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ASSOCIATION for APPLIED

**SPORTPSYCHOLOGY**<sup>SM</sup>



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# Keynote Speakers

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**Wednesday, October 18**

## **FROM FANTASY TO ACTION**

**Gabriele Oettingen, New York University**

“Think positive!” quotes are found everywhere, but contrary to popular belief merely thinking positively about the future hurts effort and success. So, how can we avoid the perils of positive thinking? By juxtaposing our dreams with personal obstacles, we pursue desired futures that can be realized and let go from those that cannot. Gabriele will talk about this self-regulation strategy, mental contrasting, its non-conscious mechanisms, and how people can use it autonomously as a cost- and time-effective tool to fulfill their wishes and solve their concerns. Combining mental contrasting with if-then plans has proven to be particularly effective for changing behavior. Mental contrasting with if-then plans or WOOP – Wish, Outcome, Obstacle, Plan (WOOP), can be used as an effective self-regulation tool to improve one’s productivity and well-being inside and outside the sports context.



*Gabriele Oettingen is a Professor of Psychology at New York University and the University of Hamburg, Germany. She is the author of more than 150 articles and book chapters on the societal and psychological origins of thinking about the future as well as on its consequences for the control of cognition, emotion, and behavior. Her work is published in social and personality psychology, developmental and educational psychology, health and clinical psychology, organizational and consumer psychology, as well as in neuropsychological and medical journals. Her findings contribute to the burgeoning literature on behavior and life style change, and businesses and institutions have increasingly become interested in the application of her research. Her first trade book, Rethinking Positive Thinking: Inside the New Science of Motivation, was published in 2014.*

**Thursday, October 19**

## **DANTE HAD VIRGIL, ATHLETES HAVE YOU**

**David Epstein, Author of The Sports Gene**

David will discuss the emergence of a “winner take all” market in sports, and how that has magnified the importance of previously almost-imperceptible advantages. A quick trip through sports history will show that increasing participation and globalization have not only changed sports, but also the athletes themselves. More than ever before – and in no small part due to biology – self-knowledge has become a critical competitive advantage for athletes. David will explain why he thinks this means that sport psychology professionals can and often do occupy a uniquely important role, and why he thinks they are critical to countering certain troubling trends in athlete development.



*David Epstein is a science writer and investigative reporter and author of the New York Times bestseller The Sports Gene. He was previously a reporter at the investigative outfit ProPublica and before that a senior writer at Sports Illustrated, where he wrote or co-wrote many of the magazine’s most high profile stories, like the 2009 revelation that Yankees third baseman Alex Rodriguez had used steroids. His work has been featured in outlets from This American Life to National Geographic. He has a Master’s degree in environmental science, and knew in grad school that he wanted to be a scientist. You can see how that worked out.*

**Friday, October 20**

## **INTERVIEW WITH ANNIKA SORENSTAM, WORLD GOLF AND LPGA HALL OF FAMER**

**AASP’s 2017 Performance Excellence Award Winner**

The recipient of AASP’s 2017 Performance Excellence Award, Annika will share insights about her professional career and how she and other players utilized sport psychology on tour. She will discuss how the “mental game” is approached differently by today’s players and her approaches to mental conditioning and peak performance at both her Florida academy and as captain of the European Team at the 2017 Solheim Cup.



*Annika Sorenstam is the greatest female golfer of our generation, and often regarded as the best of all-time. During her 15 year, Hall-of-Fame career, she rewrote the LPGA and Ladies European Tour record books, won countless awards, and changed the way women’s golf was played, viewed and covered. She amassed 89 worldwide victories, including 72 on the LPGA and 10 Major Championships. Annika holds a record number of Rolex Player of the Year awards (eight) and Vare Trophies for the lowest scoring average in a season (six). As the only female to break 60 in an official event, she has been nicknamed “Ms. 59.” Perhaps most notably, Annika received worldwide media attention when she became the first woman to play in a PGA TOUR event since 1945, joining the men at the 2003 Colonial Invitational in Fort Worth, Texas.*

**Coleman Griffith Lecture****COLEMAN GRIFFITH THE CONSULTANT: WHY LESSONS LEARNED WITH THE '38 CUBS REMAIN VALUABLE FOR CONSULTANTS OF TODAY****Sean McCann, United States Olympic Committee**

In 1938, Coleman Griffith was hired by PK Wrigley to be the first known sport psychology consultant for a professional sports team. The challenges Dr. Griffith faced, the mistakes he made, and the successful ground he broke are still relevant today. Exploring this fascinating consulting opportunity will show us how much the sport psychology consulting field has changed through today and how much more we still have to do to succeed as a profession.



*Sean McCann is a Senior Sport Psychologist for the U.S. Olympic Committee. He has worked for the US Olympic Committee as a Sport Psychologist for 25 years. He has traveled with the last 12 Olympic Teams as a sport psychologist during the Games. In his work for the USOC, he works directly with teams and coaches, from mental skills seminars and workshops about Olympic pressure, to individual sessions with athletes. Sean earned an undergraduate degree in psychology from Brown University, a Ph.D. in Clinical Psychology from the University of Hawaii, and an internship and post-doctoral fellowship at the University of Washington. He is a licensed psychologist in Colorado.*

**Saturday, October 21****Keynote Panel****BEYOND THE HARDWOOD: THE CHALLENGES OF LIFE AFTER PROFESSIONAL BASKETBALL****Nick Anderson, Former NBA Player, Orlando Magic****Johnny Davis, Former NBA Player & Head Coach****Kelly Schumacher, Former WNBA Player, Indiana Fever & Detroit Shock**

Retirement is inevitable for all professional athletes but the impact of their transition out of sport is often overlooked. Athletes can struggle to cope with their emotional attachment to the game and change in their identity. In addition, those retiring “young” can face challenges of starting a second career or managing changing family roles and responsibilities. Some experience mental health issues as a result.

This panel will feature former NBA and WNBA players and coaches who will provide their perspectives on how they handled their respective transitions out of professional basketball. Based on a model that AASP has established with the National Retired Basketball Players Association (NRBPA), ideas of how sport psychology professionals can be best positioned to assist transitioning athletes will be highlighted as well.



*Nick Anderson spent 13 years playing in the NBA, mostly with the Orlando Magic. After his junior year at the University of Illinois, he left school and entered the NBA Draft in 1989, where he was selected with the 11th pick of the first round by the Orlando Magic. As the Magic were an expansion team that season, Anderson was the first draft pick in franchise history. He is now retired from basketball, but works with the Magic in the team's community relations department.*



*Johnny Davis has spent nearly four decades with the NBA as a player, front office executive, assistant coach, and head coach. Drafted after his junior year of college, he played for the Portland Trailblazers, Indiana Pacers, Atlanta Hawks, and Cleveland Cavaliers. Following his retirement as a player, Davis worked in the Atlanta Hawks front office for three years before returning to the hardwood as a coach. Davis earned a Bachelor's Degree in Public and Environmental Affairs from Georgia State University and a Master of Arts from Union Institute and University, where he studied Sports Psychology.*



*Kelly Schumacher is currently the Team Development Coach for the WNBA Chicago Sky. After playing for the University of Connecticut, she was a first round draft pick for the Indiana Fever in 2001. She continued to play for the WNBA through 2009, including two WNBA championship wins in 2007 and 2008. She has also played professional beach volleyball.*

## CE WORKSHOPS

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### **SEXUAL & DOMESTIC VIOLENCE IN ATHLETES - PREVENTION, TREATMENT & ASSESSING RISK**

*Mitch Abrams, Learned Excellence for Athletes, USA*

The proliferation of high profile cases in the media where athletes have been involved with incidents of violence requires Sport Psychology to step up and be a part of the solution to the problem of sexual, dating & domestic violence in athlete populations. This workshop will examine these problems through a proactive, preventative lens; identifying currently used models (including Bystander Education) while offering alternatives that address accountability, psychoeducation and culture readjustments. The consequences for perpetrators, survivors & organizations will also be considered (in the context of Title IX as well) to map a plan for treatment after an incident.

### **FAST FORWARD: MOVING FROM WHAT WE ALREADY KNOW TO BECOMING MORE CULTURALLY COMPETENT WITH ANTI-BIAS CONVERSATIONS IN SPORT PSYCHOLOGY**

*Mary Foston-English, Stanford University & Private Practice, USA*

Many organizations recognize the importance of becoming more culturally responsive to the many differences individuals bring to organizations. AASP is no exception to this as evidenced by their development and support of a Diversity Committee as a way to become more culturally responsive. As organizations strive to become more culturally responsive, they are challenged to become more culturally competent. Cultural competency has been defined by the U.S. Department of Health and Human Services as “the ability to honor and respect the beliefs, languages, interpersonal styles, and behaviors of individuals and families receiving services. Cultural competence is a dynamic, ongoing developmental process that requires a long-term commitment and is achieved over time” (U.S. Department of Health and Human Services [HHS] 2003a, p.12). Cultural competency is more than having knowledge about culture; it also includes an awareness of our own biases. According to Peters and Williams (2009), sport psychology clients are negatively impacted by sport psychologists who are not aware of their cultural beliefs, biases and stereotypes. This interactive, psychoeducational workshop is designed to allow participants to understand and assess their own level of cultural competency and awareness of their own biases in regards to differences. An overview of historical milestones in the evolution of diversity/cross-cultural trainings will be used to help participants become more open to discussing what can be a sensitive topic of anti-bias conversations. Target audience will be anyone open to clarifying their own cultural identity and its usefulness in becoming more culturally competent.

### **THE NINE MENTAL SKILLS OF SUCCESSFUL ATHLETES: A PRACTICAL FRAMEWORK FOR UNDERSTANDING, ASSESSING, AND DEVELOPING TRAINING PROGRAMS FOR ATHLETES**

*Jack J. Lesyk, Ohio Center for Sport Psychology, USA*

A The Nine Mental Skills of Successful Athletes (9MSSA) is a cognitive, emotional, and behavioral conceptual framework for understanding, assessing, and designing mental skills training programs for athletes. Created by a seasoned practitioner,

the model is easily understood and utilized by athletes and coaches, as well as sport psychology professionals. After introducing the model and its rationale, the presenter will demonstrate its use in identifying an athlete’s specific mental skill strengths and weaknesses. Additionally, case materials will be used to illustrate how before and after measures can be used to assess the effectiveness of mental skills training programs. Workshop participants will be provided with the complete 9MSSA assessment tools and will learn how to use them through a series of experiential exercises that will enable them to utilize these resources in their own practices.

## FEATURED SESSIONS

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### **FEA-01**

#### **5 SLIDES IN 5 MINUTES: SPECIAL INTEREST GROUPS (SIG)**

*Kelsey Erickson, Leeds Beckett University, UK*  
*Hillary Cauthen, Texas Optimal Performance & Psychological Services, USA*  
*Amber Shipherd, Texas A&M University - Kingsville / Next Level Mind Consulting, USA*  
*John Heil, Psychological Health Roanoke, USA*  
*Michelle McAlarnen, Minnesota State University, Mankato, USA*  
*Angel Brutus, Synergistic Solutions, LLC, USA*

The 5 slides in 5 minutes presentation will explore issues related to the development of the profession and organization from coordinators of the Special Interest Groups. Presenters will focus on issues relevant to their SIGs and include a variety of topics. The following SIGs will be represented: Clean Sport, Mental Health, Teaching, Fencing, Study and Practice of Supervision, Race and Ethnicity.

### **FEA-02**

#### **5 SLIDES IN 5 MINUTES: IN ORDER TO THRIVE, THE FIELD OF SPORT PSYCHOLOGY MUST... (VIRTUAL CONFERENCE FOLLOW-UP)**

*Jonathan Fader, SportStrata, USA*  
*Alexander Cohen, USOC, USA*  
*Laura Finch, St. Cloud State University, USA*  
*Kensa Gunter, Gunter Psychology Services LLC, USA*

Following up on the Virtual Conference, speakers will complete the sentence, “In order to thrive, the field of sport psychology must...” Emphasis will be on actionable items with a look into the future.

### **FEA-03**

#### **AASP-PRO SUMMIT RECAP: A SNAPSHOT ON SPORT PSYCH IN US PRO SPORT**

*Angus Mugford, Toronto Blue Jays, USA*  
*Cristina Fink, Philadelphia Union, USA*  
*Katy Tran Turner, Buffalo Sabres, USA*  
*Cindra Kamphoff, Private Practice & Minnesota State University, USA*

A group of sport psychology professionals working in pro-sport gathered at a meeting this summer to discuss the state of the field. With a view to making inroads on AASP’s strategic plan to develop a decision making model for key stakeholders,

a panel will talk about their experiences at the summit, from comparing experiences across the NFL, MLB, NBA, NHL, MLS and other professional leagues. Implications around the opportunities and threats for the future of the sport psychology profession will be discussed and tied into strategic thinking for the sustainable growth and success of the field.

## FEA-04

### CASE STUDIES FOR CERTIFIED PROFESSIONALS

*Eric Bean, HigherEchelon, LLC, USA*  
*Phillip Post, New Mexico State University, USA*

This workshop, open solely to those certified by AASP, is specifically designed to encourage the process of collaboration, networking and peer consulting among practitioners. Two cases will be presented in a workshop format to facilitate a guided dialogue in terms of case conceptualization, challenges, intervention design, and results. Attendees will have the opportunity to discuss their own conceptualization and possible intervention strategies for each case presented.

## FEA-05

### SIGNATURE TECHNIQUES

*Vernice Richards, Evert Tennis Academy, USA*  
*Gary Bennett, Virginia Tech, USA*  
*AJ LaLonde, Los Angeles Dodgers, USA*  
*Penny Werthner, University of Calgary, Canada*

The Signature Techniques presentation highlights several esteemed practitioners within our field recognized for quality applied work. This year's presentation will feature consultants across the academic, professional, and elite sport domains. Each presenter will provide a glimpse into their work, sharing their "trade secrets" and their professional philosophy that has contributed to their success.

## FEA-06

### CERTIFICATION UPDATE FOR PROFESSIONALS

*Kensa Gunter, Gunter Psychological Services, LLC, USA*  
*Sarah Castillo, National University, USA*  
*Robin Vealey, Miami University, USA*

Over the past year, the Interim Certification Council (ICC) has completed the process of restructuring the AASP Certification program and appointing the initial Certification Council (CC). In this session, members of both councils will provide a brief overview of the updated certification program with a primary focus on the new recertification requirements. Presenters will share the rationale behind the new recertification requirements and implications for currently certified professionals and other practitioners will be discussed. Additional topics may include the impact of the new program for mentors, and academic program directors, and policies and procedures for maintaining efficacy of the program over time. This will be an interactive session designed to educate AASP professionals about the updated certification program, while responding to questions and concerns arising out of the changes to AASP's signature program.

## FEA-07

### STUDENT WORKSHOP: DEVELOPING A CONSULTING PHILOSOPHY

*Duncan Simpson, Florida State University, USA*  
*Taryn Morgan, IMG Academy, USA*

The framework of this workshop is a combination of the work of Poczwadowski et al. (2004) and Henriksen and Diment (2011) and will cover five main topics (a) Beliefs & Values (b) Theories of Intervention & Behavior Change (c) Intervention Goals (d) Content & Focus of Interventions/Techniques and (e) Sport Psychology Services and Models. The purpose of the workshop is then to help students critically think about, and begin to construct a personal and professional philosophy based on the five topics.

## FEA-08

### DISTINGUISHED INTERNATIONAL SCHOLAR PRESENTATION: A HOLISTIC PERSPECTIVE ON THE 'SCIENTIST-TEACHER-PRACTITIONER-MANAGER' ROLE IN SPORT PSYCHOLOGY

*Paul Wylleman, Vrije Universiteit Brussel, Belgium*

As Distinguished International Scholar it is an honour to reflect on four different roles which can be developed in the field of sport psychology. From a scientist point of view, my research and publications were focused on athletic transitions, dual career management, and sport psychology support services. A line of governmentally, European and internationally funded research projects were conceptually related to the Holistic Athletic Career model (Wylleman, Rosier, & De Knop, 2016). This research was used to develop and support the role of teacher as full professor to sport science and psychology university students on the subjects of sport psychology, high performance management and mental support for talented and elite athletes. Teaching was also enhanced by the experiential knowledge built up during the past 25 years in the role of practitioner working with talented, elite and Olympic athletes and coaches in individual and team sports, providing on-site support at European and World Championships, the DavisCup final as well Olympic Games including being the team psychologist to TeamNL, the Olympic team of the Netherlands at the 2016 Rio Olympic Games. Finally, the role of manager was taken up as head of the university department Topsport and Study, manager Performance Behaviour to the Netherlands Olympic Committee (NOC\*NSF)/TeamNL, co-ordinator of the European Forum of Applied Sport psychologists in Topsport (FAST), and as President of the European Federation of Sport Psychology (FEPSAC) and member of the board of associated members of the European Federation of Psychology Associations (EFPA). Using a holistic perspective, I will reflect on the interaction between my own athletic, psychological, psychosocial, academic and vocational background and the way these different roles developed. Finally, specific topics including the role of clinical psychologists, functioning as a sport psychologist in an interdisciplinary team, the education and competency profile of sport psychologists working at the elite/Olympic level, mental health of athletes and coaches, and international collaboration between sport psychology associations will be addressed from the perspective of the roles of scientist, teacher, practitioner and/or manager.

*Wylleman, P., Rosier, N., & De Knop, P. (2016). A holistic perspective on the development of elite athletes. In M. Raab, P. Wylleman, R. Seiler, A-M. Elbe, and A. Hatzigeorgiadis (Eds.), Sport and Exercise Psychology Research: From Theory to Practice (pp. 270-288). Oxford, UK: Elsevier Inc. (9780128036341).*

## **FEA-09**

### **5 SLIDES IN 5 MINUTES: TEACHING**

*Amber Shipherd, Texas A&M University - Kingsville, USA*  
*Tanya White, University of Illinois at Chicago, USA*  
*Lauren Tashman, Barry University, USA*  
*Alison Pope-Rhodijs, JFK University, USA*  
*Hannah Bennett, Augusta University, USA*  
*Pete Kadushin, Western State Colorado University, USA*  
*John Coumbe-Lilley, University of Illinois at Chicago, USA*

This Teaching Sport, Exercise, and Performance Psychology (SEPP) “5 Slides in 5 Minutes” session will highlight different creative strategies and tools to teach SEPP content through self-reflection, a key skill for students wishing to enter the field of SEPP. Six experienced educators will speak for five minutes each - followed by structured opportunity for Q&A - to introduce attendees to a variety of self-reflective activities that can be used in undergraduate or graduate courses and can be modified to teach a variety of other topics as well.

## **FEA-10**

### **NUTS AND BOLTS OF CERTIFICATION (FOR STUDENTS)**

*Robert Harmison, James Madison University, USA*  
*Taryn Morgan, IMG Academy, USA*  
*Damon Burton, University of Idaho, USA*

This workshop will review updates and changes to the AASP certification program that go into effect starting October 1, 2017. Specifically, the new eligibility requirements (i.e., degree, coursework, mentored experience) will be discussed, the application and review process will be described, and the certification exam procedures will be outlined. Students currently pursuing certification and those planning to apply for certification for the first time will benefit from the information provided in this workshop.

## **FEA-11**

### **ETHICS LECTURE: PUTTING ATHLETE WELL-BEING FIRST - HOW THE U.S. CENTER FOR SAFESPORT IS WORKING TO CHAMPION RESPECT AND END ABUSE IN SPORTS**

*Shellie Pfohl, US Center for SafeSport, USA*

The United States Center for SafeSport advances the benefits of sport participation by promoting a national culture built on respect. Athletes, regardless of level of competition, deserve to participate in sports that are free from bullying, hazing, sexual misconduct, or any form of emotional or physical abuse. And this is the centerpiece of the Center’s mission. As the first and only national organization of its kind, SafeSport – which launched in March of 2017 – is a resource for any sports entity, providing consultation, best practices and the necessary thought leadership to make athlete well-being the foundation of the sport experience. Learn more about the Center’s work and how you can help ensure the many benefits of sport are never undermined by disrespect or behavior that compromises the well-being of athletes.

## **FEA-12**

### **5 SLIDES IN 5 MINUTES: TACTICAL POPULATIONS**

*Shannon Baird, AFSC, USA*  
*Ashley Coker-Cranney, USA*  
*Stacy Gnacinski, Drake University CPHS, USA*  
*Eric Bean, HigherEchelon, INC, USA*  
*Chelsea Butters Wooding, National University, USA*  
*Kate Colvin, IMG Academy/1SFG THOR3, USA*  
*Mike Horn, USA*

The Tactical Populations 5 slides in 5 minutes is an opportunity to glimpse the experiences of 6 professionals working with tactical populations. Tactical populations include high risk occupations that demand both physical and psychological strength in order to be successful. The expertise in this session ranges from the lived experiences of an Army 1SG to consulting or researching the following populations: Army Green Berets, Army Special Operations Aviation, Army Rangers, Army Physicians, Navy SEALs, Nurses, First Responders, Firefighters, SWAT officers, and Police Academy trainers.

## **FEA-13**

### **STUDENT WORKSHOP: FIRST SESSIONS - ORGANIZING YOUR FIRST SESSION WITH AN ATHLETE/COACH**

*Phillip Post, New Mexico State University, USA*  
*Angela Fifer, Drexel University Athletics, USA*

This presentation will bring a combination of experiences from successful practitioners on how to develop trusting and effective relationships with the athletes and coaches (Fifer et al., 2008; Halliwell et al., 2003). The workshop will cover five main topics (a) Meeting Preparation (b) Education (c) Understanding Needs (d) Earning Trust and Respect (e) Generating Excitement as they pertain to working with an individual athlete or coach. The purpose of the workshop is then to help students critically think about, and begin to construct a structure for how they establish trusting relationships with athletes and coaches.

## **FEA-14**

### **THE CONUNDRUM OF PERVASIVE POSITIVE YOUTH SPORT**

*Sally Johnson, National Council of Youth Sports, USA*  
*Lindsey Blom, Ball State University, USA*  
*Karl Erickson, Michigan State University, USA*  
*Larry Lauer, United States Tennis Association, USA*  
*Meredith Whitley, Adelphi University, USA*

For decades, the parameters around young people’s sport time has been determined by adult-controlled organized programs (Coakley, 2009). With youth obesity and sedentary time rising and recreational sporting opportunities giving way to elite level competitive programs, practitioners and researchers alike are calling out for parents, coaches, communities, and young people to collaborate on ways to change the game. From long standing groups like the National Council of Youth Sports (NCYS), to think tanks like Project Play, to the recent development of the US Center for Coaching Excellence, stakeholders are advocating for change.

This panel of experts will facilitate a discussion about next steps for pervasive and inclusive positive sport opportunities for young people. Specifically, topics about the challenges of year round play and early specialization, holistically developing youth in the competitive sport track, coaching education, and squaring the participation pyramid will be discussed. The panel will also offer strategies for parents to maintain a healthy, supportive, and positive level of involvement in their child’s sport experience.

## LECTURES

### LEC-01: Tactical Populations

#### LEC-01A

##### **PERCEIVED CADRE BEHAVIOR, BASIC PSYCHOLOGICAL NEED SATISFACTION, AND MOTIVATION OF U.S. ARMY ROTC CADETS: A SELF-DETERMINATION THEORY PERSPECTIVE**

*Johannes Raabe, University of Tuebingen, Germany*  
*Rebecca Zakrajsek, University of Tennessee, USA*  
*John Orme, University of Tennessee, USA*  
*Jared Crain, University of Tennessee, USA*

Since its inception in 1916 the Reserve Officers' Training Corps (ROTC) has trained and commissioned more than half a million individuals and, therefore, produced more Officers for the United States (U.S.) Army than any other military organization. Currently, over 30,000 cadets are enrolled in 275 programs located at over a thousand universities and colleges across the U.S. (U.S. Army Cadet Command, 2016). However, in recent years, U.S. Army ROTC has experienced high attrition rates among cadets (Doganca, 2006). While the reasons for people's engagement in the military are complex and include a multitude of tangible and intangible factors (Woodruff, Kelty, & Segal, 2006), motivation has been found to be a vital contributor to individuals' ongoing service in the armed forces (Ngaruiya, Knox Velez, Clerkin, & Taylor, 2014). Accordingly, utilizing the framework of self-determination theory (Deci & Ryan, 2000), the current research was designed to investigate U.S. Army ROTC cadets' perceived cadre behavior, basic psychological need satisfaction, and motivation as well as the causal relationship between those variables. 728 U.S. Army ROTC cadets participated in this survey-based study. Overall, participants perceived high levels of autonomy support and involvement from their cadre, moderate levels of need fulfillment, and high levels of self-determined motivation. Structural Equation Modeling procedures (RMSEA = .06, 95% CI [.06; .06],  $p < .001$ ; CFI = .95) indicated that the degree to which U.S. Army ROTC cadets perceived their cadre to be autonomy-supportive and involved significantly predicted their perceived need fulfillment, which, in turn, was associated with self-determined and non-self-determined motivation ( $p < .001$ ). The structural model explained between 9.4% and 55.2% of the variance for all variables. The results highlight the essential role cadre play in shaping cadets' experiences. How to use the present findings to foster self-determined motivation among individuals in U.S. Army ROTC will be discussed.

#### LEC-01B

##### **A 10-MONTH PILOT PROGRAM TO DECREASE FAILURE RATES AMONG MILITARY INTELLIGENCE STUDENTS**

*Jessica Garza, SAIC, USA*  
*Tyler Masters, CEPP, USA*  
*Craig Jenkins, USAICoE, USA*  
*Zane Weinberger, USAICoE, USA*



The United States Army Intelligence Center of Excellence is a school house that trains a variety of military disciplines. One advanced military course had a high attrition rate due to the challenging nature of the curriculum and associated

stressors. A pilot performance enhancement program was created to address the cognitive demands essential for accelerated learning and operational adaptability. The overall objective of the pilot program was to reduce attrition by at least five percent without lowering course standards. The program was used for four courses, each seven weeks long. A 10-month standardized psycho-educational program was implemented around classroom and training exercises. The cognitive enhancement training program included 12 hours of classroom instruction on five performance skills and six learning enhancement skills over a period of three days. Students were taught self-awareness and self-regulation skills to assist with arousal control, memory recall, information accuracy, and adaptive thinking. In addition, students received designated time for acquisition and application of skills at various training events and during mastery sessions. The total number of included participants was  $n=76$ . The Test of Performance Strategies-2 (TOPS2-cs) (Olyvia & Christos, 2014) was used to assess employment of strategies by students at the beginning and end of the performance training. The participants reported an increase use of learning enhancement skills on the TOPS2-cs. More importantly, there was a reduction in course attrition from 18% to 7% with no other changes to the course or standards. The implementation of the program surpassed the initial five percent goal. The presentation will discuss the implementation, lessons learned, and future direction of training.

#### LEC-01C

##### **IMPROVING COMBAT READINESS: MENTAL SKILLS TRAINING HELPED 101ST AIRBORNE DIVISION SOLDIERS MEET ARMY REQUIREMENTS**

*Bethany Bachman, Digital Consulting Services, USA*  
*Kelsey Erlenbaugh, Digital Consulting Services, USA*

Soldiers of the 101st Airborne Division (Air Assault) at Fort Campbell, KY have specific physical fitness requirements to be considered a positive performing Soldier and to hold leadership positions at the platoon level and above; one of which is running 4 miles in 36 minutes. Physical fitness is a foundation of combat readiness and failure to maintain these requirements results in Soldiers being unprepared for the demanding rigors of deployment. These requirements are part of the Air Assault Big 5 (Physical Fitness, Marksmanship, Medical Training, Air Assault – Warrior Tasks and Battle Drills, and Maintenance) which represents Fort Campbell's training focus and forms the foundation of Soldier and unit preparation for combat (Volesky, 2016). Due to a group of Soldiers' continued failure to meet the 4 miles in 36 minutes requirement, the Battalion Commander from 129th Combat Sustainment Support Battalion, 101st Sustainment Brigade requested assistance from Comprehensive Solider and Family Fitness (CSF2) to integrate mental skills training into a tailored physical fitness program. Based on sport psychology principles, CSF2 provided a nine week training program to help the Soldiers understand the role mental factors play in successful physical training. This presentation reviews the skills, concepts, and delivery method used during this mental skills training program. At the conclusion of the nine week program results revealed that 95% of the Soldiers decreased their running time with an overall group improvement of 4 minutes and 12 seconds.

**LEC-02: Running**

**LEC-02A**

**THE PSYCHOLOGICAL EXPERIENCE OF  
ULTRAMARATHON RUNNING: A MULTIMODAL  
APPROACH**

*Dolores Christensen, University of California, Davis, USA  
Britton Brewer, Springfield College, USA  
Jasmin Hutchinson, Springfield College, USA*

Research in sport, exercise, and performance psychology has historically relied on quantitative and qualitative methods to study the experience of athletes, exercisers, and performers. A multimodal approach “recognizes communication and representation to be more than about language, and attends to the full range of communicational forms people use – image, gesture, gaze, posture, etc. – and the relationships between them” (Jewitt, 2009, p. 14). Multimodal methods may further include (but are not limited to) “image, film, cartoons, [and] acoustic modes, like speech, music, [and] sound” (Kaltenbacher, 2004, p. 196). Morrow (2005) specifically encouraged the use of multiple data sources in research to “achieve the goal of adequate variety” (p. 255) of data. The purpose of this presentation is to offer an example of a mixed-methods, multimodal research design used over 32 consecutive hours of data collection during an ultramarathon trail race. In-task quantitative data, two types of qualitative interviews, and video recordings were used to capture the “live” psychological experience of the ultramarathon participants. In-task quantitative and video data were collected at two points on a 25-mile loop during a 100-mile race. Video recordings of participants during their ultramarathon event were later used during the post-race interview to serve as a memory prompt and encourage a deeper reflection on their psychological experience. This method of data collection can be especially useful with respect to the dynamic nature of performance, the complexity of the sporting or exercise environment, and the elusive nature of psychological experiences that can render quantitative or qualitative methods insufficient. Such inquiry can help to supplement, or even enhance, traditional quantitative and qualitative methods that may be susceptible to recall bias, memory constraints, and/or misinterpretation (Grady, 2008). The benefits and limitations of such methodology will be discussed and implications for diverse informational streams in research will be highlighted.

**LEC-02B**

**“LITERALLY LIKE A PARTY”: SOCIAL ASPECTS OF  
ULTRAMARATHON RUNNING**

*Dolores Christensen, University of California, Davis, USA  
Jasmin Hutchinson, Springfield College, USA  
Britton Brewer, Springfield College, USA*

Murray (1985) was the first to explore the marathon as a social event and social experience for the athletes who participate in it. Murray further pointed out that the meaning derived from the marathon experience for the individual runner can extend to strengthen social bonds with fellow runners. As a “subworld” (Robinson, Patterson, & Axelson, 2014) to marathon running, ultramarathon running and the social connections developed within the niche sport have also been previously discussed in the literature (Hashimoto, Hagura, Kuriyama, & Nishiyama,

2010; Holt, Lee, Kim, & Klein, 2014; Simpson, Post, Young, & Jensen, 2014). Consequently, this qualitative study of 15 competitors in a 100 mile or 100km race examined the importance of the social spheres of ultrarunning. Participants were interviewed twice: once immediately following the end of their race and again approximately two months later. Phenomenological analysis yielded social aspects to the ultrarunning experience within five chronological race phases, as well as one larger, overarching social theme. Major themes included greater affinity for the running club and the larger sport of ultrarunning after running the race; the integral role of pacers, crew members, and other supports for psychological reinforcement and race success; comradery with fellow runners throughout the up to 32 hours of running; fellow runners as motivation for performance excellence; and gratitude for the race community. Implications for research and practice will be discussed within the social context of physical activity.

**LEC-02C**

**THE EFFECTS OF BRIEF ATTENTIONAL FOCUS  
INSTRUCTIONS TO PROMOTE RELAXATION ON  
MOVEMENT ECONOMY, PHYSIOLOGICAL, AND  
PERCEPTUAL RESPONSES DURING RUNNING**

*Noel Brick, Ulster University, Northern Ireland  
Megan McElhinney, School of Psychology, Ulster University,  
Northern Ireland  
Richard Metcalfe, School of Sport, Ulster University, Northern  
Ireland*

Purpose: Previous research has supported the beneficial effects of relaxing during running (e.g., Caird et al., 1999). However, no studies have investigated the effects of brief attentional focus instructions to relax on measures of running performance. The primary aim was to determine the effect of attentional instructions to promote relaxation on movement economy, physiological, and perceptual responses during running. Methods: Twenty-four trained endurance runners (11 females) with mean VO<sub>2</sub> max of 44.81ml/min/kg (SD = 5.65) completed four 6-minute running blocks at 70% of velocity at VO<sub>2</sub> max with a 2-minute rest between each block. Condition order was randomized and participants completed four six-minute running blocks either smiling, frowning, relaxing their hands and upper-body, or with a normal attentional focus (control). Movement economy (oxygen uptake) and heart rate were measured throughout each condition. Participants reported perceived exertion, affective valence, activation, and manipulation adherence immediately after each condition. Results: Oxygen uptake was lower during smiling than frowning (p = 0.006, d = -0.23) and control (p = 0.048, d = -0.19) and was non-significantly lower than relaxing (p = 0.121, d = -0.18). Fourteen participants (4 females) were most economical when smiling. Only one participant was most economical when relaxing. Perceived exertion was higher during frowning than smiling (p = 0.012, d = 0.58) and tended to be higher than relaxing (p = 0.057, d = 0.49). Activation was higher during frowning than all other conditions (all p < 0.05, all d > 0.59). Heart rate, affective valence, and manipulation adherence did not differ between conditions. Conclusion: Smiling may be an effective manipulation to improve movement economy during running. In contrast, frowning may increase both effort perception and activation. A conscious focus on relaxing was not beneficial on any outcome measure. Implications for attentional focus and endurance performance will be discussed.

## LEC-03: Mental Health I

## LEC-03A

**AN EXPLORATION OF THE RELATIONSHIP BETWEEN BURNOUT AND DEPRESSION IN COLLEGIATE ATHLETES**

*Arianna Martignetti, Western Washington University, USA*  
*Jessyca Arthur-Cameselle, Western Washington University, USA*  
*Linda Keeler, Western Washington University, USA*  
*Gordon Chalmers, Western Washington University, USA*



Researchers in occupational settings have found similarities in the symptomatology of workplace burnout and depression (Bianchi, Schonfeld, & Laurent, 2015). However, sport psychology researchers have stated that sport burnout and depression are separate constructs (Cresswell & Eklund, 2006). Broadly, the purpose of the current study was to investigate the relationship between burnout and depression to help determine if their symptoms are indeed distinct, or if they are potentially overlapping. An additional purpose was to assess gender differences in participants' responses. Participants were 419 collegiate athletes (316 females, 103 males) from all divisions of the NCAA, NAIA, and NJCAA. Athletes completed an anonymous online survey consisting of the Athlete Burnout Questionnaire (ABQ; Raedeke, 2001), the Zung Self-Rating Depression Scale (SDS; Zung, 1965), and two symptom checklists designed for this study. Results revealed a strong, statistically significant positive correlation between total burnout and depression scores. Moreover, each subscale of the ABQ was also statistically significantly correlated to total depression scores. Females scored significantly higher than males on both burnout and depression measures. Sixty-six percent of the sample reported having experienced what they defined as burnout from sport. Of this subsample, forty-seven percent reported that while "burned out," they experienced five or more Diagnostic and Statistical Manual (DSM-V, American Psychiatric Association, 2013) symptoms of depression, with at least one being a depressed mood or loss of interest. The current study demonstrates that female athletes experience more burnout and depression than males and that there is a strong relationship between sport burnout and depression in collegiate athletes, indicating a possible overlap in symptoms. Thus, the findings suggest that the two constructs may be more similar than previously understood. Further, understanding the relationship between burnout and depression in sport may assist in prevention or screening, or contribute to more substantial treatment for burned out athletes.

## LEC-03B

**"PUT SOME DIRT ON IT": MASCULINITY AND HELP-SEEKING IN MALE ATHLETES AND NONATHLETES**

*Joey Ramaeker, Iowa State University, USA*  
*Trent Petrie, University of North Texas, USA*

Men consistently seek help less frequently than women (e.g., Carragher et al., 2010) and report less favorable attitudes toward psychological services (Gonzalez et al., 2011). Additionally, men are more likely to perceive being stigmatized if they receive psychological care (e.g., Martin et al., 1997), and report less willingness to endure stigmatization for seeking services (MacKenzie et al., 2004); similar results have been found in male athletes (e.g., Steinfeldt & Steinfeldt, 2012).

Explanations for these differences have focused on masculine norms inherent in sport environments where emphasis is placed on demonstrating toughness and avoiding vulnerability (e.g., Courtenay, 2000), which may hinder male athletes' willingness to seek psychological services. Thus, we examined the relationships between masculinity variables (i.e., gender role conflict and conformity to masculine norms [CMN]) and stigma, help-seeking attitudes and intentions to seek counseling among male collegiate athletes ( $n = 220$ ) and nonathletes ( $n = 205$ ). Using SEM with bootstrapping, the model fit well for nonathletes,  $2(4, N = 203) = 10.32, p = .035; CFI = .952; SRMR = .037; RMSEA = .088$  (90% CI = .021, .156), and athletes,  $2(4, N = 220) = 7.32, p = .11; CFI = .979; SRMR = .031; RMSEA = .063$  (90% CI = .000, .132). CMN (but not gender role conflict) and stigma had negative effects on help-seeking attitudes, and indirectly were related to both groups being less likely to seek counseling by increasing their negative attitudes about seeking help in general (athletes:  $= -.13, SE = .03, p = <.001, 95\% CI [-.20, -.05]$ ; nonathletes,  $= -.14, SE = .05, p = .004, 95\% CI [-.15, -.02]$ ). Masculine norms, as opposed to conflict around gender role, along with stigma concerning help seeking are key factors in understanding men's intentions to go to counseling, regardless of their athletic status.

## LEC-03C

**EXPERIENCES OF PSYCHOLOGICAL TREATMENT: ATHLETES' PERSPECTIVES**

*Rachel Jewett, University of Toronto, Canada*  
*Gretchen Kerr, University of Toronto, Canada*  
*Ryan Todd, University of Toronto- Department of Psychiatry, Canada*



Athletes experience a range of mental illnesses at a similar rate as the general population (Gulliver et al., 2015). However, there may be factors unique to the competitive sport context which affect the nature of mental illness in athletes, such as high injury rates, competitive pressure, societal and internal performance expectations, and retirement from sport (Appaneal et al., 2009; Gulliver et al., 2012; Lavalley & Robinson, 2007). These features may also affect the nature of mental health treatment received. Indeed, researchers have suggested that athletes should receive tailored mental health treatment by clinicians who have an understanding of the sport context (Glick & Horsfall, 2009). The degree to which an athlete who has undergone mental health treatment feels that a clinician's sport knowledge is important to his or her treatment experience is unknown. The purpose of this study therefore, was to investigate athletes' perspectives on this question and to explore how athletes access mental healthcare. Sixty athletes (70% female) ranging from recreational to elite levels completed an online survey about their mental healthcare experiences. Findings revealed that 63% of athletes received treatment at a private clinic; further, 47% of athletes were referred to a mental healthcare provider by a family physician, 5% by a sports medicine physician, and 3% by a mental skills trainer. Surprisingly, 57% indicated that their clinician's knowledge of sport did not impact their treatment experience. The athletes' responses indicated that clinicians' specific knowledge of the sport context may not be critical for athletes to appraise their treatment as successful. Future research is needed to determine what clinician characteristics are important to athletes. The study findings regarding mental healthcare access may inform strategies to reduce perceived barriers to help-seeking. In addition, the assumed importance of mental healthcare providers having specific knowledge of the sport context is questioned.

## LEC-03D

### IS EVERYTHING AS IT SEEMS: ATHLETES' MENTAL HEALTH AND STIGMA TOWARDS IT



*Hallur Hallsson, University of Iceland, Iceland*  
*Ragnar P. Olafsson, University of Iceland, Iceland*  
*Bara F. Halfdanardottir, University of Iceland, Iceland*  
*Bjarki Bjornsson, University of Iceland, Iceland*  
*Gunnlaugur B. Baldursson, University of Iceland, Iceland*

Recently both the prevalence and stigma towards mental health issues among athletes has received public attention. Some studies indicate that athletes report substantially more anxiety and depression symptoms than the general population. However, it is well known from the sport psychology literature that athletes can view sport performance anxiety (SPA) facilitative for performance. Thus, it is important to discriminate between SPA and general anxiety (GA) symptoms to avoid overdiagnosis and medicalizing SPA. The study purpose was to evaluate the severity of GA and depression symptoms, the relationship between GA and SPA, and level of stigma towards mental illnesses among top level athletes. Participants were 301 (44% female) basketball and soccer players playing in top leagues in a northern European country. The Sport Anxiety Scale-2 (SAS-2) was used to measure SPA and The Hospital Anxiety and Depression Scale (HADS) to measure severity of GA and depression. Participants answered HADS in terms of how they felt on days they were not competing, but answered SAS-2 regarding their anxiety on game days. The Depression Stigma Scale (DSS) was used to measure both personal and perceived stigma of others towards anxiety and depression. Results revealed that 80% of participants reported little or no GA symptoms on HADS, 13% moderate and 7% severe symptoms. For depression, 94% reported little or no symptoms, 4% moderate, and 2% severe symptoms. A strong positive relationship was between SAS-2 scores and GA on the HADS. Interestingly, athletes reported their stigma to be significantly lower than they perceived other's stigma. Compared to studies using HADS on college students in the same country, athletes reported lower level of anxiety and depression symptoms, and the percentage of athletes reporting severe anxiety and depression was lower than in many other studies. Thus, it might be important to control for SPA in GA studies.

behind how a supervisor empowered graduate trainees to develop additional ethical guidelines to strengthen the program's commitment to providing applied sport psychology services in an ethical manner. Upon identifying several significant gaps relevant to service provision in the AASP, ACA, and APA ethical codes, an ethics sub-committee was formed consisting of colleagues committed to ethical supervision. Under the guidance of a faculty supervisor, the sub-committee developed guidelines and recommendations to help clarify and strengthen student practitioners' ability to navigate difficult ethical decisions encountered in practice. As existing ethics codes do not fully address social media standards, and because of little discussion of boundaries with staff members in the literature (Andersen & Williams-Rice, 1996), these two areas were identified as a concern for student practitioners. Additional areas identified by the sub-committee as needing further ethical guidance were: Privacy concerns for informal consultation (Farber & Hazanov, 2014), and apparel recommendations. The goal of the sub-committee was to expand upon the current ethical guidelines to develop guidance for all the student practitioners. The intent of these additional guidelines were to serve as a starting point of an ethical decision making process. The sub-committee articulated specific ethical recommendations that addressed gaps in current codes, case studies, an ethical decision making flow chart, and an accountability mechanism of a student led review board with supervisor oversight. This presentation will provide perspectives on how a need for additional ethical guidelines was identified, the process and formation of the sub-committee, how the additional ethical guidelines were constructed, and how the recommendations were communicated and implemented in the program. Implications for applied sport psychology graduate programs and supervisors will be discussed.

## LEC-04B

### ETHICAL BELIEFS AND BEHAVIORS OF SPORT PSYCHOLOGY PRACTITIONERS

*Jack Watson II, West Virginia University, USA*  
*Sae-Mi Lee, Ithaca College, USA*  
*Edward Etzel, West Virginia University, USA*  
*Brandonn Harris, Georgia Southern University, USA*  
*Robert Schinke, Laurentian University, Canada*  
*Alessandro Quartiroli, University of Wisconsin - La Crosse, USA*  
*Nathan Blamick, West Virginia University, USA*

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## LEC-04: Professional Issues & Ethics

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## LEC-04A

### BRIDGING THE GAP: EMPOWERING APPLIED SPORT PSYCHOLOGY TRAINEES TO DEVELOP ADDITIONAL ETHICAL GUIDELINES FOR PRACTICUM AND SUPERVISION

*Aaron D'Addario, Florida State University, USA*  
*Brandon Cooper, Florida State University, USA*  
*Ashley Fryer, Florida State University, USA*  
*Matthew Bird, Florida State University, USA*  
*Charles Cox, Florida State University, USA*  
*Stinne Soendergaard, Florida State University, USA*  
*Nataniel Boiangin, Florida State University Ice Hockey, USA*  
*Graig Chow, Florida State University, USA*

The delivery of ethical applied sport psychology services is paramount to the training of competent future professionals. This presentation aims to provide insight into the process

In AASP's recent Job Task Analysis (2015) conducted to improve the certification process, subject matter experts identified professional issues (e.g., ethics) as an essential domain to effective sport psychology practice. While traditionally considered a mandatory component of a profession, little attention has traditionally been paid to ethical practice in sport psychology. Although, two past surveys have examined sport psychology practitioners' beliefs and behaviors regarding ethical practice (Etzel, Watson & Zizzi, 2004; Petitpas, Brewer, Rivera & Van Raalte, 1994), the rapid development of technology and growth of the profession warrants an updated assessment of the ethical beliefs and behaviors of sport psychology professionals. The current study was designed to reexamine the beliefs and behaviors of sport psychology practitioners (N=225) using an online survey with current ethical scenarios. The survey was electronically distributed through two different listserves and graduate program coordinators listed in the Directory of Graduate Programs in Applied Sport Psychology (Burke, Sachs & Schweighardt, 2016). Authors analyzed the data using chi-square and t-tests to examine any differences in ethical beliefs and behaviors in practitioners based on their

gender, professional status, certification status, and training background. RResults revealed that male professionals were more likely to believe that it is ethical to promise improvement to clients ( $p < .001$ ), practice without a clear fee structure ( $p < .002$ ), share their personal lives ( $p < .001$ ) and socialize ( $p < .003$ ) with clients. Moreover, practitioners trained in exercise science as opposed to psychology were more likely to believe that it is ethical to not consult others for help ( $p < .003$ ), use social media with clients ( $p < .002$ ), and provide consulting ( $p < .006$ ) and supervision ( $p < .006$ ) from a distance. The authors will provide practical suggestions for the AASP Ethics Committee, newly formed Certification Council, and sport psychology practitioners.

## LEC-04C

### TRAINING SUPERVISORS: LESSONS LEARNED FROM EXPERIENCED SPORT PSYCHOLOGY SUPERVISORS

*Gily Meir, Florida State University, USA*  
*Graig Chow, Florida State University, USA*

Supervision is an elementary part of training aspiring sport psychology consultants as it provides quality control of services provided by neophyte practitioners and fosters growth in supervisees' competencies (Bernard & Goodyear, 2009; Watson, Zizzi, Etzel, & Lubker, 2004). The aim of this study was to identify the necessary competencies of effective supervisors in the field of sport psychology, the challenges supervisors face when attempting to provide effective supervision, and mistakes as well as lessons learned from supervisors' experiences in providing supervision. Ten semi-structured interviews were conducted with supervisors and directors of supervision within sport psychology programs in the US that had between two and 26 years of experience providing supervision ( $M = 17.3$ ; 4 females, 6 males). The supervisors represented sport psychology programs in institutes with different levels of research intensity, and both sport science and psychology backgrounds. The interviews were transcribed verbatim and data were analyzed both inductively as themes emerged, and deductively as guided by the research questions. Themes regarding supervisors' competencies that emerged from most supervisors were being an effective communicator, having a strong understanding of ethical issues, having specific education in supervision, and self-awareness of values, biases, and boundaries of competence. The two main themes reported by the supervisors regarding mistakes they made in the provision of supervision were being ineffective in building a trusting relationship with the supervisee and lack of availability for the supervisees. Repeated themes regarding challenges in providing effective supervision were lack of time and departmental support. Results of this study can provide insight to supervisors of the competencies necessary to provide supervision as well as challenges and hurdles they can anticipate and potentially avoid. With little data and uniformity in the field in regards to effective supervision, the results could prove useful in creating a more structured program to train supervisors.

## LEC-05: Exercise/Health/Fitness

### LEC-05A

#### EFFECTS OF A PEER-ASSISTED PHYSICAL ACTIVITY PROGRAM AS AN ADJUNCT IN THE TREATMENT OF DEPRESSION AND/OR ANXIETY IN COLLEGE STUDENTS

*Sheila Alicea, Humboldt State University, USA*  
*Jessica VanArsdale, Humboldt State University, USA*  
*Linda Keeler, Western Washington University, USA*  
*Deborah Stewart, California State University, Chico, USA*

The number of college students diagnosed with clinical depression and anxiety has significantly increased in the past decade (American College Health Association, 2016). Exercise is one treatment that is effective in reducing anxiety and depression (Lox, Martin Ginis, & Petruzzello, 2014), and additional research is needed to support a peer-mentored approach. This presentation summarizes an important replication experiment examining the effects of a peer-assisted physical activity program as an adjunct in the treatment of depression and/or anxiety in college students. The participants with anxiety and/or depression included 33 undergraduate students (28 females, 5 males) at a four-year university in the spring and fall 2016 semesters. During the program, participants met with peer mentors two hours per week to participate in self-selected physical activities. Participants completed the Zung Depression Scale, the Depression, Anxiety and Stress Scale-21 Items (DASS-21), the Psychological Need Satisfaction in Exercise Scale, the Self-Efficacy for Exercise Scale, and the Godin Leisure-Time Exercise Questionnaire at the beginning and end of the 10-12 week program, and a supplemental questionnaire with feedback at the end of the program. Results from the paired samples t-tests comparing scores from the beginning to the end of the program showed depression scores significantly decreased on both the Zung ( $t=4.489$ ,  $p=0.000$ ,  $d=0.96$ ) and the DASS-21 ( $t=3.950$ ,  $p=0.001$ ,  $d=0.79$ ), anxiety scores significantly decreased ( $t=4.551$ ,  $p=0.000$ ,  $d=0.91$ ), scores for all three basic psychological needs significantly increased: competence ( $t=-4.007$ ,  $p=0.001$ ,  $d=0.84$ ), autonomy ( $t=-3.980$ ,  $p=0.001$ ,  $d=0.81$ ), and relatedness ( $t=-4.988$ ,  $p=0.000$ ,  $d=1.06$ ), and weekly physical activity levels significantly increased ( $t=-3.693$ ,  $p=0.001$ ,  $d=0.74$ ). Mean scores for self-efficacy for exercise increased but not significantly. Results support previous research conducted in similar programs at two other universities. There is now multi-site support for this intervention; therefore, strategies for implementing this program at other schools/universities will be discussed.

### LEC-05B

#### THE IMPACT OF THE PERCEIVED MOTIVATIONAL CLIMATE IN HIGH SCHOOL PHYSICAL EDUCATION CLASSES ON STATE COGNITIVE STRESS & COPING APPRAISALS, LIFE STRESS, AND INTERNALIZED SHAME

*Candace Hogue, University of Kansas, USA*  
*Mary Fry, University of Kansas, USA*

Physical education (PE) can be instrumental in promoting physically active lifestyles and well-being among youth. Beyond the many health-related benefits of PE is the opportunity to provide youth with an affirming, supportive experience that may help them cope with life stressors that often accompany adolescence. However, these benefits are not guaranteed,

and often the very opposite occurs, with youth subjected to psychosocial threats that can adversely impact their mental and physical well-being (Bean et al., 2014; Larson et al., 2006). Achievement Goal Theory (AGT; Nicholls, 1984, 1989) research supports the contention that the psychosocial environment cultivated by PE teachers contributes to such outcomes. The purpose of the current study was to examine the relationship between high school students' perceptions of the motivational climate (i.e., caring, task-, and ego-involving) in their PE classes to state cognitive stress and coping appraisals (Gaab et al., 2005), life stress (Cohen et al., 1983), and internalized shame (Cook, 1996). Students (N = 349; Mage = 15.69) completed questionnaires during PE class, near the end of the semester. Structural equation modeling analysis revealed the relationship between perceptions of task-involving features in students' PE class and appraisals of coping resources (i.e., competence and control) were positive and linear. In contrast, there was a positive and linear relationship between perceptions of ego-involving features and life stress and internalized shame  $\chi^2$  (156), 192.384,  $p = .0253$ ; RMSEA = .026 [.010-.037], CFI = .993, TLI = .990, SRMR = .031. Consistent with AGT, results suggest efforts to create a more caring, task-involving climate in PE classes may empower youth by providing greater coping resources that assist them in managing the stress that can accompany group-based physical activity, while ego-involving climates elicit feelings of shame and also significantly contribute to the greater life stress experienced by youth.

## LEC-05C

### GO WITH THE FLOW: IMPLEMENTATION OF A PSYCHOLOGICAL SKILLS INTERVENTION INTO AN EXERCISE PROGRAM FOR POST-BARIATRIC SURGERY PATIENTS

*Sara Rothberger, The University of North Carolina at Greensboro, USA*  
*Diane Gill, UNCG, USA*  
*Paul Davis, UNCG, USA*  
*Jeaneane Wilson, Department of Bariatrics and Wellness, Cone Health, USA*

The Bariatric Exercise Lifestyle Transformation (BELT) program is designed to help individuals who have undergone bariatric surgery adopt a physically active lifestyle. Previously, this program had no integration of behavioral change or psychological skills training and very few participants had plans for continuing exercise upon completing the program. Thus, this program provided a guide for the development of an action plan focusing on behavior change and the transition from the 16-week BELT program into long-term physical activity. Following a Lifestyle of Wellness (FLOW) is based on social cognitive theory (Bandura, 2004), and includes psychological and behavioral strategies designed to increase self-efficacy and motivation to maintain a healthy lifestyle, as well as overcome potential barriers and avoid relapse. This intervention was integrated into the BELT program, which included interactive activities, informational sessions, SMART goal-setting, and the establishment of an agreed-upon action plan for continued physical activity. As part of a feasibility study, 11 participants (10 females and 1 male) completed the FLOW program. A variety of data sources were used

to assess the effectiveness of the program including self-report questionnaires, intervention evaluations, and semi-structured interviews. Results indicated participants enjoyed the program and felt ready to continue with a physically active lifestyle upon program graduation. Interviews indicated that individuals believed the FLOW program was effective for increasing positive self-perceptions, learning psychological skills necessary for behavior change, and improving motivation to exercise. The most effective psychological skills sessions were found to be goal setting, future preparation and planning, and stress management. Participants noted the support and accountability from the program facilitator enhanced their experience. Suggestions for program improvement were also provided. This information can be used to improve the FLOW program moving forward and allow for implementation into other settings with additional clinical populations, among local communities, and in university settings.

## LEC-05D

### APPLIED EXERCISE PSYCHOLOGY: UTILIZING TECHNOLOGY TO PROMOTE YOUR PRACTICE

*Jeffrey Pauline, Syracuse University, USA*

Applied exercise psychology is the application of psychological factors to promote, adopt, and maintain leisure time physical activity and exercise (Anshel et al., 1991; Lox, Martin, & Petruzzelle, 2003; Pauline, 2017). An exercise psychology practitioner works with diverse clients who are typically overweight or obese, unfit, have recurring physical and mental health issues, and at risk for or diagnosed with a chronic disease such as heart disease, high blood pressure, and type 2 diabetes. The emerging practice of applied exercise psychology can be highly rewarding, yet challenging. One of the most challenging aspects of private practice for all mental health professionals, including exercise psychology, is the business side of the profession. This stems from the fact that most graduate programs, in psychology or movement sciences, do not adequately prepare students for the business aspects of the profession. Nonetheless, the manner in which exercise psychology consultants manage the business of their practice can influence profitability, personal value of their career, and quality of their service provision to their clients. In today's digital world, it is essential for exercise psychology consultants to promote their practice through digital platforms (i.e., internet websites, blogs, podcasts, and YouTube) and social media platforms (i.e., LinkedIn, Twitter, and Facebook). The learning objectives for the presentation are to understand APA Ethics Code (2010) and AASP Ethics Code (1994) related to advertisement and promotion, describe the evolution and changes of advertising practices by mental health professionals, develop competency to utilize digital and social media, and apply good practices for maintaining privacy and confidentiality when utilizing technology to increasing one's visibility. The presentation will conclude with a discussion of the possible complications for the practitioner (time, cost, and increased caseload), clients (cost and accessibility to practitioner), and profession (monitoring advertisement activities) when engaging in the promotion of one's private practice.

## LEC-06: Youth Sport I

**LEC-06A****EXPLORING THE RELATIONSHIP BETWEEN MOTIVATIONAL CLIMATE AND SHAME**

Mario Fontana, Northern State University, USA  
Mary Fry, University of Kansas, USA

Athletes have been shown to experience shame while playing sport, both for their preparation (process shame) and for outcomes (result shame) during competition (Fontana & Fry, 2017). The purpose of this study was to explore how motivational climate affects athletes' process shame and result shame, and to further validate the Shame in Sport Questionnaire (SSQ). A questionnaire was administered to 259 track and field athletes before a practice three weeks into the season. The athletes were surveyed on their proneness to experiencing shame via the SSQ and the perceived motivational climate via the Perceived Motivational Climate in Sport Questionnaire (Seifriz, Duda, & Chi, 1992) and the Caring Climate Scale (Newton et al., 2007). To determine how motivational climate affects shame proneness, a structural equation model analysis was employed. A perceived caring and task-involving motivational climate was shown to positively affect athletes' process shame and negatively affect athletes' result shame. Perceptions of an ego-involving motivational climate were shown to negatively affect athletes' process shame and positively affect athletes' result shame. Athletes who feel supported by coaches and also feel that high effort and improvement are valued most on their teams are likely to experience shame only for circumstances under their control (lack of preparation and effort). Additionally, athletes who feel that winning and high performance are valued most on their teams are more likely to experience shame for things that are out of their control (performance outcomes).

**LEC-06B****BREAKING THE MOULD: TALKING EMOTIONS WITH ACADEMY SOCCER COACHES**

Philippa McGregor, Manchester City Football Club, UK  
David Fletcher, Loughborough University, UK  
Raymond Randall, Loughborough University, UK  
Stacy Winter, St Mary's University, UK

Within professional academy soccer the youth development phase (YDP; ages 11 -16 years) marks a period of profound change for players given that it coincides with adolescence (Steinberg, 2008). Adolescence is a period of development often accompanied by heightened emotional reactivity, hypersensitivity, instability, and poor regulation (Powers & Casey, 2015). For this reason, the area of emotional regulation has been identified as a salient target for applied work with adolescents, given the potential scaffolding it could provide during a time of emotional vulnerability (Ahmed, Bittencourt-Hewitt, & Sebastian, 2015). The purpose of this study was to gain insight into the experiences and perceptions of youth development soccer coaches around supporting adolescent players' emotional regulation.

Semi-structured interviews were conducted with 12 YDP soccer coaches. The interviews were transcribed verbatim

and inductively content analyzed (Braun & Clarke, 2006). A range of factors were identified relating to the emotions players have, when they have them, and how they are experienced and expressed. These were conceptualized into six higher-order categories: behavioural emotional expression (e.g., improved work rate; isolation from group), emotional stimulating triggers (e.g., competition; sacrifices made), player experiences (e.g., the academy environment; life outside of football), significant others (e.g., team; parents; coaches), playing situations (e.g., match day; training), and individual considerations (e.g., character; stage of development). Strategies coaches reported employing included eight lower-order themes: individual support, group support, rationalization, consequences, humor, deliberate practices, delayed support, and modelling behaviors.

These findings highlight the complexity of emotion regulation for this specific population (Ahmed et al., 2015; Harwood, 2008). However, an overall lack of understanding of adolescent emotional development was apparent. Coaches identified making use of a variety of strategies to support players' emotional regulation, yet there appeared limited conscious consideration given for the strategies they utilized, their implementation, and the evaluation of their effectiveness.

**LEC-06C****EXAMINING THE RELATION OF GROWTH MINDSET TO GRIT IN HIGH SCHOOL ATHLETES**

Eric Legg, Arizona State University, USA  
Lori Gano-Overway, Bridgewater College, USA  
Aubrey Newland, CSU Chico, USA

Grit is a potentially powerful outcome of participation in sport. Defined as passion and perseverance toward long-term goals, research suggests that grit is a stronger predictor of success than talent in such diverse outcomes as educational attainment and retention, grade-point average, job retention, and success in the National Spelling Bee (Duckworth et al., 2007; Duckworth & Quinn, 2009; Eskreis-Winkler et al., 2014). Further, research points to grit as a predictor of sport-specific engagement and higher scores on a performance-related task in youth soccer players, suggesting grit may be applicable to sport settings as well (Larkin et al., 2015). Despite the potential value of grit, little is understood about its' predictors. Recently, Duckworth (2016) suggested that one predictor is growth mindset. However, little empirical evidence supports this conclusion, and no research has examined this relationship within sport. Therefore, the purpose of this study was to investigate the relationship between mindset and grit among high school athletes. It was hypothesized that a growth mindset would positively predict grit while a fixed mindset would negatively predict grit. The participants, 556 male (n=302) and female (n=225) student-athletes from a variety of sports, completed a multi-questionnaire survey at the end of their competitive season. The survey included the Short Grit Scale (Duckworth & Quinn, 2009) and the Mindset Scale (Dweck, 2006). Testing the hypotheses using structural equation modeling revealed the proposed model adequately fit the data,  $\chi^2(97)=264.15$ ,  $TLI=.93$ ,  $CFI=.94$ ,  $RMSEA=.05$ ,  $SRMR=.05$ . A growth mindset positively predicted perseverance and effort, while a fixed mindset negatively predicted consistency of interest. Findings suggest that student-athletes with a growth mindset are more likely to persevere and try hard. Future research should explore whether coaches' cultivation of a growth mindset fosters grit supporting these correlational results.



## LEC-06D

### FROM MAPS TO METRICS: INITIAL TESTING OF THE SPORT PARTICIPATION ASSESSMENT OF FUN

*Amanda Visek, The George Washington University, USA  
Heather Mannix, The George Washington University, USA  
Avinash Chandran, The George Washington University, USA  
Sean Cleary, The George Washington University, USA  
Karen McDonnell, The George Washington University, USA  
Loretta DiPietro, The George Washington University, USA*

A congregate of research literature clearly establishes “fun” as the foundation to ensure continued sport participation, whereas negative uninspiring experiences deemed “not fun” push children to drop out. A product of innovative concept mapping methods, the fun integration theory’s scientific blueprints (FUN MAPS) indicate fun for young athletes is the accumulation of immediate experiences from contextual, internal, social, and external sources derived from 81 fun-determinants conceptualized within 11 interrelated fun-factors. Concept mapping methods naturally lead to the development of evaluation metrics (Kane & Trochim, 2007). Therefore, the purpose of this study was to develop and test an instrument designed from the fun integration theory’s FUN MAPS to measure how much fun youth sport participants are experiencing. This is important because robust measurement tools are needed to evaluate, monitor, and improve the quality of young athletes’ sport experiences. Development of the instrument involved: (a) reducing the 81 fun-determinants down to fewer items using item-reduction analysis; (b) editing the syntax of the items for reading comprehension and ease; and (c) cognitive interviewing of young athletes (n = 25) to refine the items and improve the instrument’s validity. The resultant 62-item instrument was tested in a sample of youth soccer players (N = 423), ages 9-19 years old, stratified across sex (girls, boys) and recreational/travel programs. Exploratory factor analysis, using principal axis factoring and an oblique rotation method (promax), resulted in 6 factors with an eigenvalue > 1. The 6-factor solution (Learning & improving, Positive coaching, Positive team dynamics, Team rituals, Practices, Game time support) accounted for 83% of the variance and an interpretable solution similar to the FUN MAPS. Forty-eight items loaded onto the 6 factors and yielded strong internal consistency (.72-.92). Results are examined comparative to the instrument’s science-practice utility. Directions for further testing the instrument will also be discussed.

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## LEC-07: Mental Health II

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## LEC-07A

### STUDENT-ATHLETES’ MENTAL HEALTH HELP-SEEKING EXPERIENCES: A MIXED METHODOLOGICAL APPROACH

*Matthew Bird, Florida State University, USA  
Graig Chow, Florida State University, USA  
Brandon Cooper, Florida State University, USA*

This study investigated student-athletes’ experiences of seeking help for a mental health concern using the Health Belief Model (HBM) as a conceptual framework. A convergent mixed methodological design was utilized to collect qualitative and quantitative data pertaining to the perceived

seriousness, perceived susceptibility, perceived benefits, perceived barriers, self-efficacy, and cues to action, factors of the model. Five National Collegiate Athletic Association Division I student-athletes who had previously sought help for a mental health concern participated in this study. Participants completed a semi-structured qualitative interview followed by a quantitative survey. Results suggest student-athletes who sought help for a mental health concern believed the issues they were experiencing to be serious enough to seek help, but acknowledged it was unexpected that they would experience such a problem. Student-athletes perceived numerous benefits of engaging in a help-seeking relationship with a mental health provider including learning coping skills from this professional. Participants attributed the relationship with the mental health professional as a factor which influenced their self-efficacy to overcome their mental health concern, while discussions with family and friends were a cue to help-seeking. A belief that there was no need to seek help, and disclosing sensitive information to a professional, were identified as barriers to seeking help. Quantitative results complimented the qualitative data. Participants reported high perceived benefits of seeking help, and high self-efficacy in knowing how to interface with, and deal with, the consequences of entering the mental health care system. Additionally, student-athletes reported scores in the moderate range on the perceived seriousness and perceived susceptibility scales. Findings from this study support the theory of help-seeking behavior proposed by the HBM. Qualitative themes and high scores on the perceived benefits, and self-efficacy quantitative scales, suggest these two factors are important influences of help-seeking behavior for mental health purposes among student-athletes.

## LEC-07B

### THERAPEUTIC MOVEMENT: SCHOOL-WIDE INTEGRATION OF PHYSICAL ACTIVITY AND COUNSELING

*Laura Hayden, University of Massachusetts Boston, USA*

Given the social, emotional, and academic benefits of physical activity on youth development (e.g. Hellison, 2011), we undertook a line of inquiry aimed at exploring the interest and required conditions under which school-based counselors might integrate physical activity into their counseling with youth. This presentation describes the results of two separate studies exploring this phenomenon. Study 1 explores factors that influence school counselors to use physical activity as a means of developing relationships with students and how physical activity might contribute to social and emotional development. Using inferential statistics, we found that school counselors, especially those who were also athletic coaches, were interested in collaborating with coaches, using physical activity to develop relationships or life skills with youth, and receiving professional development to support integrating physical activity into their work. These findings, while significant, were only able to ascertain that an interest actually existed; they were unable to expand on such an interest. Therefore, study 2 presents qualitative findings to supplement the quantitative exploration of school counselors’ opinions on using physical activity for youth development outcomes and the corollaries of such engagement. Through inductive content analysis of survey results from 338 school counselors, we found support for collaborating with coaches and using physical activity to develop life skills, in addition to interest in training opportunities for school counselors to integrate physical activity into their job. We also found, however, real and perceived barriers to systemic integration

of socio-emotional development through physical activity into the school system (Hayden, et al., under review). We provide practical implications that focus on system-based change and collaborative opportunities for school-based counselors to integrate physical activity into the school day.

## LEC-07C

### A CROSS-SECTIONAL EXAMINATION OF WELL-BEING IN SPORT COACHES

*Brendan Cropley, University of South Wales, UK  
Stephen Mellalieu, Cardiff Metropolitan University, UK  
Christopher Wagstaff, University of Portsmouth, UK  
Rich Neil, Cardiff Metropolitan University, UK  
Ross Wadey, St. Mary's University, London, UK*

It is widely acknowledged that coaches are expected to consistently perform in a job role that is multifaceted and in environments characterised by complexity and ambiguity (Fletcher & Scott, 2010). Such positions are thought to place considerable demands on the well-being of the individual. This study aimed to provide an insight into the levels of well-being and the prevalence of psychological issues associated with ill-being amongst sports coaches in the UK. Following receipt of institutional ethical approval, a cross-sectional approach was adopted whereby Williams and Smith's (2012) Well-Being Process Questionnaire was distributed to coaches registered with UK National Governing Bodies of sport. The sample (n = 165) consisted of male (n = 98) and female (n = 67), elite (n = 89) and non-elite (n = 76) coaches from team (n = 109) and individual (n = 56) sports. Utilizing non-parametric statistics (e.g., Kruskal-Wallis) no differences were found between genders, sport type or the level of performance for overall levels of well-being. However, results indicated that 25% of the sample reported low overall well-being, with 7% totalling negative well-being and 45% mid-low overall well-being. Results also indicated a significant number of coaches with high levels of anxiety, life and job stress, and work withdrawal difficulties. These results have significant implications for coaches both on a personal and professional level. The prevalence of low levels of well-being experienced in this study has the potential to impact on the physical health of coaches as well as on their ability to build and sustain positive relationships both in and out of sport. Further, such symptoms are likely to impair a coach's ability to fulfil their multiple and often demanding roles. Consequently, future research is needed to gain a better understanding of the factors contributing to such mental states.

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## LEC-08: Coaching

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## LEC-08A

### THE INFLUENCE OF NCAA HEAD COACHES ON ASSISTANT COACHES' BASIC PSYCHOLOGICAL NEEDS

*Sara Erdner, University of Tennessee, USA  
Rebecca Zakrajsek, University of Tennessee, USA  
Johannes Raabe, University of Tuebingen, Germany  
Andrew Bass, University of Tennessee, USA  
Tucker Readdy, University of Wyoming, USA  
Matthew Carnell, University of Tennessee, USA*

Self-determination theory (Deci & Ryan, 2000) offers a practical framework for coaches to effectively foster climates

that nurture optimal development and functioning among the athletes they work with. The main premise of this theory is that positive sport experiences are more likely to occur when individuals' three basic psychological needs of autonomy, competence, and relatedness are satisfied. Researchers have largely examined these tenets within the coach-athlete relationship (e.g., Mageau & Vallerand, 2003); yet, head coaches can also meaningfully influence the way members of their coaching staff think, feel, and perform (Cushion, Armour, & Jones, 2003). In the current study, seventeen National Collegiate Athletic Association assistant coaches (nine assistant, eight associate) were interviewed about their relationship with head coaches and the ways in which head coaches influenced their basic psychological needs. Using Consensual Qualitative Research (Hill, 2012) procedures, three domains were constructed: (a) assistant coaches have a need to make a difference, (b) making assistant coaches feel valued and connected strengthens their motivation, and (c) investing in quality communication cultivates feeling valued and connected. Assistant coaches reported a desire to impact athlete development and add value to the team. Giving assistant coaches responsibilities, genuinely seeking their opinion, recognizing their efforts, caring about and respecting them as people, and investing in their professional development were reported as effective ways head coaches nurtured assistant coaches' need fulfillment and motivation. However, an inherent power dynamic existed between head and assistant coaches. It was clear that head coaches possessed the authority to make the final decisions. During stressful times throughout the season, head coaches exercised their power most and interacted with assistants in ways that diminished feelings of value and connection. The focus of this presentation will be on the ways head coaches can interact with assistants to promote their positive development.

## LEC-08B

### THE CREATION AND EXPERIENCE OF A CHAMPIONSHIP TEAM CULTURE IN NCAA DIVISION I FIELD HOCKEY

*Jenelle Gilbert, California State University, Fresno, USA  
Jamie Robbins, Methodist University, USA  
Wade Gilbert, California State University, Fresno, USA  
Jeffrey Ruser, California State University, Fresno, USA*

Researchers have begun to explore how high-performance coaches build championship teams and experience multiple successful seasons (Lara-Bercial & Mallett, 2016; Yukelson & Rose, 2014). Given their growing contributions of females to the coaching profession, the current study was used to examine how successful female coaches create and experience a championship culture using self-determination theory (Deci & Ryan, 2000) as the conceptual framework. Seven NCAA DI head coaches were selected based on their experience (26 to 37 years), and history of program growth and success (Conference and/or National Championship wins). Coaches participated in semi-structured interviews (45-120 minutes) that were audiotaped, transcribed verbatim, and returned for member checking. Results showed coaches' perceptions of competence increased throughout their careers and was linked to their team's success. Coaches explained increasing athletes' feelings of competence by giving athletes specific roles and helping them to not fear failure. The importance of relatedness between coach and athlete differed based on coach personality, thus results revealed the use of various strategies including team bonding activities, open communication, honesty about roles, performance, and playing time, respecting athletes' desires

for a relationship (i.e., not forcing a close relationship), and using assistant coaches. Autonomy was noteworthy in terms of both how coaches experienced their environment and the environment they created for their team. A key theme under autonomy was “choice within limits.” They created an overall climate and roles within which rules and disciplinary actions fit. Coaches explained the importance of autonomy for their athletes, their assistants, and themselves. Further details and possible explanations of findings will be discussed, along with implications for coaches and mental training practitioners. A unique contribution of the study is the perspective of female coaches in building and experiencing championship team cultures, something that has rarely been examined.

## LEC-08C

### PROFILES OF PSYCHOLOGICAL FUNCTIONING AND THEIR RELATIONSHIP WITH SELF-REGULATION CAPACITY AND PERCEIVED STRESS AMONG COACHES

*Kylie McNeill, University of Ottawa, Canada*  
*Natalie Durand-Bush, University of Ottawa, Canada*  
*Pierre-Nicolas Lemyre, Norwegian School of Sport Sciences, Norway*

While considerable literature on coaches’ functioning has focused on their ill-being (e.g., burnout, stress; Fletcher & Scott, 2010), researchers have begun to acknowledge that a more complete understanding of coaches’ psychological states necessitates an exploration of positive features of functioning (i.e., well-being) as well (Stebbing & Taylor, 2016). Although ill-being and well-being represent distinct dimensions of functioning, in this study we argue that there is a need to study these dimensions together to understand how coaches in different profiles may differ on relevant psychological correlates, such as their capacity to self-regulate and how they appraise stress. Specifically, we investigated how indices of psychological functioning (i.e., burnout and well-being) were associated with self-regulation capacity and perceived stress in a sample of 250 Canadian competitive sport coaches. Using a two-stage cluster analysis (Hair, Black, Babin, & Anderson, 2010), three profiles of psychological functioning in coaches were identified within the sample: (a) thriving (n = 135, characterized by relatively low burnout and high well-being), (b) at-risk (n = 79, characterized by relatively high burnout and moderate well-being), and (c) depleted (n = 36, characterized by relatively high burnout and low well-being). Results of a MANOVA revealed that the profiles could be distinguished based on self-regulation capacity and perceived stress. Specifically, coaches within the thriving profile had significantly higher levels of self-regulation and lower levels of perceived stress than coaches in the at-risk and depleted profiles. Coaches within the depleted profile had significantly higher levels of perceived stress than coaches in the at-risk profile. Practical implications to help coaches maintain optimal psychological functioning and strengthen self-management skills in stressful environments are discussed in light of Keyes’ (2002) dual-continuum model of mental health and Zimmerman’s (2000) model of self-regulation. Proven self-regulation exercises utilized with depleted and at risk coaches are shared to facilitate knowledge transfer.

## LEC-09: Collegiate Sport I

### LEC-09A

#### 360 REVIEW: SELF, TEAMMATE, AND COACH EVALUATION FOR PERSONAL DEVELOPMENT

*Cory Shaffer, Lowdergroup/Clemson University, USA*

In preparation for the 2016 Rio Olympics, the U.S Women’s Volleyball team used anonymous peer reviews to provide feedback to players on their strengths and areas of improvement leading up to the games. Similar to this approach, three collegiate sports teams (men’s soccer, women’s soccer, and men’s basketball) at a large Division I university participated in a comprehensive intervention in which each player filled out self- and peer-evaluations on a variety of characteristics, including traits like leadership, discipline, mental toughness, and emotional control. Additionally, each member of the respective coaching staffs evaluated their players on the same characteristics. Characteristics were scored on a 1-10 Likert-type scale, with descriptive anchors provided. Peer and coaching staff scores were averaged, and results were provided to individuals in a graphical (bar chart) format, with separate bars for self, peer, and coach scores. The purpose of the intervention was to gauge student-athlete self-awareness and to provide holistic feedback to each player on strengths and areas for improvement. The mental performance coach met with the head coaches of each team to develop the list of attributes to be assessed, and how the information was dispersed to each team varied by program. Based on the feedback from coaches and teammates, players worked with the mental performance coach on establishing goals for personal development and growth in areas with the largest discrepancies or room for improvement (similar to the performance profile approach modeled by Butler, 1989). This “360-degree” review process provided valuable information to aid in character and personal development, and with the combination of teammate and coach evaluations was valued by the student-athletes. This lecture will discuss the design, implementation, and evaluation of the 360 review and suggestions for practical application for practitioners.

### LEC-09B

#### A NATURALISTIC INVESTIGATION OF MINDFUL SPORT PERFORMANCE ENHANCEMENT: DEVELOPING A MINDFUL TEAM CULTURE

*Timothy Pineau, Marymount University, USA*

There has been rapidly growing empirical support for mindfulness-based interventions for athletes. However, most of this research does not address a primary recommendation often associated with mindfulness-based approaches, which is to integrate mindfulness into the culture of a team rather than ‘parachuting in’ to address a specific issue.

This lecture will explore the long-term impact of mindful sport performance enhancement (MSPE: Kaufman, Glass, & Pineau, in press) with a women’s team at a Division III university. A unique feature of this research is the sustained contact between the team and the MSPE leader after the 6-session program, which included follow-up sessions and consultations with the coach on ways to incorporate mindfulness into the team culture. Athletes and their head coach participated in MSPE prior to the spring 2016 competitive season, and completed

measures of mindfulness, sport anxiety, flow, experiential avoidance, and self-rated performance before and after the intervention, as well as at the end of their competitive season. Another assessment point is planned for the end of the spring 2017 season. Coach-rated performance was also assessed at these time points.

Results to date have demonstrated significant changes at post-test in the anticipated directions in all domains except coach-rated performance, and these gains were maintained at the post-season follow-up. Additional increases in coach-rated performance were also found post season. Along with presenting these results in detail (including the upcoming follow-up), anecdotal information from team sessions and ongoing conversations with the coach will highlight the shift toward a mindful team culture. These findings will inform a discussion of the importance of continued contact between athletes and sport psychology service providers, and the ways in which this contact, as well as other factors (e.g., coach involvement, athletic department support) can help contribute to the development of a mindful team culture.

### LEC-09C

#### **THE IMPACT OF ENVIRONMENT, LEADERSHIP AND TEAM COHESION ON SUCCESS AND SATISFACTION: AN ETHNOGRAPHIC STUDY OF ONE NCAA MEN'S GYMNASTICS TEAM**

*Jamie Robbins, Methodist University, USA*  
*Leilani Madrigal, California State University, Long Beach, USA*

Gymnastics is an interesting sport because it allows for both individual and team adulation. A gymnast can win All-Around titles or place on single events, while teams win meets or National Championships. This team aspect has been ignored in existing empirical research, which focuses on factors that separate individual athletes, such as self-confidence, anxiety and self-efficacy (Cartoni, Minganti, & Zelli, 2005; DaPero, Minganti, Pesce, Capranica, & Piacentini, 2013; Mahoney & Avenier, 1977). Given the importance of understanding team effectiveness in a sport context and the scant existing data on men's gymnastics in relation to team dynamics and success, the current study selected one collegiate team, currently performing above their previous performance average, to identify factors they perceived as influential on their success and satisfaction. An ethnographic approach was used to uncover the unique culture of this team. Fourteen athletes, three coaches and one Athletic Trainer participated in semi-structured interviews, and athletes responded to a short questionnaire following the final meet of the season. Data were analyzed according to recommendations from Wolcott (1994) and Côté, Salmela, Baria, and Russell, (1993). Findings revealed numerous factors that influenced the motivational climate. In accordance with Carron and Hausenblas's (1998) conceptual framework, we can demonstrate the interaction of the environment (i.e. available resources and University support), member attributes (i.e., coaches', athletes' and athletic trainer's qualities), leadership structure, team cohesion (i.e. task and social), and ultimate success and satisfaction of the participants; however, the findings reveal more of a cyclical rather than a linear model. Most notable findings demonstrate the connection between athlete needs and provisions granted, general appreciation of participants, a focus on strengths, and team cohesion. Further discussion will include practical advice for coaches, athletes and athletic trainers regarding positivity, commitment, openness to change and effective goal setting.

### LEC-09D

#### **ADDRESSING ATHLETE TRANSITION THROUGH COPING AND OTHER PROACTIVE TECHNIQUES**

*Kimberly Cologgi, Barry University, USA*  
*Graig Chow, Florida State University, USA*

Understanding athlete transition is a complex process which involves many subjective pieces. A review of previous literature on athletic career termination has shown that two of the most highly debated topics include athletes' specific reason for retirement (Cockerill 2004; Orlick & Sinclair 1993; Webb, Nasco, Riley, & Headrick 1998), and the coping techniques employed by athletes during their transition period (Coakley 1983; Grove, Lavalley, & Gordon, 1997; Lavalley 2005; Reynolds 1981; Sinclair & Orlick, 1993). The purpose of this study was to examine important components involved in retirement from National Collegiate Athletic Association (NCAA) competitive athletics. Self-concept clarity was conceptualized as the primary variable of focus because it tends to be internally consistent over time (Lodi-Smith & Roberts, 2010), and previous studies have shown role exits and entries negatively affect one's perceived self-concept clarity (Light & Visser, 2013). Participants were female (n=148) and male (n=89) former NCAA athletes from over 75 different Division I colleges and universities across the United States, ranging in age from 20 to 27 years old (M=22.47, SD=.837). Participants were to be no more than 12 months removed from their last NCAA game or practice, to ensure they were actively going through a transition phase and not recalling their feelings retrospectively. Path analyses were used to determine which factors significantly contributed to athlete self-concept clarity, and overall life satisfaction. Findings revealed exciting results about the positive effects of problem-focused coping and athlete's perceived willingness to retire. The aim of this presentation is to educate practitioners on things they can do to actively help their athletes transition out of sport while remaining true to themselves, and keeping their self-concept clarity intact.

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### LEC-10: Elite/Pro Sport I

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### LEC-10A

#### **COPING STRATEGIES AND RESOURCES IN THE NATIONAL HOCKEY LEAGUE: AN INDUCTIVE THEMATIC ANALYSIS WITH CANADIAN PROFESSIONAL ICE-HOCKEY PLAYERS**

*Randy Battochio, Laurentian University, Canada*  
*Robert Schinke, Laurentian University, Canada*  
*Natalia Stambulova, Halmstad University, Sweden*

Canadian ice-hockey players must overcome numerous stressors throughout their National Hockey League (NHL) careers. Though sport psychology researchers have conducted preliminary studies, theoretical restrictions, small participant numbers, and the use of a structured interview guide have limited breadth of knowledge. Our authors constructed a comprehensive empirical career model by eliciting 23 Canadian NHL players. The intent in the presentation is to feature the stressors, barriers, coping strategies and resources utilised at each status and career stage. Five rookies, five veterans, and 13 retirees agreed to participate in conversational interviews before their transcripts underwent an interpretive thematic

analysis (Braun & Clarke, 2012). Prospects seeking to gain entry into the NHL needed (a) realistic expectations of draft pressures, (b) training camp expectations, (c) identify the team's needs, and (d) if demoted, readjust their expectations. Rookies developing as NHL players needed a high compete level when called-up while sophomores developed by (a) knowing their opponents, (b) generating role player production, and (c) made friendships. Veterans seeking to be All-Stars coped by (a) practicing scoring and creating scoring chances, and (b) showing Stanley Cup determination. Seasoned veterans extended their careers by preserving their physique. The authors will discuss the practical applications for sport psychology consultants tasked with ensuring that professional ice-hockey players move effectively through career transitions including entering the NHL, developing as an NHL players, reaching the NHL elite, and maintaining NHL play involvement. The authors will also speak about teammates, coaches, and support staff hoping to be effective resources to their players' career progression.

### LEC-10B

#### DEVELOPMENT AND TRANSFER OF LIFE SKILLS: THE EXPERIENCES OF ELITE FEMALE FIGURE SKATERS AND THEIR FEMALE COACHES

*Élise Marsollier, Département d'éducation Physique Université Laval Québec, Canada*  
*Christiane Trottier, Université Laval, Canada*

Few studies have simultaneously considered the experiences of athletes and their coaches to examine the development and transfer of life skills, and even fewer have focused on female athletes and coaches. The aim of this study was to compare how elite female figure skaters and their female coaches experienced the development and transfer of life skills. We used a qualitative multiple-case study approach (Yin, 2014), with each case representing one coach and two of her skaters. Two semi-structured interviews each were held with six coaches and 12 skaters. First, the transcript contents were analyzed deductively and inductively (Miles et al. 2014; Yin, 2014). The deductive analysis was based on the study questions and the literature, including Pierce et al.'s (2017) model. Second, the six cases were cross-analysed. All coaches and athletes reported that the demands of the sport largely explained the development of life skills such as perseverance, commitment, and stepping out of one's comfort zone. There were also discrepancies across cases. Some coaches reported teaching life skills such as maintaining focus or other life skills important for healthy development (e.g., self-esteem, respect), and some athletes reported learning life skills that differed from those that the coaches reported teaching. Furthermore, the athletes explained that, with time and experience, they changed their identity according to learned life skills. The coaches reported that they rarely focused on life skills transfer, believing this to be the athletes' or their parents' responsibility. Overall, the athletes and coaches described an indirect development of life skills, with mostly implicit transfer, and the athletes appeared to be the key actors in this transfer.

### LEC-10C

#### THE JOURNEY FROM ANXIETY TO INNER PEACE - A MINDFULNESS-BASED INTERVENTION WITH A MULTI-MEDALIST 5-TIME PARALYMPIAN

*Amelie Soulard, University of Sherbrooke, Canada*

Mindfulness-based interventions have recently been introduced into the sport and performance enhancement sphere (Gardner & Moore, 2012) and have rapidly found a place of choice amongst mental training consultants' approaches and methods, showing a promising impact on athletes' performance and well-being (Bernier, Thienot, Codron & Fournier, 2009; Kee & Wang, 2008, Moore, 2009). However, studies using mindfulness-based interventions have mainly focused on younger (i.e. high school or college athletes) and able-bodied athletes (Sappington & Longshore, 2015). Literature involving mindfulness for Paralympic athletes is still rare, especially for those who Starkes, Cullen and MacMahon (2004) called 'transcendent experts'. This is the case-study of a multi-medallist, 5-time Paralympic swimmer who, over a period of a little more than one year progressed from experiencing anxiety attacks to performing with a feeling of "inner peace" in Rio Paralympic Games. The mindfulness-based protocol used in this intervention will be presented and its effects and underlying processes will be discussed in the light of the particular needs of elite Paralympic athletes.

### LEC-10D

#### WINNING AT THE RUGBY WORLD CUP 2015: DUAL LEADERSHIP MANAGEMENT OF THE JAPAN RUGBY

*Kaori Araki, Sonoda Women's University, Japan*

The purpose of the presentation is to share experiences as a consultant to build the weakest team in the world to winning team. At the 2015 Rugby World Cup, Japan won three matches against South Africa, Samoa, and the US. The winning against two-time champions South Africa was reported as a biggest upset in rugby union history. The players experienced psychological skills training for four seasons. The major purposes of the consultation were creating team culture and developing leadership skills. Based on transformational leadership theory (Bass, 1998), players were trained to develop skills related to idealized influence, inspirational motivation, individual consideration, and intellectual stimulation. Moreover, the Japan Rugby was led by dual management which is by coaching staff and players (Hodge et al., 2014). Developing and operating the players leadership group was the key to create a winning team. Besides the captain, on-field and off-field leaders were selected. Also, a leader who is responsible supporting foreign players and inexperience players was selected. The leadership group meetings were used to understand team conditions, set team goals, confirm leaders' responsibilities, evaluate leadership skills, create sets of questions and requests for coaching staff, decide details about captain's run and more. As the leadership group matured, it leads to empower players and became possible for them to keep desirable motivation and physical and psychological conditions. While the head coach suggested to choose a penalty goal kick to bring the game to an equal, the captain chose a scrum and try to win against South Africa. The decision by the captain showed that the players became independent from coaching staff and competent to play at the international level. "Creating a winning culture," "Change a history," and "Be spontaneous" were the team goals and all the goals were achieved by the end of the RWC2015.

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**LEC-11: Diversity & Culture**


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**LEC-11A****EXPLORING THE DIVERSITY OF AASP CERTIFIED CONSULTANTS AND THEIR EXPERIENCES OF DISCRIMINATION IN APPLIED PRACTICE**

Zachary McCarver, Ithaca College, USA  
 Shelby Anderson, Ithaca College, USA  
 Sebastian Harenberg, Ithaca College, USA  
 Justine Vosloo, Ithaca College, USA

Diversity can be defined as a variation in numerous characteristics (e.g., gender, race, ethnicity, sexual orientation, age, education level). A more diverse workplace may impact employee affect (e.g., satisfaction, commitment), achievement (e.g., performance) and overall organizational effectiveness (e.g., profits, market share) (Groggins & Ryan, 2012). Although the importance of diversity in the workforce has been explored, discrimination remains an important issue (Castleman, 2014). Anecdotal evidence suggests that CC-AASPs are subjected to discrimination within applied sport psychology (Barrett, 2015). Yet, there exists a lack of empirical research assessing diversity characteristics and experiences of discrimination of CC-AASPs. This was the purpose of the present study. A total of 154 AASP certified consultants (n = 76 females, 49.4%) completed a descriptive questionnaire assessing diversity and experiences of discrimination while working in the field of sport psychology. The participants identified predominantly as Caucasian (n = 138, 89.6%) and heterosexual (n = 139, 90.3%). Three quarters of the participants had completed a PhD (n = 117, 76%). One third of participants (n = 52, 33.8%) reported experiences of discrimination (e.g., sexism, racism, questioned competence) in their applied practice. Chi-Square analysis revealed that significantly more females (n = 38, 51.4%) than males (n = 14, 17.9%) experienced discrimination ( $\chi^2(1) = 18.83, p < .001, \phi = .35$ ). Female consultants were 4.83 times more likely to experience discrimination compared to their male counterparts. The results clearly indicate the need for further investment in the diversification of the field of applied sport psychology and the prevention of discrimination that consultants may experience. Recommendations for diversity education and discrimination prevention efforts will also be discussed.

**LEC-11B****UNDERSTANDING FACTORS INFLUENCING PHYSICAL ACTIVITY BEHAVIOR AMONG AFRICAN AMERICAN COLLEGE WOMEN**

Amanda Perkins-Ball, Benedictine University, USA

Many health behaviors are established in young adulthood; however, only 46.5% of college students meet physical activity recommendations (ACHA, 2013). Further, African American college women have higher rates of physical inactivity and overweight/obesity than their Caucasian counterparts (McArthur & Raedeke, 2009). African American college women face several challenges to achieving an active lifestyle, including culturally-specific factors such as tolerance for overweight and obesity, differing values ascribed to physical activity, and negative perceptions of the social climate at predominantly white institutions (PWIs)

(Ancis et al., 2000; Carter-Francique, 2011). The purpose of this study was to (a) examine current physical activity patterns and beliefs among black college women at a large PWI, (b) explore social context in which behaviors occur, and (c) investigate the relationship between psychosocial, cultural, physiological, and environmental factors influencing behavior. Undergraduate and graduate female students (N=112; Mage=20.06) who self-identified as African American and/or black completed online questionnaires, including the subscales of the Multidimensional Inventory of Black Identity (MIBI), and measures related to physical activity participation and health. Survey data was used to inform focus groups conducted with thirty-six women, in which psychosocial factors influencing physical activity (i.e., barriers/benefits, self-efficacy, social support), utilization of resources, and culturally relevant factors (i.e., racial identity, perceived campus climate) were explored. Thematic analyses of the focus group transcripts revealed themes related to negative perceptions of campus and academic climates, feelings of isolation and the need for relatedness, lack of exercise knowledge and fear of judgment while using campus recreational facilities. This study offers new insights in understanding black college women's participation in physical activity, particularly in regard to use of campus recreational facilities and can be used to develop physical activity programming to address the needs of black women on campus.

**LEC-11C****SPORT ACTIVISM IN ACTION: A SPORT FEMINIST APPROACH TO SUPPORT WOMEN ATHLETES**

Niteesa Brooks, Columbia University, USA  
 Shydia Snow, Long Island University, PEAK Center, USA

When athletes speak out on social issues it often generates controversy especially for minority athletes (Sanderson, Frederick, & Stocz, 2016) and particularly for women (Kaufman & Wolff, 2010). For example, in 2016 WNBA players were fined \$500 after wearing all black attire to support the victims of recent police shootings. Such penalties silence women to conform to male expectations of sport and neutrality as well as deters athletes from engaging in activism. In serving to enhance performance, sport and exercise psychology (SEP) professionals can assist athletes throughout their athletic growth by understanding and processing their interest in sport activism.

The purpose of this Women in Sports SIG-sponsored lecture is to provide attendees with a feminist theory-to-practice discussion on strategies to incorporate a feminist approach to sport activism via applied SEP practice. Athletes often have the ability to become social change agents due to their visibility and popularity (Pelak, 2005) and are able to use that status to become invested in social movements (Edwards, 1969). As a feminist approach intersectionality considers how race, gender, class, sexual orientation, and national origin reinforce particular areas of oppression (Sallah, 2011). This lecture will provide attendees with: 1) common barriers that hinder women athletes from being agents of social change; 2) methods to acknowledging and validating women athletes advocacy/activism challenges; 3) analyzing the applicability of a feminist-based approach to sport social activism; and 4) strategies for applying a feminist-centered framework to sport social activism.

## LEC-11D

### MINORITY, STUDENT, AND ATHLETE: MULTIRACIAL DIVISION I COLLEGE ATHLETES' STEREOTYPE THREAT EXPERIENCES

*Angel Brutus, Synergistic Solutions, LLC, USA*

The purpose of this qualitative transcendent phenomenological study was to understand the meanings ascribed by multiracial male and female NCAA Division I student athletes in the Southeast region of the United States to the lived experiences of stereotype threat. Stereotype threat is a phenomenon that is boundless and can influence any individual who adopts an individual or group-based social identity (Steele, 2011). Stereotype threat, as a theoretical framework was developed as part of Steele and Aronson's (1995) research on the phenomenon of underperformance, which extends social identity theory. Specifically, underperformance is defined as a performance behavior that is uncharacteristic of someone who otherwise has demonstrated competency and mastery over the achievement domain for which the person performs (Steele, 2011; Steele & Aronson, 1995).

By exploring the stereotype threat experiences of multiracial collegiate-athletes, this study extended the research of Comeaux (2012), Harrison (2012), and Steele (2011) who proved the existence of stereotype threat experiences among monoracial populations. For this study, analysis of respondents' verbalizations revealed 21 invariant constituents which were clustered into five themes. The modified Van Kaam method was used to create textual structural descriptions of the stereotype threat phenomenon. The interpreted results include six essences of stereotype threat. In addition to participant narratives, tables and figures help foster the reader's contextual understanding of the participants and their stereotype threat experiences. Contemporary scholars have opportunities to extend the research and to suggest ways to apply findings to the practical situations of multiracial student athlete populations.

Keywords: anti-miscegenation laws, athlete, college, multiracial, NCAA Division I, phenomenology, race, sport, social identity theory, Southeast United States, stereotype threat, underperformance

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## LEC-12: Youth Sport II

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## LEC-12A

### FROM THE AGE OF INNOCENCE TO THE AGE OF ACKNOWLEDGEMENT: COMPETITIVE YOUTH SOCCER CLUB COACHES' PERCEPTIONS OF MORAL ATMOSPHERE

*E. Earlynn Lauer, University of Tennessee, USA*  
*Terilyn Shigeno, University of Tennessee, USA*  
*Leslee Fisher, University of Tennessee, USA*  
*Emily Johnson, University of Tennessee, USA*  
*Rebecca Zakrajsek, University of Tennessee, USA*

Few researchers have examined components of moral atmosphere in adolescent sport teams (Chow, Murray, & Feltz, 2009; Malet, Chow, & Feltz, 2013). Thus, it is important to understand how coaches view moral reasoning as well as

how moral reasoning influences their coaching practices. The purpose of this study was to use case study methodology to explore coaches' perceptions of moral atmosphere in a single competitive youth soccer club in the Southeastern United States. Using criterion-based purposeful sampling (Patton, 2005), five youth soccer coaches (four men, one woman) who coached athletes ranging from U9 to U18 participated in interviews about how they conceptualized moral development and their role in creating a moral atmosphere on their teams. Using thematic content analysis (Braun & Clark, 2005) five major themes were constructed: (a) coaches' understanding of athletes' development, (b) coaches' views on morality in soccer, (c) coaches' definitions of moral and immoral behaviors in soccer, (d) coaches' philosophies in teaching moral and immoral behaviors in soccer, and (e) coaches' perceptions of resources available for teaching moral behaviors in soccer. Coaches perceived athletes' moral development to progress from "the age of innocence to the age of acknowledgment" as athletes became less egocentric and more relativistic. Coaches' definitions of morality centered on respect and doing things "right," and for some, their definition of morality was different in the sport context. Several moral and immoral behaviors in soccer were identified, and coaches discussed using both formal (e.g., an Honor Code) and informal methods to teach moral behaviors in soccer. Finally, coaches perceived there to be limited resources for teaching moral behaviors in sport. The focus of this presentation will be on ways sport psychology professionals can help youth coaches understand moral development, recognize moral situations, and teach young athletes to act morally in practice and competition.

## LEC-12B

### DECISION-MAKING SKILLS IN EARLY ADOLESCENCE AND THEIR PROGNOSTIC RELEVANCE FOR MIDDLE- TO-LATE ADOLESCENT SUCCESS IN GERMAN SOCCER

*Oliver Höner, University of Tübingen, Germany*  
*Klaus Roth, University of Heidelberg, Institute of Sport and Sports Science, Germany*  
*Markus Schmid, University of Heidelberg, Institute of Sport and Sports Science, Germany*  
*Florian Schultz, University of Tübingen, Institute of Sports Science, Germany*

In order to identify the most promising youth athletes, successful talent identification programs rely on highly educated coaches with a good "subjective eye" as well as objective diagnostics of potential (e.g., physiological or physical) talent predictors. Among the many psychological factors that need to be considered (e.g., personality characteristics), perceptual-cognitive skills have been shown to be crucial for successful performance in many elite sports (Williams et al., 2011). However, there is currently a lack of empirical evidence for the prognostic relevance of objective assessments for perceptual-cognitive skills.

This study examined the relevance of U12 soccer players' decision-making skills in predicting their achieved performance level in middle-to-late adolescence. The study sample included 94 U12-players ( $M=11.6\pm 0.5$  years) from three age cohorts (1998-2000) within the German soccer talent identification program. Altogether 36 video-simulated offensive game situations were presented to the participants who had to decide how they would proceed in each scenario (e.g., pass right). The time, accuracy, and quality (accuracy

x time) of players' decisions were assessed with sufficient reliability ( $r > .86$ ). As the criterion for future success, players' middle-to-late adolescent performance was ascertained by examining whether they were selected for the German Youth Bundesliga in U17 or U19 (28% of the sample reached this level).

The results revealed non-significant differences in decision time between players who achieved the Youth Bundesliga and the players who did not. However, players who achieved middle-to-late adolescent success had demonstrated significantly improved performances with regard to accuracy ( $d = 0.49$ ) and quality ( $d = 0.48$ ) in the decision-making diagnostic.

In conclusion, this study provided evidence of decision-making skills' prognostic relevance even within a highly selective sample (participants belonged to the top 1% of their age cohort). This underlines the need for psychological support in elite youth sports, not only with regard to the development of personality characteristics, but also perceptual-cognitive skills.

## LEC-12C

### DON "PETE" PETERSEN - A PROFILE OF AN EXPERT PARTICIPATION SPORT COACH

*Matthew Vierimaa, Utah State University, USA*  
*Roland Billings, "Pete" Petersen Basketball League, USA*

In recent years, researchers have made great progress in conceptualizing and understanding sport coaching effectiveness and expertise. It is known that coaching is context-specific (Lyle, 2002), and that the characteristics of expert coaches can vary dramatically across contexts. While there is no shortage of literature on expert competitive or elite sport coaches (e.g., Bloom, Crumpton & Anderson, 1999; Gallimore & Tharp, 2004; Gavazzi, 2015), much less is known about expert coaches in participation sport because they rarely remain in the context long enough to form the necessary expertise (Côté & Gilbert, 2009). However, this sport context is critical to consider given the significant potential impact of coaches on young athletes in their formative years of sport participation (e.g., Fraser-Thomas, Côté, & Deakin, 2008). Thus, the purpose of this presentation is to profile the life and coaching philosophy of Don "Pete" Petersen, an expert youth basketball coach who dedicated his life to his community and through this effort founded a long-running youth basketball league. Data were collected through a variety of formats including personal lived experiences, narratives from community members, and archival documents. Identified themes highlight how Pete's spirituality and belief in the importance of inclusiveness, accessibility, and community engagement informed the development of an exemplary grassroots basketball league. The league has undergone many changes over its 60 years of existence, but has maintained Pete's core values over that time. This presentation will elaborate on these themes and their integration with the extant leadership, coaching, and youth sport literature. Ultimately, this presentation will shed considerable insight into the coaching practices of an expert participation coach and will be relevant for researchers, coaches, and practitioners alike.

## LEC-13: Elite/Pro Sport II

### LEC-13A

#### RETURNING FROM RIO: THE POST-OLYMPIC BLUES, A QUALITATIVE EXPLORATION

*Karen Howells, The Open University, UK*  
*Mathijs Lucassen, Lecturer in Mental Health, The Open University, UK*

Background: Anecdotal reports, popular media items, and findings from research studies exploring adversity in elite athletes, have suggested that the post-Olympic period may be characterized by Olympic athletes experiencing 'the blues'. Despite this, few researchers have focused on the post-Olympic period as a critical time for the well-being of athletes.

Methods: A longitudinal design was utilized to: (a) explore the phenomena of post-Olympic blues; and, (b) examine whether the post-Olympic blues comprises a short-term phenomenon or whether it has enduring aspects. This abstract refers to the preliminary findings from the first interviews and timelines completed with Olympic athletes following their return from Rio 2016 and addresses the first part of the overall research question. The transcripts and timelines were analysed using Interpretative Phenomenological Analysis.

Findings: Four British female athletes from individual sports who competed in Rio took part, none of the participants were medal winners, but all intended to continue training for future competitions. The post-Olympic period was difficult for participants and was characterized by heightened negative emotions (e.g., sadness, hopelessness) and loss of purpose. Three participants perceived that they experienced the post-Olympic blues as a consequence of Olympic participation, and one participant attributed her negative state to organizational stressors. The prevalence and extent of depressive symptoms appeared related to goal achievement, prior experience of Olympic participation, actual social support, and organizational stressors.

Conclusions: The initial post-Olympic period was characterized by negative emotions, and we interpreted that irrespective of the perceived cause of the negative emotions, that this experience can be conceptualized as comprising what others have colloquially referred to as the post-Olympic blues. The absence of any formal support for these athletes illustrates the need for specific sport psychology provision, especially during the initial aftermath of the Olympic Games.

### LEC-13B

#### THE ELITE ATHLETE BRAIN

*Lindsay Thornton, USOC, USA*

The elite athlete brain has gained increasing attention over the past several years, including ways to assess and modulate, to both better understand and enhance, the neural characteristics of elite athletes. This session reviews structural and functional markers of the elite athlete brain from neuroimaging and neurophysiology studies. Landmark and recent publications examining the elite athlete brain in a resting and task state will be reviewed. Evidence for and against the 'neural efficiency' hypothesis in athletes will be presented.

Brain training and intervention tools will be examined, including those directly targeting the brain (neurofeedback/brain computer interface, brain electro stimulation, nootropics, sleep, meditation) as well as those targeting brain outputs (occlusion, multi object tracking, gaze behavior). Barriers to utilization from a sport psychology practitioner's perspective will be considered, including estimated monetary cost, practitioner training time, athlete training time, and opportunity cost.

Attendees will gain an understanding of the expert's brain from sport and performance literature, and a snapshot of intervention tools sport psychology practitioners can utilize to enhance neural performance of athletes.

## LEC-13C

### EVALUATING A SUPER-STRENGTHS INTERVENTION IN ELITE SPORT

*Katie Ludlam, English Institute of Sport/ Sheffield Hallam University, UK*

*Joanne Butt, Sheffield Hallam University, UK*

*Mark Bawden, Mindflick, UK*

*Ian Maynard, Sheffield Hallam University, UK*

Researchers have studied the application of positive psychology and strengths-based interventions with the intention of enhancing mental health and performance in various settings, including clinical (e.g., Bolier et al., 2013), coaching (e.g., Linley et al., 2010), organizational (e.g., Hodges & Clifton, 2004), and education (e.g., Park & Peterson, 2008). Existing literature indicates that desirable characteristics and behaviors can be enhanced, such as engagement (Harter, et al., 2002), well-being, motivation and goal attainment (Linley et al., 2010), and employee performance (Hodges & Clifton, 2004). However, knowledge of how to utilize strengths-based approaches in sport psychology is limited despite being encouraged (i.e., Gordon & Gucciardi, 2011). This study aimed to evaluate the efficacy of delivering a super-strengths intervention (Ludlam et al., 2016) for enhancing elite athletes' psychology and performance in the context of their sport. Elite male athletes (N=3) from three different sports in the UK (cricket, shooting, football) were included in the study, and a single-case, multiple baseline research design was adopted. Specifically, through the use of questionnaires, engagement, confidence, basic needs satisfaction, and coping skills were assessed. In addition, subjective and objective measures of performance were employed, and social validation interviews were conducted. Findings supported the hypothesis that athletes' mean psychometric scores and individual measures of performance would be higher throughout the intervention phase than in the baseline phase. Social validation interviews indicated the importance of the athlete-coach discussions within the super-strengths intervention, and the need for these to emphasize athletes' competence and autonomy. Finally, athletes suggested that super-strengths enhanced their role-clarity, sport-confidence, and thus enabled them to better cope with the demands of performing in their sport. From an applied perspective, results demonstrate that sport psychologists and coaches can implement a super-strengths intervention to facilitate positive change in athletes' psychology and performance.

## LEC-14: Collegiate Sport II

### LEC-14A

#### NCAA STRENGTH AND CONDITIONING COACHES' RECEPTIVITY TO AND USE OF SPORT PSYCHOLOGY SERVICES

*Rebecca Zakrajsek, University of Tennessee, USA*

*Alessandro Quartiroli, University of Wisconsin - La Crosse, USA*

*E. Whitney Moore, Wayne State University, USA*

It has been argued that sport psychology consultants (SPCs) can make a great impact in student-athletes' performance and well-being by working with and through athletic department support staff, such as strength and conditioning coaches (SCCs), as they are in a position to influence the provision of SPC services at National Collegiate Athletic Association (NCAA) institutions (McGuire & Scogin, 2013). The purpose of this study was to assess SCCs experience with and perceptions of the benefits of SPC services, willingness to encourage student-athletes to use SPC services, and support for the possible roles of SPCs at NCAA institutions. Of the 415 NCAA SCCs (343 males) who participated in this study, 186 (44.8%) indicated having access to a SPC at their institution. Among those with access to services, 131 (70.4%) interacted with the SPC; whereas only 42.4% of those without access to an SPC at their institution interacted with consultants off campus. Likewise, 135 (62.8%) of the 215 SCCs who encouraged student-athletes to seek mental training services had an SPC available at their institution. SCCs were more willing to encourage student-athletes to see a SPC for personal and performance related issues (69.9% and 67.7%, respectively) than for strength and conditioning related issues (48.9%). SCCs rated the following SPC services as most beneficial for NCAA student-athletes: managing anxiety, improving focus, managing emotions, and dealing with injury and rehabilitation. Linear regression indicated that perceiving a benefit in having sport psychology services available to athletes was positively predicted by two SCC variables: a) being female and b) having positive previous experience referring student-athletes to a SPC. Female SCCs were also significantly more likely than males to perceive including SPCs in athletic departments as beneficial. Implications for SPCs interested in working with athletic departments and SCCs to improve student-athletes' sport performance and well-being will be discussed.

### LEC-14B

#### FROM THE LOCKER ROOM TO THE OFFICE: LIFE SKILLS AND CAREER PROGRAMMING FOR STUDENT-ATHLETES

*Alicia Deogracias, Ball State University, USA*

*Nile Brandt, University of Utah, USA*

*Kelsie Payne, Ball State University, USA*

*Stefanía Ægisdóttir, Ball State University, USA*

Collegiate student athletes place a significant amount of time and energy into their sports throughout their academic careers (Leonard & Schimmel, 2016). By the time they reach the college ranks, many have built an athletic identity through years of skill development and a sense of self that has been reinforced by parents, coaches, and peers (Beamon, 2012). Though collegiate athletes may experience benefits encapsulated by their athletic abilities through the course of their academic

careers, a vast majority will not be able to continue their athletic pursuits beyond the college level (Leonard & Schimmel, 2016).

Universities acknowledge the risks collegiate athletes make which jeopardize their academic and career development through continued sport participation, and act by offering workshops, tutoring, and guidance through academic support services (Burns, Jasinski, Dunn, & Fletcher, 2013; NCAA, 2008). Common programs such as CHAMPS (Challenging Athlete's Minds for Personal Success) are guided upon five fundamental principles: academics, athletics, personal development, career planning, and community service (NCAA, 2008). Career planning represents only a portion of the program, and researchers indicate a lack of programming centered on career transitions for student athletes (Leonard & Schimmel, 2016).

The purpose of this presentation is to identify the shortcomings inherent in many of these programs, such as the lack of consistent programming specifically geared toward student athletes' transition as they approach graduation. Using the Theory of Work Adjustment, an example program will be developed to address these deficiencies and will also include a specific method in which to evaluate effectiveness. This developed program will serve to exemplify best practices which can be adopted into Division 1 universities. The proposed presentation has implications for practitioners who may offer life skills and career development programming in a university setting, as well as other university administrators who oversee athletic entities.

## LEC-14C

### INJURED COLLEGIATE ATHLETES' PERCEPTIONS OF ATHLETIC TRAINERS: A SELF-DETERMINATION PERSPECTIVE

*Matthew Bejar, Mount Mercy University, USA*  
*Johannes Raabe, University of Tuebingen, Germany*  
*Rebecca Zakrajsek, University of Tennessee, USA*  
*Leslee Fisher, University of Tennessee, USA*  
*Damien Clement, West Virginia University, USA*

Athletic trainers (ATs) can have a profound impact on athletes' cognitive and emotional responses to injury (Tracey, 2003) as well as their motivation to adhere to rehabilitation (Granquist, Podlog, Engel, & Newland, 2014). While some researchers (e.g., Granquist et al., 2014) have examined ATs' views of athletes' post-injury responses, there is minimal research centered on athletes' perceptions of their relationship with ATs (Unruh, Unruh, Moorman, & Seshadri, 2005). Moreover, ATs have indicated a desire to better understand the motivation of athletes during rehabilitation (Clement, Granquist, & Arvinen-Barrow, 2013). Self-determination theory (Deci & Ryan, 2000) offers an ideal lens to understand social influences such as ATs' impact on athletes' motivation and well-being. Specifically, Deci and Ryan (2000) suggest that individuals' motivation is primarily determined by the satisfaction of their inherent basic psychological needs of competence, autonomy, and relatedness. The purpose of the current study was to explore college student-athletes' experiences with the ways ATs influence their basic psychological needs and motivation during rehabilitation. Semi-structured interviews were conducted with 10 injured U.S. National Collegiate Athletic Association Division I athletes (seven female, three male). Using Consensual Qualitative Research methodology (Hill, 2012), four domains were constructed from the data: (a)

athletes' concerns about injury and rehabilitation; (b) feedback and athletes' perceptions of competence; (c) person-centered approach and athletes' perceptions of autonomy; and (d) connection and athletes' perceptions of relatedness. Overall, seven participants expressed a generally positive relationship with their AT, while three participants shared more negative perspectives. Athletes' experiences were largely influenced by the degree to which they perceived that ATs satisfied their three basic psychological needs, which, in turn, was determined by the presence or absence of particular AT behaviors, such as providing encouragement (competence), soliciting input (autonomy), and building rapport (relatedness). Practical suggestions and future directions will be discussed.

## LEC-15: Teaching, Mentoring & Consulting

### LEC-15A

#### SELF-REGULATED LEARNING IN THE SPORT PSYCHOLOGY CLASSROOM: EXPLORING STUDENTS' LEARNING PROCESSES AND OUTCOMES



*Jordan Goffena, George Mason University, USA*  
*Erin Peters-Burton, George Mason University, USA*

Self-regulated learners are said to be motivationally, metacognitively, and behaviorally engaged in a dynamic, individualized process of learning (Zimmerman, 1986). Research shows that self-regulators cycle through forethought, performance, and reflection phases when learning (Zimmerman, 2000, 2008), and students with enhanced self-regulated learning (SRL) processes perform higher at the university level (Zimmerman & Kitsantas, 2014). The purpose of this study was to discover how undergraduate sport psychology students are self-regulating their learning and to explore the processes and outcomes of their learning as outlined by the cyclical phases of SRL. Using a multiple case study design (Yin, 2003) and subsequent cross-case analysis (Stake, 2006), four high performing students were identified as highly self-regulatory after comparing scores from an SRL self-report scale (Cleary, 2006) to their overall course grade. Case study data from each participant was derived from a series of two microanalytical reflections. An SRL microanalysis (Cleary, 2011) represents a task-specific interview protocol that gleans the participants' learning processes congruent to the subprocesses of self-regulation. Each microanalysis was adapted to represent the learning of sport psychology theory and learning aspects of mental skills training. Individual case findings support student use of SRL strategies such as setting learning goals, metacognitive self-monitoring, and self-reflecting on learning performance. Findings from the cross-case analysis indicated that students who were identified as self-regulators set appropriate learning goals based on the course framework, learning objectives, and personal interest. Moreover, the use of personal experience and real world applications (e.g., assessing prior knowledge, comparing content to current sport experience, applying the course toward future career goals) helped facilitate student learning. The comparison between participants' SRL subprocesses for learning of sport psychology theory and learning mental skills training will be presented in radial diagrams. Implications will be discussed for practical applications for teaching sport psychology.

## LEC-15B

### MENTORING MENTAL SKILLS TRAINING PROGRAMS

*Paul Wright, Lindenwood University, USA*

In the field of Sport Psychology there is no substitute for hands-on, applied learning experiences when preparing graduate students to become effective professionals. This presentation will introduce a unique mentoring program that is built into the structure of a graduate Performance Psychology class at a mid-western University. Graduate students are matched with high school cross-country runners for the entire duration (12 weeks) of the competitive season. Graduate students meet weekly with their athletes and also attend as observers select practice sessions and in-season competitions. Before beginning the mentorship program, graduate students are exposed to a comprehensive mental skills training program that is age-appropriate for competitive adolescent runners. This program is then replicated in a one-on-one mentorship program with athletes. This presentation will provide participants details about the 12-week Mental Skills Training program and the training that helps prepare students to begin the mentorship assignment. Results of three-years of providing this learning opportunity will be discussed. Statistical data related to pre-and-post testing, athletic performance improvements, testimonials from athletes and parents, course evaluations from graduate students, and other information related to building the course around the experiential project will also be discussed.

## LEC-15C

### ASSESSING THE PSYCHOMETRIC PROPERTIES AND GENDER INVARIANCE OF POSITIONAL COMPETITION IN TEAM SPORT QUESTIONNAIRE (PCTSQ)

*Sebastian Harenberg, Ithaca College, USA*  
*Harold Riemer, University of Regina, Canada*  
*Kyle Paradis, University of Western Ontario, Canada*  
*Luc Martin, Queen's University, Canada*  
*Rob McCaffrey, University Of Regina, Canada*  
*Erwin Karreman, Regina Qu'Appelle Health Region, Canada*  
*Kim Dorsch, University of Regina, Canada*  
*Justine Vosloo, Ithaca College, USA*

Positional competition is known as the process by which teammates in a particular position vie for the same limited amount of playing time (Harenberg et al., 2016). It is a unique process that occurs most strongly in high performance or elite sport settings. The PCTSQ was developed to measure this process, and has subsequently been found to have satisfactory face, factorial, and convergent validity, as well as internal consistency values (Harenberg, 2014). However, a large body of literature suggests the perception of competition is influenced by the gender of the competitor. Yet, there is an absence of assessment to whether the PCTSQ can be used in male and female athletes. The objective of the present study was to verify the factorial validity and test for invariance of the PCTSQ across gender. In total, 923 athletes (Mage= 20.32, SD = 2.15, n = 474 females) from university team sports (i.e., soccer, football, ice-hockey, volleyball, basketball, lacrosse) completed the PCTSQ. All seven dimensions of the PCTSQ demonstrated sufficient internal consistency scores ( $\alpha > .70$ ). To assess the factorial validity of the PCTSQ, confirmatory factor analyses were conducted for the entire sample, for

male athletes, and for female athletes. This was followed by an invariance analysis across gender. The model fit was satisfactory for the entire sample as well as for both gender groupings ( $\chi^2/df= 2.51-3.59$ , CFI = .93-.94, TLI = .91-.93, RMSEA = .05-.06). Invariance across gender ( $\Delta CFI < .01$ ) was found for measurement weights and structural covariances. In summary, the PCTSQ showed satisfactory factorial validity and invariance across gender, meaning that practitioners and researchers can have confidence in utilizing the scale when assessing positional competition in male and female athletes. Limitations and future research directions are discussed (e.g., use in other populations, translation to other languages).

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## LEC-16: Consulting & Interventions

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## LEC-16A

### EXPERT APPROACHES TO CONDUCTING A FIRST SPORT PSYCHOLOGY SESSION

*Graig Chow, Florida State University, USA*  
*Jaison Freeman, Florida State University, USA*  
*Lindsay Garinger, Florida State University, USA*  
*Savanna Ward, Florida State University, USA*

The first session with an athlete-client presents an opportunity to establish the working alliance, and acquire useful information to facilitate conceptualization and develop an effective treatment plan. However, many individuals—including athletes—drop out after the first session (Swift & Greenberg, 2012). While professionals in sport psychology have independently discussed how practitioners might go about conducting a first session with an athlete (Andersen 2000; Taylor & Schneider, 1992), there is sparse empirical research on the topic. This study aimed to advance the science of practice by investigating expert practitioners' approaches of conducting a first sport psychology session with an athlete-client. Participants were nine certified consultants of AASP (licensed psychologist = 4) who had on average 24 years of sport psychology consulting experience. Participants completed a semi-structured interview during which they were asked to discuss their experiences of conducting a typical first sport psychology session with an athlete, including objectives, aspects, strategies, mistakes, and lessons learned. Inductive content analysis was employed. Primary objectives were establishing the relationship, treatment planning, setting guidelines for the consulting process, and understanding the client and his/her concerns. Important aspects were expectations about the consulting process, building rapport, getting a holistic understanding of the client, exploring the presenting problem, ensuring the client takes something away from the session, and understanding the client's definition of success. Strategies employed to increase perceived benefits (or decrease perceived barriers) of engaging in sport psychology services included ensuring the client knows who the consultant is and his/her approach and clarifying parameters for client change. Lessons learned centered around doing too much, significant others, pre-planning, and appreciating individual differences. Differences between licensed and non-licensed practitioners, and other participant characteristics will be discussed. Findings from this study provide an initial understanding of best practices of conducting a first sport psychology session with an athlete-client.

**LEC-16B****MINDFUL SPORT PERFORMANCE ENHANCEMENT: A RANDOMIZED CONTROLLED TRIAL WITH COLLEGIATE ATHLETES**

Carol Glass, *The Catholic University of America, USA*  
 Claire Spears, *Division of Health Promotion & Behavior,  
 School of Public Health, Georgia State University, USA*  
 Rokas Perskaudas, *Department of Psychology, The Catholic  
 University of America, USA*  
 Keith Kaufman, *Keith A. Kaufman, Ph.D., PLLC, USA*

Mindfulness-based interventions for mental and physical health concerns are now used with increasing frequency for athletes. Mindful sport performance enhancement (MSPE; Kaufman, Glass, & Pineau, in press) is one such approach, emphasizing present-moment awareness and non-judgmental acceptance in performance settings. Initial research with archers, golfers, and runners demonstrated that athletes showed improved mindfulness, state flow, sport-related anxiety, and self-rated sport performance. However, because these were open trials with same-sport community athletes, the extent to which MSPE is effective for mixed-sport collegiate athletes in a randomized controlled study was unknown.

Forty-nine student-athletes at a NCAA Division III private university (8 men and 41 women) attended at least one session of MSPE, and were initially assigned either to 6-week MSPE training or served as wait-list controls. They represented a range of sports (e.g., baseball, lacrosse, field hockey, swimming, tennis). Participants completed online measures before and after the first round of group interventions, as well as after the wait-list athletes completed the program and at a 6-month follow-up.

A significant condition x time interaction revealed that whereas athletes in the control group reported significantly increased depressive symptoms over time, those in the MSPE group reported non-significant reductions in symptoms. In addition, after wait-list participants received training, t-tests revealed that athletes showed significant improvement in sport anxiety and flow. Treatment “completers” (who attended  $\geq$  five sessions) additionally increased in life satisfaction, two facets of mindfulness, and self-rated sport performance. Associations between outcomes and both the frequency and enjoyment of mindfulness practice were also found, and gains were maintained at follow-up.

Although these results support MSPE as a promising intervention for collegiate athletes, additional research is needed. Future directions will be discussed, such as studies with teams of high school, college, and professional athletes, and comparing MSPE with other mindfulness and psychological skills training approaches.

**LEC-16C****USING E-PRIME 2.0 TO DEVELOP SPORT-SPECIFIC VIDEO ANALYSIS TRAINING PROTOCOLS**

Joseph Kronzer, *University of Minnesota, Twin Cities, USA*  
 Diane Wiese-Bjornstal, *University of Minnesota, USA*

Coaches in many sports utilize video analysis as an effective tool to teach their athletes mental and physical elements of their respective sports, to scout future opponents and to learn from previous mistakes. In a meta-analysis, Mann, Williams,

Ward and Janelle (2007) researched differences between expert and novice sporting populations regarding their response speeds and accuracies to stimuli. Across sports, such as handball, tennis and volleyball, experts tended to have a holistic focus when observing a play develop, noting both explicit and verbal cues (Abernethy, Schorer, Jackson, & Hagemann, 2012; Williams, Ford, Eccles, & Ward, 2011; Williams, Ward, Knowles, & Smeeton, 2002), while the novice population had a narrower focus. The differences between the expert and novice populations suggest trainable skills that can be applied to improve sporting performances. Few studies have investigated the direct effects of video analysis training programs on sports performances, but the programs have shown promise in volleyball (Afonso et al., 2014), karate (Mori, Ohtani, & Imanaka, 2002), and soccer simulations (Savelsbergh, Williams, Kamp, & Ward, 2002). In a study using soccer players, Gabbett et al. (2016) found that players who underwent a video analysis training program had higher dribbling, passing and shooting efficiency in practice when compared to a control group who did not receive the video analysis training. The promising results from these studies should encourage coaches to develop sport-specific video analysis training protocols that help their players react faster and more accurately to opponents' plays, which may lead to improvements in their performance. E-Prime 2.0 Professional is a robust, multi-purpose computer software package used to create and run simple to complex psychological experiments while collecting data. Adapting its use to a sport performance tracking and enhancement tool could be the future of video analysis training protocols.

**LEC-17: Collegiate Sport III****LEC-17A****A LONGITUDINAL BIOPSYCHOSOCIAL INVESTIGATION OF OVERTRAINING IN DIVISION I COLLEGE SWIMMERS**

Brigid Byrd, *Wayne State University, USA*  
 Jeffrey Martin, *Wayne State University, USA*  
 E. Whitney Moore, *Wayne State University, USA*  
 Tamara Hew-Butler, *Oakland University, USA*

2017 The Sport Psychologist Young Researcher Award Winner, Sponsored by Human Kinetics

The aim of this study was to investigate psychosocial (PS) and physiological (PH) indicators of overtraining in NCAA swimmers to predict athlete burnout during an intense 6 week training period. Twenty-three female and 17 male DI swimmers completed PS and PH measures during weekly lab visits. At baseline, PS measures of student-athlete identity, mental toughness, pain attitudes, perceptions of coaching behaviors, training distress (TD), and recovery stress (RS) were completed. During the following weeks measures of training distress were collected simultaneously with a measure of muscle damage; creatine kinase (CK), and of stress; testosterone/cortisol (T/C) ratios. The last week, Time 6 (T6) included an assessment of athlete burnout (AB). Based on multiple regression analyses we predicted 81.7% ( $p < .01$ ) of AB in female athletes largely due to perceptions of strong controlling coaching behaviors ( $p < .05$ ,  $B = 0.34$ ), high academic identity ( $p < .001$ ,  $B = 1.13$ ), and low athletic identity ( $p < .001$ ,  $B = -1.26$ ). In female athletes significant changes were noted in CK ( $135 \pm 67$ ;  $446 \pm 709$ ;  $171 \pm 82$ ;  $202 \pm 78$ ;  $181 \pm 98$ ;  $206 \pm 167$  U/L;  $p < .05$ ) and T/C ratio ( $2.9 \pm 3.1$ ;  $4.1 \pm 4.3$ ;  $4.1 \pm 2.7$ ;  $p < .05$ ) over the 6 weeks. In male athletes significant changes were noted in CK ( $174 \pm 49$ ;  $438 \pm 252$ ;  $358 \pm 302$ ;  $274 \pm 109$ ;  $276 \pm 124$ ;  $298 \pm 120$  U/L;  $p < .05$ )

and T/C ratio ( $37 \pm 17$ ;  $48 \pm 20$ ;  $58 \pm 31$ ;  $p < 0.05$ ). In all athletes no significant changes were noted in TD and RS. CK steadily increased throughout the 6 time points, except for a decrease observed between time 2 and 3. T/C increased from time 1 through time 6. Increased CK and decreased T/C are indicative of training distress. These findings offer pertinent information regarding objective and subjective measures of TD throughout an intense training period that may aid in the prevention of overtraining and decreased swimmer well-being.

## LEC-17B

### PERFECTIONISM AND PERFORMANCE IN A COMPETITIVE GOLF-PUTTING TASK

*Michael Lizmore, University of Alberta, Canada  
John G. H. Dunn, University of Alberta, Canada*

**Objectives:** An important goal of performance psychology research is to identify and understand psychological characteristics that may be linked to human performance in achievement settings. Perfectionism can be described as a personality disposition that is comprised of two higher-order dimensions: perfectionistic strivings and perfectionistic concerns (see Hill, 2016; Stoeber & Otto, 2006). The purpose of this study was to determine if athletes' perfectionistic strivings and perfectionistic concerns were associated with performance in a golf-putting competition.

**Design:** A within-subjects quasi-experimental design was implemented.

**Method:** A total of 99 (47 male, 52 female) intercollegiate athletes (M age = 20.51 years, SD = 1.79) completed a measure of perfectionistic strivings and perfectionistic concerns in sport. Athletes competed in two trials (each consisting of ten putts) of a golf-putting competition where they received false-failure feedback after the first trial. Athletes were asked to complete measures of state responses (i.e., perceived threat, cognitive anxiety, and optimism) prior to each competitive trial and their performance (i.e., putting distances) was recorded for each trial of putts.

**Results:** Standardized regression coefficients obtained from sequential regression analyses indicated that (a) perfectionistic concerns were not related to performance in the golf putting competition, and (b) when the overlap with state responses and perfectionistic concerns was controlled, perfectionistic strivings predicted better performance both before and after failure feedback.

**Conclusions:** Findings provide detail regarding the important role that the personality disposition of perfectionism appears to play with respect to athletes' performance in a competitive environment and support inquiry into further applied considerations for practitioners working with athletes with perfectionistic tendencies.

## LEC-17C

### DEVELOPING EVIDENCE-BASED PROGRAMMING TO SUPPORT STUDENT-ATHLETES IN MAKING HEALTHY TRANSITIONS OUT OF SPORT



*Erin Reifsteck, University of North Carolina at Greensboro, USA  
DeAnne Brooks, Salem College, USA  
Lenka Shriver, University of North Carolina at Greensboro, USA*

Athletes face challenges with maintaining a healthy lifestyle as they transition from highly structured, competitive athletics to lifestyle health behaviors (Sorenson et al., 2015). Despite the health concerns associated with this transition (Kerr et al., 2014; Simon & Docherty, 2014), there is a dearth of evidence-based programming to promote healthy lifestyle behaviors among transitioning student-athletes. To fill this gap, our research team developed the Moving On! program, which helps student-athletes transition to a healthy lifestyle after college sports. The program is based on identity and self-determination theories (Reifsteck et al., 2016) and incorporates cognitive-behavioral strategies that promote healthy physical activity and nutrition. During Phase 1 of program development (2015), we developed physical activity-related transition resources, pilot-tested them with current student-athletes, and gathered feedback from former student-athletes and athletics department administrators. In Phase 2 (2016), we expanded our offerings to include nutritional content and user-friendly resources to enhance the program and promote adoption and sustainability across colleges/universities. Senior collegiate student-athletes (N=20) completed the expanded version of the program consisting of four 90-minute sessions, and data were gathered from surveys, evaluation ratings, and focus groups. Overall, participants reported that the program increased their knowledge, and that they enjoyed their experience in the program, felt more prepared to transition to a healthy lifestyle, and would highly recommend the program to their peers. Findings suggest that the program helped participants envision how physical activity and healthy eating might fit with their future lives, and enhanced their confidence and internal motivators for engaging in healthy behaviors. In this presentation, we summarize our journey developing evidence-based programming that fosters the long-term health and well-being of student-athletes, and offer practical recommendations for sport and exercise psychology professionals working to promote healthy transitions out of sport.

## LEC-17D

### EXPLORING THE CONCEPTUALIZATION AND PERSISTENCE OF DISORDERED EATING IN RETIRED COLLEGIATE SWIMMERS

*Hannah Cooper, UK  
Stacy Winter, St Mary's University Twickenham, UK*

Disordered eating lies on the less extreme end of the eating disorder continuum, and while not classified as a clinically diagnosed eating disorder, is a psychological ailment that befalls many athletes that can persist into retirement (APA, 2013). Links have been established between sport-specific pressures and disordered eating development and persistence; however, little research has focused on the perspective of retired athletes in a time-based sport (Greenleaf et al., 2009). The purpose of the current research

was to explore the conceptualization of disordered eating in relation to swimming participation in the National Collegiate Athletic Association (NCAA), how retirement affects eating patterns, and ways to mitigate disordered eating. Following interpretative phenomenological analysis (IPA) methodological guidelines (Smith & Osborn, 2008), six retired swimmers from the NCAA were chosen for semi-structured interviews based off scores from the Eating Disorder Examination Questionnaire 6.0 (Fairburn & Beglin, 2008). The interviews were analyzed using IPA methodology, and three superordinate themes emerged: (1) Pressures Unique to Swimming, (2) Transition to Eating Pattern Awareness, (3) Maintaining Ideal Eating Patterns in Retirement. The first superordinate theme and corresponding subthemes revealed how swimmers' insatiable appetites, social pressures of swimming, and wearing revealing uniforms influenced disordered eating. Secondly, results indicated key mental transitions in retirement of becoming aware of nutrition and life without swimming. Finally, many retired athletes used disordered eating to cope with feeling unhealthy and post-swimming weight gain. The results were a combination of novel findings on, support for, and expansion of, previous data on disordered eating. Findings specifically expanded on how pressures unique to swimming can be linked to disordered eating, but was innovative in the exploration disordered eating in the context of sport retirement (Petrie et al., 2008). Suggestions for practitioners with clients facing retirement from collegiate sports, and ideas for future research are discussed.

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### LEC-18: Elite/Pro Sport III

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#### LEC-18A

##### EXAMINING THE EXPERIENCES OF A NEWLY ACCREDITED PERFORMANCE PSYCHOLOGIST AT THE 2014 COMMONWEALTH GAMES

*Fiona Meikle, FM Performance Psychology, UK*

Providing support to athletes at a major multi-sport championship is the career goal of many sport psychologists. Arnold and Sarkar (2014) highlight the importance of learning from other sport psychologists' experiences at an Olympic Games. They state that if neophyte practitioners have access to insights into preparing athletes and teams for the Games they can learn valuable lessons to help them achieve their dreams of becoming a world-class practitioner. The purpose of this presentation is to offer experiential evidence from a newly accredited practitioner working at the Commonwealth Games to inform those who have an interest in following a similar professional path. Reflections on situations in which the high pressured environment made delivering psychology support more difficult than expected will be discussed. This will include what was expected going into the Games, what was actually experienced, the support provided and what was learned from these experiences. Challenges discussed will include what was done to prepare the athletes and staff for the Games and how they responded to the pressures of the environment as well as how the psychologist responded to the pressures of the environment, overcame obstacles, faced unexpected situations and managed themselves as a practitioner. This case study seeks to build on the research and experiences of practitioners supporting athletes at a major multi-sport event and to aid practitioners working towards their career goal of supporting athletes at a world class competition for the first time.

#### LEC-18B

##### SPORT-PSYCHOLOGICAL COUNSELING WITH DISABLED PARALYMPIC ATHLETES – RESULTS OF A QUALITATIVE INTERVIEW STUDY WITH GERMAN SPORT PSYCHOLOGISTS

*Sydney Querfurth, WWU Münster, Germany  
Kathrin Staufenbiel, University of Muenster, Germany  
Charlotte Raue, WWU Münster, Germany  
Bernd Strauss, University of Muenster, Germany*

The repertoire of sport psychological interventions for disabled athletes needs to be expanded, both from a theoretical, as well as from an applied perspective (Kettner & Corban, 2014). After an extensive literature search and theoretical approach (Strauss et al., 2016), this studies objective was to examine and focus the knowledge and experience of sport psychologists working within the context of Paralympic sports in Germany, in order to draw conclusions for future research and practice.

In total, 12 (9 female) German sport psychological experts (Mage = 42.83, SD = 6.91) working in a range of summer and winter Paralympic sports (e.g., equestrian sports, skiing) were interviewed. All interview partners were certified sport psychological consultants with an average of M = 10.05 (SD = 5.78) years of working experience. The interview included different topics, e.g., "similarities and differences between athletes with and without disability" and "further education of sport psychologists".

Interviews were transcribed verbatim following which, codes were defined using a deductive approach. Two independent raters then coded experts' statements. Deviating ratings were discussed and consent was found.

Preliminary results indicate numerous similarities concerning topics of classical mental skills training (e.g., performance pressure) in the work with athletes with and without handicap. Main differences were evident in the implementation of specific methods (e.g., relaxation) or in an increased importance of psychosocial topics or topics outside of the sporting field (e.g., general quality of life). Professional, content related exchange among sport psychologists, as well as exchange with medical staff and physiotherapists were seen as major areas for future development of sport psychology. Overall, the interviews indicate the status-quo of sport psychological consulting in Paralympic sports in Germany and reveal areas for future development.

#### LEC-18C

##### DEVELOPING TEAM RESILIENCE: A SEASON-LONG INVESTIGATION OF A NATIONAL LEAGUE WINNING SEMI-PROFESSIONAL RUGBY UNION TEAM

*Paul Morgan, Buckinghamshire New University, UK  
David Fletcher, Loughborough University, UK  
Mustafa Sarkar, Nottingham Trent University, UK*

Recent research (Morgan, Fletcher, & Sarkar, 2013; 2015) has provided greater definitional and conceptual clarity of resilience at the team level (i.e., what team resilience is) and explained key underpinning psychosocial processes (i.e., how a resilient team functions). Despite the growing interest in team resilience in the sport psychology literature, an understanding of how it can be developed has yet to

be explored. The purpose of this study, therefore, was to investigate team resilience development in competitive sport. Through prolonged fieldwork, a season-long ethnography (11 months) was conducted to achieve an in-depth investigation of team resilience development during the stressors encountered. The sample consisted of a leading English national league-winning semi-professional rugby union team (n = 27 participants). Multiple data collection methods were employed (i.e., observation, interviewing, field notes, reflexive diary) as part of a holistic ethnographic approach. Following an iterative process of data analysis, the findings revealed a number of strategies for team resilience development which were abstracted into five themes: Inspiring, motivating, and challenging team members to achieve performance excellence; developing a team regulatory system based on ownership and accountability; cultivating a team identity and togetherness based on a selfless culture; exposing the team to challenging training and unexpected/difficult situations; and promoting enjoyment and keeping a positive outlook during stressors. Cultural expressions and folk terms were also identified to illuminate the context of the ethnography. This study advanced team resilience research by identifying key psychosocial strategies that mobilize a team's coordinative adaptive resources throughout a season in accordance with the stressors it encounters, and as part of building a resilient team culture. The findings provide practitioners with a platform for creating team resilience interventions in competitive sport teams.

## PANELS

### PAN-01

#### **EVIDENCE-BASED SUPERVISION: SUCCESSFUL APPROACHES TO FACILITATE DEVELOPMENT OF SERVICE-DELIVERY COMPETENCE IN NOVICE PRACTITIONERS**

*Janaina Lima Fogaca, West Virginia University, USA*  
*Sam Zizzi, West Virginia University, USA*  
*Judy Van Raalte, Springfield College, USA*  
*Lauren Tashman, Barry University / Inspire Performance Consulting, USA*

Supervising the applied work of neophyte practitioners is a great responsibility. Research in supervision in sport psychology has not successfully addressed the dose-response question. That is, how much and what type of supervision is ideal for which students, under which circumstances? The purpose of this panel presentation is to provide research evidence related to supervision of student-practitioners, as well as practical tips for application of best practices for individual, multilevel, and group supervision. The panel presentation begins with a description of a longitudinal qualitative study of nine supervisor-supervisee dyads, who were interviewed individually at the beginning and end of an academic term. Supervisees were asked about their previous experiences that prepared them for practice and then about their supervision experience and development. Supervisors were asked about their general approach and later about their supervision experience and development of the specific supervisee. Successful approaches to facilitate supervisee development included a mixture of: individual, multilevel, and group supervision. Following presentation of the data from this research, three panelists will describe the implementation of these three approaches, including structure, challenges, and strategies. First, a panelist will describe the use of individual supervision of doctoral students mixed with shadowing and group supervision. Next, a panelist will describe multilevel supervision involving faculty, doctoral students, and master's students working with teams and athletes. Finally, a panelist will discuss group supervision in which each supervisee engages in reflective practice, receives and provides peer mentoring, and gets feedback and direction from a professional supervisor. Information pertaining to strategies that can be used both in and out of the supervision group meetings, such as structured reflection journals, interpersonal process recall, case studies and portfolios, reading discussions, and self-awareness/professional development exercises will also be provided. A discussion period with the opportunity for audience interaction follows the panelists' presentations.

### PAN-02

#### **BUILDING A BROTHERHOOD: NEOPHYTE CONSULTANTS' EXPERIENCES OF WORKING WITH A HIGH SCHOOL FOOTBALL PROGRAM**

*Danielle DeLisio, University of Tennessee, USA*  
*E. Earlynn Lauer, University of Tennessee, USA*  
*Terilyn Shigeno, University of Tennessee, USA*  
*Pin-Chen Lin, University of Tennessee, USA*

Neophyte sport psychology consultants, prior to obtaining certification through the Association for Applied Sport

Psychology (AASP), engage in applied work to gain experience in delivering sport psychology services. In many institutions, there are numerous students hoping to become certified consultants and few established professionals available to provide necessary supervision. Within a meta-supervision hierarchy (Vosloo, Zakrajsek, & Grindley, 2014), "rookie" students are mentored by a more experienced peer. That peer is then mentored by a CC-AASP supervisor. This supervision model facilitates a more effective training environment that increases competency of the sport psychology consultants in training. Thus, the purpose of this panel is to discuss the consulting and meta-supervision experiences of two female doctoral students and two Master's students (one male and one female) who worked with a high school football team in the Southeastern United States. The presenters will speak about (a) gaining entry and building rapport with high school football athletes, (b) developing an educational consulting philosophy, (c) delivering sport psychology services within a systems approach (i.e., working with both athletes and coaches; Hellstedt, 1987), (d) the meta-supervision process, and (e) challenges faced (e.g., women working in a male-dominated sport). Consultants found that contact time (e.g., attending practices and games) was an important first step in building rapport. Educational sessions provided athletes with an opportunity to develop attentional focus skills through various strategies (e.g., cue words). Due to the large team size, working through a systems approach enhanced learning and use of psychological skills by both athletes and coaches during practices and games. Consultants also noted that their knowledge of sport psychology principles helped to create credibility as women on an all-male coaching staff, though this dynamic was not without challenges. This panel hopes to provide the audience with practical suggestions of working in similar settings.

### PAN-03

#### **INTEGRATING APPLIED SPORT PSYCHOLOGY INTO PROFESSIONAL SPORTS ORGANIZATIONS: LESSONS LEARNED FROM PROFESSIONAL BASEBALL**

*Charles Maher, Cleveland Indians, USA*  
*Angus Mugford, Toronto Blue Jays, USA*  
*Kenneth Ravizza, California State University, Fullerton, USA*  
*Bernie Holliday, Pittsburgh Pirates, USA*  
*Bob Tewksbury, San Francisco Giants Baseball Club, USA*

Recently, there has been rapid expansion of mental skills and other applied sport psychology services in Major League Baseball (MLB). In this regard, MLB clubs have invested heavily and purposefully in terms of such services, resulting in increased employment of sport psychology practitioners. The emphasis has been on the design and implementation of programs, services, and systems which are intended to foster the mental and emotional development of players and their performance, at the major league and minor league levels. Relatedly, a professional group of practitioners, the Professional Baseball Performance Psychology Group, has formed to make sure that quality services are being provided. Much has been learned during this time about integrating applied sport psychology services into the operational routines of MLB clubs, and what has been learned has relevance for continued development of applied sport psychology in professional baseball, for other professional sports organizations, and also for collegiate athletic departments. This panel will include very experienced practitioners who actively work with MLB

clubs and who will share their thoughts and opinions about the following:

- How mental skills professionals can collaborate with baseball coaches, athletic trainers, strength personnel, and employee assistance professionals
- How credibility can be established and lost with professional players and staff
- The types of sport psychology programs and services that are considered as being of value by players, coaches, and front office executives
- The importance of context for program design and implementation.
- Developing and maintaining policies and procedures pertaining to confidentiality
- What all of this has to do with the continued development of applied sport psychology in elite and professional sport and for graduate education and training.
- Other relevant matters.

## PAN-04

### CATASTROPHIC FAILURES: WHEN THE BEST PLAN IS NOT ENOUGH

*Jen Schumacher, United States Military Academy, USA*  
*Angela Fifer, Drexel University Athletics, USA*  
*Cindra Kamphoff, Private Practice & Minnesota State University, USA*

Failure is an unavoidable component of all performances and is not foreign to those seeking to achieve personal excellence. Numerous studies have demonstrated links between emotion, self-efficacy, self-esteem, peaking under pressure, confidence in physical abilities, and ability to cope with failure (Lane, Jones, & Stevens, 2002; Lazarus, 2000; Mummery, Schofield, & Perry, 2004). Most performers and athletes become familiar with effective ways to reframe perceived failures, such as seeking to understand the lessons from the experience, working on addressing weaknesses, and striving for improved future performances (Dweck, 2012). Further, perfectionist tendencies, which may limit one's ability to effectively cope with adversity, are understood to be counterproductive to optimal performance (Flett & Hewitt, 2005). Despite developing skill sets to improve resilience, there are still those extremely adverse setbacks which performers and athletes occasionally encounter that can be particularly challenging to overcome. With the rise of social media and the harshness of the public eye on well-known performers today, professional athletes, and to an extent, collegiate athletes, are forced to reckon with their shortcomings in a much more public and pervasive way than generations past. Therefore, the strategies sport psychology consultants utilize to assist such performers must also adapt. This panel seeks to explore some of the ways in which consultants can be effective in assisting athletes in dealing with major career setbacks. Panelists, which include individuals working with collegiate and professional athletes, will share their personal experiences with such cases and how they assisted the athlete through this challenging time.

## PAN-05

### ADOPTING A WORLDVIEW PERSPECTIVE: WORKING WITH CLIENTS FROM DIVERSE BACKGROUNDS

*Angel Brutus, Synergistic Solutions, LLC, USA*  
*Nikola Milinkovic, Intensity Tennis Academy, USA*  
*Mary Foston-English, Stanford University, USA*  
*Aaron Goodson, West Virginia University, USA*

The purpose of the Race and Ethnicity in Sport SIG is to address racial and ethnic disparities in the way sport psychology is accessed, promoted, and represented in educational training, sport psychology literature, and practiced in professional settings. Discussions concerning diversity in sports rightfully involve awareness of multiple social identity categorizations, however this panel of professionals intend to specifically address ways researchers and practitioners approach racial and ethnic stereotypes in their work. Anti-bias conversations are fundamental in becoming more culturally competent practitioners and researchers addressing the dearth of literature available on the topic of race and ethnicity in sport (Ram, Starek, & Johnson, 2004). In order to achieve the goal of having such dialog, self-awareness of implicit bias serves as an agent for pursuing a paradigm shift. This SIG sponsored panel will include: an overview of the research conducted on stereotypes, bias, and microaggressions in sport and share strategies on how to assist performers with using mental skills training techniques to manage exposure to identity threats both in and out of their performance domain (Steele, 2014); group based and individual intervention strategies to consider use with clientele of diverse backgrounds faced with such experiences; and introduce five (5) anchor standards within the Diversity domain that the Anti-bias Framework established (Teaching Tolerance Project of Southern Poverty Law Center, 2017) and how this can be used to enhance cultural competency within the field of sport psychology.

## PAN-06

### SIGNIFICANT LEARNING: STRATEGIES FOR ENGAGED LEARNING AND TEACHING IN THE SPORT AND EXERCISE PSYCHOLOGY CLASSROOM

*Christina Johnson, Cornell College, USA*  
*John Coumbe-Lilley, University of Illinois at Chicago, USA*  
*Amber Shipherd, Texas A&M University - Kingsville / Next Level Mind Consulting, USA*  
*Emily Heller, Aurora University, USA*  
*Marcel Yoder, University of IL-Springfield, USA*

Teaching can be thrilling if it is meaningful to both students and teachers. This panel will explore strategies for fostering student engagement while supporting meaningful learning outcomes in sport and exercise psychology classrooms. As sport and exercise psychology professionals, we are attuned to the need to support our students' need for intrinsic motivation (e.g., Ryan & Deci, 2001) and to manage anxiety in ways that facilitate classroom performance (e.g., Jones, 1995). Fink's (2003, 2013) Taxonomy of Significant Learning can be used to guide a conversation about best practices in sport, exercise, and performance psychology education. Fink extends Bloom's taxonomy (1956) to emphasize significant learning that goes beyond mastery and application of content. Often, classes are organized to focus on content rather than how students will learn material, resulting in learning that is superficial and temporary (Barkley, 2010). Fink's taxonomy adds to the goals of mastery and application of

foundational knowledge by suggesting that educators create an environment in their classrooms to assist students with learning how to learn, caring about others through the use of curricular material, understanding themselves and others in and through the material, and integrating knowledge from one domain across other domains. To demonstrate implementation of these strategies, panelists will briefly present examples of assignments or active learning strategies that draw from Fink's taxonomy. These include using Visual Thinking Strategies (Yenawine, 2013) to foster application and integration, engaging Problem-Based Learning (Albanese & Mitchell, 1993) to facilitate students learning how to learn, creating a sport psychology field study to engage foundational knowledge while supporting application and integration, and employing an array of other strategies to foster engagement in the classroom. In the spirit of active learning, we will facilitate discussion among audience members and panelists to explore other strategies for teaching sport and exercise psychology.

### PAN-07

#### PERFORMANCE PSYCHOLOGY CAREERS WITH TACTICAL POPULATIONS: A RANGE OF ROLES AND VARIETY OF SETTINGS

*Elizabeth Shoenfelt, Western Kentucky University, USA*  
*Valerie Alston, AFSC/Magellan Federal, USA*  
*Mathew Park, Aetos Systems, Inc., USA*  
*Kathryn Thompson, Special Operations Cognitive Enhancement for Performance, USA*  
*Xinpin (Will) Zuo, Shanghai Police College, China*

Increasingly, performance psychologists work with a variety of tactical populations ranging from police officers and firefighters to military personnel. This panel will provide information on a variety of careers with different tactical populations, both in the US and internationally. Panel members working with the tactical populations of the US Army, the National Aeronautics and Space Administration (NASA), medical personnel, and police SWAT team members will respond to questions addressing how they obtained their positions, major job responsibilities, recipients of their services, and performance psychology skills and other critical KSAs needed for effective job performance. Panelist will address topics including their most challenging assignments to date, challenges of working internationally, and how one adapts his/her approach to specific populations. Panel members work in diverse settings including the US Army John F. Kennedy Special Warfare Center and School, the Shanghai Police College, the Marshall Space Flight Center, and US Army Europe (USAREUR) Resilience Training Center. Thus, additional questions will address the reality of the day-to-day work environment, rapport building and achieving buy in with tactical units, and the challenges of getting involved in field exercises and training events. Panelist will address the reality that effective performance for elite tactical teams can lead to the death of the enemy, the role of technology (e.g., simulations, biofeedback) in training tactical populations, and how to facilitate the transition back to civilian life for tactical team members. Time will be allotted for audience questions. Attendees will learn about the range of opportunities for performance psychologists working with a variety of tactical populations in the US and internationally, in addition to the challenges and rewards of working with tactical populations. Note: this panel on careers with a variety of tactical populations is a sister panel to one focusing on performance psychology careers with the US Army.

### PAN-08

#### CRASH COURSE: SPORT PSYCHOLOGY IN COLLISION SPORTS

*Mark Aoyagi, University of Denver, USA*  
*Ken Hodge, University of Otago, New Zealand*  
*John Carlson, University of Denver, USA*  
*Stephen Mellalieu, Cardiff Metropolitan University, UK*

Providing sport psychology services within the context of collision sports presents some unique challenges and opportunities. Unfortunately, there is very little literature to help practitioners seeking to work in collision sports develop contextual intelligence (Brown et al., 2005). Outside of a few self-reflective accounts (e.g., Mellalieu, 2016) and case studies (e.g., Hodge, Henry, & Smith, 2014; Hodge & Smith, 2014) the literature surrounding collision sports is largely focused on aggression/anger/violence and injury/concussion. Thus, the purpose of this panel is to share experiences and facilitate discussions about sport psychology consulting in collision sports.

The panel consists of four members: three who have consulted extensively with rugby union and American football at the professional/elite level and the fourth a retired National Football League player who is now a graduate student in sport psychology. First, the panelists will describe their backgrounds and journeys playing and working in collision sports. With this contextual framing, they will then elaborate on the challenges and opportunities within the culture of collision sports. For example, Mellalieu (2017) has identified the negative halo effect (Linder et al., 1991), showing no emotions, and the culture of physicality as challenges for sport psychology consultants working in collision sports. However, there are opportunities in collision sports as well that, if understood and appreciated, can provide leverage points for acceptance and ultimately effective consultations. Examples of these would be the inherent danger and short career spans of collision sport athletes that cause them to look for any edge, the bonding through physicality of teammates promotes an environment where successful meetings with individual players can quickly gain traction throughout the team, and an in-group/out-group mentality that can be built and reinforced through connections with coaching and support staff. The moderator will offer ample opportunity for reflections and audience participation throughout.

### PAN-09

#### HOLDING IT DOWN: FEMALE SPORT PSYCHOLOGY CONSULTANTS IN PROFESSIONAL SPORTS

*Wendy Borlabi, Chicago Bulls, USA*  
*Gloria Balague, SportPsych Consulting, USA*  
*Cecilia Clark, Cleveland Indians, USA*  
*Kensa Gunter, Gunter Psychological Services, LLC, USA*  
*Cindra Kamphoff, Private Practice & Minnesota State University, USA*

The objective of this presentation is to expose more women to what can be expected as you enter and work in the Sport Psychology field. We will do so by discussing personal stories and tactics of how we were able to be successful. The journey is different for all of us, but there are key components in this process that we must navigate more readily. Major themes of this presentation will comprise of dealing with work-life balance, gender differences, proof of competence, validation

of your experiences, and locker room boundaries. Some specific examples of discussion points include:

The process that lead to working in professional sports after years of experience at the Olympic and collegiate level. A discussion of the initial phase of interviewing, a philosophy for working at this level, and what interventions were successful and unsuccessful due to the reality of the constraints that the NFL environment has imposed on the preferred mode of work will be presented. A focus on how your breadth of experiences is essential to your preparation to work with professional sports and the strong need for a reflective practice. Also highlighted will be how finding our place, our voice, our way within that environment, and having a reflective practice will foster personal development and future success in this field as women. Past experiences that have contributed to the preparation for working in professional sports will also be shared.

The experiences for this presentation derive from women who are currently working with professional organizations (NBA, MLB, WNBA and NFL). Being able to support other women in the sports world, colleagues and mentees alike, is not only a privilege we honor, but an important aspect of developing and encouraging a new perspective in the field.

## PAN-10

### SPORT PSYCHOLOGY CONSULTING WITH UNITED STATES PARALYMPIC ATHLETES

*Jamie Shapiro, University of Denver, USA*  
*Sara Mitchell, United States Olympic Committee, USA*  
*Artur Poczwardowski, University of Denver, USA*  
*Emily Clark, University of Denver, USA*

Paralympic athletes are elite level athletes who have physical disabilities (and some sports include athletes with intellectual disabilities). While Paralympic athletes share many similarities with their able-bodied Olympic counterparts, there are unique aspects of working with this population that should be taken into consideration for consulting (Haberl, 2006). Researchers have found few differences between athletes with disabilities and able-bodied athletes on psychosocial variables, such as motivation, self-esteem, confidence, stress, anxiety, and mood (Dieffenbach & Statler, 2012; Martin & Wheeler, 2011). Sport psychology practitioners have also pointed out that mental training can be implemented similarly with Paralympic and Olympic athletes, and consultants should use creativity in sessions to incorporate the various disabilities (Hanrahan, 2015). Differences to consider between Olympians and Paralympians in a sport psychology setting include: the wide variety of classifications of disabilities in the Paralympic system, athletes' abilities to participate in interactive team building or mental training activities, sociocultural context (i.e., accessible facilities, societal attitudes towards this population, funding and resources [or lack of] provided to these athletes), and prevalence of clinical issues.

In this panel, five sport psychology/mental training consultants who work with United States Paralympic athletes will share aspects of their consulting. The panelists will include a neophyte consultant (doctoral student) and four professionals

who have consulted with Paralympic athletes in various capacities. One professional is a full-time sport psychologist with Paralympic athletes, while the others are either contracted through the U.S. Olympic Committee or through a specific National Governing Body (NGB). One of the professionals will also serve as the moderator of the panel. Panelists will share how they gained entry with athletes, the nature of their consulting, highlights, challenges, and lessons learned from working with this population. Recommendations will be made for consultants who would like to (or already) work with Paralympic (or adaptive) athletes.

## PAN-11

### IF I KNEW THEN WHAT I KNOW NOW: REFLECTING ON OUR JOURNEYS IN SPORT PSYCHOLOGY

*Leeja Carter, Long Island University - Brooklyn, USA*  
*David Yukelson, Penn State University, USA*  
*Kate F. Hays, The Performing Edge, Canada*  
*Carole Oglesby, Private Consulting, USA*  
*Margaret Ottley, West Chester University, USA*  
*Kenneth Ravizza, California State University, Fullerton, USA*

Students and early career professionals (ECPs) in applied sport psychology (ASP) face several challenges when graduating and entering the workforce, including: uncertainty about their career path, job insecurity and low pay (Fitzpatrick, Monda, and Butters-Wooding, 2016; Meyers, Coleman, Whelan, & Mehlenbeck, 2001), obtaining ASP experience and mentorship, developing a professional network, and getting published if in an academic environment. Furthermore due to the multidisciplinary and diverse nature of sport psychology it is often hard to find one's niche and path upon graduating and starting as an ECP.

Further Fitzpatrick, Monda, and Butters-Wooding (2016) found that while sport and exercise psychology (SEP) students' goals center on working directly with athletes, they may be unaware of the challenges to obtaining consistent ASP work. The purpose of this panel discussion is to provide students and ECPs a diverse perspective of experiences, lessons learned, and advice for achieving success from seasoned experts in the field.

The panel consists of 5 leading, trailblazing professionals across practice areas in sport psychology, including: a clinical psychologist working for many years with athletes and performing artists in a private practice setting, along with scholarly writing regarding the ethical and complex areas of SEP; a Professor Emeritus and sport psychology consultant to professional sports teams and athletes; a sport psychologist within a Division I Athletics Department; an educator and applied SEP practitioner working with international, professional athletes and teams; and a Professor Emeritus and expert on evidence-based sport advocacy. Attendees will learn about the complicated journey to success in sport psychology, the diverse experiences of successful men and women across areas of practice, and recommendations for building and maintaining a career in sport psychology. The moderator is an ECP, assistant professor, and advocate for diversity issues in sport.

**PAN-12****COMPARING THE INTERPERSONAL AND PERFORMANCE BENEFITS OF MINDFULNESS USING META-ANALYTIC AND CASE STUDY METHODS**

*Sam Zizzi, West Virginia University, USA*  
*Michelle McAlarnen, Minnesota State University, USA*  
*Kathryn Longshore, Lafayette College, USA*  
*Michele Mahr, St. Cloud State University, USA*

Nineteen sessions at the 2016 Association for Applied Sport Psychology conference discussed mindfulness, which suggests that professionals, and students alike, have a strong interest in learning more about mindfulness-based interventions (MBIs). As practitioners continue to develop and implement MBIs, it is important to pause and examine the current state of MBI research within, and outside of, sport and exercise psychology. To ensure athlete and client safety, the field must be evidence-based in its application of interventions, thus the purpose of this panel is to extend the discussion of MBIs using evidence from a recent meta-level review (McAlarnen & Longshore, 2017) along with case studies documenting the intra- and interpersonal benefits. The first speaker will briefly highlight the core concepts of mindfulness, and present the idea of the “performance paradox” outlined by Zizzi & Andersen (2017). This paradox explores the mindful focus on being with the idea of doing sport psychology interventions. The second panelist will review evidence on MBIs for anxiety, depression, and performance outcomes across clinical, sport, and medical populations. Meta-analyses (n=19 studies) on MBI research within these domains and focused on these outcomes were analyzed using West et al.’s (2002) system based on quantity and quality of studies, and consistency of findings. The findings of this meta-review suggest medium to large strength ratings of MBI research in anxiety and depression, and limited/weak evidence for sport performance. The final panelists will share two case studies rooted in social cognitive theory and the biopsychosocial model that highlight the intra- and inter-personal benefits of MBIs for athletes. Following these panelist remarks, the moderator will present a set of questions for the audience focused on implementing MBIs, measuring performance changes, and conducting quality research studies to strengthen the evidence base.

**PAN-13****REFLECTING ON PAST PRACTICES, RECENT CHALLENGES, AND PROBLEM-SOLVING IN GAINING ENTRY**

*Artur Poczwardowski, University of Denver, USA*  
*Kenneth Ravizza, California State University, Fullerton, USA*  
*Mark Aoyagi, University of Denver, USA*

There are a number of critical elements to successful sport psychology service delivery (Poczwardowski, Sherman, & Henschen, 1998), with gaining entry as a foundation for establishing respect, credibility, and trust (Ravizza, 1988). Critical examinations of effective practices in light of theoretical frameworks and evidence-based recommendations continue to guide the advancement of applied sport psychology. Fifer, Henschen, Gould, and Ravizza (2008) offered insights regarding their professional experiences with gaining entry, Poczwardowski and Sherman (2011) reported qualitative data on making contact and goodness of fit, and Reid et al. (2015) offered a reflective report of initiating teleconferencing into one’s practice. The purpose of this panel is to re-examine

gaining entry in light of the past best practices and most recent challenges (including the distance supplementation of interventions [tele-consultation]) as experienced by three practitioners. First, the panelists will identify barriers to gaining entry as well as opportunities afforded by contextual features and consultant’s professional style. Next, based on working with both individual athletes and teams, they will elaborate on their gaining entry problem-solving and review the implemented solutions. For example, schedule conflicts, financial constraints, and long international trips pose a threat to maintaining the level of achieved entry and nurturing the working alliance through significant reduction of “face time” with the clients. Long-term planning of in-person immersion, tele-consulting, and other sport psychology touch points (e.g., reminders from coaching staff) can be useful in caring for the clients; thus, both capitalizing on and adding to the gained levels of respect, credibility and trust. The interaction-based presentations will engage the audience in the exchange of related experiences and implementations to stimulate the diversity of perspectives on the theoretical and practical issues involved in gaining entry. The moderator will summarize the session and offer reflections as enriched by the collected attendees’ voices and perspectives.

**PAN-14****GOING PRO: A DISCUSSION ABOUT PRIVATE PRACTICE AND DECIDING IF IT’S FOR YOU**

*Aimee Kimball, KPEX Consulting, USA*  
*Rob Bell, DRB & Associates, USA*  
*Emily Galvin, Summit Performance Consulting, USA*  
*Eddie O’Connor, Mary Free Bed Rehabilitation Hospital, USA*

Many students and young professionals dream of working in a private practice yet have doubts about whether they can make a living on their own (Taylor, 2008). In fact, 27% of graduate students in sport psychology reported not knowing someone who worked in the career that they desired (Fitzpatrick, Monda, Wooding, 2015). Considering the value of mentorship (Watson et al, 2009), this panel brings together four professional sport psychology consultants with unique perspectives on the reality of private practice. We will engage in a facilitated discussion and answer questions such as: 1) What have you learned the hard way about private practice? 2) What is the easiest thing about private practice and what is the most challenging? 3) If you could change one thing about getting to the point you are now, what would it be? 4) What advice would you give your younger self? 5) What are the financial and practical considerations of starting a private practice?

Key learning points for attendees include: a) private practice is stressful, you must work hard and take a leap of faith in yourself and the profession; b) private practice is not for individuals who are risk-averse or who need life to be predictable; c) to succeed you need to establish relationships, be business-minded, and seek out applied and educational experiences while in graduate school; d) budget wisely, there are hidden costs and affordable office space can be difficult to find.

Audience members will have the opportunity to interact with the panel. Attendees will leave with an understanding of what it takes to succeed in private practice and receive honest responses about the nuts and bolts of doing applied work on your own or within a group practice.

## PAN-15

### TWO HEADS ARE BETTER THAN ONE: COLLABORATING WITH SPORT COACHES TO INTEGRATE MENTAL SKILLS INTO PRACTICE

*Zach Brandon, IMG Academy, USA*  
*Lindsey Hamilton, IMG Academy, USA*  
*Ryan Ingalls, IMG Academy, USA*  
*Anthony DeCicco, IMG Academy, USA*  
*Taylor Stutzman, IMG Academy, USA*  
*Andrea Wieland, IMG Academy, USA*  
*Taryn Morgan, IMG Academy, USA*  
*David Hesse, IMG Academy, USA*  
*David da Silva, IMG Academy, Athletic & Personal Development, USA*  
*Christian Smith, IMG Academy, USA*  
*Duncan Simpson, IMG Academy, USA*  
*DJ Andreoli, IMG Academy, USA*  
*Leslie Larsen, IMG Academy, USA*

A critical factor in determining a sport psychology consultant's (SPCs) effectiveness is their ability to develop a positive working and trusting relationship with his or her coaching staff (Zakrajsek et al., 2013). Given the significant influence that coaches have on shaping their athletes' views of sport psychology (SP) services (Zakrajsek & Zizzi, 2007), it is paramount that coaches support and reinforce the value of these services for SPCs to be successful (McCann, 2014). Additionally, to enhance the effectiveness of the mental skills training (MST) program it is essential that the SPC meets the unique needs of the team (Fifer et al., 2008), which is best achieved through collaboration between coaching staff and SPC. With this in mind, this proposed panel will feature two SPCs and their respective head coaches where they will discuss their experiences collaborating and how they have integrated MST within sport training. Using a structured discussion approach, panelists will address the following key themes posed by the moderator: (1) Developing MST program expectations in collaboration, (2) periodization of the MST program, (3) integration of MST within the training environment, and (4) reflection on program effectiveness. The primary purpose of this proposed panel is to explain "how" MST can be implemented within the actual training environment. For example, SPCs and head coaches will share how MST was integrated into practice drills, physical conditioning workouts, and intersquad scrimmages. In addition, panelists will discuss the differences in integrating MST across both open (e.g. soccer) and closed (e.g. baseball) skill sports.

## PAN-16

### DEVELOPING AND SUSTAINING A PROFESSIONAL PRACTICE IN SPORT AND PERFORMANCE PSYCHOLOGY: REFLECTIONS BY EXPERTS

*Charles Maher, Cleveland Indians, USA*  
*Tim Herzog, Reaching Ahead Counseling and Mental Performance, USA*  
*Jack Lesyk, Ohio Center for Sport Psychology, USA*  
*Jim Taylor, Dr. Jim Taylor, USA*  
*Kate F. Hays, The Performing Edge, Canada*

The task of developing and sustaining a professional practice in sport and performance psychology is a challenging one, certainly not a linear undertaking. For the practitioner, the task requires, among other things, graduate education and training in the field, perspective, personal awareness, motivation, confidence, focus, a framework which guides their work and, of course, clients. For this panel, professional practice in sport and performance psychology will be considered as a process whereby a practitioner provides services to clients, in a systematic way, within a clearly-articulated framework or model that guides their work. This panel comprises carefully selected individuals who have been actively involved in the process of the professional practice of sport and performance psychology with individuals, teams, and organizations and who have been regarded as being highly successful with their practices, over many years. Each panelist will be asked to share their viewpoints and expertise about one or more of the following matters:

- Principles which they consider to be core to the continued development and improvement of professional practice.
- Challenges that they have encountered in their their work and how they have dealt with these challenges.
- How they evaluate the worth and merit of the services that they provide to clients.
- Importance considerations for professional practice that have relevance for graduate education and training, services delivery, and applied research.
- Other related matters

It is anticipated that those in attendance at this panel will be informed about what to consider as they proceed to develop and improve their professional practices, and they will have opportunities to ask panelists questions.

**PAN-17****PROMOTING EXERCISE IN CHRONICALLY ILL AND DISABLED: MAKE IT FUN!**

*Selen Razon, West Chester University of PA, USA*  
*Jean-Charles Lebeau, Florida State University, USA*  
*Nataniel Boiangin, Florida State University Ice Hockey, USA*  
*Edson Filho, University of Central Lancashire, UK*  
*Itay Basevitch, Anglia Ruskin University, UK*  
*Gershon Tenenbaum, Florida State University, USA*

Over 21 million US adults 18-64 years of age have a disability including serious difficulty walking or climbing stairs, hearing, seeing, concentrating, remembering, or making decisions. These adults are also three times more likely to develop cardiovascular conditions, stroke, diabetes, or cancer relative to adults with no disabilities (CDC, 2016). Exercise is a major prevention strategy to reduce the impact of chronic illness and disabilities (Thorton et al., 2016). Nevertheless, promoting exercise among persons with chronic illness and disabilities remains a challenge (Moore, Durstine, & Painter, 20016).

Given the unique and many difficulties faced by these individuals (Anderson, Grant, & Hurley 2017), the purpose of this interactive panel is to offer novel strategies to facilitate consulting with individuals with chronic illness and disabilities. Four sport and exercise psychology consultants experienced with persons with chronic illness and disabilities will offer perspectives and outline evidence-based recommendations for promoting exercise adoption and adherence.

Approaches to a number of common conditions including difficulties in locomotion and thinking as well as others such as cancer, fibromyalgia, and arthritis, intellectual disabilities (former mental retardation), severe ADHD, and cerebral palsy will be covered. Challenges associated with tailoring traditional need assessments and psychological skill training to meet the specific needs of these individuals will be outlined. Steps for rapport building and realistic goal setting will be defined. Examples of fun-based programming that centers around traditional and virtual gaming will be offered. Special emphasis will be placed upon consulting for promoting positive affective responses to exercise as positive affective responses remain a key factor to ultimately increase exercise behavior in clinical populations (Segar, Guérin, Phillips, & Fortier, 2016).

## POSTER SESSION I

THURSDAY, OCTOBER 19

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### Coaching

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#### 1

##### DEVELOPMENT OF A RELATEDNESS-SUPPORTIVE COACHING INTERVENTION IN YOUTH SPORT

*Tsz Lun (Alan) Chu, University of North Texas, USA*  
*Tao Zhang, University of North Texas, USA*

Although youth sport participation produces many physical and psychosocial health benefits, sport dropout increases with age during adolescence (Balish et al., 2014). Lack of quality friendships and relationships with coaches in sport are frequently reported among young athletes who drop out of sports (Balish et al., 2014). Therefore, development of a coaching intervention targeting positive coach-athlete and teammate interactions is warranted. Although it is important to apply theory to guide intervention practices, a systematic review of interpersonal coach education interventions shows that only four studies used a theoretical framework in their investigation (Langan et al., 2013).

Grounded in self-determination theory (SDT; Deci & Ryan, 1985), this presentation will outline a relatedness-supportive coaching intervention with regards to the structure and practical strategies for youth sport. SDT proposes that relatedness, autonomy, and competence are the three basic psychological needs that help individuals achieve self-determination (Ryan & Deci, 2000). Coaches, a significant social agent within sports, can enhance sport motivation of young athletes by fulfilling their basic psychological needs. SDT-based interventions have been demonstrated to be effective in educating professionals across various domains, including exercise instructors (e.g., Moustaka et al., 2012), teachers (e.g., Jang et al., 2010), and physical education teachers (e.g., Tessier et al., 2010). These interventions provide support for utilizing this framework in coach education. SDT-based coaching intervention studies have mostly focused on autonomy-supportive behaviors (Langan et al., 2015), whereas relatedness-supportive behaviors are understudied and thus warrant further exploration.

Our review of previous interpersonal coaching intervention studies suggests coaches adopt instructional practices that encourage young athletes' improvement and effort. In addition, avoiding controlling behaviors (i.e., negative signals about poor performance) is important and necessary. To enhance the benefits of youth sport, professional associations (e.g., AASP, SHAPE America) may implement this relatedness-supportive coaching intervention through coach education workshops and training programs.

#### 2

##### EFFECTIVE SUPPORT OF SPORTS TALENT DEVELOPMENT: PRESENTATION AND APPLICATION OF RESEARCH-BASED MODEL

*Malgorzata Siekanska, The University of Physical Education in Krakow, Poland*  
*Agnieszka Wojtowicz, The University of Physical Education in Krakow, Poland*

The transformation of talented youngsters into successful senior athletes is a topic of interest for practitioners and researchers alike (Martindale et al., 2005). Coaches play an important role in the development of sport talent and have strong influence upon the benefits experienced by youth athletes (Watson et al., 2011). Nevertheless, still not enough is known about the environment that effectively supports talent development, and there is a need of research that will provide clear and integrated views associated with optimal development of athletes (Allan & Côté, 2016).

The purpose of this study was to determine crucial factors of effective talent development environment and to present implications for practitioners.

496 athletes (Mage=19.32, Nfemales=181, Nmales=315; Nindividual=210, Nteam-sports=286) participated in the study. Six factors of talent development environment were identified: Communication, Lack of Supporting Environment (inverted), Support Network, Individualized Approach to Athlete, Understanding the Athlete, and Long-term Development Fundamentals. All factors were associated with self-efficacy and self-esteem of the athletes, but the strongest positive association was found between individualized approach to the athlete and self-efficacy, and between support network and self-esteem. Lack of supporting environment was related to lower self-esteem and lower self-efficacy of the athletes. It was also found that athletes' need for understanding, support network, and enhancing long-term motivation changed with age. Good relationships and communication with coach pertained more frequently to female athletes than to male athletes ( $t=2.25$ ,  $p=.025$ ), and to individual sports athletes than to athletes playing team sports ( $t=3.08$ ,  $p<.001$ ). The male athletes ( $t=-2.22$ ,  $p=.027$ ) and players of team sports ( $t=-2.02$ ,  $p=.044$ ) more frequently admitted to experience adverse environmental impacts and obstacles to their talent development.

The findings provide deeper understanding of crucial factors of sports talent development environment. The results have practical application as they can help coaches and sport psychology consultants to optimize athletes' development process.

#### 3

##### EXPLORING THE IMPACT OF THE UNIVERSITY CLIMATE ON DIVISION I COACHES

*Alisha Sink, University of Southern Mississippi, USA*  
*Melissa Thompson, The University of Southern Mississippi, USA*  
*Susan Johnson, APHA / The University of Southern Mississippi, USA*

Coaches play an important role in the creation of the academic and athletic climate of their teams (Jowett & Cockerill, 2003; Martin, Harrison, & Bukstein, 2010), an environment which can influence student-athlete well-being (Wilson & Stephens, 2007). Just as the coach-created climate can impact student-

athletes, it is possible that the university climate can influence the perceptions and behavior of the coach, but research on this topic is barren. This chain reaction is important for both the well-being of the coach as well as the well-being of the student-athletes under his or her supervision. The aim of this qualitative study was to explore the climate perceived by NCAA coaches in various sports. The study addressed two research questions: What is the makeup of the university climate perceived by the coach? How does this climate impact decisions made by the coach? Semi-structured interviews were conducted with five Division I head coaches (3 female, 2 male) of non-revenue sports. The coaches were from an institution in the southern region of the United States. Data are being analyzed using thematic analysis (Braun & Clarke, 2006). Preliminary themes that emerged included a lack of resources, engaging in multiple roles, self-administered pressure, desire for more support for the athletes, enjoyment of the job, and developing student-athletes as a whole. The themes regarding roles and student-athlete development partly materialized outside the scope of the original research questions. Instead of developing from the climate alone, those themes were centered around the coaches' personal attitudes and perceptions, which is important in the interpretation of the themes. The results from this study have implications for coach development. Further, these findings may provide insight to sport psychology professionals working with collegiate coaches and their athletes.

#### 4

##### **LEADING STUDENT-ATHLETES TOWARD ACADEMIC SUCCESS: TRANSFORMATIONAL COACHING AND ACADEMIC MOTIVATION**

*Aubrey Newland, CSU Chico, USA  
Eric Legg, Arizona State University, USA*

Optimizing the academic achievement of student-athletes is a fundamental goal of the National Collegiate Athletics Association (NCAA). Because coaches play a significant role in the lives of their athletes (Weathington, Alexander, & Rodebaugh, 2010; Mageau & Vallerand, 2003), coach leadership is a potentially influential factor in academic performance of student-athletes. Yet, research has not explored the potential influence a collegiate coach may have on athletes' performance in the classroom. The purpose of this study is to explore the influence of coach transformational leadership (TL) on athlete academic achievement. Transformational leadership behaviors are related to greater effort (Rowold, 2006), commitment (Brown & Moshavi, 2002), and performance (Charbonneau, Barling, & Kelloway, 2001) of followers in a variety of settings including sport. Athletes' academic performance was characterized by self-reported GPA and academic motivation. Preliminary data reflects sixty-five Division 1 and 2 athletes from a variety of sports who completed a multi-questionnaire online survey that included measures of TL (Transformational Leadership Inventory; Podsakoff et al., 1990), self-reported GPA, and academic motivation (Student-Athlete Motivation for Sports and Athletics Questionnaire; Gaston-Gayles, 2004). A multiple regression analysis with coach TL behaviors predicting student-athlete academic motivation was hypothesized. The model revealed that coach TL behaviors explained 28% of the variance in student-athlete academic motivation,  $R^2 = .285$ ,  $F(7, 58) = 2.898$ ,  $p = .01$ . Further inspection of the model indicated that coaching behaviors dealing with articulating a vision and having high performance expectations significantly contributed to the model. Findings of this exploratory study

suggest a need to more closely examine coaching behaviors that might influence athletes' performance in the classroom. A transformational coach may influence athletes' academic performance by emphasizing their own values about education, caring about athletes' lives, and providing support and encouragement for classroom efforts, which would lead to positive academic outcomes.

#### 5

##### **OUTSIDE-IN VS INSIDE-OUT: A REVIEW OF JOURNAL OF APPLIED SPORT PSYCHOLOGY LITERATURE REGARDING COACHES AND HOW THEY ARE VIEWED IN THE FIELD OF APPLIED SPORT PSYCHOLOGY**

*Tammy Sheehy, West Virginia University, USA  
Kristen Dieffenbach, WVU - Athletic Coaching Ed, USA  
Patrick Reed, West Virginia University, USA*

The mission of AASP is to "improve human performance, holistic well-being, and social functioning through education, research & practice, certification and service to the profession of sport psychology" (AASP, 1986). This is achieved through disseminating research that informs the practice of sport psychology and promoting services for use by athletes, coaches, non-sport performers, high-risk occupations, and business professionals (AASP, 1986). The purpose of this study was to examine the literature within the applied field of sport psychology research to assess the treatment of coaches and coaching. All published volumes of the Journal of Applied Sport Psychology between 1989 to 2017 were reviewed for articles containing reference to coaching in the title, abstract, introduction, or discussion sections. In total, 103 articles met the criteria and were coded and analyzed for themes relating to how coaches were researched and discussed. Results showed that 39% of articles focused solely on the coach and 21% were studies that specifically gained coach perceptions, rather than athlete, parent, or others' perceptions about the coach. Furthermore, only 3% pertained to coach performance (e.g., burnout, goal setting), 3% to professionalism (e.g., ethics, coach development), 6% to personal factors (e.g., stress, exhaustion, coach efficacy), and 10% coded as 'other' (e.g., opinion of mental skills training, team building strategies, perceptions of life skill development). The findings suggest that while coaches are specified in the AASP list of service receivers, little is known about how the field of applied sport psychology recognizes the need for consulting with coaches to address their performance, professional, and personal needs. Implications of this study include increasing awareness within the field of sport psychology for working with the coach as a performer, professional, and as a person, as well as suggesting ways to bridge the gap for consulting with coaches.

#### 6

##### **RELATIONSHIP BETWEEN COACH AUTONOMYSUPPORTIVE PRACTICE BEHAVIORS AND PERCEIVED ATHLETIC DEVELOPMENT**

*Alphonso Thompson, USA  
Wade Gilbert, International Sport Coaching Journal, USA*

The purpose of the present study was to examine the relationship between autonomy-supportive coaching behaviors and athlete perceived development. More specifically, the present research was used to test the assumption that there is a positive correlation between autonomy-supportive coaching behaviors in practices and athletes' perceptions of

their development. One NCAA Division 1 collegiate women's soccer team and its coaching staff participated in the present study. One member of the coaching staff was selected to be video and audio recorded during seven practices. The selected coach was then video and audio recorded using a GoPro camera. At the end of each practice the players immediately provided a self-rating of the selected coach's autonomy-supportive behaviors. Coaching behaviors were analyzed using an event recording systematic observation tool to code the coach's use of autonomy-supportive behaviors. It was predicted that higher rates of coach autonomy-supportive behaviors would correlate with higher athlete-rating scores of their perceived development. The main findings were: (a) autonomy-supportive coaching behaviors were evident across all practice observations, (b) athlete ratings of development across the 4C's of effective coaching (confidence, competence, connection, and character) was consistently high, and (c) there was no correlation between any of the autonomy-supportive coaching behaviors and athlete perceptions of their development.

## 7

### **THE 360 APPROACH: A CASE STUDY OF PHYSICAL AND MENTAL TRAINING WITH A YOUTH ATHLETE**

*Kerry Guest, Southern Illinois University Edwardsville  
Lindsay Ross-Stewart, Southern Illinois University  
Edwardsville*

This poster will focus on the perspective of a neophyte mental training coach working with a seventh grade football player over three years. The athlete, a 13-year-old Caucasian male, trained at an elite performance center multiple times per week under the center's 360 approach. Specifically, this approach deals with one trainer focusing on psychological, physiological and social demands of sport. When the athlete started the training program, he was in fifth grade with zero sport experience and avoided social interactions. The mental training coach is a Masters student in Sport Psychology and a Certified Personal Trainer. The initial goal of the one-hour sessions was for the obese participant to decrease body fat, increase confidence with athleticism and facilitate motivation through a focus on mental and physical sport specific training as he started playing football. Over time, the program added goals of seeing improvements in performance efficacy, development and utilization of transferable skills from sport and establish social support systems. Specific psychological skills implemented included: goal setting, imagery, pre-performance routines and self-talk. This poster will disseminate information related to the successes and challenges that the neophyte mental training coach experienced, as well as highlight some of the advantages and challenges of serving in the dual role of personal trainer and mental training coach. Finally, the athlete and his parent's perspectives on the value of the program will be highlighted.

## 8

### **THE DEVELOPMENT OF ROLE AND IDENTITY IN LEADERSHIP FOR HIGH SCHOOL BASKETBALL CAPTAINS**

*Jason Mead, Northern Illinois University, USA  
Todd Gilson, Northern Illinois University, USA*

Leadership is not often learned in isolation; it is inherently a group process where shared membership is essential (Platow et al., 2015). In the sport realm, captains are in a position to learn leadership skills/concepts (Gould & Voelker, 2010); as specifically, captains note that salient skills include leading by example, trustworthiness, and being vocal as a role model (Holmes et al., 2010). However, the "organic process" of leadership development has been overlooked in literature. This is important because leadership is developmental in nature (Brungardt, 1996) and is learned through the experience of assuming responsibility (Grandzol, 2011). Thus, understanding the formal process of leadership development may fail to present a complete picture of how individuals progress. To help bolster collective knowledge, the purpose of this study was to understand how high school boys' basketball captains, being mentored by their coach, led based on their understanding of leadership. Specifically, four captains (from one team) were followed for an entire season. Data collection included four interviews and weekly journal entries by participants. Data analysis involved categorizing and coding strategies to look for themes across participants after the season. Results highlighted five themes: interactions with other captains influenced leadership abilities, common understanding and experiences were central to leadership, importance of unity and leading as a group, leadership related to role/personality, and the relationship between leadership and motivation. As captains appeared to progress as transformational leaders throughout the season they were able to positively influence psychological aspects such as cohesion and communication (Filho et al., 2014). Furthermore, captains worked within their particular leadership strengths to accomplish collective goals central to the team. Therefore, because of the nature of participant-led leadership in sport, having captains share common experiences can help to foster greater unity and produce more adaptive communication/motivation patterns amongst leaders.

## 9

### **THE RELATIONSHIP BETWEEN MORAL DISENGAGEMENT AND ANTISOCIAL BEHAVIOR: SOCIAL IDENTITY AS A MODERATOR**

*San-Fu Kao, National Tsing Hua University, Taiwan  
Chih-Chuan Wang, Office of Physical Education, National  
Chiao Tung University, Taiwan  
Yu-Yi Gan, Department of Physical Education, National Tsing  
Hua University, Taiwan*

Bandura's moral disengagement theory is the primary framework to understand athletes' moral behaviors in sports in recent years. Though studies showed that moral disengagement is negatively related to pro-social behaviors and positively related to anti-social behaviors, studies to explore the variables between moral disengagement and moral behaviors are needed. Therefore, the purpose of the present study examined the moderation role of social identity between athletes' moral disengagement and antisocial behavior. Participants were 265 university basketball, football and handball male athletes from Taiwan.

Data were collected in season and moral disengagement, anti-social behaviors, and social identity were measured. The hierarchical regression was used to analyze the data. Results showed that athletes' moral disengagement was positively related to their antisocial behavior toward opponents and toward teammates, respectively. Results also indicated that social identity negatively moderated the relationship between moral disengagement and antisocial behavior toward opponents and toward teammates, respectively. For those who were low social identity athletes, the positive relationships between moral disengagement and antisocial behavior (both toward opponents and toward teammates) were strong. In contrast, the relationships between moral disengagement and antisocial behavior (both toward opponents and toward teammates) were weak for those who were high team identity athletes. The results provide support for research investigating the effect of moral disengagement and antisocial behavior, and also provide the evidence for the moderation role of social identity. Implications for future study are discussed.

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### Collegiate Sport

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## 10

### ATHLETE BURNOUT DIFFERENCES IN NCAA DI AND NAIA ATHLETES

*Molly Josephs, Southern Illinois University Edwardsville, USA*  
*Lindsay Ross-Stewart, Southern Illinois University Edwardsville, USA*  
*Jessie Stapleton, Missouri Baptist University, USA*

Athlete burnout is a multifaceted syndrome comprised of physical and emotional exhaustion, sport devaluation and reduced sense of accomplishment (Maslach & Jackson, 1984, Raedeke, 1997). Some factors that have been shown to contribute to burnout in athletes include: sex, injury, time demands, pressure and mental and physical stress (Galli & Reel, 2012; Lonsdale, Hodge & Rose, 2009). In coaches, level of sport (e.g., NCAA DI, II, III & NAIA) has been assessed with conflicting results (Hunt, 1984; Kelley, Eklund & Ritter-Taylor, 1999; Hunt & Miller, 1994). However, there is presently a lack of research assessing the effect of level on athlete burnout. Therefore, the current research investigated the relationship between level of college sport participation and burnout. The sample consisted of 231 athletes from two universities serving the same geographical area, one NCAA Division I and one NAIA University. All athletes completed the Athlete Burnout Questionnaire. The Athlete Burnout Questionnaire divides global burnout into three subscales. Results indicated that the emotional exhaustion and reduced sense of accomplishment subscales were not significantly different for athletes based on level. Significant difference was found for the sport devaluation subscale ( $f(1, 229) = 3.85, p = 0.05$ ) based on level. NCAA Division I athletes had significantly lower burnout ( $m = 2.04$ ) compared to NAIA athletes ( $m = 2.52$ ). Furthermore, when global burnout was assessed, a significant difference was found ( $f(1, 229) = 6.69, p = 0.10$ ) indicating that NCAA Division I athletes had overall lower burnout scores ( $m = 2.41$ ) compared to NAIA athletes ( $m = 2.67$ ). A possible explanation for these results could be that within these particular universities, the DI athletes had sport psychology services readily available to them while the NAIA athletes did not. Future research should investigate how access to sport psychology services aid in reducing burnout.

## 11

### ATHLETIC BURNOUT AND ACADEMIC PERFORMANCE OF FILIPINO STUDENT-ATHLETES

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The increasing time demands of college athletes (NCAA, 2016) can be a source of athletic burnout, which is defined as a psychological condition that has three characteristics: emotional and physical exhaustion, reduced sense of accomplishment, and devaluation of an individual's sport involvement (Raedeke, 1997). While athletic burnout has been identified as a correlate of training load/volume in previous studies (Goodger, Gorely, Lavalle, & Harwood, 2007), its role on the academics of college athletes needs further exploration. This study investigated the association between athletic burnout and academic performance of student-athletes, and the role of sex and athletic time demands in athletic burnout. Athletes from different varsity sports in a state university in the northern part of the Philippines comprised the participants ( $N=129$ ). Burnout was measured using Raedeke and Smith's (2011) Athlete Burnout Questionnaire. Grade point average (GPA), which was used as the measure of academic performance, was obtained from the university registrar after getting individual permission from the athletes. Based on the results, participants have moderate level of overall athletic burnout. Specifically, they have low level of reduced accomplishment and sports devaluation, and moderate level of emotional and physical exhaustion. No significant correlation between athletic burnout and academic performance was found. However, significant but low negative correlation ( $r=-.184$ ) between time demands in athletics and burnout was observed. In addition, male and female athletes significantly differ in athletic burnout. These findings highlight the importance of understanding the antecedents and consequences of athletic burnout. They have important implications for student-athlete development, particularly on programs that promote general well-being. Whether athletics is a coping mechanism or a source of burnout in the case of Filipino student-athletes requires additional studies. Likewise, the relationship between athletic burnout and time spent on athletics entails in-depth elucidation.

## 12

### BODY DISSATISFACTION AND SELF-ESTEEM IN DIVISION I AND DIVISION III COLLEGIATE ATHLETES

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Body dissatisfaction (BD) occurs when there is inconsistency between an individual's body image and the body type perceived as ideal. The risk for BD is greater in "lean-promoting" sports (e.g., track) as compared to "non-lean promoting" sports (e.g., basketball). Research also indicates that athletes who exercise for appearance reasons have low self-esteem. Our study sought to clarify the effect of sport type and gender on BD and self-esteem in Division I and Division III athletes. Male ( $n=44$  in the lean-promoting category,  $n=18$  in the non-lean promoting category) and female ( $n=59$  in the lean-promoting

category, n=70 in the non-lean promoting category) collegiate athletes were recruited from two Midwestern universities to complete the Body Shape Questionnaire Revised-10 and the Rosenberg Self-Esteem Scale. Lean-promoting sports were defined as: cross country, track and field, swimming and diving, gymnastics, and volleyball. Non-lean promoting sports were defined as: soccer, golf, lacrosse, baseball, softball, basketball, and tennis. A three-way analysis of variance (ANOVA) (gender vs. sport type vs. division level) revealed a significant main effect for gender indicating that females experience more BD than males ( $p < .001$ ). Main effects were also found showing that Division I athletes reported significantly higher self-esteem than Division III athletes ( $p < .01$ ), and males reported significantly higher self-esteem than females ( $p < .001$ ). Findings suggest that females experience more BD regardless of sport type or competition level. This study did not replicate previous research that suggests females in lean-promoting sports experience more BD than females in non-lean promoting sports, perhaps because the ideal body is internalized by female athletes of different collegiate levels of competition. Division I athletes reported more self-esteem than Division III athletes, potentially due to their higher imposed standards which warrant higher self-esteem. Future research should strive to investigate other factors related to BD and low self-esteem in females, such as internalization of the thin ideal and external pressures (e.g., coaches, teammates).

### 13

#### **COLLEGIATE STUDENT-ATHLETES' PERCEPTIONS OF THEIR SPORT TEAM CLIMATE AND LEVELS OF HOPE**

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Sport psychology researchers have utilized achievement goal perspective theory and a caring framework to identify physical and psychological well-being benefits of athletes perceiving a caring/task-involving climate within their teams. In a study involving undergraduate students enrolled in physical activity classes, Brown and Fry (2009) found an association between perceptions of the motivational climate in the physical activity setting and participants' self-reported level of hope in their lives. Specifically, students who reported a high caring/task-involving climate were also more likely to report high hope levels. This study, while fruitful, was limited by a narrow definition of hope and a single university sample.

The purpose of this study is to see if this link generalizes between collegiate student-athletes' perceptions of their sport team climate and their levels of hope. Unlike the previous aforementioned study, this study uses the Integrated Hope Scale which provides a multi-dimensional evaluation of factors common across measures of hope, examining social relationships, trust and confidence, perspectives of the future, and a lack of hopefulness. Schrank and colleagues' measure (2011) demonstrated strong overall score  $\alpha$  (.92), with factor scores ranging from .80 to .85; similar scores have been replicated in an American college student population (Ingram et al., in-review).

Data collection remains in final stages of IRB review for three universities spanning Division 1, Division 2, and NAIA levels. Planned analyses include using multivariate analysis of variance using perceptions of a caring/task-involving climate and ego-involving climate as independent variables and the aforementioned subscales of hope as dependent variables. Additionally, an analysis of variance between a

caring/task-involving climate or an ego-involving climate and the total hope score. Results derived from this study will burnish literature on the influence of hope in student-athletes and provide additional information regarding perceived motivational climates. Implications for sport psychologists and consultation will be discussed.

### 14

#### **EFFECT OF A SEASON OPENER ON THE PERCEPTION OF SEASON READINESS IN A TRACK AND FIELD ATHLETE**

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The purpose of this study was to explore the relationship between a season opening track performance and perception of season readiness through athlete self-report. The investigators were interested in further understanding the relationship between a season opening track performance, and the perception of season readiness with respect to cognitive anxiety, somatic anxiety, and self-confidence. Athlete self-report measures (ASRM) include perceptions of wellbeing (e.g. fatigue) and psychological variables (e.g. mood) which are influenced by both training and non-training stressors (Kellmann, 2010; Rushall, 1990). Understanding how cognitive anxiety and somatic anxiety interact within an athlete may help sport psychology consultants assist athletes in managing anxiety more effectively, and requires both components to be measures reliably and validly (Martens, 1990). Anxiety has been one of the most frequently measured constructs in the field of sport psychology (Terry, 2005), where there Revised Competitive State Anxiety Inventory-2 (CSAI-2R) has been the measure of choice. A 23-year-old male collegiate track and field athlete from a Power-5, Division 1 University was used in this study. A semi-structured interview, along with the CSAI-2R were administered before and after the first outdoor track meet of the year. Results from the CSAI-2R and semi-structured interview indicate that somatic anxiety scores decreased after the season opening performance. The study could contribute to current literature by providing current evidence to the relationship between somatic anxiety and the perception of season readiness, while further showing the utility of athlete self-report measures.

### 15

#### **EVIDENCE OF AN UPDATED PERIODIZED MODEL OF PSYCHOLOGICAL SKILLS TRAINING ALIGNED WITH SOCCER COACHES PEP GUARDIOLA AND JOSE MOURINHO'S USE OF TACTICAL PERIODIZATION TO WIN SOCCER CHAMPIONSHIPS**

*John Coumbe-Lilley, University of Illinois at Chicago, USA*  
*Miossi Lindsey, University of Illinois at Chicago, USA*  
*Abigail Li-Choong, University of Illinois at Chicago, USA*  
*Lauren Erickson, University of Illinois at Chicago, USA*  
*Sharzad Ayrempour, University of Illinois at Chicago, USA*  
*Chanya Angwarawong, University of Illinois at Chicago, USA*

Coaches of team sports seek insights into how their teams can play at optimal levels. The purpose of this investigation was to confirm previous findings from an earlier study by Coumbe-Lilley (2003) which integrated the theoretical model of periodization (Bompa, 1999) and psychological skills training (PST) program for teams (Bacon, 1989) to identify the PST

approaches coaches of high school and college levels used with their teams (N=10). Since 2003, several studies have been conducted to examine periodized PST delivery (Blumenstein, Lidor, & Tenenbaum, 2005; Blumenstein, & Lidor, 2008; Holliday, Burton, Hammermeister, Naylor, Freigang, 2008 and von Guenther, Hammermeister, Burton, & Keller, 2010). The current study replicated the semi-structured interview protocol of the earlier investigation using convenience and snowball subject sampling recruitment approaches. (N=10) college level coaches leading teams through NCAA competition at Division I and Division III contexts participated. Analysis was conducted using thematic content analysis methodology (Boyatzis, 1998 & Creswell, 2012). Preliminary findings from the second study showed coaches applied the following approaches to PST programming across all phases of competition: leadership, goal setting, imagery, self-talk, coping, focus and interpersonal communication. These results differed from the previous study which demonstrated no consistent PST applications across a season of play. While the findings of the studies differ. The latter investigation is aligned with the contemporary concept of Tactical Periodization (Xamarit, 2015) proposing an holistic team preparation model using periodized principles and variables intentionally inclusive of PST and supplemented by it, indivisible from the whole training method. This approach has been adopted by top championship winning soccer coaches Jose Mourinho and Pep Guiradiola. Further interviews and analysis are planned to check validity and consistency to develop an applied intervention for college soccer teams.

## 16

### EXAMINING ORGANIZATIONAL COMMITMENT OF SMALL COLLEGE SPORTS OFFICIALS

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There is growing recognition on the importance of understanding sports officials' motivations in relation to their avocation (Hancock, Dawson, & Auger, 2015; Van Yrpre, 1998). Attrition rates within officiating are problematic (Deacon, 2001; Livingston & Forbes, 2016) and officials who are more likely to continue demonstrate greater intrinsic (Livingston & Forbes, 2016) and social (Hancock et al., 2015) motivations. Meyer and Allen (1997) indicated that organizational commitment (OC) represents a psychological link between an employee and organization, reducing the likelihood the employee will leave the organization. While organizational commitment has been examined in Canadian officials (Gray & Wilson, 2008), less is known about sports officials at small colleges and universities in the US. Therefore, the purpose of this study was to examine the organizational commitment among National Association of Intercollegiate Athletics (NAIA) sports officials. Participants (N = 1,453; M age = 47.91 years, SD = 11.22) were registered NAIA officials across the US in various sports who completed an online survey containing demographic items and a modified Organizational Commitment Questionnaire (OCQ; Mowday, Steers, & Porter, 1979). A t-test comparing OC across gender was significant ( $t(1,390) = -3.38, p < .005$ ), with males higher in OC than females. One-way MANOVA results for OCQ items across officiating experience were significant (Wilks's Lambda (15, 1,384) = .952,  $p < .005$ ). Follow-up ANOVAs showed less experienced officials were: (a) more willing to put in effort beyond normal ( $p < .005$ ); (b) more glad to work for the NAIA ( $p < .05$ ); (c) higher in disagreeing with the NAIA on officiating matters ( $p < .005$ ) and (d), higher in feeling that working for the NAIA was a mistake ( $p < .05$ ). More experienced officials

were higher in feeling the NAIA was the best level to officiate ( $p < .005$ ). Findings offer suggestions for sports officials' education and training to maximize retention.

## 17

### GENDER DIFFERENCES IN GOLFERS' PREFERENCE FOR LEADERSHIP STYLES AND PSYCHOLOGICAL SKILLS

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Psychological strategies and preferred leadership styles are crucial in the development of athletes. Sport specialists agree that athletic performance is influenced not only by physical skills but also by psychological ones (Katsikas, Argeitaki, & Smirniotou, 2009) and that athletic performance could also be influenced by team or coaching variables and social support issues (Gould, Dieffenbach, Moffett, 2002). Although these two qualities are essential, differences have been found to exist between genders. Male elite track and field athletes have been found to use more relaxation and emotional control than female athletes in competition (Katsikas, Argeitaki & Smirniotou, 2009). Additionally, athlete gender was responsible for some variance in preference for autocratic behavior and positive feedback behavior in elite level tennis players (Riemer & Toon, 2001). The purpose of this pilot study was to explore if there were gender differences within the same sport and competition level on psychological skills use and leadership style preference. NCAA Division 1 athletes competing in men's (n=7) and women's (n=7) golf completed the Test of Performance Strategies (TOPS) and the Leadership Scale for Sports (LSS) during their competitive season. Due to the small sample, descriptive statistics (M, SD) were used. For the TOPS, in terms of competition, females were found to be higher in relaxation (M= 3.64, SD= .42), self-talk (M= 4.35, SD= .40) and imagery (M= 4.28, SD= .44). Males were higher in emotional control (M= 2.82, SD= .55). For the LSS, females were found to be higher in preference for autocratic behavior (M= 2.28, SD= .60) and positive feedback behavior (M= 2.62, SD= .39). Males were higher in preference for social support behavior (M= 2.30, SD= .53). While future research should replicate this study with a larger sample size, these results suggest gender may influence preference for coaching behavior and athletes' psychological skill use.

## 18

### INFLUENCES OF INTRINSIC AND EXTRINSIC MOTIVATION ON FLOW STATE

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Joanne Perry, Northwestern University, USA  
Taylor Montgomery, Saint Louis University, USA  
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Michael Ross, Saint Louis University, USA*

Introduction: The state of flow, or being "in the zone," is a state of peak performance characterized by nine separate components, including a merging of action and awareness, transformation of time, and a loss of self-consciousness (Jackson, Eklund, & Martin, 2010). Motivation has been identified as a key component of performance and sport engagement. Previous research has demonstrated that constructs related

to motivation are associated with flow. Methods: NCAA Division I collegiate, women soccer players (n = 28) completed the Flow State Scale–2 and Sport Motivation Scale in order to assess for flow experience and facets of motivation (i.e., intrinsic, extrinsic). Results: A multiple linear regression was conducted to investigate whether type of motivation predicted flow state experience. The overall regression model yielded a statistically significant finding, ( $F(2,24) = 5.41, p < .05, R^2 = .31$ ). Intrinsic motivation independently predicted flow state experience, ( $\beta = .55, t = 3.15, p < .01$ ). In contrast, extrinsic motivation did not predict flow state experience ( $\beta = -.29, t = -.17, p = .11$ ). Discussion: Although previous literature has demonstrated that motivation may be related to flow, this study further clarifies that intrinsic motivation plays an important role in predicting flow experience, while extrinsic motivation seems to be less relevant. These findings suggest that the presence and importance of intrinsic motivators may impact how an athlete experiences flow. These findings could have implications for professional practice, as interventions aimed at increasing intrinsic motivation may impact an athlete's flow state experience to change or strengthen.

## 19

### RECRUITING FOR MENTAL TOUGHNESS: A QUALITATIVE EXAMINATION OF DIVISION I COACHES' PERSPECTIVES WHEN EVALUATING PROSPECTIVE STUDENT-ATHLETES

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Recruiting student-athletes with the most potential for high athletic performance is a crucial factor for athletic program success and revenue generation for athletic departments (Caro, 2012). Athletes with high levels of mental toughness are more likely to see improved athletic performance which is desired by collegiate coaches (Sheard & Golby, 2006; Weissensteiner et al, 2012). However, the literature suggests that coaches are more likely to consider "intangible factors" while recruiting. The purpose of this study was to conduct a phenomenological investigation into the psychological factors coaches examine during recruiting process. Division I coaches from the Northeast, Midwest and Southern US were contacted to request their participation. Six coaches (four male) met the criteria for participation in the interview (primary recruiter, 2+ years of coaching Division I athletics; recruiting for intangibles; spending 10 hours a year in contact with a recruit). Sports included: men's basketball, men's soccer, men's and women's volleyball, baseball and field hockey. Interviews were transcribed verbatim, ranged from 27-55 minutes in length, and were coded into respective themes. The final thematic structure (and sub-themes) of indicators that coaches considered during the recruiting process consisted of: characteristics of the athlete (integrity, leadership, character, accountability, responsibility, hard work ethic), athlete interactions with others (teammates, parents, authorities, referees), and perceived on-field behaviors (reactions, body language, ability to move past bad calls). On-field behaviors emerged as the most similar theme to any characteristics of mental toughness, as described in the literature, and was one of the primary psychological characteristics for which coaches recruited. At the conclusion of the interview, when asked, a few coaches agreed that they do recruit for mental toughness. Overall, the findings provided valuable insight into the psychological characteristics that coaches' desired in their recruits. The applied relevance of the findings will be discussed during the presentation.

## 20

### RESILIENCE AND NON-TRAINING BIOMETRIC MARKERS IN FEMALE COLLEGIATE CLUB ATHLETES

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Resilience is the ability to cope despite adversity (Campbell-Sills & Stein, 2007) and may help an athlete manage, and potentially thrive, in the stressful environment of competitive sport. Trait resilience has been found to be negatively associated with cardiovascular changes after a stressor (Tugade and Fredrickson, 2004). Heart rate variability (HRV) is individual variation in heart rate and may mirror the body's capability to adapt to stress (Acharya et al., 2006). HRV has been associated with higher physical activity (PA) levels (Davy et al., 1998). Yet, the association of these biometric markers with athlete resilience is not well known. The present study evaluated the association of resilience with HRV and PA during a six-week pilot study of collegiate club athletes. Over the six weeks, participants completed psychometric questionnaires at baseline, two-, four-, and six-week sessions. Non-sport PA and HRV were monitored daily via biometric device. Resilience scores at baseline, two, and six weeks exhibited moderate to strong associations with HRV across the sessions. Additionally, PA and resilience were positively associated at each time point, ( $r = .50$  to  $.69, p = .03$  to  $.12$ ). Follow-up moderated regression analyses revealed a significant main effect of PA and resilience which accounted for 7.3% of the variance in HRV ( $F(3,7) = 4.89, p > .05$ ). A significant interaction effect between PA and resilience was also found to predict an additional 4.7% of the variance in HRV ( $F(1,7) = 8.06, p > .05$ ). Cumulatively, study results showcased that athletes with higher resilience scores exhibited significantly greater HRV than individuals endorsing average or low resilience scores, even when exhibiting lower PA levels. Study data corroborates resilience as an important correlate of non-training HRV and non-sport PA in club athletes. Though preliminary, study results may inform ways to increase resilience as means to manage sport stress.

## 21

### STUDENT-ATHLETE DEVELOPMENT: INSIGHTS FROM 12 NCAA DIVISION I COACHES

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Developing successful student-athletes on the field of play, in the classroom, and in life beyond sports and academics are core components of the NCAA's mission. Many NCAA institutions provide leadership programs and additional development opportunities for student-athletes. The effectiveness of training programs is impacted by three factors: (1) the culture, norms and resources of the institution (2) the training program's alignment with the vision of the institution and (3) buy-in from coaches, student-athletes, and administrators regarding the design and goals of the training program. The purpose of this study was to conduct a training needs analysis (TNA) to assess the above factors and assist in designing an effective student-athlete development program. This lecture details the first step of the TNA, in which 12 NCAA Division I head coaches at a small, private university were interviewed to gain perspective on the training needs of their student-athletes. Each coach was asked the same set of questions regarding their mission statement, goals, the strengths and weaknesses of their individual athletes and/or team, and their view on attributes central to cultivating student-athlete

success in their program. This lecture discusses the common themes surrounding each coaches' perspective regarding the development of successful student-athletes, including the importance of communication, accountability, and a long-term passion for the sport. Additionally, in this lecture I highlight coaches' unique comments surrounding this generation of NCAA athletes and differences across coaches based on gender and historical success of the team. In closing, I detail the next steps in creating a data driven program targeted at enhancing specific outcomes for student-athletes.

## 22

### STUDENT-ATHLETES' MOTIVATION: ACADEMIC VS. SPORT MOTIVATION WHILE FACTORING IN THE PERCEIVED MOTIVATIONAL CLIMATE

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B. David Ridpath, Ohio University, USA

College athletes' experiences, athletically and academically, have received considerable attention in the popular media and literature. Research has explored the athletic environment in terms of leadership, team dynamics, team cohesion, and the motivational climate (Adie, Duda, & Ntoumanis, 2008; Medic, Mack, Wilson, & Starkes, 2007; Tsang, 2007). Others focused on individual attributes such as motivation to perform and participate, perceived competence, personal satisfaction, enjoyment, and social status (Amorose & Horn, 2001; Hollembeak, & Amorose, 2005). Although these concepts have been studied extensively in different contexts, fewer have examined college athletes' motivation towards academics and athletics. Researchers and leaders in collegiate athletics would benefit from understanding factors that influence academic motivation and performance. This study examined the effects of the perceived motivational climate on motivation towards academics and athletics. Data were gleaned from male and female athletes at one large, Midwestern NCAA Division I University using the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2) and the Student Athlete's Motivation toward Sports and Academics Questionnaire (SAMSAQ). Results indicated three predictors (gender, race, task-involving climate) that significantly predict academic motivation,  $R^2=.205$ ,  $R^2_{adj}=.189$ ,  $F(6,302) = 12.946$ ,  $p<.001$  and two predictors (gender, task-involving climate) that significantly predict sport motivation,  $R^2=.396$ ,  $R^2_{adj}=.384$ ,  $F(6,302) = 33.018$ ,  $p<.001$ .

## 23

### THE WHITE LINE THEORY: MORAL DILEMMAS FOUND IN US NCAA DIVISION I (DI) WOMEN'S SOCCER

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Leslee Fisher, University of Tennessee, USA

To date, little research exists with regard to morality within the sport context (e.g., Bredemeier & Shields, 1984, 1986; Kavussanu, 2007, 2008; Shields & Bredemeier, 1995; Weiss, 1987), and even less exists that examines bracketed morality and/or game reasoning in sport (e.g., Bredemeier & Shields, 1984, 1986; Kavussanu, Boardley, Sager, & Ring, 2013). However, these researchers have provided participants within their studies with moral dilemmas and asked them

to reason about them. Furthermore, they have not allowed for athletes to identify potential moral dilemmas they have faced within their respective sports. Thus, there is a lack of knowledge regarding the moral dilemmas faced by women in NCAA DI soccer. Therefore, the purpose of the current study was to use interpretative phenomenological analysis (IPA; Smith, 1996) to explore NCAA DI women's soccer players' perceptions regarding morality in sport. This is part of a larger study examining components of sport moral identity within US NCAA DI women's soccer players. Ten DI women's soccer players were interviewed about their moral experiences in sport. From the data, the researchers suggested there to be three superordinate themes related to (a) bracketed morality, (b) the coach-athlete relationship, and (c) gender. Sport psychology consultants need to be made aware of the dilemmas elite athletes face in order to provide strategies that will help athletes handle such dilemmas.

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## Consulting & Interventions

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## 24

### AN EXPLORATION OF THE TAXONOMY OF COLLEGIATE ATHLETIC VALUES

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Joanne Perry, Northwestern University, USA  
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Purpose: Adherence to personal values enables athletes to perform consistently and successfully, despite experiencing negative internal states. Given the performance benefits of interventions prioritizing value-driven behavior (i.e. Mindfulness, Acceptance, and Commitment [MAC]), this is a relevant construct to study in athletes. The purpose of this study is to represent an exploration into better defining the most common values utilized at the individual level. Participants: Participants will include collegiate athletes competing in a variety of sports who were self-referred to receive sport psychological interventions. All participants included in the sample were participating in the MAC approach to treatment. The study is currently in the data collection phase and expects to be completed by May 2017. The final sample size will include approximately 30 student-athletes. Methods: Athletes receiving sport psychological services were asked to provide an exhaustive list of intrinsic and extrinsic values deemed to be relevant to collegiate athletic performance. From these suggestions, a list of 30 combined intrinsic and extrinsic values was created based on the frequency of responses. Participants in this study are asked to sort these 30 values into three piles based on their perception of importance relative to their personal experiences (e.g. most important, important, and least important). Results: Based on preliminary findings, it is hypothesized that a higher frequency of intrinsic values will be identified as 'most important' relative to extrinsic values. Additionally, it is predicted that values relating to increasing the favor of teammates/coaches will be the highest rated extrinsic values. Discussion: We are unable to comment on the implications of our findings at this time. However, due to the positive performance effects of value-driven behavior, we believe that these results will provide clinicians with valuable information to better direct values-based exploration while working with athletes.

25

**ANALYZING THE EFFECTIVENESS OF AN INJURY EDUCATION PROGRAM IN INCREASING NOVICE MARATHONERS' SELF-EFFICACY IN ADOPTING PROPER INJURY MANAGEMENT STRATEGIES**

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*Andrew White, University of Minnesota, USA*  
*Joseph Kronzer, University of Minnesota, USA*  
*Hayley Russell, Gustavus Adolphus College, USA*  
*Diane Wiese-Bjornstal, University of Minnesota, USA*

With the increased awareness of the positive health outcomes associated with regular physical activity, the number of participants participating in running events, such as the marathon, continues to increase significantly each year. Research shows that novice participants are relatively inexperienced and untrained in regards to completing a marathon training program (Chorley et al., 2002). Education to minimize potential common injuries and promote positive training adherence is necessary to empowering these individuals to complete the grueling process of a marathon training program. Our study analyzes the effectiveness of an in-person injury education program in a) increasing runners' ability to identify specific running-related injuries, and b) enhance runners' utilization of proper injury management strategies during their marathon training program. All runners' received the injury education program developed and delivered by a certified athletic trainer illustrating four of the most common running-related injuries (i.e. plantar fasciitis, iliotibial band friction syndrome, patellar-femoral syndrome, stress fractures). Prior to the injury education sessions, runners were assessed on their current injury knowledge and ability to identify specific injuries using case vignettes developed to specifically portray each respective injury in running. After the injury education sessions were delivered, runners were retested in ability to accurately identify specific running-related injuries. Longitudinally throughout the 22-week training program, the runners' training logs were assessed to identify the onset of injury and subsequent management strategies, general feelings and thoughts surrounding each runners' training experience were gathered, and complete recovery profiles were created for each runners' training program. With the rise in interest in injury prevention programs, this study aims to add to the literature on the positive psychological effects of injury education programs in enhancing novice runners' adoption of proper injury management strategies.

26

**APPLIED INTERVENTIONS USING QUIET EYE TECHNIQUES TO ENHANCE PERFORMANCE IN BASEBALL AND FASTPITCH SOFTBALL: A MULTIPLE-CASE PILOT STUDY**

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*Brandon Orr, University of Missouri, USA*

Introduction: Quiet eye (QE) represents the time needed to cognitively process information being fixated or tracked and focus attention on the demands of the task (Vickers, 2009). Research indicates that an optimal combination of QE, attentional control, and gaze behaviors is linked with superior skill execution (Harle & Vickers, 2001). Furthermore, successful integration of these attentional behaviors may combat the negative effects of anxiety during competition (Vine & Wilson, 2011). While QE has been applied to various

sports, like rifle shooting (e.g., Vickers & Williams, 2007), QE research in baseball and fastpitch softball is lacking (Vickers, 2016). Therefore, the purpose of this multiple-case study was twofold: (1) explore the perceived applicability of QE and attentional control principles (Eysenck et al., 2007) to baseball and softball; and (2) test the validity of such perceptions. Method: Study 1 – A baseball coach who played 5 years professionally and a fastpitch softball player with 1 year of professional experience each spent three hours implementing QE techniques while shooting an AR-15 rifle, prone. Follow-up interviews were conducted to assess the participants' experiences. Study 2 – Four current Division I softball players (mean = 19.25 years; SD = .866) each spent 45 minutes completing QE-inspired softball drills (Vickers, 2007) and 15 minutes journaling once weekly for six weeks. Journals and final interviews were transcribed, coded, and evaluated via a multiple-case study analysis (Yin, 2013). Results/Discussion: Overall, the perceived benefits of applying QE to baseball and softball as discussed by participants in Study 1 manifested in Study 2. Themes indicated that QE facilitated a present-focused mindset, mitigated performance anxiety, and increased task focus. Given baseball and softball's segmented nature and inherent downtime, QE training may be especially beneficial for enhancing attentional control and sustaining a task-oriented focus during competition. Limitations and future directions will be discussed.

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**ATTENTION TRAINING FOR PERFORMANCE ENHANCEMENT: A CASE STUDY OF A COMPETITIVE ELITE SOCCER ATHLETE**

*John Roman, University of Florida, USA*  
*Garrett Beatty, College of Health and Human Performance, University of Florida, USA*  
*Christopher Janelle, University of Florida, USA*

Perceptual-cognitive skills differentiate elite performers across myriad domains. Research indicates experts more efficiently gather and apply visual information within their domains of expertise. Specifically, experts utilize fewer fixations, maintain longer fixation durations (including longer quiet eye periods) and subsequently initiate motor responses more quickly and accurately. However, the best combination and type of systematic training activities to gain expertise in specific perceptual-cognitive skills continues to be explored. This case study reports an intervention aimed to train optimal perceptual-cognitive strategies in a Competitive Elite soccer athlete. The intervention included a semi-in-situ assessment of pre-season gaze behavior utilizing a mobile eye-tracker during dynamic soccer sequences; daily training of perceptual-cognitive skills through imagery, process goals, and arousal regulation; and ongoing assessment of intervention efficacy utilizing multi-dimensional measures. Quantitative and qualitative data collectively indicated a trend towards improved perceptual-cognitive skills. The pre-season, qualitative assessment of gaze behavior identified inefficient search strategies and expedited target disengagement during shots-on-goal. The athlete consistently engaged in the subsequent, customized 35-session psychological skills training program (PST) over six weeks. During the final week of the PST, the athlete reported decreased cognitive and somatic state anxiety, and increased self-confidence. Specifically, these data report states before the most challenging games against teams ranked in the top-10 of the NCAA RPI and Coaches' poll, compared to similar competition during the first week of PST. The athlete's self-

evaluation indicated rapport among dyadic player pairings influenced anticipation accuracy during passing, receiving, and offensive corner kicks. The athlete also self-reported improvement in attentional control towards performance relevant cues and more efficient decision making within shooting contexts. This case-study could serve as a prototype for future intervention efforts attempting to maximize the integration of available psycho-physiological and qualitative data to enhance performance.

## 28

### **BIGGER, FASTER, STRONGER... SAFER? THE USE OF SELF-TALK INTERVENTIONS ON BARBELL BACK SQUAT KINEMATICS**

*Ivan Macias, Fresno State, USA  
Jenelle Gilbert, California State University, Fresno, USA  
Luke Pryor, California State University, Fresno, USA  
Mark Baldis, California State University, Fresno, USA*

The purpose of this study was to explore the influence of motivational and instructional self-talk on barbell back squat kinematics during fatiguing workouts. Fatiguing workouts (e.g., CrossFit, P90X) are popular amongst individuals who look to become stronger, faster, or just more physically fit (Bergeron et al., 2011). In the interest of finishing the workout quickly, form and technique may be compromised. This can increase the risk of injury and reduce performance output. Self-talk may assist individuals in maintaining proper form when engaging in fatiguing workouts. Experienced resistance trained males (20-34 years old;  $M=24.26$ ,  $SD=3.52$ ) participated in a familiarization session to determine their 1RM. Participants were then randomized into a motivational self-talk, instructional self-talk, or control group; intervention groups completed a brief, self-talk specific intervention, while the control group learned about the benefits of squatting. All participants completed a timed highly fatiguing resistance training workout (Hooper et al., 2014) using 75% of their 1RM. Self-talk or thoughts (control group) were recorded after each set. Hip and knee angles during initial reps showed wide dispersion among groups and were included as covariates in subsequent analyses. Separate 3 x 6 (group x time) repeated measures ANCOVAs with Tukey post-hoc evaluated changes in hip and knee angles. An interaction effect for hip angle occurred whereby at the final repetition the control group demonstrated a lower hip flexion angle vs. instructional self-talk ( $M=18$ ,  $SD=6.82$ ,  $p=0.036$ ). The reduced hip flexion angle is consistent with poor squat form. As expected, 86% of all self-talk used by the instructional group included cues related to proper form. Results suggest that the use of instructional self-talk during squatting may help with maintaining proper form, thereby lowering the risk of injury. Implications of these results will be discussed with suggestions included for sport psychology practitioners who consult with strength training athletes.

## 29

### **DATA-DRIVEN CHANGES IN BEHAVIORS: EVIDENCE-BASED MENTAL SKILLS AND TRAINING IN OPEN AND CLOSED SKILL SPORTS**

*Domagoj Lausic, Hourglass Performance Institute, USA*

This presentation focuses on frequently advocated science-practitioner and evidence-based mental skills training approach. A program was carried out with junior, collegiate,

and professional athletes, in off- and on-court or on-range settings in different sports: tennis (open skill sport) and precision shooting (closed skill sports). The process involved assessment and training results of objective measures of mental skills, execution, and outcome performance. To bridge the gap between practice and research, technological components were incorporated during assessments and training: (a) biofeedback technology, and (b) software for measuring athletes' performance and outcome results. Research and practices with biofeedback have been expanding rapidly (Schwartz & Andrasik, 2003) and practitioners are finding numerous biofeedback applications useful in sports (Strack et al., 2011). As biofeedback equipment is becoming more reliable, efficient, and reasonably priced, it allows for sport and situation specific preparation, increasing the ecological validity of mental skills training. As a result, athletes may be likely to adhere to the programs if mental skills training can be measured and related to performance outcomes. Assessment and training data will be presented utilizing the Hourglass Performance Model and sequential analysis (Jeong, 2003) to indicate outcomes as a function of positive or negative behaviors (i.e., poor body language and self-talk) or preferred and less preferred physiological indicators.

## 30

### **DEVELOPING A PRACTICE JOURNAL THAT SUPPORTS DELIBERATE PRACTICE AND HOW TO INTRODUCE IT TO ATHLETES**

*Brad Baumgardner, The Mental Component, USA*

Overcoming a plateau in performance can be a difficult experience for most athletes. In many areas of performance, once a person reaches that level of "acceptable" performance in which their skills become automatic, any additional years of "practice" don't lead to improvement (Ericsson and Pool, 2016). As early as 1958, Keller found that these plateaus could be overcome by alternative and more efficient training methods. However, it has only been more recently that Ericsson and other researchers have identified the key elements of deliberate practice to better equip athletes to continue developing their performance throughout their careers (Ericsson & Pool, 2016; Ericsson, Krampe, & Tesch-Römer, 1993; Ericsson 2006). By using key components of deliberate practice, I created an athlete journal to facilitate deliberate practice and improve performance. This poster will share the athlete journal format and explore effective ways to enhance athlete buy-in and encourage practice journal adherence.

## 31

### **DISTANCE RUNNERS REPORTED USE OF IMAGERY**

*Phillip Post, New Mexico State University, USA  
Duncan Simpson, IMG Academy, USA  
Greg Young, James Madison University, USA  
Ashley Samson, California State University Northridge, USA  
Jason Grindstaff, Cumberland University, USA*

Imagery has been shown to be an important mental skill in improving athletic performance (Weinberg, 2008). To conceptualize athletes' use of imagery, Paivio (1985) proposed a framework to described the various functions of imagery, suggesting that imagery influences behavior on a general and specific level through cognitive (i.e., strategy rehearsal) and



motivational (i.e., self-confidence) mechanisms. Drawing on Paivio's work Hall et al. (1998) developed the Sport Imagery Questionnaire (SIQ), which assesses five imagery functions (cognitive specific-CS, cognitive general-CG, motivational specific-MS, motivational general-arousal-MG-A, and motivational-mastery-MG-M). The SIQ has been used to describe athletes' reported imagery use with results of prior research suggesting there are several factors that affect athletes imagery use including: competitive level, type of sport, time of season, and gender. However, little research has examined how distance runners use imagery. The purpose of the current study was to examine distance runners (from 5K to 100miles) reported use of imagery using the SIQ. 1,155 (M = 38.44 age; SD = 10.07). Recreational to competitive distance runners filled out the SIQ. MANOVA analyses were conducted to determine the influence that gender, preferred distance, and competitive level had on runners' imagery use. Results revealed that males reported higher use of CS, CG, and MG-M imagery than females ( $p < .01$ ). Competitive runners reported greater use of CS, CG, MS, and MG-A imagery than intermediate and recreational runners ( $p < .01$ ). Runners of longer distances (50 miles or greater) reported greater use of CS, CG, and MG-M imagery than runners of shorter distances (5K to half marathon). These results are congruent with prior research indicating that various factors impact reported imagery use (Callow & Hardy, 2001; Munroe et al. 1998). Results also indicate that distance runners might use imagery differently depending on their competitive level and preferred race distance.

### 32

#### EFFECTS OF MENTAL IMAGERY VS. A VISUAL TRAINING AID ON SHORT AND LAG-PUTTING GOLF PERFORMANCE

Sean Mullen, University of Illinois, USA

Jeffrey Ruser, California State University, Fresno, USA

Nicole Bolter, San Francisco State University, USA

Prior research supports the benefits of multiple imagery modalities on golf-putting performance. However, most studies were conducted with young adult beginner golfers putting within laboratory settings using artificial turf and distances <10 feet (e.g., Short et al., 2002). Our purpose was to compare the acute effects of an evidence-based mental imagery intervention with a visual training aid based on layperson strategies for improving putting performance. Additionally, we aimed to test the effects of each manipulation in a natural setting using a short (5-ft) and lag-putt (35-ft) condition. Sixty adult golfers (81.7% male; Mage = 42.70 [SD=15.89]) with >1 year experience (M= 21.72 [SD=12.96] years) completed an informed consent and online questionnaires assessing demographics, current engagement in golfing activities, putting self-efficacy, and Vividness of Movement Imagery Questionnaire-2 (VMIQ-2). Participants were then randomly assigned to one of three conditions (visual training aid, audio imagery, active stretching control). Ten practice and ten performance trials were conducted before and after each intervention. Performance was recorded and computed as average (%) accuracy and distance (in inches) from the hole. Pre-post intervention change in accuracy (5ft putt) and distance (35 ft putt) were used as primary outcomes in a multivariate analysis of variance, adjusting for age, gender, experience, and VMIQ-2. Results revealed no significant group differences in the short putt condition. However, a significant group effect was found in the lag-putting condition indicating, on average, a foot improvement

(SD=9.70 inches) after using the visual training aid relative to the audio imagery condition (M=1.52; SD=14.69). After Bonferroni correction, this effect was not statistically different ( $p=.13$ ) from the control stretching (M=3.86; SD=16.68). These findings suggest self-corrective techniques already used by experienced golfers may be more effective than guided mental imagery. Future research is needed to explore sport psychology interventions relative to layperson strategies for performance enhancement.

### 33

#### EVALUATION OF A PSYCHOLOGICAL SKILLS TRAINING PROGRAM FOR ELITE YOUTH TENNIS ATHLETES

E. Earlynn Lauer, University of Tennessee, USA

Rebecca Zakrajsek, University of Tennessee, USA

Larry Lauer, United States Tennis Association, USA

Due to the growth of organized youth sport, young athletes are exposed to demanding competition and rigorous training schedules, creating a platform for psychological stressors to disrupt their sport experiences. Integrating psychological skills training (PST) into organized youth sport programs can help young athletes develop functional responses to stressful or evaluative situations such as competition (Harwood, 2008; Vealey, 1988). The purpose of this study was to qualitatively evaluate participants' perceptions of a PST program delivered within a U16 tennis player development program in the Northeastern United States. The study was guided by Anderson, Miles, Mahoney and Robinson's (2002) recommendations for PST program evaluation. Twenty tennis players (12 girls, eight boys) between nine and 16 years of age participated in focus group interviews, and six tennis staff members (four coaches, one program manager, one mental trainer) completed individual interviews about their perceptions of the PST program content and structure. Thematic content analysis (Braun & Clark, 2006) resulted in 11 themes and 26 subthemes. Athletes and staff members believed the PST program was effective because it nurtured a solid foundation of psychological skills and strategies to help athletes "be better on the court." Athletes reported using specific strategies (e.g., breathing, routines, journaling) on the court to manage emotions, focus/re-focus, and regulate energy. They also found these strategies helpful to cope with stressful situations outside of tennis (e.g., taking tests). Athletes appreciated reminders from staff to use PST strategies because they found it difficult to remember to "do them every single time." Participants recognized the effectiveness of an integrated program and recommended even more exposure to PST through additional sessions and topics (e.g., fear, anger). This presentation will focus on participants' perceptions of PST program content and considerations for sport psychology professionals looking to integrate PST within a youth sport program.

### 34

#### GEOGRAPHIC DISTRIBUTION OF CERTIFIED CONSULTANTS 2017: SATURATION AND UNDERREPRESENTATION

Jerry Holt, Florida A&M University, USA

In 2012, there were fewer than 350 AASP Certified Consultants. At the Atlanta conference, a report was presented with regard to the geographic distribution of AASP Certified Consultants, with a view to determination of geographic areas in which

Certified Consultants were underrepresented. In 2017, there are over 470 Certified Consultants in the United States, Canada, and a number of other countries. Because of the increased number of Certified Consultants, a five-year update of the distribution of CCs is in order. This poster presentation provides information on the geographic distribution of Certified Consultants, again with a view to specific areas in which Consultants are underrepresented per capita. There continue to be areas in which underrepresentation is evident, including especially some of the major American metropolitan areas. Although the emphasis will be on the United States, the analysis will expand to include Canadian representation of Certified Consultants as well. In addition, and as a matter of interest, the investigation will include those metropolitan and micropolitan areas in which Certified Consultants are more highly concentrated. This analysis yields opportunities for application, in terms of areas in which early-career Certified Consultants may choose to establish a practice, or for expansion of services by established Certified Consultants.

### 35

#### **KEEP CALM AND GET OVER IT: AN EXAMINATION OF POST-SHOT ROUTINES IN SKILLED AND PROFESSIONAL GOLFERS INTERNATIONALLY**

*Olivier Schmid, University of Bern, Switzerland*  
*Jack Watson II, West Virginia University, USA*  
*Robine Kobel, University of Bern, Switzerland*

In closed skills sports like golf, pre-shot routines were widely promoted as optimal strategies to foster mental and physical readiness, cope with distractions, and set and commit to a plan of action (Lidor, 2013). However, the emotional, cognitive, and physical state resulting from maladaptive reactions to a previous shot have the potential to interfere with the effectiveness of the next pre-shot routine and with the next shot unless golfers effectively deal with their reactions to their previous shot. Post-shot routines have been defined as a sequence of consistent and deliberate actions and thoughts that golfers use after a shot and prior to the pre-shot routine of their next shot (Post-Shot Routine Model; Schmid, Watson, & Prior, 2016). However, the nature, function, content, and frequency of post-shot routines remain empirically unexplored. A sample of 434 golfers (from more than 20 countries and including 107 professional golfers) completed an online survey designed to systematically examine which components of post-shot routines are most effective across golfers (e.g., skill level, experience), situations (i.e., quality and outcome of previous shot), and type of shot (e.g., drive, putt), as well as the factors that may prevent golfers from using post-shot routines. A large majority (86%) of participants reported using pre-shot routines consistently and admitted that their pre-shot routines could be, at least occasionally, affected by maladaptive reactions to a previous shot. However, only 30% reported using (inconsistently) their own tailored post-shot routines, mainly to prevent negative reactions from affecting future performance. Post-shot routines included various cognitive-behavioral strategies depending upon the quality of the shot execution and outcome satisfaction. Step processes were commonly reported, but only rarely included all four steps of the Post-Shot Routine Model (Schmid et al., 2016). Implications for practitioners and coaches to design interventions and training programs are discussed.

### 36

#### **PLANNING AHEAD PART 2: HOW PSYCHOSOCIAL MEDIATORS AND CONTEXTUAL MODERATORS IMPACT CAREER DEVELOPMENT INTERVENTION OUTCOMES FOR STUDENT-ATHLETES**

*Matt Vaartstra, University of Idaho, USA*  
*Damon Burton, University of Idaho, USA*

A previous study demonstrated that a career development intervention designed for student-athletes can be effective in enhancing career-related psychosocial and behavioral outcomes (Vaartstra & Burton, 2016). However, it is important to investigate the role that psychosocial and contextual variables play in the success of the intervention. The purpose of the second part of this study was to examine whether psychosocial and contextual variables act as mediators and/or moderators of the intervention to help explain why the intervention worked. A total of 36 student-athletes (M-age = 20.03 years) were recruited from a NCAA Division I university in the northwest United States to participate in a career development intervention. Half of the student-athletes served as a control group, while the other half participated in a 9-week career development intervention. Survey instruments measuring psychosocial and behavioral outcomes were completed by both groups pre-intervention and post-intervention. Mediation analysis was conducted on all variables of interest using a classic regression approach (Baron & Kenny, 1986). Additionally, repeated measures ANOVA's were used to test for moderation following the creation of dichotomous variables (Baron & Kenny, 1986). Career decision-making self-efficacy and two different subscales of self-determined motivation (i.e., identified regulation and integrated regulation) acted as mediators of the relationship between the intervention and several of the psychosocial and behavioral outcomes. Intervention engagement was also found to be a moderator of the relationship between the intervention and different subscales of self-determined motivation. Results indicate that career development interventions for student-athletes should focus on critical mediating (i.e., career decision-making self-efficacy and self-determined motivation) and moderating (i.e., intervention engagement) factors in order to maximize the impact of the intervention on targeted psychosocial and behavioral outcomes.

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#### **THE EFFECTS OF ACTIVE AND PASSIVE IMAGERY ON LEARNING A NOVEL, SELF-PACED MOTOR TASK**

*Sadie Van Norman, Western Illinois University, USA*  
*Shital Joshi, Western Illinois University, USA*  
*Alana Cesarz, Western Illinois University, USA*  
*Steven Radlo, Western Illinois University, USA*

Imagery is an important tool used by many athletes and those learning to acquire motor tasks of various cognitive and motor demands (Weinberg, 2008). An imagery model gaining greater popularity is the Functional Equivalence Model (Holmes & Collins, 2001). This model proposes that imagery should mirror the actual performance environment as much as possible. Specifically, it is thought that the brain stores memories in the form of a central representation that is accessed by both physical aspects of the movement and by the motor imagery used for the physical execution. To further test this model, two types of imagery were studied: active imagery (AI) and

passive imagery (PI). AI is defined as imaging with the sporting/performance environment, while PI is imaging outside of the sporting/performance environment, and is known as “traditional” imagery. Three groups (n=15 per group) were tested, the task being underhand dart throwing. One group received AI (sitting in front of the dartboard imaging in first person successful throws), another group received PI (sitting in another room imaging in first person successful throws), and a Control group (sitting in another room imaging everyday objects not associated with dart throwing). Participants completed 100 throws (20 pre-test, 60 acquisition, 20 post-test/learning trials). Subject-centroid radial error (SRE) was used to determine accuracy. ANOVA test showed a Group main effect,  $F(2,42)=28.14, p<.001$ . AI ( $M=6.30, SD=.5$ ) and PI ( $M=6.45, SD=.59$ ) threw with less error than the Control group ( $M=7.64, SD=1.2$ ). ANOVA also showed a  $3(\text{Group}) \times 5(\text{Block})$  interaction,  $F(8,168)=5.20, p<.001$ . Both AI and PI threw with less error than did the Control group for Blocks 2, 3, 4, and 5. Furthermore, the AI group recorded significantly less SRE for Blocks 3 and 5 (Retention) when compared with the PI group. Findings support the Functional Equivalence Model and will be discussed further.

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### USING STRESS EXPOSURE TRAINING TO PREVENT PARADOXICAL PERFORMANCE

*Adam Fulton, Brigham Young University, USA*

Paradoxical performance effects (or choking under pressure) has been studied for years, with an emphasis on helping athletes prevent inferior performance. Although progress has been made, too many athletes are still underperforming due to anticipated and unanticipated stressors (Baumeister & Showers, 1986, p. 362). Stress exposure training is suggested as a potential solution to choking under pressure, even though little research has been done to evaluate its effectiveness. A review of the literature on paradoxical performance is presented, emphasizing skills that appear to be effective for coping with stressors and could be inserted into a stress exposure training program. Skills such as self-consciousness training, positive self-talk, self-confidence, pre-performance routines, and others could be improved as part of stress exposure training (Driskell, Sclafani, & Driskell, 2014). Although stress exposure training has been done in the military, law enforcement, firefighting, aviation, and even in baseball, recommendations are made for further research in other sports.

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## Diversity & Culture

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## 39

### BEYOND THE PLAYING FIELD: THE IMPLEMENTATION AND EVALUATION OF A SPORT-BASED, POSITIVE YOUTH DEVELOPMENT PROGRAM FOR AT-RISK YOUTH

*Mindy Scott, Salvation Army Boys and Girls Club, USA*  
*Brandonn Harris, Georgia Southern University, USA*  
*Kendra Grant, University of North Florida, USA*

At-risk youth include children and adolescents who, due to their environment, family context, mental/physical health, or academic performance are considered at risk for poor life outcomes (Moore, 2006). Educational- and physical

activity-based after-school programs such as the Boys and Girls Club can serve as effective community resources that support the social and emotional well-being of at-risk youth. Such outlets represent an important opportunity to integrate sport-based life skills training aimed at developing various pro-social behaviors designed to enhance the well-being of at-risk youth. Thus, with the support of an AASP Community Outreach Grant, the current project implemented a positive youth development program targeting life skills for at-risk youth at a local Boys and Girls Club. Participants included 53 children between the ages of 8-11 years ( $Mage=9.54, SD=.96$ ) who were in the 3rd-5th grades. Children participated in the Sports United to Promote Education and Recreation program (SUPER; Danish, 2002), a program using sport and physical activity to teach a series of life skills while helping participants recognize relationships between success in sport and one's endeavors outside of sport. To evaluate the preliminary effectiveness of the program, participants completed the Life Skills Transfer Survey (LSTS; Weiss, et al., 2014) pre- and post-intervention which assess their ability to integrate life skills learned through the program to their home and school environments. Analyses suggested that among participants who attended more than half of the sessions, the ability to resolve conflict increased significantly from pre- to post-intervention ( $p=.021$ ). More importantly as an outreach endeavor, authors will discuss the successes, challenges, and lessons learned associated with developing and implementing such a program, as well as efforts made regarding the sustainability of similar community-based interventions. Recommendations for future sport-based programs integrating life skill training with at-risk youth will also be offered in light of the present study.

## 40

### BREAKING DOWN STIGMA AND STEREOTYPES: MALE ATHLETES' EXPERIENCES WITH DISORDERED EATING

*Rebecca Busanich, St. Catherine University, USA*

Disordered eating has historically been constructed as a female issue, and as a result researchers have primarily sought out and highlighted females' experiences with disordered eating. The disordered eating literature in sport has traditionally followed this same trajectory, leaving male athletes' experiences underrepresented, ignored, and/or silenced. In recent years, several researchers in cultural sport psychology have shone new light on disordered eating, in an attempt to break down the stereotypes and stigmas associated with it. In doing so, we have begun to realize that male athletes' may be just as likely to experience disordered eating as female athletes, however their experiences vary. This lecture will highlight the results of a recent research project that narratively explored male distance runners' experiences with disordered eating. The results of this study show that while male athletes can and do experience disordered eating, it is often constructed and experienced differently than females due to the gendered meanings around the body, food and exercise that intertwine with these experiences. Due in part to the feminization of this concept, male athletes reported feeling too embarrassed or stigmatized to voice concerns around their body shape or size when they arose, and their disordered eating behaviors were constructed within narratives of masculinity and high performance. The emotional impact of such experiences left many of these athletes feeling further isolated, depressed and anxious. Implications will be provided for how we might begin to re-conceptualize disordered eating and provide healthier narratives for both male and female athletes.

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**SIZEISM AMONG FEMALE ATHLETE POPULATIONS: AN ECOLOGICAL PERSPECTIVE**

Sonia Dhaliwal, University of Missouri, USA  
Zandre Labuschagne, University of Missouri, USA

Research suggests that prejudice on the basis of weight or shape has increased over the past couple of years (Andreyeva, Puhl, & Brownell, 2008). Sizeism is defined as “the mistreatment of or discrimination against people based on their perceived body size and shape” (Puhl, Moss-Racusin, Schwartz, & Brownell, 2008). This is particularly important as it relates to populations that are at risk for greater body-related scrutiny, such as female athletes participating in aesthetic sports. Unfortunately, literature on sizeism among female athlete populations is relatively scant. Research among non-athlete populations suggests a strong correlation between perceived weight stigma and increased body dissatisfaction and mood-related concerns (Durso & Latner, 2008; Hilbert, Braehler, Haeuser, & Zenger, 2013). To our knowledge, only one study to date has compared this phenomenon among college athletes and non-athletes (Coppola, 2007). The results suggest that weight stigma may be related to poorer physical health and mental health outcomes among athletes when compared to non-athletes. A better understanding of the interplay between weight stigma, mental health, and contextual variables can provide greater insight into how these factors contribute to unhealthy weight and shape norms. More specifically, from Bronfenbrenner’s ecological systems approach, factors at the microsystem (peers, coaches, family) and exosystem (mass media, social norms) interact with athletes and not only shape their perceived weight and shape ideals but can potentially lead to problematic long-term psychical health and mental health consequences. Therefore, a better understanding of systemic factors can provide more insight related to systemic stressors. This session will review the current literature on sizeism and conceptualize weight and eating-related concerns among female athlete populations from Bronfenbrenner’s ecological systems approach. Future directions will also be discussed as it relates to scale development and adequately assessing sizeism among female athlete populations.

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**VALIDATION OF THE HETEROSEXIST ATTITUDES IN SPORT – GAY MALE SCALE**

Elizabeth Mullin, Springfield College, USA  
James E. Leone, Bridgewater State University, USA  
Gregory Margolis, Springfield College, USA

In men’s athletics, homophobia and heterosexism have been normalized to increase masculine capital (e.g., White, heterosexual, strong, aggressive) while subordinating others (e.g., gay males, persons of color, women). While overall homophobic attitudes have decreased in athletics in the last 15 years, male athletes and coaches have consistently demonstrated more homophobic attitudes than women. Sport Psychology Consultants (SPCs) have evidence-based supports to develop inclusive and diverse environments with athletes, but require a valid and reliable tool for assessment. The purpose of the current study was to validate the Heterosexist Attitudes in Sport – Gay Male (HAS-GM) scale. The scale was theoretically framed by Tripartite Model of

Attitudes (Zanna & Rempel, 1988) and has evidence of content validity. In Phase 1 of the current study, a three-factor solution emerged from the exploratory factor analysis with a national sample of male collegiate athletes (N = 108), explaining 49% of variance in heterosexist attitudes in sport. After item reduction, national and regional samples of male athletes (N = 605) were recruited for Phase 2. Evidence of factorial validity [ $\chi^2(76) = 393.14, p < .05, CFI = .92, TLI = .91, RMSEA = .08, SRMR = .06$ ] and internal consistency was found for a two-factor structure: Cognitive/Affective subscale ( $\alpha = .76$ ) and Behavioral subscale ( $\alpha = .91$ ). One-month test-retest coefficients were adequate (ICCs = .94 and .64, respectively). The regional sample (n = 268) completed questionnaires measuring theoretically related constructs in Phase 3. Evidence of criterion-related validity ( $r = .43-.71, ps < .05$ ) and convergent validity ( $r = .13-.59, ps < .05$ ) was found. While continuous validation is required, SPCs may use this valid and reliable measure as a formative and summative assessment related to inclusion and diversity interventions. Researchers may use the instrument to quantitatively examine the ramifications of heterosexist attitudes in men’s athletics.

**Elite/Pro Sport**

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**26 REASONS WHY ONLY A FEW SUCCEED!**

Anne Marte Pensgaard, Norwegian School of Sport Sciences & NOC, Norway  
Arne Jorstad Riise, Norwegian Olympic Training Center, Olympiatoppen, Norway

Success in sport can have wide reaching consequences, both when it comes to recognition and economic security. But the journey is often winding and narrow and it is only a few who manage to go all the way. Champions and insight into their qualities have always fascinated sports psychology researchers and over the years it has become evident that there are no simple recipe as to how to succeed in sport. Some even claim that excellence is something you are, and not something you can learn to be (Harung & Travis, 2016). This complexity became apparent when we interviewed 30 of Norway’s most celebrated champions including Olympic Gold medalist winners from 18 different sports, a two-time Iditarod winner, a three time consecutive World Champion in chess, in addition to World Champions from non-Olympic sports. In-depth interviews revealed that each athlete had a unique story and yet, they were all adamant that mental strength and flexibility were key factors for their success. Their narratives provides us with detailed insight into the possible origin of some of these mental processes and in this presentation, we will focus mainly on the factors the athletes themselves thought were decisive for why they had succeeded. We will particularly focus on their upbringing, childhood and family relations. A high level of diverse activities and a regular, all-year outdoor life with the family are among two factors that will be discussed in more detail. Our findings provide important awareness of the early days of those who later became the most celebrated performers in their field.

Harald Harung and Frederick Travis (2016). *Excellence through Mind-Brain Development: The Secrets of World Class Performers*. London, UK. Routledge

**44**

**ATTENTION: HOW TO SAVE PENALTY KICKS**



*Hallur Hallsson, University of Iceland, Iceland*  
*Omar I. Johannesson, University of Iceland, Iceland*  
*Árni Kristjánsson, University of Iceland, Iceland*

Goalkeepers' abilities to save penalty kicks (PKs) can decide soccer games. Research findings on what goalkeepers attend to during a PK have been contradictory. Verbal reports indicate that goalkeepers attend to the angle of the kicker's run, hips, kicking leg, and shoulders. Eye-tracking data indicate that goalkeepers attend to the ball area and non-kicking foot. However, it is possible that goalkeepers attend to hips and shoulders in the periphery, while fixating on the ball area. Also, to increase the likelihood of saving the ball goalkeepers have to anticipate the ball direction just before the kick. It is, therefore, important for practical reasons to study where elite goalkeepers attend during PKs, and whether practice improves early anticipation performance. Fifteen professional goalkeepers (13 with national team experience at some age level), and 15 novices participated. They anticipated ball direction in 120 video clips of PKs in three blocks while their eye-movements were tracked. Block 1 videos were occluded at the moment of foot-to-ball contact. Block 2 was a dual-task since an unexpected computer-made-stimulus appeared on the hips, shoulders, or in front of the ball. Participants anticipated ball direction and indicated whether they noticed the stimulus. In block 3 clips were occluded 80-120 ms prior to the kick. Goalkeepers better anticipated ball direction than novices, with similar performance in all blocks. The eye-tracking data showed that gaze was mostly concentrated on the ball area and the goalkeepers' gaze was more often on the kicking leg than the novices' gaze. Participants noticed the computer-made-stimuli in front of the ball but not on hips and shoulders. Therefore, vision training for goalkeepers should emphasize attention on the ball area and kicking-foot, but not shoulders and hips. Also, goalkeepers should be trained to react based on information occurring 80-120 ms before the kick.

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**EXPERIENCES AND EXPECTATIONS OF PROFESSIONAL BASEBALL ACADEMY PLAYERS IN THE DOMINICAN REPUBLIC**

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A qualitative study was conducted to explore experiences, hopes, and expectations of professional academy players in the Dominican Republic. After parents gave informed consent and players indicated their assent, 5 players completed a semi-structured interview in a private setting. Data analysis included a constant comparison method (Strauss and Corbin, 1990), whereby, the researcher began open coding transcriptions. The second round of axial coding was completed to create more representative codes. Finally, themes were constructed to answer the research questions.

The first theme Hopes and Dreams, "I've been playing baseball since I was 6 years old in Venezuela... from that moment, I always wanted to be a professional baseball player"

describes what the players identified as their personal hopes and dreams related to their involvement in the academy. The second theme, Experiencing Anxiety, was built on the players' recognition that their involvement in the academy was a source of anxiety in their lives. Contributing to this anxiety were; the unpredictability of their futures, the needs of their family that is dependent on their success, and differences in cultural background. The third theme, Navigating Anxiety, captures the strategies that players relied on to cope with anxiety and included supportive relationships, peer/cultural relationships, and faith.

The findings of this investigation support that the hope and dreams of academy players are directly related to the anxiety of their academy experience. Their hopes of playing in the MLB and economic dreams for their families, weighed on them as they worked on their sport.

The absence of confidence in other pursuits, perceptions of lack of opportunity, and lack of resources can elicit a strong and exclusive athletic identity or identity foreclosure, "I have dedicated my life to being on a baseball field... I do not know how to do anything outside of baseball"

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**PERFORMANCE-BASED IDENTITY**

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Contingency self-worth and perfectionistic concerns over mistakes have been related to higher levels of depression, anxiety, and threat appraisals of competition (Crocker et al., 2006; Sterling & Kerr, 2006). However, very few studies have examined underlying mechanisms for how views of self in relation to competition are linked to psychological well-being, appraisal of competition and view of self post-career. When athletes base their self-worth on performance outcomes, competition becomes a social-evaluative threat context that produces physiological markers of fear (Dickerson et al., 2009). Fear of failure has consistently been linked to maladaptive coping strategies and outcomes in high achieving contexts (Sagar & Stober, 2009). The present research examined fear of failure as a key mechanism for understanding the relationship between performance views of self and psychological well-being, threat appraisal and view of post-career life. The sample identified was predominantly Caucasian (73%) in early adulthood (Mdn age = 22; male = 55%) and were recruited through partnering Universities and Hope Sports, a service organization that partners with professional athletes. Athletes reported their level of competition as 74% competed at NCAA division 1 level at one time (45% competed at the NCAA championships), 22% competed at the World Championships, 7% competed at the Olympic Games, 5% have an Olympic or World Championship medal and 18% identified as a professional. All measures were self-reports. Both contingent self-worth and perfectionistic concern were significantly and indirectly related to depression, anxiety, threat appraisal, and view of a good life post sports via fear of failure. These findings suggest that higher levels of contingency self-worth and perfectionistic concerns may lead to higher levels of fear of failure, which has a negative impact on psychological well-being, heightens threat appraisals of upcoming competition and relates to lower levels of a positive outlook on life post sports. Intervention efforts aimed at psychological well-being and perceptions of competition may benefit from targeting how athletes derive self-worth in order to reduce fear of failure.

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**SELF-TALK OF JUNIOR ELITE TENNIS PLAYERS IN COMPETITION: A MULTIPLE CASE-STUDY**

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This study uses a multiple-case study design to investigate elite junior tennis players' spontaneous self-talk in a competitive setting. Semi-structured in-depth interviews were conducted with six elite tennis players within 30 minutes after a tournament. The interviews focused on the individual subjective experience. Data were analyzed using a combined inductive and deductive approach, revealing seven main categories of self-talk used by the athletes, including two emergent categories: rumination and performance pressure. The results are interpreted and discussed with reference to the literature, providing additional support for a sport-specific model of self-talk (Van Raalte, Vincent, & Brewer, 2016a). Avenues for future research and practical recommendations are proposed.

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**TESTING A FRAMEWORK FOR SYSTEMATICALLY CREATING PRESSURIZED TRAINING ENVIRONMENTS IN ELITE SPORT**

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Research investigating how to create pressure in elite sport is scarce, suggesting that pressure training is practiced in the absence of comprehensive theoretical underpinnings. Previous research has explored how elite coaches created pressurized training environments (Stoker, Lindsay, Butt, & Maynard, 2016) and an emergent framework suggested coaches manipulated two key areas: demands of training (i.e., task, performer, and environmental stressors), and consequences of training (i.e., forfeit, reward, and judgment stressors). The purpose of this study was to test the efficacy of this pressure training framework and two investigations were conducted using a randomized within subject design. Study one examined whether manipulating training demands and consequences altered experiences of pressure in Elite Netball (n= 15 ). The second study examined the impact of each individual demand (i.e., task, performer and environmental) and consequence (i.e., reward, forfeit and judgment) stressor on pressure in elite Disability Shooting (n= 6). The results of study two were synonymous with those of study one in indicating that perceived pressure significantly increased in conditions where consequences were introduced. This result suggests that these consequence-type stressors were essential for increasing pressure. Further, results of study two indicated that the judgment stressor had the greatest influence of all stressors and, thus, presents coaches with the most effective means for maximizing pressure. Across both studies, manipulating demands in isolation did not influence pressure in any condition. Yet, these stressors did negatively impact on performance. Collectively the findings support and build on the framework by indicating that demands and consequences have distinct roles when pressure training. From an applied perspective it appears that demand stressors could be critical for shaping performance whereas consequences appear essential for producing pressure.

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**THE DECISION TO USE PERFORMANCE ENHANCING DRUGS IN THE SPORT OF MOTOCROSS: A CASE STUDY**

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The use of performance enhancing drugs (PEDs) plagues competitive sports indiscriminately. Understanding the motivation that leads an athlete making the decision to use PEDs is complex, and until this motivation is clearly understood, efforts to eliminate this behavior will have limited success. The purpose of this case study was to examine the social and psychological factors surrounding the decision to use PEDs in an athlete who participated in motocross racing. The interview revolved around the exposure the participant had to PEDs as a young athlete, the acceptance and use of PEDs by his mentors, his own decision to use PEDs, and his eventual decision to quit using PEDs and come forward about his use. The primary themes that emerged in the interview focused on a) the culture of a sport that facilitated the use of PEDs, b) the motivators that led to the decision to use PEDs, c) the motivators that led to the decision to cease the use of PEDs and, d) the social response from the sport community after cessation and public exposure. Results indicated the use of PEDs was a culturally accepted part of the sport of motocross, and the pressure felt by the participant from a young age to use by those he admired and trusted (coaches and elite riders). Social responses to his admission to using PEDs were primarily negative and efforts to clean up the sport and help others learn from his mistakes were largely ignored. The interview lends insight into the complex journey of one athlete's experience with PEDs and the complex role that the culture of a sport can play in the decisions of individual athletes regarding PEDs. Future research on athlete motivation for the use of PEDs should focus on the distinct culture of individual sports as well as athlete behaviors.

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**THE HOME ADVANTAGE: PSYCHOBIOLOGICAL EFFECTS BEFORE AND AFTER HOME AND AWAY SOCCER MATCHES**

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The home advantage is a well known phenomenon wherein teams are more likely to win at their home venue than away, notably in the sport of association football (soccer). Traditional explanations have included crowd support, familiarity, referee bias and travel. More recently, studies have begun to focus on psychobiological factors, finding that testosterone is elevated in males playing in their home environment compared to training sessions and away games. However, little research has investigated whether cortisol might also be implicated in the home advantage. The present studies measured both testosterone and cortisol responses in relation to home and away venues. In an initial study of 18 male elite Premier League academy soccer players (mean age = 17.47, sd 64), salivary cortisol levels were monitored in two competitive matches, both before and after home and away games. Significantly higher post-game cortisol levels were observed at home ( $p=.002$ ) compared to post-games

away and pre-games at home or away, with none of the latter three conditions differing from each other. In a second study involving 12 semi-professional players (mean age = 23.17, sd 3.8), the same significant post-game cortisol increase at home was replicated ( $p=.001$ ), again with no differences within the other conditions. Inconsistent with previous literature, no effects were observed for testosterone in either study. These results extend earlier theory and research into the complex relationship surrounding the psychobiological impact on behaviour in a variety of contexts. The findings suggest that higher levels of challenge and stress are experienced by players in their home matches, culminating in increases in cortisol by the end of home games. The findings yield potentially valuable recommendations to elite level coaches and players regarding preparation and halftime activity, as well as the importance of identifying individual differences in patterns of hormones and behaviour.

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### THE RELATIONSHIP BETWEEN SPORT ORIENTATION, MENTAL TOUGHNESS AND RESILIENCE IN GOLFERS

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Athletes experience many difficulty in sport situations and knowing how to deal with the situation means they have high resilience. The concept of resilience is defined as the ability of a substance to recoil, spring back, or resume its original shape after bending, stretching, or compressing (Strumpfer, 1999). Resilience is considered to be an essential factor for the overall measurement of mental toughness in athletes (Madrigal, Hamill, & Gill, 2013). What influenced the athlete's response to adversity the most were personality characteristic such as competitiveness, confidence and optimism and how passion for the sport and coping mechanisms can predict a person's ability to positively deal with adversity (Galli, & Veally, 2008). The purpose of this study was to examine the relationship between sport orientation, mental toughness, and resilience had in Korean golfers. Participants ( $N=51$ , age  $M=29$  years, sport career  $M=13$  years) were Korean golf players. Sport Orientation Questionnaire (Gill, & Deeter, 1988), Korean Mental Toughness Questionnaire (KMTQ-20; Kim, 2001) and Connor-Davidson Resilience Scale (Connor & Davidson, 2003) were administered to assess the relationship. A cluster analysis, multivariate analysis and regression were performed to classify athletes' psychological attributes. Results indicated as followed; First, There were significantly different results at the Pearson correlations. Resilience had a negative correlation with win orientation (-.119) and had a positive correlation with competitiveness orientation (.236), goal orientation (.440), mental toughness (.382). Second, from the results of multivariate analysis across golf skill levels(3), the only significant differences was the effort factor of mental toughness ( $F(2, 48)=4.417$ ,  $p<.05$ ; wilk's = .775). Also, from the results across careers(3), there were significant differences at the effort factor ( $F(2, 48)=6.056$ ,  $p<.01$ ; wilk's = .650) and the endurance factor ( $F(2, 48)=4.107$ ,  $p<.05$ ; wilk's = .650) of mental toughness. There was significant differences at tolerance factor of resilience ( $F(2, 48)=3.729$ ,  $p<.05$ ; wilk's lamda = .783). Third, the results of independent t-test across the low/high group of the competitiveness orientation, winning factor ( $p<.001$ ), endurance factor ( $p<.01$ ), effort factor ( $p<.001$ ), fighting factor ( $p<.01$ ) of mental toughness and tenacity factor ( $p<.01$ ), tolerance factor ( $p<.05$ ), positive acceptance factor

( $p<.01$ ) of resilience. But, the results of low/high group of win orientation, winning factor ( $p<.001$ ), fighting factor ( $p<.05$ ) and all factors of resilience were not significantly different. Finally, the goal orientation factor ( $R^2=.181$ ,  $B=.377$ ) of sport orientation and the endurance factor ( $R^2=.194$ ,  $B=.256$ ) of mental toughness predicts resilience.

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## Exercise/Health/Fitness

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### AFFECTIVE CHANGES OF EXERCISERS BY PHYSICAL ENVIRONMENT ALTERATIONS AND THE EFFECTS OF "GREEN EXERCISE"

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By using the theory of social ecological model (SEM), this study attempted to investigate the affective difference of participants exercising in different physical environments (indoor/forest) in the pre-, intra-, and post- exercise stages and to reveal differences between the two environments. Furthermore, based on the results, this study was carried out as a case study to identify the in-depth effects of 'green exercise' that has continued to grow in recent years. To achieve this goal, the changes of affect in the pre-, intra-, and post- stages were examined for 12 participants exercising in physically different environments by employing the two-dimensional circumplex model and in-depth interviews. This paper summarized the results of these experiments and categorized the effects of green exercise. An analysis of the two-dimensional circumplex model and in-depth interviews combined showed that the participants who were asked to exercise in forest had more positive affect during exercise than the indoor exercise participants, and a striking difference in the affective states was observed during recovery after exercising. Using these results, we divided the effects of green exercise into four categories: (1) positive effect of the natural environment, (2) desensitization to time perception during exercise, (3) positive sensory experience, and (4) positive affect during post-exercise recovery. Thus, physical environment has a primary influence on exercise participants' affective states and may influence participants' involvement in and adherence to exercise.

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### LONGITUDINAL GROUP DIFFERENCES AMONG COLLEGE STUDENTS' MOTIVATIONAL READINESS FOR REGULAR PHYSICAL ACTIVITY

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The purpose was to determine if longitudinal group differences existed within majors and between majors of undergraduate college students' stage of behavior change for regular physical activity within a Human Performance Movement Sciences Department (HPMS). This convenient sample consisted of 146 undergraduate HPMS (Athletic Training (AT)

= 49, Exercise Science (ES)= 56, and Physical Education (PE) = 41) students. Informed consent forms and the survey packet were completed during in selected classrooms. The survey packet included a demographic questionnaire as well as Marcus and colleagues (1992), Physical Activity Stages of Change questionnaire that measures current stage of exercise behavior. The questionnaire was found to have acceptable levels (above .90) of internal consistency (Marcus et al., 1992). The results of a 3 X 4 between subjects ANOVA revealed a significant main effect for major,  $F(2, 127) = 3.879$ ,  $p < .05$ , whereas no main effect was found for class level,  $F(3, 127) = 0.831$ ,  $p > .05$ , as well as a non significant interaction effect between major and class level,  $F(6, 127) = 1.407$ ,  $p > .05$ . Partial eta square analysis revealed a small effect size of 0.058 for the lone significant main effect on major, while the study being slightly under power at 0.692. Scheffe post hoc test analysis revealed that the difference was between AT and ES with AT majors having the lowest mean. In conclusion, regardless of major or class level, the majority of the HPMS students were found to be regularly physically active and modeling an active lifestyle in these settings. However, the significant main effect emerging between AT and ES suggests that AT majors in their junior year are in the action level, whereas ES as well as PE majors are in the maintenance level. Possibilities could be due to practical experience differences between majors.

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### MENTAL SKILLS TRAINING IN ELITE POWERLIFTING: AN INTERVENTION CASE STUDY EXAMPLE

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The relatively young sport of powerlifting may seem simple to those unfamiliar. A combined total of the best of three repetitions in three distinctive lift movements over the course of a roughly ten-hour meet: Squat, Bench Press, and Deadlift. While many may see the sport as strictly physical in nature, those at the elite, national, and world-class level understand the importance that time management, arousal control, and mindset play in meet performance. While applied mental skills training has been well explored, there is a distinct lack of professional research and applied sport psychology consulting within elite powerlifting. The powerlifting athlete at the focus of this case study dedicated 16 weeks of physical preparation for a USAPL (USA Powerlifting) meet, which also served as a qualifying meet for the United States Powerlifting Open. This preparation also included a six-week, athlete-specific applied mental skills training intervention focused on improving and implementing the mental skills of self-talk, imagery, and relaxation for both practice and competition performance. As reported by the athlete as compared to his previous best meet performance, he reported physical performance increases of 7.54% in the Squat, 3.64% in the Bench Press, and a 5.85% in the Deadlift, leading to a personal best three-lift total of 1306 pounds, a 5.75% increase on his personal best, leading to qualification in the United States Open. As reported by the athlete; "This increase in performance is due to both physiological and psychological. It is, however, evident that my ability to enter a training session with a more positive and confident mindset allowed me to train at a higher level". This case study serves to illustrate the effect of an applied mental skills training intervention in an otherwise under-served and under-researched setting, and support the link between psychological skills training and physical skill enhancement.

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### MOVEMENT IS LIFE: TAI CHI FOR SENIORS

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Frailty is an increasingly recognized geriatric syndrome that has considerable impact on the financial, physical, and psychological well-being of seniors. We examined the effects of a Simple Tai Chi Exercise Program (STEP) on measures of day-to-day motoric activities of 20 randomly selected adults in assisted living, with results compared to 20 matched controls in the same residential unit. All participants were evaluated by either physical or occupational therapists using the Falls Efficacy Scale, Timed Up and Go Test, Tinetti Balance Scale, Functional Reach Test, Berg Balance Scale and day-to-day living activities requiring reach, balance, and ambulation, at baseline, and after completing 10, 20, and 30 STEP sessions. The results of multivariate analyses indicated that STEP participants demonstrated a) significant declines in the likelihood of falling and in time needed to stand and ambulate, and b) significant increases in functional reach, balance, and performance of day-to day activities (all  $F > 5.43$ , all  $p < .009$ ; median effect size = 0.42); no changes were observed for controls. Participants who independently continued STEP activities after the conclusion of the study were judged by staff and medical attendants to require the lowest level of physical support during ambulation, to incur the fewest falls, and to evidence the greatest balance and reach during the completion of day-to-day living activities. Upon completion of the 30 sessions the matched controls were offered STEP participation, again for 30 sessions and with the same dependent measures described above. Upon the completion of this follow-up study comparable improvements were observed in 17 of the former controls (and much less so for the three released from the study due to their relocation to either memory or advanced/hospice care).

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### REVISITING THE FAT AND JOLLY HYPOTHESIS

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Malia Johnson, University of North Texas, USA  
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According to the "fat and jolly" hypothesis (Crisp & McGuiness, 1975) as people gain weight, they are likely to experience stress and depressive symptoms. However, upon becoming excessively overweight, individuals may experience a reduction in stress and depressive symptoms. Consequently, an inverted-U relationship was hypothesized between weight status and depression. Thus, the purpose of this study was to examine the relationship between body-fatness and psychological well-being among college students in undergraduate kinesiology classes. Participants, 367 males and 306 females (Mage = 20.63 ± 3.57 years), completed the Depression, Anxiety, and Stress Scale (DASS; Henry & Crawford, 2005) along with a measurement of body-fat percentage using a hand-held bioelectrical impedance device. Based on American College of Sports Medicine guidelines (2016), participants were put into one of six body-fat categories: good, average, below average, poor, and very poor. Three one-way ANOVAs were conducted to evaluate how body-fat categories differed on depression, anxiety, and stress scores. Overall, results indicated a statistically significant difference between the body fat groups for

stress and depression ( $p < .01$ ). As expected, the “good” and “average” groups reported the lowest mean scores on depression and stress. Interestingly, the “below average” group reported the highest mean scores. Post hoc testing revealed that the “very poor” body-fat group reported statistically lower mean scores for stress and depression when compared to the “below average” group, though the means for the “poor” group did not statistically differ from the “below average” group. Results support the “fat and jolly” hypothesis. Specifically, participants in the “below average” body-fat category had higher levels of depression and stress than individuals in the “very poor” body-fat category. With high rates of obesity, knowledge of this phenomena may be relevant for teachers, health practitioners, and researchers.

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### THE EFFECT OF MUSIC ON RECOVERY FROM INTENSE EXERCISE

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Appropriately selected music can positively influence psychophysical responses to exercise, yet less is known about the role of music during recovery from intermittent bouts of exercise. The purpose of this study was to examine the influence of music played during recovery from intense exercise on lactate clearance, heart rate (HR), rating of perceived exertion (RPE) and subsequent task performance. Anaerobically trained participants ( $N = 45$ ) were randomly assigned to one of three groups: Stimulative music, sedative music, or no-music control. Participants completed two 30s Wingate anaerobic tests (WAnT) separated by 10 min of active recovery (self-paced unloaded cycling), during which the experimental participants listened to either stimulative or sedative music. Blood lactate and HR were measured at baseline, immediately after the first WAnT, and at the end of the active recovery period. RPE was measured immediately after the first WAnT, and at min-5 and min-10 of the active recovery period. WAnT performance was recorded in both trials. Data were analyzed using mixed factorial ANOVAs. Participants in the stimulative music group showed a significant increase in Peak Power (PP) and anaerobic fatigue (AF) from Trial 1 to Trial 2, whereas participants in the sedative and control groups decreased PP and AF from Trial 1 to Trial 2. Participants in the stimulative music group had a higher HR during the latter half of the recovery period ( $p < 0.05$ ) and a significant pre-post recovery drop in blood lactate that was not evident in the other groups. RPE did not differ between groups. In conclusion, it appears that stimulative music exerts a positive influence on self-paced exercise recovery, wherein participants are motivated to move at a faster rate, which can facilitate blood lactate clearance. This has implications for the application of music in sport and exercise settings.

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### THE EFFECTS OF PARTICIPATION IN A SIX-WEEK EXERCISE PROGRAM ON SENIOR CITIZENS' WELLBEING

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The number of senior citizens has been rapidly increasing around the world (World Health Organization, 2015). Under such circumstances, regular exercise can play a significant role in contributing to their healthy aging by developing and maintaining functional capacities (American College of Sports Medicine, 2015). The main purpose of this study was to describe changes in senior exercisers' multidimensional physical self-concept and fitness levels through participation in a six-week exercise program. Twenty-one participants (Fifteen females and six males) ranging in age from 62 to 79 years ( $M = 69.4$ ) worked out with an individualized exercise protocol in a small group setting (i.e., a group of two to four). The pre- and post-assessments were conducted utilizing the short version of the Physical Self Description Questionnaire (PSDQ-S: Marsh, Martin, & Jackson, 2010) and Senior Fitness Test (Rikli & Jones, 2001) to measure their physical self-concept and fitness levels, respectively. Descriptive statistics and Cronbach's alphas (ranged from .72 to .98) were computed for 11 subscales of the questionnaire. Paired sample t-tests revealed significant improvement in fitness scores: Chair Stand Test, Arm Curl Test, and 8-Foot Up-and Go Test as well as PSDQ-S subscales: Sport, Global Physical, Strength, and Endurance. The results indicate meaningful connections between these senior citizens' perceived and actual improvements through the six-week exercise participation. An example of these connections includes an increase in the self-concept scores of Strength and Global Physical and an increase in the fitness test scores of Chair Stand Test and Arm Curl Test. Further research is needed utilizing qualitative analysis for more detailed investigations into the effects of exercise participation on senior citizens' wellbeing. The overview of the exercise program management and the exercise interventions is also presented to further discuss applied implications for those who are involved in facilitating senior citizens' wellbeing through exercise participation.

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### THE RELATIONSHIP BETWEEN AEROBIC FITNESS, AUTONOMIC REACTIVITY, AND HOSTILITY

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Hostility, a personality trait accompanied by cynicism, mistrust of others, anger, and aggression, is a known risk factor for coronary heart disease and all-cause mortality. Recently, models of stress reactivity have been used to examine this relationship as well as determine the potential cardioprotective role aerobic fitness may play in reducing heart disease and improving autonomic function. However, it currently remains unclear whether higher levels of aerobic fitness are associated with improved cardiovascular and

autonomic responses in individuals displaying high levels of hostility. Thus, the purpose of this study was to examine the relationship between cardiorespiratory fitness (VO<sub>2</sub> peak), autonomic reactivity, and hostility in college-aged students. On day 1, fifty age- and sex-matched men and women (24 females; Mage = 21.0 ± 1.2 years) completed the Cook-Medley Hostility Scale followed by a maximal aerobic fitness test. On day 2, autonomic measures of pre-ejection period (PEP) and respiratory sinus arrhythmia (RSA) were collected during a 10-min baseline, 12-min stressor protocol, and 10-min recovery period. Cardiac autonomic balance (CAB), an index of autonomic stability that reflects adaptive flexibility, and cardiac autonomic regulation (CAR), an index of coactivation that reflects overall regulatory capacity, were also assessed. Change scores in PEP, RSA, CAB, and CAR were then calculated for the stressor and recovery periods. Correlation analyses for the stressor protocol revealed a significant relationship between hostility and CAR,  $r = .34$ ;  $p < .01$ , and hostility and PEP,  $r = -.32$ ;  $p < .05$ , such that individuals reporting higher levels of hostility displayed impaired regulatory capacity and increased sympathetic reactivity, respectively. No further relationships were established between VO<sub>2</sub> peak, autonomic function, and hostility. These results indicate that lower levels of hostility are related to more adaptive stress responses in college-aged students and that fitness may serve a limited cardioprotective role in this population.

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### THE RELATIONSHIP BETWEEN GENDER ROLE IDENTITY, TYPE OF SPORT AND PHYSICAL SELF-CONCEPT IN FEMALE UNIVERSITY STUDENTS

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Insufficient physical activity is relatively more concern for young females who are reported to be less involved in sport and exercise than others such as males at all ages. We focused on gender role identity to broaden our understanding why women participate less in sufficient physical activities. Therefore, the aim of this study was to examine the relationship between young females' gender role identity and their physical self-concept according to the type of sports (masculine or feminine) that they participate in. A cross-sectional survey of 410 female university students who take part in masculine ( $n=201$ ) or feminine ( $n=209$ ) physical activity in South Korea was conducted using a set of questionnaires. Results of two-way ANOVA revealed that there were significant differences in most sub-factors of physical self-concept between groups divided by the type of gender role identity (feminine, masculine, androgynous and undifferentiated) and groups divided by the type of sports. Also, there was a significant interaction effect of gender role identity and type of sports on the female students' competence in sport that is one of sub-factors in physical self-concept. To sum up, it is possible to conclude that individuals with androgynous identity or the female participants involved in a masculine sport have more positive physical self-concept. Especially, young women who participate in a manly type of sports with high androgynous identity would have higher competence in sport. The one of important implications in this study is that it is needed to focus on promoting androgynous identity and participation in masculine sport in order to increase exercise participation with positive physical self-concept among young women.

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### THE RUNNING AND PROBLEM SOLVING QUESTIONNAIRE (RPSQ): AN INVESTIGATION OF THE INTERNAL CONSISTENCY OF THE QUESTIONNAIRE AND THE RELATIONSHIP WITH FLOW

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*Kasey Jones, Edinboro University, USA*  
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The purposes of this study were to: 1) to explore the extent to which recreational runners report engaging in problem solving during and after running, and 2) to explore the reliability and validity of the Running and Problem Solving Questionnaire (RPSQ) by examining the internal consistency of the questionnaire and its relationship with flow. The RPSQ is a revision of the Training Run Thoughts Questionnaire (Hamilton, McCormick, and Kirstein, 2013). Both instruments were based in part upon D'Zurilla and Goldfried's (1971) stages of problem solving, which influenced social problem solving therapy (Chang, DZurilla, and Sanna, 2004). Social problem solving included five components: 1) problem orientation, 2) problem definition and formulation, 3) generation of alternative solution, 4) decision making, and 5) solution implementation and verification. The RPSQ was developed to include questions related to all five components. Previously, we conducted a content validity study finding that each of the RPSQ items was consistently associated with one of these content areas. (Winfield, Smith, King, Fitzgerald and Hamilton, 2016). In addition, changes in emotions while running was suggested as another possible area of content related to the RPSQ.

In the current study, 47 male and 58 female recreational runners completed self-report surveys including: 1) a survey of running habits, 2) the RPSQ, and 3) the Flow Short Scale (FSS) (Engeser and Rheinberg, 2008). Participants were recruited by contacting running groups and by attending running events. The majority of runners reported engaging in problem solving both during and after running, with RPSQ item agreement ratings ranging from 72.4% to 92.4%. The internal consistency of the RSPQ was examined by calculating a Cronbach's Alpha, suggesting a relatively high internal consistency ( $\alpha=.83$ ). A significant low correlation was found between the RSPQ and the FSS,  $r = .326$ ,  $p < .01$ .

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### THE SECRET OF AGING: AN EXPLORATION OF THE ACTIVE LIVING EXPERIENCE IN OLDER ADULTS THROUGH RETIREMENT

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Although regular exercise provides various health benefits for individuals of all ages, only 30% of older men and 15% of older women participate in sustained physical activity (Shutzer & Graves, 2004). Physical activity engagement provides physical, mental, emotional, and cognitive benefits at any age (Kirkland, 2011) and health care providers are increasingly interested in prescribing exercise regimens to

older adults for both preventative and rehabilitative measures (Sebire, 2009). Therefore, discovering ways to improve adherence and motivation to exercise is crucial. The purpose of this study was to explore the value and the meaning that older adults attributed to physical activity and the factors promoting and impeding their engagement, through the lens of self-determination theory (SDT; Ryan & Deci, 2000). The inclusion criteria to participate in this study included (1) Being 60 years of age or older and (2) Being fully retired. Eighteen participants were interviewed using a semi-structured interview protocol, which contained questions designed to explore the personal experience with exercise during the transition to retirement. The interview protocol was informed by the review of literature as well as the researchers' interest in exercise psychology and gerontology. Interviews were audio-recorded, transcribed and analyzed using Consensual Qualitative Research Methodology (Hill, 2012). Four content-led domains were identified: Developmental Nature of the Exercise Experience, Promoters to Exercise, Barriers to Exercise, and Retirement as (an Alternative) Lifestyle. Findings and recommendations are reported.

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### WHAT MOVES YOU?: DEVELOPMENT OF THE REASONS (REX) TO EXERCISE SCALE

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The psychometric properties of measures used to understand why people engage in physical activity (PA) have been equivocal. Before meaningful inquiries about the reasons people have for exercise can be conducted, a psychometrically sound instrument is needed to assess PA goals for a diverse population. Therefore, the purpose of this study was to develop the Reasons to Exercise (REx) Scale. The REx consisted of 65-items with 13 5-item dimensions including: (a) social; (b) mental health; (c) appearance; (d) weight management; (e) revitalization; (f) fitness; (g) feel good; (h) solitude; (i) preventative health; (j) health concerns; (k) mastery; (l) competition; and (m) muscular fitness. Items included a standardized stem (i.e., "To you, how important is this reason for exercising and/or being physically active...?") followed by content written to tap into the 13 reasons using a 6-point Likert scale, ranging from 1 (not at all important) to 6 (extremely important). An online survey was developed in Qualtrics using the REx and distributed to three active, adult samples for a total of 772 participants (M age= 35 years). An exploratory factor analysis (EFA) examination of the REx Scale revealed nine factors (i.e., social, appearance, weight management, solitude, preventative health, health concerns, competition, fitness, and mood enhancement) and 38 items which held up under both unrestricted and restricted (exploratory structural covariance modeling) examination of model fit. Each dimension demonstrated Cronbach alpha coefficients greater than 0.80 (Kline, 2016). The results of this initial effort to develop a psychometrically sound instrument assessing the reasons people exercise and/or are being physically active were encouraging. Before the REx can be used to make meaningful comparisons between groups, the similarity of the instrument's measurement structure across groups must be assessed. Thus, future work on the REx Scale should conduct invariance analysis for gender and age, confirmatory factor analysis and provide preliminary construct validity.

## Injury/Rehabilitation

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### A CONCEPTUAL MODEL INTEGRATING SOCIAL SUPPORT AND COACHING KNOWLEDGE IN SUPPORT OF THE INJURED ATHLETE

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The International Sport Coaching Framework (ISCF; ICCE, 2014) has been used to highlight 'effective' coaches use of professional, interpersonal, and intrapersonal knowledge necessary to improve athlete outcomes. While research demonstrates that coaches possess varying forms and levels of professional, interpersonal, and intrapersonal knowledge in various contexts, existing literature examining how coaches use knowledge in the context of injured athletes has not been addressed. Yet, one critical factor determining the time it takes for athletes to return to competition from injury and how effective they are in their return is the level of social support (i.e., emotional, informational, tangible) that they receive from coaches, parents, and teammates. Coaches are in a unique position to be impactful in their provision of social support as they draw upon professional, interpersonal, and intrapersonal knowledge. However, in many cases athletes are not reporting the coach as a source of support at all or that coaches may even have had a negative influence on their recovery (Udry et al., 1997). Therefore, we have proposed a conceptual model to integrate coaching knowledge (i.e., professional, interpersonal, intrapersonal) with the types of social support that coaches can provide throughout the stages of injury rehabilitation (i.e., initial injury response, rehabilitation, return to competition; Bianco, 2001). The conceptual model utilizes the ISCF as a guide to highlight ways in which coaches can integrate their existing coaching knowledge into providing social support to an injured athlete throughout their rehabilitation. Applications of this model are presented through hypothetical scenarios and tools that coaches can implement as they assist and support their injured athletes. The scenario analyses are informed by the ISCF and social support types, which expresses the ways coaches can expand their knowledge (i.e., professional, interpersonal, intrapersonal) to provide social support to injured athletes working towards returning to competition.

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### CARING INTERACTIONS IN DISABILITY PREVENTION PROGRAMS: A QUALITATIVE INQUIRY OF INDIVIDUAL'S WITH PARKINSON'S DISEASE

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For individuals with Parkinson's disease (PD), exercise prevention programs (PP) are often prescribed to mitigate disability progression and loss of motor function. With increased incidence of PD and notoriously low program adherence,

investigating factors associated with increased adherence to PPs is critical. Caring is a seldom examined construct that may be relevant in improving adherence to PPs among individuals with PD. Therefore, the purpose of this study was twofold: 1. To gain a better understanding of the nature of caring in a PP setting from a patient perspective, and 2. To discover what implications, if any, caring has on relevant patient-centered outcomes. Ten individuals with PD were recruited. In-depth qualitative interviews were performed using a semi-structured interview guide. Inductive content analysis was used to identify themes representing participants' experiences of caring in the PP setting. Six themes emerged from the data analysis. The first four themes related to the means by which caring was fostered in the PP setting: showing interest, creating a supportive atmosphere, benevolence, and paying attention. Participants described instances when program providers showed interest by asking personal questions and remembering personal information. A supportive environment was facilitated by making participants feel supported, welcomed, and valued. Benevolence was apparent when program providers' demonstrated kindness and approached their work as "more than just a job". Finally, the importance of feeling that program providers "paid attention" to patients by giving them undivided consideration and aiding with exercises was emphasized. The final two themes, caring and increased attendance and caring and enhanced effort, are novel and represent key behavioral outcomes associated with caring in PP settings. Several practical implications can be gleaned from the study including the importance of remembering personal information (e.g. patient names), welcoming patients as they enter the clinic, treating patients as individuals, and providing undivided attention.

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### **CONTINUING TO PLAY AFTER A CONCUSSION: EVIDENCE FOR A DOSE RESPONSE EFFECT ON RECOVERY TIME**

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Objective: Current guidelines and common sense suggest athletes not continue to play or practice following sport-related concussion (SRC). However, some athletes do continue to play as result of sport culture pressure (e.g., pain ethic), lack of awareness of signs/symptoms, and limited medical coverage. Previously, we have shown that athletes who continue to play demonstrate worse outcomes, including more severe cognitive impairment and longer recovery time (Elbin et al., 2016). However, we do not know if how long an athlete continues to play after SRC influences their recovery time and other outcomes. The purpose of the current study was to determine if there was a dose response for continuing to play (i.e., minutes remained in game/practice play after SRC) on symptoms, neurocognitive impairment, and recovery

time. Methods: Participants included 59 athletes aged 15.3 (SD= 1.9) years, who continued to play for an average of 22.9 (SD= 26.8) minutes immediately following a SRC. Participants were grouped by short (3-15 minutes [n=25]) or long duration (>15 minutes [n=34]) of continuing to play following injury. A Mann-Whitney U test compared groups on recovery time and a series of t-tests compared groups on the Post-concussion Symptom Scale (PCSS) and Immediate Post-Concussion Assessment and Cognitive Testing (ImPACT) 1-7 days post-injury. Results: Athletes in the long duration continued to play group took longer to recover (M=43.79 days, SD=26.34) compared to those in the short duration continued to play group (M=29.08 days, SD=12.90, p=.049). There were no significant differences on acute outcomes at 1-7 days post injury on ImPACT or PCSS scores, however the two groups did differ in the types of symptoms following injury. Conclusion: Continuing to play following SRC has a dose response effect on recovery time. This effect could be due to additional aerobic activity or exposure to additional contact or collisions immediately following injury.

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### **"I'M TRYING OUT ALL THE OLD PEOPLE'S SPORTS NOW": IMPACT OF HIGH SCHOOL ACL TEARS ON WELL-BEING OF COLLEGE STUDENTS**

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Research on outcomes post-ACL tears has focused primarily on the experience of return to play (e.g., te Weirke et al., 2012). It has been well documented that approximately half of all athletes who experience ACL tears do not return to their previous level of sport participation (Arderm et al., 2014; Kvist et al., 2005), however, little is known about the experience of these individuals. Therefore, the purpose of this study was to explore the impact of an ACL tear during high school sport participation on well-being in undergraduate students not participating in a collegiate sport. The secondary purpose was to examine motives and barriers to physical activity participation in undergraduate students with a history of ACL-tears. Eleven college students with a history of ACL tears who were not participating in an NCAA intercollegiate sport were interviewed regarding their injury and rehabilitation experiences, and motives and barriers to current physical activity participation. A thematic analysis approach was adopted to recognize, examine, and report patterns, synthesized into themes guided by the steps outlined by Braun and Clarke (2006). Thematic analysis revealed themes centered on 1) perspective, 2) transition and adaptation, 3) the importance and utility of physicality, and 4) the psychosocial impact of the length of the process of rehabilitation. Understanding the experience of athletes who do not return to competitive sport has important implications for sport psychology consultants. Specifically, consultants can help athletes more successfully transition from participation in competitive sport to participation in meaningful physical activity and can prepare athletes for the challenges and opportunities in transitioning out of competitive sport.

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**PHYSICAL THERAPY ADHERENCE: AN INITIAL EXAMINATION OF SELF-COMPASSION AS REPORTED BY PATIENTS AND PRACTITIONERS**

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Several factors can influence a physical therapy patient's level of adherence to rehabilitation protocols, including one's history of stressors, personality, and coping skills, which in turn, can have a significant impact on recovery outcomes. Empirically, self-compassion has been associated with factors that could facilitate adherence, such as self-motivation and coping skills. According to Neff (2003), self-compassion is comprised of three elements—self-kindness, common humanity, and mindfulness, and refers to treating oneself with kindness and understanding when one is facing difficult life experiences. This study was an initial exploration of the role self-compassion plays in adherence to physical therapy programs. Fifty-six physical therapy patients (26 male, 30 female) and five physical therapists (4 male, 1 female) participated in the investigation. Patients reported a wide range of acute (e.g., torn Achilles) and chronic (e.g., degenerative disc) injuries. Study participants completed the Sport Injury Rehabilitation Adherence Scale (practitioners only) and the Self-Compassion Scale–Short Form (practitioners and patients). Results demonstrated a positive association between rehabilitation adherence and a practitioner's observation of self-compassion for each patient, which was moderated by a patient's stage of rehabilitation. That is, the correlation was significant if patients had completed more than 70% of their rehabilitation. Additionally, canonical correlation analysis revealed that the set of practitioner observed self-compassion variables explained a significant and meaningful amount of variance in the set of rehabilitation adherence variables (17.6%), with common humanity and effort exerted during rehabilitation making the greatest contributions to the multivariate relationship. From a practical perspective, this suggests that patients who try harder are the patients who, from the perspective of the practitioner, understand that feelings of failure and inadequacy are shared by most people. Therefore, the findings speak to sharing not only success stories of other patients but the struggles of other patients that preceded the success stories.

*Key Words: motivation, rehabilitation, compliance, injury, healing*

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**SPORT INJURY REHABILITATION & THE MMTS 2.0**

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Injury is prevalent at all competitive levels of sport with consequences including increased stress, frustration, anxiety, and pain (Brewer, 2007; Tracey, 2003; Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998). Increased stress and debilitating emotions complicate the rehabilitation process, and often lead to reinjury (Ahern & Lohr, 1997). Mindfulness, or paying attention nonjudgmentally to the present moment (Kabat-Zinn, 2003), has tenets which include: awareness, acceptance, non-judgment, and self-compassion (Baltzell, 2015; Bishop et al., 2004; Kabat-Zinn, 2003); all of which could benefit

athletes who are experiencing distress and pain during the injury rehabilitation process. The Mindfulness Meditation Training Intervention for Sport (MMTS 2.0; Baltzell, Caraballo, Chipman, & Hayden, 2014) incorporates mindfulness and self-compassion principles and exercises through a six-week, six-module program. The focus of the six modules include: 1) Mindfulness and Self-Compassion, 2) Labeling, 3) Concentration, 4) Self-Compassion, 5) Self-Regulation, and 6) Awareness. Although the MMTS 2.0 has not been used with injured athletes, mindfulness interventions represent an ideal coping technique for this population. Researchers have acknowledged the importance of acceptance in the injury process, as athletes who accept their injury and its circumstances improve their outlook on the rehabilitation process (Brewer & Petrie, 1995; Gould, Udry, Bridges, & Beck, 1997; Tracey, 2003). Additionally, mindfulness meditation has been shown to reduce stress, anxiety, and pain (Grossman, Niemann, Schmidt, & Walach, 2004), as well as increase well-being (Carmody & Baer, 2008). Improved self-compassion has been related to reduced stress and anxiety (Allen & Leary, 2010) and improved well-being and psychological functioning (Neff, 2003a; 2003b). This poster presentation will provide a rationale and conceptual framework for how the MMTS 2.0 can be tailored to injured athletes to reduce their pain and stress through the mechanisms of mindfulness and self-compassion.

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**THE INFLUENCE OF PERSONALITY AND PREVIOUS INJURY HISTORY ON ATHLETE'S PERCEIVED SUSCEPTIBILITY TO SPORT INJURY**

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Psychological factors and previous injury experience have been found to influence perceived susceptibility to sport injury (PSSI) in runners (Stephan et al., 2009), but no research has investigated such relationships in other sports. In particular, the personality trait of neuroticism has been directly linked to PSSI (Stephan et al., 2009), whereas other Big Five personality characteristics; extraversion, agreeableness, openness, and conscientiousness have yet to be researched. The purpose of this study was to investigate the potential relationship between the Big Five personality characteristics, previous injury history, and athletes' perceived sport injury susceptibility in different sports. A total of 218 Division I collegiate athletes (male n = 106; [49.07%]; female n = 110; [50.93%]; M/SD age [19.68/1.36]) completed the 40-item Mini Markers questionnaire (Saucier, 1994), self-reported injury history, and the 4-item PSSI questionnaire (adapted from Deroche, Stephan, Brewer, & LeScanff, 2007) as part of an online survey during preseason. Eight sports were represented in the study: soccer (19.3%), swimming (18.8%), track & field (18.8%), basketball (12.8%), cross-country (11.9%), baseball (10.6%), volleyball (6.9%), and tennis (0.9%). A multiple regression analysis revealed that neuroticism explained 21.2% (p < 0.01) and agreeableness 13.8% (p < 0.05) of the variance in PSSI total score. Minor, moderate, and major injury history also significantly explained 14.3% (p = 0.04), 29.6% (p < 0.01), and 32.2% (p < 0.01) of the variance, respectively. The results of this study confirm the findings of Stephan et al. (2009) and also suggest that agreeableness and previous injury history play a role in athlete's perceived susceptibility to sport injury.

It is therefore likely that there are many contributing factors to perceived susceptibility to sport injury in both personality traits and injury history, thus warranting further research into other possible underlying factors that can affect perceived susceptibility to sport injury.

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### THE RELATIONSHIP BETWEEN PSYCHOLOGICAL FACTORS AND MUSCLE STRENGTH AMONG ANTERIOR CRUCIATE LIGAMENT-DEFICIENT PATIENTS IN JAPAN

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Muscle strength is an important factor for athletes returning to physical activities after anterior cruciate ligament (ACL) reconstruction. Few studies, however, have evaluated the relationship between muscle strength and psychological factors in these patients. The purpose of this study was to investigate the relationship between the strength of the hamstring and quadriceps femoris muscle and mood, optimism, and pain among ACL-deficient patients. The participants were 44 ACL-deficient patients who underwent ACL reconstruction in a Japanese hospital. Participants completed the Revised Life Orientation Test before surgery, and the short form of the McGill Pain Questionnaire and the Profile of Mood States before and after surgery. The first assessment was performed one or two days before ACL reconstruction, and the second assessment was performed approximately 13 days after surgery. The strength of the hamstring and quadriceps femoris muscle in the injured leg was assessed by the percentage of muscle strength in the uninjured leg before surgery and approximately six months after surgery. The results revealed that anger and tension were negatively related to the strength of the hamstring muscle before surgery ( $r = -.31, p < .05$ ). Additionally, anger and pain were negatively related to the strength of the quadriceps femoris muscle before surgery (anger:  $r = -.31, p < .05$ ; pain:  $r = -.35, p < .05$ ). Furthermore, confusion assessed approximately 13 days after surgery was positively related to the strength of the hamstring muscle at 6 months after surgery ( $r = .34, p < .05$ ). Patients who were motivated to rehabilitate their knee might have been impatient after surgery (approximately 13 days after surgery) because their rehabilitation exercises were limited. As we found a negative relationship between negative mood and muscle strength before surgery, patients with low muscle strength before surgery might need psychological support from professionals in sports medicine.

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### THE RELATIONSHIP OF ATHLETES' PERCEPTIONS OF SPORT INJURY SUSCEPTIBILITY, MENTAL TOUGHNESS AND SPORT INJURY OCCURRENCE: A PROSPECTIVE STUDY

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It has been theorized that individuals' personality variables (e.g., mental toughness) and cognitions (e.g., perceived injury susceptibility) influence one's appraisal of a potentially

stressful situation and possible subsequent injury occurrence (Andersen & Williams, 1988; Clough, Earle, & Sewell, 2002; Deroche Stephan, Brewer, & Le Scanff, 2007). However, empirical investigations to that effect are still limited, warranting more research investigating the role of psychological factors on actual injury occurrence (Ivarsson, Johnson, & Podlog, 2013). The purpose of the current study was to investigate the relationship between perceptions of susceptibility to sport injury (PSSI), mental toughness (MT), and subsequent athletic injury occurrence. Division I student-athletes (male  $n = 17$ ; female  $n = 22$ ; M/SD age 19.6/1.2) completed a web-based survey consisting of the Perceived Susceptibility to Sport Injury Scale (Deroche et al., 2007) and Mental Toughness Questionnaire 48 (MTQ48; Clough et al., 2002) during preseason. Participants' athletic injury occurrence was then monitored for one season by their athletic training (AT) staff. Athletic injury referred to musculoskeletal injuries of the lower extremity or lower back that required the athlete to seek care from the AT staff (Wright, Dischiavi, Smoliga, Taylor, & Hegedus, 2016). A multiple logistic regression analysis was conducted to assess the extent to which MTQ48 subscale scores (confidence, challenge, commitment, control) and PSSI predicted injury occurrence. The resulting prediction model was not statistically significant  $\chi^2(5, N = 39) = 3.95, p = .56$ , thus suggesting that when examined in isolation from other potential psychological antecedents, PSSI and MT alone are not sufficient to predict injury occurrence. Given that the Stress and Athletic Injury model (Andersen & Williams, 1998) presumes a bidirectional interaction between personality, stress history, and coping resources as influencing one's stress response and potential injury occurrence, future research should aim to explore these variables concurrently.

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### THE UTILITY OF fNCI IN THE DIAGNOSIS AND ASSESSMENT OF POST-CONCUSSION SYNDROME

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Accurate diagnosis of post-concussion syndrome (PCS) is a growing concern for therapists and physicians treating concussion patients. Recent literature noted that 3-6 months post-concussion, PCS symptoms are no longer distinguishable from novel psychiatric conditions. Current psychological and cognitive assessment batteries are limited in their ability to distinguish between novel conditions and symptoms resulting from PCS. Functional NeuroCognitive Imaging (fNCI) is a modified fMRI capable of localizing NeuroVascular Uncoupling (NVU), a pathophysiological change resulting from concussions, by measuring the BOLD signal change during performance of MRI-adapted neuropsychological evaluations. fNCI measurements assess the severity and localize NVU as a result of concussions allowing for effective diagnosis of PCS leading to the development of effective individualized and targeted treatment to resolve physical, cognitive, and psychiatric PCS symptoms. fNCI assessment protocol consisting of a modified neuropsychological evaluation was initially performed in a normative reference group of 60 volunteers (32 Female, 28 Male) between the ages of 19-57 years old (Mean = 30.1,  $\sigma = 8.5$ ). Resulting BOLD signaling was contextualized into a normative database and degrees of NeuroVascular coupling efficiency (Hnvc) were quantified into a severity index score (SIS). Data analysis revealed 57 specific activation regions that possess a normal distribution

of functional Hnvc efficiency amongst reference subjects. This distributive property formulated a three-dimensional activation standard, or normative atlas, which was later used to statistically contextualize both severity and localization of NVU in a sample consisting of 100 patients with SRC (43 Female, 57 Male) between the ages of 11-66 years old (Mean = 25.7,  $\sigma = 13.0$ ). We present fNCl as an effective means of assessing NVU in PCS patients. The ability to assess the 57 regions of activation and identify key biomarkers of concussions allows for the reliable evaluation and diagnosis of concussion, distinguishing it from other novel cognitive and psychiatric conditions.

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## Mental Health

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#### **COMPASSIONATE EFFICACY: AN ACCEPTANCE-BASED RESPONSE STYLE TO BODY IMAGE CONCERNS AND COGNITIONS FOR ATHLETES**

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Evaluations and comparisons based on body, appearance, uniforms, and performance occur regularly in sport. How athletes choose to relate or experience these appraisals can lead to body misperceptions, shame, and unhealthy weight-control behaviors. Therefore, appropriate and effective management of these evaluations is needed, while maintaining a healthy self-perspective. Cultivation of acceptance-based strategies rooted in self-compassion may allow athletes to maintain positive views of themselves by buffering against dueling and often paradoxical identities of gender and athletic performance expectations. This study intends to help strengthen the shift toward self-compassion, body image flexibility, and related acceptance-based practices and interventions as potential resources for athletes who experience body image concerns. Specifically, developing a self-compassionate efficacy may yield greater body acceptance, shield against negative reactivity, and offer a more useful, healthy, and accurate view of self.

A sample of 83 collegiate student-athletes (74 female, 9 male) between the ages of 18 and 25 completed an online survey containing a brief demographics questionnaire and 10 survey instruments.

Linear regression was conducted to evaluate the relationship of self-compassion, self-esteem, and self-efficacy to body image flexibility. The results indicated that self-esteem and self-compassion scores significantly predicted body image flexibility scores. Self-efficacy scores in predicting and body image flexibility were not linearly related.

A moderation model was tested using hierarchical regression analyses to test the effect of the moderator (self-efficacy) on the relationship between body image flexibility and self-compassion. Results revealed that self-efficacy significantly acted as a moderator,  $b = -2.39$ ,  $t = -2.56$ ,  $p = .01$ .

Three mediation models were tested using linear regression, following a four-step analysis. We concluded that self-compassion mediates the relationship between social physique anxiety and body image flexibility;  $b = 1.03$ ,  $t = 7.1$ ,  $p < .001$ . Self-compassion was not found to be a mediator in the relationships between self-efficacy and body image flexibility, or between athletic self-appraisal and body image flexibility.

Emotion regulation strategies that focus on acceptance, self-compassion, and self-efficacy may serve as a possible future intervention to manage body image and self-presentation concerns in athletes. This study proposes compassionate efficacy as an acceptance-based response style for athlete body image concerns and cognitions.

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#### **EXAMINATION OF THE IMPACT OF PSYCHOLOGICAL AND EMOTIONAL FACTORS IN STUDENT-ATHLETES AT AN HISTORICALLY BLACK UNIVERSITY**

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Vargas and colleagues (2015) discovered a relationship between sport-related injuries and depression. Similar findings by Wiese-Bjornstal, White, Russell, and Smith (2015) indicated that psychological, emotional, and social consequences of sport concussions stem from the short- and long-term effects of the initial injury occurrence as well as from the unique context of sport-related influences on recovery. Thus, the purpose of this study was to examine the effect if any on the Classification, Age Range, Gender and/or Sport Range on the Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), and/or Life Stress scale in male and female National Collegiate Athletic Association Division I players at an historically black university in the Deep South.

A Post Hoc was calculated to compare the Classification; which is the only independent variable with more than two levels. (freshman, sophomore, junior, senior). Results indicated that there is a strong, positive relationship using Roy's Largest Root where  $p=0.25$ . Our findings also revealed a strong, positive correlation between classification and gender on the stress measure where  $p=0.37$ . There is a significant interaction effect of age range and gender on the Anxiety measure where  $p=0.54$ . A MANOVA was used to examine the effect on (Classification, Age Range, Gender, and Sport Range) as the independent variable (IV) and Anxiety, Depression, and Stress as dependent Variables (DV). Results showed a significant positive correlation between classification and gender, anxiety, depression, and stress. (Roy's Largest Root=0.25,  $F(3.276)=3.00$ ,  $p<0.05$ ).

Therefore, findings from the present study suggested that based on an athlete's classification and gender, symptoms of depression, anxiety, and stress are elevated and there is a significant linear relationship between dependent variables. Our research results have implications for policies governing mental health protocols in collegiate settings and suggest that careful consideration should be paid to student athletes' psychological and emotional well-being.

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### EXAMINING RELATIONSHIPS AMONG INTRA- AND INTER-PERSONAL FACTORS AND ATHLETE BURNOUT: SELF-DETERMINATION THEORY PERSPECTIVE

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 Win Koo, *Troy University, USA*

The study aims were (a) to investigate the relationship between intra- personal factors (i.e., competitive trait anxiety and perfectionism) and inter-personal factor (i.e., perceived coaching behaviors), and athlete burnout, and (b) to examine the mediation effects of need satisfaction/thwarting and self-determined motivation on this relationship. The conceptual model of this study assumed that intra-/inter-personal factors would affect need satisfaction/thwarting, and these in turn affect burnout through the mediation of the three motivational constructs of motivation postulated by self-determination theory (i.e., autonomous motivation, controlled motivation, and amotivation). Four hundred six one Korean active collegiate athletes from 21 sports participated in the study (Mage = 21.29yrs, SD = 1.42, and Mexp = 8.97yrs, SD = 2.49). The participants completed seven questionnaires: a demographic questionnaire, Athlete Burnout Questionnaire, Basic Psychological Needs Scale, Psychological Need Thwarting Scale, Sport Behavioral Regulation Scale, Sport Anxiety Scale-2, Sport Multidimensional Perfectionism Scale-2, Controlling Coach Behaviors Scale, and short version of the Sport Climate Questionnaire. The results of the final model fitting the data indicated that perfectionism was positively related to need satisfaction (.88), whereas competitive trait anxiety and controlling coaching were negatively related to need satisfaction (-.29 and -.40, respectively). In contrast, perfectionism was negatively related to need thwarting (-.15), whereas anxiety and controlling coaching were positively related to need thwarting (.39 and .53, respectively). Interestingly, autonomy supportive coaching style was not related to need satisfaction and need thwarting. All intra- and inter-personal factors were significantly related to three forms of motivation except that anxiety was not related to controlled motivation. Only amotivation had a significant causal path (.59) to burnout. The findings of this study shed light on the importance of understanding the intra-/inter-personal factors, need satisfaction/thwarting and self-determined motivation in athlete burnout.

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### GENDER DIFFERENCES IN PRIMARY AND SECONDARY EXERCISE ADDICTIONS AMONG INDIVIDUALS WHO EXERCISE REGULARLY

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 Hacohen Yael, *Tel Aviv Academic College, Israel*  
 Gil Goldzweig, *The Academic College of Tel Aviv-Yaffo, Israel*

Many researches emphasize the positive effects of exercise, both physically and psychologically. However, some individuals who exercise develop a pattern that causes immense psychological and physiological anguish, engulfs other parts of their lives and is experienced as difficult to control. These individuals are considered to be at risk of developing exercise addiction. We distinguish between 'Primary addiction' - people who don't have eating disorders, 'Secondary addiction' - people who suffer from eating disorder, who exercise in order to control their weight. According to previous studies, men appear to report more exercise addiction symptoms than women

(primary addiction potential), while women tend to be at higher risk of secondary addiction potential. In the current study we collected data from 154 participants that exercise regularly and that were identified as being at high risk for developing exercise addiction. We hypothesized a connection between exercise addiction symptoms and eating disorders symptoms for all participants, which would be stronger for the secondary addiction group. In addition, we hypothesized that men will report more exercise addiction symptoms than women, while women would report more eating disorder symptoms than men. Hypotheses were partially supported: First, though a connection between exercise addiction symptoms and eating disorders symptoms was found for all participants, it was not stronger for the secondary addiction group. Second, gender issues - the hypothesis that women will report more eating disorders symptoms than men was supported, but its other part - that men will report more exercise addiction symptoms than women - was refuted. Women reported more exercise addiction symptoms than men. A possible explanation to these surprising findings might be a shift in 'ideal body' perceptions - from ideal masculine figure for men and thin figure for women - a hybrid thin and masculine figure for both men and women, yet more directed at women.

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### MENTAL HEALTH SCREENING AMONG NCAA D I STUDENT-ATHLETES

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 Karolina Wartalowicz, *University of North Texas, USA*  
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College student-athletes experience mental health concerns, including depression, anxiety, substance abuse, and eating disorders (Wolanin et al., 2016), and sports medicine personnel have advocated for early identification through screening during preperformance physicals (Kroshus, 2016). In this study, we describe the findings from a mental health screening conducted with 144 male and 124 female student athletes drawn from an intact NCAA Division I athletic department. This confidential screener was based on 26-items drawn from the NCAA's Mental Health Best Practices Handbook; student athletes completed it during scheduled team meetings conducted by sports medicine personnel (coaches were not present). Regarding anxiety, 72.2% indicated excessive worry, 20.7% felt anxious much of the time, 28.6% worried about family/friends, and 28.9% had trouble sleeping. Related to depression, 11.4% felt sad/worthless, 7% felt hopeless about the future, 5.1% expressed feelings of hurting self or others, and many had difficulty managing (19.4%) or sharing (39.9%) their emotions. For body image and weight behaviors, 16.5% reported weight influenced how they felt about themselves, 12.1% were dissatisfied with how their bodies looked, 7.3% felt out of control when eating, and 33.3% were trying to gain or lose weight; only 2.2% used laxatives, diuretics, vomiting or fasting. Specific to their current mental health status, 16.1% had seen a counselor, 4.4% had been prescribed medication for a psychological issue, and 7.3% reported an LD or ADHD diagnosis. We also examined differences in frequencies based on gender and race/ethnicity, and will report those in the paper. Overall, symptoms of anxiety were more present than those related to depression, though a sizable minority of the athletes did report substantive depressive symptoms and body image concerns. Further, just over 20% had received mental health treatment, either in the form of counseling or medication. Results demonstrate the need for student athlete mental health awareness.

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**PERCEIVED JOB CONTROL  
MEDIATES THE RELATIONSHIP  
BETWEEN ORGANIZATIONAL  
STRESSORS AND ATHLETE  
ENGAGEMENT IN PROFESSIONAL SOCCER PLAYERS**



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In order to compete effectively, elite sport organizations are dependent on athletes who are psychologically connected during training and competition, and who are willing, and able, to invest themselves fully despite the inherent demands of competitive sport. Specifically, sport organizations need athletes who are engaged with their work. Using a questionnaire-based cross sectional design, 401 professional soccer players from the United Kingdom completed measures of organizational stressors, perceived job control, and engagement. The data were analyzed using Hayes's PROCESS macro for SPSS, and showed organizational stressors to be predict athlete engagement. Further, this relationship was mediated by soccer players' perceptions of control. The findings highlight the salience of autonomy and appraisal in the stress process and it's potential contribution to athlete engagement in professional sporting organizations. Moreover, these findings indicate that interventions aimed at promoting athletes' perceptions of autonomy may ameliorate the potential negative impact of organizational stressors on athlete engagement with their work.

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**PROACTIVELY AVOIDING BURNOUT: A QUALITATIVE  
ANALYSIS OF COLLEGIATE FEMALE TENNIS PLAYERS'  
MOTIVATION LIFE CYCLE**

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**Objective:** Female individual sport athletes appear to experience more burnout than male athletes and female team sport athletes (Cremades, University, & Wiggins, 2008). Thus, the purpose of this study was to understand how four highly motivated female tennis players had maintained motivation in a sport with high burnout risk.

**Method:** Participants were four NCAA Division I female collegiate tennis players (mean age 19.5 years), who were on full scholarship and started in their team's lineup. They were recruited after participating in a quantitative study on burnout. Six participants with low Athlete Burnout Questionnaire (Raedeke & Smith, 2001) scores from the sample were invited to participate in a follow-up interview; four responded. Interviews were semi-structured and focused on the athletes' motivation over their tennis careers. Inductive content analysis procedures were used to identify themes.

**Results:** Five thematic categories emerged from the data, including: Reasons for Specialization, Motivating Factors, Factors that Decreased Motivation, Obstacles/Setbacks to Success, and Strategies for Regaining Motivation. Each athlete identified factors that motivated them to specialize and train intensely in tennis. Additionally, they described periods of decreased motivation, which were a result of documented burnout risks like training monotony or lack of time off. All

participants reported implementing intentional internal and external changes to overcome these periods, thus avoiding burnout and reigniting their motivation for tennis.

**Discussion:** While it is important to study athletes who have experienced burnout, it is also valuable to solicit reports from highly motivated elite athletes to determine how they successfully navigate the demands of sport. Results indicated that proactive changes, which were supported by at least one parent, were necessary to avoid burnout. This study contributes to knowledge regarding burnout prevention and provides a framework for parents and coaches, who are influential in shaping the developmental experiences of junior tennis players.

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**THE DEPRESSION EFFECT OF SPORTS EXPERIENCE ON  
THE SEVERITY OF STUTTERERS' STUTTERING**

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Stuttering, according to the WHO, is defined as a disorder that disrupts the rhythmic flow of speech. It is a language impairment that disturbs the fluency of speech contrary to the speaker's intention. Adriaenssens, et al. (2015) reported that the severity of stuttering negatively affects self-esteem. Yagi (2005) also reported that a negative correlation exists between social anxiety and self-esteem. Therefore, it can be considered that stuttering originates in the social anxiety caused by conversations and that the repeated experience of stuttering decreases self-esteem and its subordinate concept of self-affirmation, thus making the stuttering severer. Shimamoto, et al. (2014) reported that self-disclosure that is required and frequently seen in organizational and continuous sports activities positively affects self-esteem. It is thus suggested that such sports experience could depress the severity of stuttering by increasing self-esteem and self-affirmation.

This study investigated on how sports experience depresses the severity of stutterers' stuttering through self-affirmation or social anxiety by using questionnaire method. Subjects were 120 people who belong to or participate in a self-help group of stutterers. They were asked to answer the questionnaire that measures self-affirmation and social anxiety. An analysis of covariance structures was performed with the obtained data to investigate the influence of sports experience on the severity of stuttering through social anxiety and self-affirmation. As a result, generally acceptable goodness of fit was obtained. Especially, it was observed that self-disclosure in sports experience tends to depress the severity of stuttering by decreasing social anxiety and increasing self-affirmation.

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**THE INFLUENCE OF CONTINUED SPORTS ACTIVITY  
EXPERIENCE ON THE SOCIAL SKILLS OF UNIVERSITY  
STUDENTS**

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Hirohisa Isogai, Kyushu Institute of Technology, Japan*

This study investigated the social skills of university students with KISS-18 psychological scale, which is based on extensive investigations on the social skills. Examinations were made on how continued sports activity experience in puberty through adolescence influences their social skills. The skills evaluated

by KiSS-18 consist of six factors of beginning social skills, advanced social skills, dealing with feelings, alternatives to aggression, dealing with stress, and planning skills. Sports activity experience in this study refers to activities in sports clubs within campus, local sports clubs, and sports circles in and out of the campus.

Research participants were 787 university students. However, 145 of them who didn't fall into the three categories below during the three educational phases of junior high (age 12-15), high school (15-18), and university (18-26) were excluded, so that the actual number of the research subject was 642. They were categorized into three groups: A (66, those who have never experienced any sports activity since junior high); B (224, those who had joined some for three or more years consecutively during junior high and high school); C (352, those who have continuously been engaged in some since junior high).

Independent one-way ANOVAs were performed to test for the difference among the means of the three educational phases on the six social skill factors. Significant differences were observed in the "advanced social skills" and "alternatives to aggression" between groups A and C, and B and C, respectively, with C being the higher. Therefore, it was suggested that continued sports activity in puberty through adolescence was effective in acquiring social skills such as the communication skills of giving instructions, joining conversations, or apologizing, and skills for helping others, settlement, or solving troubles.

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### Non-Sport Performance Applications

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#### **HOW DID YOU FIND THAT LUCKY CHARM? A QUALITATIVE ANALYSIS OF SUPERSTITIOUS BEHAVIOR AND PERFORMANCE**

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Keith Russell, Western Washington University, USA*

Superstition has been analyzed in prevalence and in performance in the worlds of athletics, academics, and economics (e.g., Bleak & Frederick, 1998; Dudley, 1999; Wright & Erdal, 2008). Superstition has been hypothesized to be positively associated with external locus of control, high athletic identity, ambiguous intolerance, and high stress situations (Foster, Weigand & Baner, 2006; Todd & Brown, 2003). To date, there has been no known research exploring how an individual decides to believe in the power of superstition and how they choose a superstitious behavior. The purpose of this study was to qualitatively analyze why and how an individual comes about choosing and relying on a superstitious behavior in a performance setting. A naturalistic research design using a case study approach guided the study of superstition (e.g., Yin, 1993). Five athletes, three military members, and three performing artists participated. The semi-structured interview focused on three topics: history of superstition use, perspective around superstitious behavior, and sustainability of superstition. To identify constructs associated with each interview, a constant comparative method was used (Glaser & Strauss, 1967). Open and pattern coding of data was driven by questions related to the key [questions, themes] (Miles & Huberman, 1994). Each interview was considered independently of others and consistent

coding procedures were used to maintain reliability of data. Data were then merged in order to identify common themes and patterns. The goal was to develop more sophisticated descriptions and, thus, more powerful descriptions of superstition. After analysis, ten themes were discovered. A model was created, using the discovered themes, depicting how a superstition starts, why a superstition works, and how a superstition works. Future research is needed on the connection between belief in superstition and behavior, as well as, the discovered themes; particularly transfer of power, root of power, and ambivalence around superstitious behaviors.

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#### **SELF-CONCEPT, SELF-COMPASSION, AND BODY SATISFACTION OF DANCERS AND YOGA PRACTITIONERS: SOCIOCULTURAL INFLUENCES FROM FAMILY, PEERS, SIGNIFICANT OTHERS, AND THE MEDIA**

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Jeffrey Martin, Wayne State University, USA*

In the present study we explored if dance/yogi self-concept and socio-cultural influences (i.e., family, peers, media, & significant others) on body image predicted body appreciation (BA) and self-compassion (SC). Dancers and yogi participants (N = 71) enrolled in dance/yogi community college classes completed scales, with a strong history of producing valid and reliable scores, assessing each construct. A linear multiple regression (MR) using BA as the dependent variable was statistically significant,  $F(5, 71) = 13.302, p < .001$ , and accounted for 47% of the variance in BA ( $R^2 = .51$ , Adjusted  $R^2 = .47$ ). The strongest influence on participants' BA was the media ( $\beta = -.53, p < .001$ ) and self-concept ( $\beta = .36, p < .001$ ). Participants with the greatest appreciation of their bodies had the strongest self-concepts and perceived the media as sending messages about the value of being thin and denigrating fat. A second MR with SC as the dependent variable was also significant,  $F(5, 71) = 2.984, p < .001$ , and accounted for 12% of the variance in SC ( $R^2 = .19$ , Adjusted  $R^2 = .13$ ). Similar to BA, the media ( $\beta = -.42, p < .001$ ) and self-concept ( $\beta = .23, p < .06$ ) were important predictors of participants' SC. Participants with the greatest SC had strong self-concepts and saw the media as providing value laden messages about being thin and fat. In contrast, messages about body image stemming from family, significant others and peers, relative to the media, had no bearing on SC and BA. Both MR equations explained meaningful amounts of variance with moderate to large effect sizes (i.e., variance accounted for). The larger beta weights and variance accounted for in predicting BA likely reflected the correspondence between the body specific predictors and BA, relative to SC which is not body specific.

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#### **THE INFLUENCE OF BIASES ON OFFICIALS' SPORT-RELATED DECISION-MAKING: A META-ANALYSIS**

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Matthew Bird, Florida State University, USA  
Natanuel Boiangin, Florida State University Ice Hockey, USA  
Betsy Becker, Florida State University, USA*

Sport officials face many challenges which inhibit their ability to make a correct decision when officiating sporting events. These challenges include incorrect positioning during

gameplay due to a lack of physical fitness, the limits of the human capacity to process multiple stimuli, and making an objective decision. In addition to these challenges, recent studies of officials' sport-related decision-making have uncovered numerous biases that influence the ability of an official to make a correct decision. These biases include, but are not limited to, the effect of uniform color on decision-making, the effect of home-field on decision-making, and the effect of noise (e.g. crowd noise or player noise) on decision-making. The purpose of this meta-analysis was to provide insight into the strength of the existing evidence surrounding the influence of biases on officials' sport-related decision-making. Eighteen studies investigating the bias of uniform color, home-field advantage, and noise, in sports such as soccer, cricket, basketball, and hockey were analyzed. Meta-analysis of these eighteen studies indicates that bias, regardless of type, has a small significant effect on officiating performance ( $d = 0.23$ ,  $SE = 0.04$ ). Crowd noise appeared to have the largest effect ( $d = 0.44$ ,  $SE = .22$ ) although it was not significant. However, home field advantage ( $d = 0.24$ ,  $SE = 0.05$ ) and uniform color ( $d = 0.16$ ,  $SE = 0.06$ ) had smaller effects which were significant. These results suggest that sport officials' decision-making is vulnerable to various sources of biases. These effects, while small, may influence the outcomes of games or seasons. Further research is required to understand how these biases influence performance, while interventions should be developed and implemented to reduce the impact of biases on sport-officials' decision-making.

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**Professional Development, Supervision, and Mentoring**

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**“SHOW ME THE MONEY”: A REVIEW OF CAREER DEVELOPMENT AND EMPLOYMENT OPPORTUNITIES IN APPLIED SPORT PSYCHOLOGY**

*Alex Yarnell, Ithaca College, USA*  
*Victoria Blakeslee, Ithaca College, USA*  
*Lia Gorden, Ithaca College, USA*  
*Justine Vosloo, Ithaca College, USA*  
*Sebastian Harenberg, Ithaca College, USA*



In 2001, Meyers et al. (2001) concluded that a doctorate in either clinical or counseling psychology would yield a higher earning potential than that of sport sciences; and suggested at that time that Applied Sport Psychology (ASP) careers should not be viewed as a primary source of income. The purpose of this study was to conduct a follow up to Meyers et al. (2001) review of the status of employment, educational pathways, and earning potential in the field. Sport psychology professionals were recruited to participate in the study using the CC-AASP finder tool, the BASES website, the CSPA website, a general Google search for “mental skills trainer”, and snowball sampling. In total, 274 participants (female  $n=139$ , 50.7%) completed a descriptive questionnaire, including questions about educational background, workplace setting, annual gross income, and consulting income. The majority of respondents worked in the US ( $n=216$ , 84.4%) or Canada ( $n=33$ , 12.9%) and were Caucasian ( $n=241$ , 90.6%). The median experience in the field was six to ten years. Approximately half of the participants held a doctorate degree ( $n=134$ , 48.9%). Individuals with a PhD reported a significantly higher income than Master's level consultants ( $t(185)=2.18$ ,  $p<.05$ ,  $d=.40$ ). Compared to Meyers et al. (2001), no differences were found between individuals who

held a doctorate in sport sciences or in clinical or counseling psychology in reported income through ASP. The comparison of gross annual income approached significance ( $p=.06$ ), with a higher median income for individuals holding a doctorate in clinical or counseling psychology. The presentation will include further discussion of how the field of SEP has evolved in the 15+ years since Meyers et al. (2001) seminal work, while also making recommendations for areas that need further improvement in the support of neophyte and aspiring SEP professionals. Recommendations for career development will also be made.

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**THE EARLY HISTORY OF APPLIED SPORT PSYCHOLOGY IN THE UNITED STATES: THE WORK OF THE COMMISSION ON SPORT PSYCHOLOGY AND THE SPORT PSYCHOLOGY TASKFORCE**

*Alan Kornspan, University of Akron, USA*

Throughout the past sixty years the application of sport psychology has increased significantly (Weinberg & Gould, 2015). Specifically, during the 1960s, more professionals became interested in providing sport psychology interventions to athletes and coaches (Williams & Krane, 2015). As a result, contrasting viewpoints emerged toward what the focus of the field of sport psychology should entail. Individuals such as John Lawther, Reuben Frost, and Walter Schwank believed that sport psychology should be an applied profession which focused on helping coaches and athletes apply psychological concepts (Schwank, 1970). Since these professionals supported teaching athletes and coaches the practical aspects of sport psychology, they were instrumental in the formation of the Commission on Sport Psychology. Because there is a dearth of literature which has explained how the Commission on Sport Psychology was formed, the purpose of this poster presentation is to explain the development and activities of the Commission on Sport Psychology during the late 1960s and early 1970s. First, the support that the American Association of Health, Physical Education and Recreation (AAHPER) provided for the practical aspects of sport psychology in the late 1960s is delineated. Next, details of how the Commission on Sport Psychology was formed are provided. This is followed by a description of the work of the Sport Psychology Taskforce which culminated in the organization of the First Sport Psychology National Conference at the State University of Buffalo in 1973. Finally, the influence of the Commission on Sport Psychology to the development of applied sport psychology in the United States is discussed.

## Research Design

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**FULL-TEXT PUBLICATION OF ABSTRACT PRESENTED WORK IN SPORT AND EXERCISE PSYCHOLOGY***Sarah Shue, Indiana University Purdue University Indianapolis, USA**Stuart Warden, American College of Sports Medicine, USA*

Conference presentations provide an opportunity for exchanges between professionals and immediate feedback from peers. However, research presented in abstract form is limited in its ability to contribute to evidence based practices within the field of sport and exercise psychology. Conference abstracts are often preliminary in nature, present limited details regarding the study's methods, do not typically undergo rigorous peer review, and are limited in availability to those not attending conference meetings. There may also be significant discrepancies between data presented in abstract form and subsequent full-text publication. Full-text publications of conference abstracts are important to ensure the greatest impact within the field. The purposes of this study were: 1) to determine the full-text publication rate of work presented in abstract form at Association for Applied Sport Psychology (AASP) Annual Conferences, and; 2) investigate factors influencing this rate.

A systematic search was conducted to locate full-text publications for the 423 abstracts presented at the 25th and 26th AASP Annual Conferences in 2010 and 2011, respectively. One-fifth (22.2%; 94-out-of-423) of presented abstracts were published in full-text in the predefined 5 year window following conference presentation, with an average (SD) time to publication of 23.2 (15.6) months. Odds of full-text publication increased if the institution of origin was international, a qualitative design was utilized, the abstract was presented in certain sections of the conference, and if it was presented as lecture presentation. Full-text publications were published in 47 journals, but over one-quarter (27.8%) of full-text publications were published in two journals: *The Sport Psychologist* (n=12) and *Psychology of Sport and Exercise* (n=10). With approximately only a fifth of conference abstracts becoming full-text publications, researchers should exercise caution when incorporating research presented at AASP into practice.

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**HOW DO I FEEL ABOUT RESEARCH? HIGHLIGHTING A NOVEL WAY TO USE RESEARCH TO ELICIT EMOTIONAL RESPONSES***Ashley Coker-Cranney, USA*

Traditional means for reporting research findings can seem sterile. They may seem separate from personal experience, reducing the emotional impact of practically important phenomena. Quantitative reports focus on numbers to represent human experience. Traditional qualitative reports bring life to the human experience, on a limited basis, using participant's words to convey that experience within larger themes. Although both methods are highly effective at conveying significance at an intellectual level, they can fall short of inspiring readers to interact with the findings in emotionally meaningful ways. Creative nonfictions (Caulley, 2008; Smith, McGannon, & Williams, 2015)—stories created

from participants' accounts of researched phenomena-- have the potential to elicit powerful, visceral responses from the reader. Confidentiality is honored by deriving a fictional character composed of research participant characteristics and backgrounds. Actual participant experiences are integrated into a single plotline that communicates potential context and consequences of real, lived experiences. In these ways, "facts" are presented as "fiction." Rather than breaking multifaceted experiences into smaller parts, theory and complex interactions are communicated holistically, encouraging the reader to interpret the research phenomenon in their own way (Smith & Sparkes, 2014). Narration gives way to illustration; the reader is transported into a vivid picture of the specified phenomenon, finding ways to interact with research in emotionally-driven ways. Focusing on specific, vivid participant experiences, armed with convincing evidence and a sense of personal connection, compels the reader to care about research in important ways, expanding the potential audience for research and encouraging specific action related to the phenomenon of interest. This presentation explores the ways in which creative nonfiction can be useful to the sport, performance, and exercise psychology researcher, how to use creative nonfiction in research practice, and the advantages and disadvantages of such an approach in the sport, performance, and exercise psychology context.

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**THE USEFULNESS OF SALIVA CORTISOL AND DEHYDROEPIANDROSTERONE AS A RESILIENCE MARKER FOR ATHLETES' TRANSIENT STRESS***Natsumi Kato, Graduate School of Literature and Social Sciences Nihon University, Japan**Fumio Mizuochi, Nihon University, Japan**Nobuhiro Takahashi, Graduate School of Literature and Social Sciences Nihon University, Japan*

As evaluation indicators of resilience towards long term stress, dehydroepiandrosterone (DHEA) and the ratio of DHEA to cortisol (DHEA/Cor) are getting more attention (e.g., Morgan et al., 2004; Yehuda et al., 2006). These adrenal cortex hormones are the representative indicators to evaluate the activity of the HPA (Hypothalamic-Pituitary-Adrenal) axis stress response system, and thus sharply respond to the transient competitive stress which affects athletes' performance. In this study, psychosocial stressor was applied to athletes with different resilience to determine their saliva DHEA and saliva cortisol, and then the usefulness of these saliva components as resilience indicators for the athletes' transient stress were investigated.

Sixteen subjects were chosen from 78 male university athletes by an evaluation scale for resilience, and divided into high resilience group (8) and low resilience group (8). The stress task was TSST (Trier Social Stress Test). The subjects rated their subjective emotional state with TDMS (Two-Dimensional Mood Scale) and SSRS (Stress Self-Rating Scale), and their saliva was collected six times in total, that is, before and after the task, and every 10 minutes until 40 minutes later.

In both groups, after the task, "comfortableness" decreased, "anger" increased, and the saliva cortisol showed high values 20 and 30 minutes after the task. Comparing to the low resilience group, the high resilience group showed higher "comfortableness" just and 20 minutes after the task, lower "anger" just after the task, and higher DHEA and DHEA/Cor 30 minutes after the task. This means that despite of the

increase in the activity of the HPA stress reaction system, the enhancement of the DHEA action restrained the reduction in positive feelings and the increase in negative feelings of the athletes with high resilience. Therefore, it was suggested that DHEA and DHEA/Cor are useful as resilience indicators for the athletes' transient stress.

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### Tactical Populations

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**CRITICAL MISSION REHEARSALS: AN INTEGRATED IMAGERY TRAINING APPROACH FOR ARMY COMBAT ENGINEERS**

*Robert Price, Digital Consulting Services, USA*  
*Adam Skoranski, Digital Consulting Services, USA*

Army Combat Engineers are highly-trained Army Combat Soldiers, designed to provide essential mission support to a number of Army units during wartime. Success can often mean the difference between life and death, Engineer Commanders place an emphasis on mission rehearsals. Rehearsals offer leaders an opportunity to train their Soldiers through detailed mission practice, replicating each aspect of the upcoming mission to increase overall confidence, motivation, and efficiency during the upcoming task. Fort Stewart Engineer Commanders requested DCS MRT-PE support to develop a training plan aimed at using imagery education and training to increase performance on the platoon validation training exercise, a large scale training event to determine Soldiers' abilities to rehearse missions and see them through to successful completion. Imagery was used as a training tool due to Soldier inexperience, and the importance placed on the rehearsal aspect of the evaluation. The training began with formal training to present tenets of imagery use; the science behind the practice, use of imagery to enhance mission rehearsals, and how leaders can use the skill to informally teach inexperienced Soldiers proper technique (Sport Imagery Ability Questionnaire (SIAQ)). Trainers then accompanied Soldiers through the validation exercise to ensure application of mental skills and provide corrections if necessary.

A multi-method approach to examine the impact Soldier's ability to utilize imagery according to the SIAQ results from pre and post assessments. Soldiers showed an overall increase in the Soldier's ability to generate effective imagery content from pre- to post course evaluation and field support ( $p < .01$ ). Specifically in the sub-scale of Affect Imagery there was an increase from pre- to post assessment ( $p < .01$ ) which highlights the Soldiers ability to predict challenges and threats in a more productive manner (Williams et al., 2014) which is crucial and led to their ultimate success.

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**MENTAL SKILLS TRAINING AND THE ARMY PHYSICAL FITNESS TEST: A POSITIVE COMBINATION**

*Miguel Vera Cruz, California State University, Fresno - Army ROTC, USA*  
*Jenelle Gilbert, California State University, Fresno, USA*  
*Boyce R. Buckner, California State University, Fresno - Army ROTC, USA*

Army Reserve Officer Training Corps (AROTC) cadets at 4-year universities are required to pass the Army Physical Fitness Test (APFT) each semester. This physical fitness test includes three timed events: sit-ups, push-ups, and a 2-mile run. The purpose of this case study was to review cadets' performance on the diagnostic and record APFTs, and explore their perceptions regarding an applied mental skills training (MST) intervention. Baseline measures are obtained early each semester and used to tailor the three weekly physical readiness-training sessions. However, deliberate integration of MST can be a viable strategy in enhancing performance in military-specific, physical tasks (Blank, Sylvia, Garza, & Wade, 2014). For this reason, cadets identified by their cadre as lacking in mental preparation (N=3) were encouraged to participate in a 12-week MST intervention. Though there were no significant differences between the diagnostic and record APFT measures, two of the three cadets experienced improvement in all three measures. All cadets were individually interviewed following their record APFT in order to contextualize these results. Several Key Themes were identified. To start, participating in the intervention led to Mental Skills Realization, or a greater understanding of MST and how it can help with performance. The cadets used imagery to enhance their Environmental Familiarization, which is their comfortableness with the testing site, while positive self-talk was instrumental in Confidence Building. The Identification of Mastery Experiences was critical in helping them to see that attaining the APFT benchmarks was possible. Finally, Effective Prioritization, via creating effective goals and using time management strategies, was also found to be beneficial. Cadets' quotes will be used to support these results as appropriate. Though not significant, the observed performance improvement is positive and provides insight into how MST may be used in an AROTC setting. Implications for mental training practitioners will be suggested.

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**PERFORMANCE IN AUSTERE ENVIRONMENTS: EXTREME COLD**

*Scotty Hanley, University of Denver, USA*  
*Jacob Hyde, University of Denver, USA*

Human exposure to extreme and austere environments impact performance by directly influencing physiological and psychological human reactions, irrespective of duration of hours or months (Leon, Mjeldheim, & Larsen, 2011). Increased cognitive and behavioral errors, longer response time, decreased reasoning skills, short term memory impairments, and delayed memory recall are apparent even after brief exposure to intense cold (Hindle & Henning, 2014). For prolonged polar expeditions, common psychological symptoms include somatic complaints, disturbed sleep, impaired cognition, negative affect, and interpersonal conflict (Palinkas & Suedfeld, 2008). Cold temperatures can enhance performance on certain cognitive tasks, with prolonged exposure eventually leading to negative cognitive

effects, increases in response time, and decreased accuracy and efficiency (Leon et al., 2011). Extreme cold increases energy requirements, incurs inappropriate thirst and appetite response, and creates a negative energy balance, in turn impairing thermoregulation, depleting muscle glycogen, and degrading fine motor skills (Day, Young, & Askew, 2012). Negative energy balance along with stressors such as physical exertion or sleep deprivation, will impair both the metabolic and vasomotor responses, increasing the risk for hypothermia (Day et al., 2012). In the extreme cold, nutritional deficiencies result in noticeably reduced capacity for physical exertion (Day et al., 2012) and loss of excess water from cold-induced diuresis, unnecessary sweat due to bulky clothing, and respiration with breathing dry and cold air (Montain & Ely, 2012). Extreme cold also results in peripheral vasoconstriction, resulting in increased thermal insulation, heat production up to five times the basal rate (Hindle & Henning, 2014), and can adversely affect functioning when core body temperature drops below 89.6°F (Leon et al., 2011). Considerations for novel and creative approaches to the study of physiological and psychological changes exhibited by elite and tactical athletes, military special operations medical assets, and work teams within extreme cold will be discussed.

## 94

### **SOLDIERS OF THE 86TH COMBAT SUPPORT HOSPITAL UTILIZE SPORT PSYCHOLOGY TO IMPROVE WEAPON QUALIFICATION AT TWICE THE RATE OF TRADITIONAL TRAINING**

*Bethany Bachman, Digital Consulting Services, USA*  
*Justin Foster, Digital Consulting Services, USA*  
*Mitchell Weaver, Digital Consulting Services, USA*  
*Kelsey Erlenbaugh, Digital Consulting Services, USA*

Soldiers of the 86th Combat Support Hospital (CSH), 101st Airborne Division (Air Assault) at Fort Campbell, KY are required to meet specific marksmanship requirements to be considered a positive performing Soldier. Marksmanship requirements are part of the Air Assault Big 5 (Physical Fitness, Marksmanship, Medical Training, Air Assault – Warrior Tasks and Battle Drills, and Maintenance) which represents Fort Campbell's training focus and foundation of Soldier preparation for combat. Weapons proficiency is one of the single most critical skill sets a Soldier must master in order to be successful during combat (Volesky, 2016). Soldiers must qualify twice per year and failure to qualify results in Soldiers being un-deployable. Soldiers must be confident in their ability to qualify their primary weapon and this confidence comes from competence and consistently executing proper technique. However, for the Soldiers assigned to 86th CSH, being proficient at their assigned weapon is not their primary focus which leads to marksmanship training not being considered a top priority. This results in some Soldiers feeling less motivated and less familiar with the fundamentals of weapon proficiency. The Commander for 86th CSH requested assistance from Comprehensive Soldier and Family Fitness (CSF2) to integrate mental skills training into monthly marksmanship range training to increase their number of qualified personnel and overall weapons proficiency. Based on sport psychology principles, CSF2 personnel provided mental skills training over a two-day period once a month for three months during the Soldiers training time at the engagement skills trainer and the marksmanship range. This presentation reviews the skills, concepts, and delivery method used during this mental skills training program. At the conclusion of the three months, results revealed that Soldiers

who went through the CSF2 training improved twice as much as those who participated in traditional training methods led by their unit's Non-Commissioned Officers.

## 95

### **THE TRIGGER ISO DRILL: INTEGRATING APPLIED MENTAL SKILLS IN A COMBAT SHOOTING COURSE**

*Seth Haselhuhn, Booz Allen Hamilton, USA*

Performance psychology training is not a new concept in the military. However it still lacks widespread acceptance as a staple in Special Operation Forces (SOF) training. Operators are acquiring mental skills which they can transfer to their training and performance approaches but there are few known examples of applying mental skills training directly into tactical and operational skills. The focus of this presentation is to describe one successful example of a fully integrated shooting drill which allows operators to use mental skills while training basic military skills. Formerly known as the "Strong/Weak Hand", the drill is designed for shooters to practice the shooting fundamental of pressing the trigger of their pistol directly to the rear without inducing sight displacement or sympathetic response from the remaining fingers used to grip the pistol. After extended discussion with SOF personnel responsible for training their peers, the purpose, instruction, and execution of the drill were changed to what is now known as the "Trigger Iso" drill. In its current format the instruction of the drill is still based in shooting expertise with an added mental skills framework including Nidiffer's (1976) model of attentional styles, mindfulness (Gardner, 2007), and Elliot's (2005) measures of competence, woven into the instruction to create an incremental mindset (Dweck, 1999). These instructions are couched in the motor learning principle of bi-lateral transfer (Magill, 2011) to off-set the preexisting bias against psychology to take advantage of the context of the military training environment. The presentation will outline how the drill was developed, is delivered and executed, as well as present significant mean score changes on pertinent scored shooting events from five groups who received the "Strong/Weak Hand" drill compared to five groups who received the "Trigger Iso" drill. Qualitative feedback from SOF personnel receiving the training will also be discussed.

## 96

### **US ARMY PHYSICAL FITNESS TEST (APFT) RUN CLINIC**

*Stephanie Costello, USA*  
*Mathew Vezzani, USA*

The US Army Physical Fitness Test (APFT) is required of all active Army, Army National Guard, and Army Reserve soldiers regardless of MOS. The test consists of three assessments (2-mile run, sit-ups and pushups) and is a simple way of measuring a soldier's major muscle groups' endurance and ability to move the body, as well as the performance of the soldier's cardiorespiratory fitness (Schloessler, 2011). The CSF2 training center, having noticed the 2-mile run as the most commonly failed portion of the test, recognized a need to design a more effective mental and physical training intervention. To address the need, the CSF2 center designed a comprehensive run intervention plan that has subsequently been delivered to over 1,000 participants. The APFT clinic combines run interval training with various mental skills that are relevant to performance on the standard two-mile run. Individual soldiers learned to use mental cues to direct

attention to proper running form, self-awareness skills to use thoughts that were productive and stop thoughts that were unproductive, energy management skills to harness proper emotions and physiology to create individual zones of optimal functioning and pre-performance routines to properly warm up the body and direct attention to the task at hand. The APFT Clinic has been successfully implemented with soldiers from various MOS's with the Army population at Schofield Barracks. In the first iterations of the clinic, a five-day course resulted in an average decrease of 51 seconds in run time and the six-week version of the course saw an average decrease of 2:05.

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## Teaching

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**97**

### **A DYNAMIC MOVEMENT PROGRAM ON EXECUTIVE FUNCTIONS AND FITNESS IN OVERWEIGHT CHILDREN**

*Chienchih Chou, University of Taipei, Taiwan  
Chung-Ju Huang, University of Taipei, Taiwan  
Wang Wem-Yi, University of Taipei, Taiwan*

Movement in physical education may prove to be an important method of enhancing those aspects of children's mental functioning central to cognitive development. Therefore, the purpose of this study was to determine whether the effects of a movement program were reflected in the attention and discrimination patterns of overweight children. Fifty overweight children were assigned to either a movement activity program group or a regular physical activity group, and twenty-five typically developing children were assigned to a control group. Participants were given the Stroop Test and Determination Test prior to and after an eight-week movement activity program group, regular physical activity group, or non-exercise group intervention (twice per week, 40 min per session) or a control intervention. The results indicated that movement activity program facilitated performance in the Stroop Test, particularly in the Stroop Color-Word condition. In addition, children in the movement activity program group demonstrated improvement in specific Determination Test performances in accuracy rate and reaction time, whereas no influences were found in those performances in the regular physical activity group and control group. These findings suggest that movement activity program can be complementary to behavioral interventions for overweight children. These findings are promising and additional investigations to explore the efficacy of movement activity program on executive function in overweight children are encouraged.

**98**

### **COUBERTIN'S CORNER: ACTIVE LEARNING WITH HANDS-ON SURVEY RESEARCH IN A SPORT PSYCHOLOGY COURSE**

*Tami Eggleston, McKendree University, USA*

Over 100 years ago, Pierre de Coubertin founded the modern Olympic games. Importantly, he instituted educational conferences as part of the Olympic movement. In tribute to de Coubertin, the AASP Teaching Sport and Exercise Psychology SIG has developed the concept of "Coubertin's Corner" as a way of grouping and integrating poster submissions on teaching topics. Since the time of Coubertin, teaching

pedagogy has changed and been informed by research on best practices to truly engage students in the learning process. Active learning or the concept of learning by doing is essential and it is easy to integrate into a sport psychology class. In Blooms taxonomy language, there has been a shift from the emphasis on knowledge, to an emphasis on application. The AAC&U emphasizes the importance of signature assignments and authentic assessments that can be defined as meaningful learning activities that often involved real world activities that demonstrate a proficiency of the learning outcomes. Important topics to explore in a sport psychology class include research methods, survey design, validity, reliability, factor analyses. These are important topics, but not always the best received by students who are often more interested in application. In a recent course, students completed and administered Jack Lesyk's 9 Mental Skills Survey (<https://www.sportpsych.org/nine-mental-skills-overview>). This survey is useful to use in a team consulting meeting to determine strengths and weaknesses of a team. After collecting surveys, we developed hypotheses and conducted basic analyses comparing men and women and various teams (e.g., individual versus team sports). This poster will include the specific steps to integrate an engaging research study in the class. It also will show the importance of modeling the scientist-practitioner model. This poster will be useful to teachers, researchers, and practitioners. Finally some interesting results from the 9 Mental Skill Survey will be shared.

**99**

### **COUBERTIN'S CORNER: TEACHER-COACH, NOW TEACHER-CONSULTANT? A CONCEPTUAL MODEL EXPLORING THE ROLE OF TEACHER-COACHES AND THE PROFESSIONAL DEVELOPMENT OF TEACHER-CONSULTANTS**

*Christina Johnson, Cornell College, USA  
Steven DeVries, Cornell College, USA*

Over 100 years ago, Pierre de Coubertin founded the modern Olympic Games. Importantly, he instituted educational conferences as part of the Olympic movement. In tribute to de Coubertin, the AASP Teaching Sport and Exercise Psychology SIG developed the concept of "Coubertin's Corner" to integrate poster submissions on teaching topics. The profession of sport psychology, and AASP, in particular, has long since recognized the danger in separating research from professional practice (Roberts, 1989) and the professional community has taken strides to actively and conceptually integrate these major aspects of the sport psychology profession (e.g., Streat & Roberts, 1992). Yet, it is also widely accepted that the roles of sport psychology professionals include research, consulting, and teaching (Weinberg & Gould, 2015). With the evolution of academia, athletics, and professional practice in sport psychology, it is conceivable that we may witness a fragmentation of these roles for young professionals. In this research, we use reflexive ethnography and dialogue (Davies, 2012) to critically examine the teacher-coach model as a case for exploring the integration of roles. The teacher-coach model has been used widely within small colleges, particularly those participating in NCAA Division III athletics. As a teacher-coach, professionals are called upon to both coach their sports and teach any number of academic courses. While the teacher-coach model is not without flaws, it offers a vision of athletics as embedded in within the academic life of the college by facilitating connections among student-athletes, professors, and coaches. The teacher-coach simultaneously engages in professional practice in their

field of expertise and teaching. We offer a parallel conceptual model for integrating the roles of researcher, practitioner, and teacher by emphasizing the role of teaching for the sport psychology professional. Our conceptual model positions the sport psychology teacher-consultant as a liaison between the athletic and academic lives of student-athletes.

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### Youth Sport

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**100**

**A COMPARISON OF FEMALE YOUTH SPORT SPECIALIZERS AND NON-SPECIALIZERS ON SPORT MOTIVATION AND ATHLETIC BURNOUT**

*William Russell, Missouri Western State University, USA*  
*Sergio Molina, Missouri Western State University, USA*

While youth sport participation remains immensely popular (Coakley, 2017), an increasing emphasis on sport specialization has led to numerous youth sport concerns including increasing injuries (Kaleth & Mikesky, 2010), anxiety (Gould, 2010), and burnout (Harris & Watson, 2014). Youth athletes participating in sport for self-determined reasons are more likely to experience positive outcomes (Vallerand & Losier, 1999), yet youth involved in specialized sport programs often have lower self-determined motivation (Hendry, Crocker, & Hodges, 2014). Positive correlations have been shown between less self-determined motivation and athletic burnout in elite sport (Lonsdale, Hodge, & Rose, 2009). Such a relationship may also exist in youth sport, especially with youth sport specializers, yet youth sport burnout research is limited. Therefore, the purpose of this study was to examine the relationship of adolescent female athletes' sport motivations and athletic burnout, according to whether or not they specialized in one sport. Female high school athletes (N=77; M age = 15.81, SD=1.27) were surveyed on their sport training habits, peer satisfaction, sport motivation (Sport Motivation Scale-II, Pelletier, Rocchi, Vallerand, Deci, & Ryan, 2013), and athletic burnout (Athlete Burnout Questionnaire, Raedeke & Smith, 2001). Separate MANOVAs examining sport motivations and burnout across self-reported specialization status were not significant ( $p > .05$ ). Regression results on burnout using sport motivation, training habits and peer satisfaction as predictors indicated amotivation was a significant predictor of athletic burnout  $F(1, 76) = 31.64, p < .001, R^2 = .30$ , yet perceived burnout in this sample was low. More autonomous forms of extrinsic motivation (identified and integrated regulation) were negatively related to athletic burnout ( $p < .05$ ). In addition, more frequent play during sport practice was associated with greater intrinsic regulation. The current results indicate that in non-elite female adolescent athletes, specializers and non-specializers are similar in sport motivations and do not experience elevated athletic burnout.

**101**

**A PHENOMENOLOGICAL STUDY: THE EXPERIENCE OF PARENTING AN ELITE YOUTH ATHLETE**

*Zachary Vidic, Barry University, USA*  
*Duncan Simpson, IMG Academy, USA*  
*Lauren Tashman, Barry University / Inspire Performance Consulting, USA*  
*Kathryn Ludwig, Barry University, USA*

There have been few studies that address in great detail the experience of parenting an elite youth athlete. The current investigation involved transcendental phenomenology used to interview 20 parents of current/past elite youth athletes involved in winter ski and snowboarding competitions to determine the meaning of the experience of parenting an elite youth athlete. The participants were asked to respond to one general and primary research question, "When you think of your experiences of parenting your elite youth athlete, what stands out for you?" Probing and follow-up questions were asked to gain an in-depth understanding of the experience of parenting an elite youth athlete. The interviews ranged anywhere from 36 to 127 minutes (SD = 20.97). After analyzing the transcripts, five major themes emerged that included: Rewarding Opportunities, Emotional Backboard, Delegation of Resources, Risks, and Belief, with a total of 24 sub-themes. The results aimed to expand the research field, in which each theme could be targeted to inform parents, coaches, sport psychology consultants, and athletes about the experience of parenting an elite youth athlete.

**102**

**ADOLESCENTS' PHYSICAL AND VERBAL AGGRESSION BEFORE AND AFTER MARTIAL ARTS TRAINING**

*Gary Brosvic, Rider University, USA*

This project represents an action study addressing the on-going debate about whether the practice of martial arts leads to positive or negative changes in its participants. For 12 months, adolescents with significant levels of physical and verbal aggression and anger participated in martial arts programs emphasizing respect and self-discipline but differing in emphasis on personal development and appropriate use of self-defense technique. Over each the past 3 cycles, each 1-year in length, we worked with an average of 258 males and 234 females. Participants were randomly assigned to 1 of 2 treatment conditions or to a wait-list control condition and, after 1 year, controls entered training. Physical training and technique were identical between the two treatment conditions, but the orientation of training was not. Students in the Non-Traditional Group trained in technique in the absence of a philosophy governing its use. Students in the Traditional Group trained in the same technique but did so within the history and philosophy of the martial arts. Training required at least four hours per week of floor time and an equal or greater amount of practice at home. After 1 year, controls entered training and those in training were offered the opportunity to continue as regular students. Each month we recorded and verified the number of legal incidents and fights—during and outside of school—and participants also completed scales assessing aggression and anger. Martial arts training significantly reduced physical and verbal aggression, in and outside of school, as well as personal bouts of anger. Collectively, the greatest reductions were

observed for participants completing training emphasizing personal development and appropriate use of self-defense. Controls demonstrated static levels of aggression and anger than remained significantly higher than that of all martial artists, especially those trained with a governing philosophy, but these were significantly lowered through training.

## 103

### **ASSOCIATIONS AMONG MENTAL TOUGHNESS, PERCEIVED LIFE STRESS, AND CARDIOVASCULAR ENDURANCE OF ADOLESCENT RUGBY PLAYERS**

*Chung-Ju Huang, University of Taipei, Taiwan*  
*Wei-Hsin Tsai, Graduate Institute of Sport Pedagogy, University of Taipei, Taiwan*  
*Tzu-Lin Wong, Department of Physical Education, National Taipei University of Education, Taiwan*

Mental toughness is conceptualized as a psychological resource that facilitates the pursuit, attainment, and maintenance of performance excellence despite challenges and adversity. Being mentally tough has been considered an essential ingredient for successful performance outcomes and well-being across a number of life domains. The purpose of this study was to examine the relationships between mental toughness, perceived life stress, and one construct linked to athletic performance, aerobic fitness. A sample of 120 male adolescent rugby players (mean age = 16.8 years, SD = 1.3) completed the Mental Toughness Inventory, the Perceived Stress Scale-14, and the Multistage 20M Shuttle Run Test. The results indicated a positive relationship between mental toughness and coping ability to life stress, whereas a negative relationship was observed between mental toughness and perceived life stress. Further, indicators of shuttle run endurance including completed levels, distance, and VO2 max were positively and significantly related to scores on mental toughness. The findings suggest that young athletes' capacity to effectively cope with general life stress appears to be dependent on their mental toughness attribute. Mentally tougher athletes are able to cope more adaptively with their emotions during daily life through their optimistic perspectives and self-belief toward overcoming. It also appears that athletes with greater mental toughness benefit from positive threat appraisals at the high-workload condition, given lower perceived physical and mental demands and less overall effort. The findings are likely to advance our knowledge base of the associations between mental toughness and life stress and physical endurance. If sport psychology practitioners are to intervene effectively and enhance young athletes' mental toughness, then a better insight into how mental toughness operates is necessary.

## 104

### **FROM DETRACTORS TO LEADERS: NARRATIVES OF STUDENT GROWTH IN A SPORT BASED YOUTH DEVELOPMENT PROGRAM**

*Jacob Cooper, Boston University, USA*  
*John McCarthy, Boston University, USA*  
*Stephanie Dinius, Boston University School of Education, USA*

Sport and physical activity have long been viewed as a compelling vehicle to help youth develop and implement pro-social skill sets that will have long-term positive health behavior implications (Holt & Sehn, 2008). Sport-based youth

development programming that connects socially-vulnerable youth with caring adults and their communities has been shown to improve behavior and health outcomes in the domains of mental health, substance abuse, and violence (Bernat, & Resnick, 2006). Unfortunately, recent research describes an "unsettling level of unreadiness for adulthood" among American youth due to poor fitness, delinquency, and unmet education requirements (Klein & Rice (2012). It is clear that now more than ever there is a need for thoughtful and theory-based practice regarding efforts to best equip youth for the future via salient avenues that promote physical activity. GET READY is a positive youth development program in an urban neighborhood of South Boston. While engaging students in physical fitness activities, this program integrates the teaching of personal and social responsibility (Hellison, 2003). The program is designed to create a caring climate that fosters the development of transferable life skills that promote youth empowerment (Hellison, 2011). Specifically, this poster presentation will highlight the findings of a two-year qualitative study that utilized the method of narrative inquiry (Smith & Sparks, 2009) to best understand the development of two students who progressed from notable detractors in the program to powerful leaders. Data was collected through periodically recorded interviews and written reflections with the participants over the duration of their involvement with the program. Results indicated that participants felt the program provided a consistent culture that challenged and empowered them to develop their skills in the areas of public speaking, respect, effort, and physical fitness. Additionally, analysis showed that the participants were able to transfer the skills learned in the program to other areas of their life.

## 105

### **PERCEPTIONS OF CLOSENESS OF LIBERIAN YOUTH IN A SPORT LIFE SKILLS PROGRAM**

*Lindsey Blom, Ball State University, USA*  
*Mariah Sullivan, Ball State University, USA*  
*Jorge Ballesteros, Ball State University, USA*  
*Kendall Bronk, Claremont Graduate University, USA*  
*James McConchie, Claremont Graduate University, USA*

According to Levitt (2014), individuals who learn to be in relationships with others can transfer this sense of connection to the larger world. Encouraging this increasing awareness of common humanity and responsibility to the greater good represents a central aim of positive youth development (PYD) research and practice (Benson, 2006). With the recent civil war and Ebola outbreak in Liberia, intentional efforts by communities, schools, and parents to cultivate purpose, social connections, values and ethics have been overshadowed by the necessity of basic survival. The Life and Change Experience thru Sports (L.A.C.E.S.) organization seeks to fill the community void by establishing mentor-based sport leagues that connects children to peers and mentors in meaningful ways with a life skill curriculum. The goal of L.A.C.E.S. is to develop a sense of purpose and direction in youth participants that will buffer against recruitment into negative groups and, ultimately, help safeguard Liberia from another civil war. The purpose of this study, which is part of a larger study, was to explore differences in perceptions of closeness of 180 youth (ages 9 -14) who are involved in the L.A.C.E.S. program. Chi Square analyses revealed significant relationships between closeness (i.e., equals, mother, father and L.A.C.E.S. coach) and year in the program, and closeness (i.e., mother, father, L.A.C.E.S. coach and community) and living situation (i.e., on the street, living with someone not a parent, living with a

parent),  $p < .01$ . Results indicated youth who are in the second year of the program perceived closer relationships with parents, peers and their L.A.C.E.S. coach. Youth who are living on the street perceived less-close relationships with parents, coach and community, but not their peers.

## 106

### SPORT-BASED LIFE SKILLS INTERVENTIONS: A PROGRAM ANALYSIS FOR AT-RISK YOUTH

Mindy Scott, *Salvation Army Boys and Girls Club, USA*  
 Brandonn Harris, *Georgia Southern University, USA*  
 Katy Gregg, *Georgia Southern University, USA*

At-risk youth are children and adolescents who due to environment, family context, mental/physical health, and/or academic performance are at risk for poor life outcomes (Moore, 2006). The current study analyzed the effectiveness of a life skills program that used sport in a population of at-risk youth. The Sports United to Promote Education and Recreation program (SUPER; Danish, 2002) uses sport and physical activity as a mechanism to teach a series of life skills in such a way that the participants recognize the relationship between the skills they are using in each module and their applicability to other settings such as home or school. Five male students aged 11 to 14 years old participated in the single subject ABA design where basketball was used to teach life skills using the SUPER program. The life skills included managing emotions, goal setting, relaxation, confidence, mental preparation, focus, and seeking help from others. To evaluate the effectiveness of the program, three subscales were used from the Life Skills Transfer Survey (LSTS; Weiss, Bolter, & Kipp, 2014) as well as four subscales from the Ottawa Mental Skills Assessment Tool (Durand-Bush, Salmela, & Green-Demers, 2001). Results indicated that the intervention was effective at enhancing the ability for four of the five participants to use life skills they learned in the intervention. This study supports the use of sport-based interventions with at-risk youth as well as the use of individualized interventions to enhance the results.

## 107

### THE BOY BEHIND THE BRAVADO: ADVANCED PLAYER SAFETY AND SUPPORT PROJECTS IN PROFESSIONAL ACADEMY SOCCER SETTINGS

Philippa McGregor, *Manchester City Football Club, UK*  
 Cherrie Daley, *Manchester City Football Club, UK*

Adolescents within elite soccer academies simultaneously encounter the natural challenges associated with puberty and maturation and the inherent adversity of professional performance environments. It is therefore reasonable to suggest that provision of support for adolescents in these settings should be developmentally attuned. There is at present, a lack of literature focusing on this population which currently exceeds over 12,000 young people in the English system alone. The purpose of this project was to design and implement a thorough multi-disciplinary case formulation process for appraising individual support needs (Bickley & Rogers, 2016) and to build and employ responsive, developmentally informed interventions.

The case formulation process utilised a panel of staff from a range of disciplines and provided an outlet within the system

to hold and review concerns about player well-being and performance. Through sharing and appraising information, the case reviews completed by the panel included: main concerns, background factors, key relationships, triggers for the concerns, and contextual influences (Carr, 2006). These advanced case reviews served to highlight common themes emerging within the youth development age group (12-16 years); where staff were finding player behaviours increasingly challenging and difficult to comprehend and manage. Identification of salient concepts and areas of need then permitted the performance psychology team to design and drive a purposeful intervention with key-staff to develop their perspective taking.

Appropriate sharing of case information enabled staff to more readily understand the background, current context, and overall perspectives of the young players. Engagement with staff was designed to promote curiosity rather than judgement around player behaviour, a significant departure from the 'norm' in such evaluative environments. In order to understand and optimally support young people in these contexts we maintain that it is essential to encourage staff to recognise 'the boy behind the bravado'.

## 108

### THE GLOBAL PARENT-CHILD RELATIONSHIP AND SPORT PARENT BURNOUT AND ENGAGEMENT: A PILOT STUDY

J.D. DeFreese, *University of North Carolina, USA*  
 Maggie Auslander, *University of North Carolina, USA*  
 Travis Dorsch, *Utah State University, USA*

Burnout and engagement are important markers of sport-based psychological health within the social environment of sport (e.g., DeFreese & Smith, 2013). For sport parents, these outcomes represent a psychosocial window into their experiences of the organized sport participation of their children, a key parenting environment (Dorsch et al., 2009). Moreover, parents' relationships with their children both in and out of sport may impact their sport-based burnout and engagement experiences. To enhance understanding of the psychosocial experiences of parents in organized youth sport, the present study was designed to examine associations among markers of the global parent-child-relationship and sport-based burnout and engagement in a pilot sample of youth sport parents. Participants ( $N = 57$ ) aged 37-58 years ( $M = 46.6$ ,  $SD = 4.2$ ) completed self-report assessments of their perceptions of global warmth and conflict in the parent-child relationship, and sport-based burnout (via exhaustion, reduced sense of accomplishment, and devaluation) and engagement (via confidence, vigor, dedication, and enthusiasm). Fathers (42%) and mothers (58%) were drawn from a sample of youth sport teams in the Southeastern United States. Overall, parents reported low-to-moderate levels of burnout ( $M = 1.94$ ,  $SD = 0.74$ ) and moderate-to-high levels of engagement ( $M = 3.92$ ,  $SD = 0.82$ ). Regression analyses showcased warmth but not conflict as a significant negative contributor to sport-based burnout ( $\beta = -0.51$ ,  $p < .001$ , model  $R^2 = 0.34$ ) and a significant positive contributor to sport-based engagement scores ( $\beta = 0.60$ ,  $p < .001$ , model  $R^2 = 0.32$ ). Guided by the scientist-practitioner perspective, results offer preliminary insight into the impact of global parent-child warmth on parents' experiences of burnout and engagement in sport. Results inform clinicians working to positively shape youth sport environments for parents and children. The design and testing of such burnout and engagement interventions represents a fruitful future applied research effort.



109

**THE INFLUENCE OF HIGH SCHOOL ATHLETES' PERCEPTIONS OF THE MOTIVATIONAL CLIMATE ON ATHLETIC IDENTITY AND ACADEMIC ENDEAVORS**

*Jacob Chamberlin, University of Kansas, USA  
 Mary Fry, University of Kansas, USA  
 Susumu Iwasaki, Fort Lewis College, USA*

Athletics are an important part of many students' lives, and can enrich their overall student experience (Hansen, Larson, & Dworkin, 2003). Poux and Fry (2015), employing Achievement Goal Perspective Theory, found that Division I collegiate athletes who perceived a high caring/task-involving climate on their sport teams were likely to report more engagement in their academic and future career preparation as well as a high athletic identity. These researchers suggest that athletes' commitment to both athletics and academics can compliment one another. These relationships with college athletes have not yet been examined with high school athletes. The purpose of this study, then, was to examine the relationship between high school athletes' perceptions of the motivational climate to their academic motivation, academic endeavors, athletic and academic identities, and coach and teammate support. Athletes (N = 228: 75 females & 146 males; Mage= 15.8 years, SD = 1.09) participating in fall sports at high schools located in the Midwestern region of the U.S. completed a survey that included the measures of interest. A canonical correlation analysis revealed one significant function [L = .50, F (18) = 7.68 (p < .001); The canonical correlation was .67 with 44% overlapping variance]. In accord with the loadings, athletes who perceived a high caring/task-involving climate reported higher career self efficacy, engagement in their academic and future career preparation, academic identity, and team and coach support. A caring/task-involving motivational climate in sport settings may be critical in developing high school athletes' ability to pursue academic endeavors outside of sports and feel supported.

110

**THE INFLUENCE OF YOUNG FEMALE HOCKEY PLAYERS' ATHLETIC IDENTIFY AND PERCEPTIONS OF GENDER STEREOTYPES ON POSITIVE PSYCHOLOGICAL OUTCOMES**

*Kari Kischnick-Roethlisberger, Wayne State, USA  
 Jeffrey Martin, Wayne State University, USA  
 Brigid Byrd, Wayne State University, USA  
 Krista Monro-Chandler, University of Windsor, Canada  
 Erin Snapp, USA*

Playing ice hockey is a positive experience for girls making it important to understand the antecedents of continued involvement. In the present study we explored if multi-dimensional gender stereotypes and athletic identity (AI) predicted sport commitment (SC), sport enjoyment (SE), and intention (I). Female (ages 7 to 17) ice hockey players (N = 124) from Michigan and Ontario completed scales assessing each construct. Three multiple regressions (MR) were conducted. The MR predicting SE was significant, F (11, 112) = 1.99, p < .04, and accounted for 16% of the variance. The strongest predictors of SE were AI ( $\beta = .25$ , p < .01) and the girls' own personally held ice hockey gender stereotypes ( $\beta = .26$ , p .09). Participants with the strongest AI and who believed girls should play ice hockey enjoyed ice hockey the most. The second MR, predicting SC was statistically significant, F (11, 112) = 6.70, p < .001, and accounted for 40% of the variance. The strongest predictor of SC were AI ( $\beta = .53$ , p < .02) and parents ( $\beta = -.21$ , p < .09). Participants with the strongest AI and who believed girls should play ice hockey, that their siblings believed ice hockey was appropriate for girls expressed the strongest SC. The parent's negative  $\beta$  weight likely represented a suppressor effect given it was positively correlated with SC. The third MR predicting I was not significant. These results support the potential role of AI in SE and SC commitment while also pointing to the value of understanding ice hockey gender stereotypes held by girls, parents, and siblings.

## POSTER SESSION II

FRIDAY, OCTOBER 20

### Coaching

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#### A NEOPHYTE SPORT PSYCHOLOGY CONSULTANT'S PERSPECTIVE NAVIGATING THROUGH TWO CULTURALLY OPPOSED FOOTBALL TEAMS

*Kerry Guest, Southern Illinois University Edwardsville, USA  
Lindsay Ross-Stewart, Southern Illinois University Edwardsville, USA*

This poster will reflect the early career experiences of a high school football coach in two rival programs with vastly different socioeconomic (SES) environments. The coach started his coaching career (2015) at a low SES high school, situated in a city amongst the nation's highest in crime and poverty rates. The median household income for this, primarily African American (95%) community was \$19,697 in 2014. After one and a half years coaching for this team, the coach began working at his alma mater. This high school, although only separated by 18 miles, has vastly different demographics. It is similar in size, however, the median household wage of this primarily Caucasian community (80%) was \$70,037 in 2014. These teams are in the same conference and play each other every year. Both teams are highly competitive with a combined record of 36-5 over the last 2 seasons, including a state title. The coach who worked for both teams is pursuing his education in sport psychology, and will use this poster to highlight the effect of the demographic differences on psychological constructs including: team dynamics, conflict management, and confidence. Finally, insights on the role of community and family support, conflict within society (crime) and an unrivaled unspoken tension between the two teams and communities will be addressed.

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#### CAN PARTICIPANTS BE INFLUENCED TO SCORE HIGHER ON THE REINVESTMENT SCALES?

*Stephen Weiss, Upper Iowa University, USA  
Arthur Reber, University of British Columbia, Canada  
David Owen, The City University of New York, USA*

Masters, Polman, and Hammond (1993) addressed the possibility that the reinvestment of conscious processing may be a dimension of personality. They suggested that some individuals have a greater predisposition to reinvest actions with attentional focus. In an effort to assess this susceptibility, they developed the Reinvestment Scale. Masters, Eves, and Maxwell (2005) noted that there are circumstances where reinvestment takes place in an attempt to control movements. These researchers developed the Movement Specific Reinvestment Scale geared specifically to sensorimotor tasks.

Focusing strategies are known to play a role in motor performance with participants who use an internal focus on body movement typically showing poorer outcomes than those who focus on features of the external environment. Weiss, Reber, and Owen (2008) suggested that individual preference may be another factor involved in determining

optimal focusing. They examined the impact of encouraging participants to use either their preferred or a non-preferred focus. It was reported that interference in performance only was present in those changing their focus from a preferred external to a non-preferred internal.

We believe that when asking a performer to switch from their preferred mode, an interference with automatic processes may result. Therefore, the objective of the study is to determine the immediate situational effects on reinvestment in individuals switching their focus of attention.

In the current experiment, participants asked to switch strategies obtained higher reinvestment scores than those allowed to continue to throw darts in a preferred manner. Additionally, improvement in performance was only seen in those maintaining their preferred focus. Considering these findings, it is recommended that coaches show caution when asking athletes to switch their focus of attention as is often the case when a player is in a slump. Our findings suggest this may serve to increase reinvestment, which can lead to further decline in performance.

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#### COACHES LEADERSHIP PROGRAM: HOW TO LEAD THE LEADERS

*Lindsay Ross-Stewart, Southern Illinois University Edwardsville, USA  
Lindsey Schmidt, Southern Illinois University Edwardsville, USA*

Coaches' education and development is a pivotal piece of NCAA athletic program success. Having a sport psychology consultant run a leadership program for coaches can have valuable outcomes for both coaches, and their athletes. This poster presentation will focus on how sport psychology consultants working with college sport programs can develop and implement an ongoing coaches' leadership workshop. Specifically, this presentation will detail a coaches' roundtable program that requires all head coaches at a NCAA Division I university to meet monthly to discuss a set topic related to mental training. The presentation will touch on how to incorporate sport psychology research and ideas into the discussion, when to lead and when to let the coaches take control, and potential topics for the meetings. Opinions on the strengths, challenges and potential pitfalls of these types of programs as indicated by both the sport psychology consultant who runs the program as well as from coaches who have been a part of the program, will be a main component of the presentation.

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#### EXAMINING THE COACH-ATHLETE DYAD FOR AUTONOMY-SUPPORTIVE LANGUAGE AND BEHAVIOR IN A YOUTH GYMNASTICS CLUB

*Lucy la Cour, University of Missouri, USA  
Brandon Orr, University of Missouri, USA*

The coach-athlete relationship is one of the most influential components of sport performance (Poczwardowski, Barott, & Henschen, 2002). A mutual relationship characterized by trust, respect, support, and cooperation positively impacts factors such as an athlete's satisfaction, well-being, and performance.



An autonomy-supportive coaching style supports this healthy relationship by offering athletes choices, meaningful rationales, acknowledgement of feelings, and encouragement (Ryan & Deci, 2000). However, a relationship lacking trust and respect or featuring a power imbalance often results in the deterioration of the athlete's well-being and performance (Jowett & Poczwardowski, 2007). The latter being exemplified by a controlling coaching style, utilizing coercion, compliance, and shame (Hodge & Lonsdale, 2011). Communication, both verbal and nonverbal, dictates an autonomy-supportive or controlling coaching style (Rhind & Jowett, 2010).

Unfortunately, little to no research addresses the exact composition of this communication within instruction (LaVoi, 2007). This poster will highlight the results of a study investigating gymnastics coaches' instruction style and the role coach-athlete relationship played within that communication. Participants included two coaches (one male, one female) and three female gymnasts (aged 15 to 16) from a local gymnastics club. The primary researcher recorded communication within practices via video and audio recorders, followed by one-on-one interviews with each participant. Discourse analysis was used to analyze the practice transcripts while utilizing open coding for interviews (Potter & Wetherell, 1987).

Three themes emerged from the data as to how athletes interpret and understand instruction. First, the coach-athlete relationship served as a buffer for instruction, especially during critical, corrective feedback. Second, coaches used instructional cues to make coaching more efficient. Finally, interpersonal dynamics within the coach-athlete relationship influenced the outcome goal of performance enhancement. Overall, researchers concluded that successful coach-athlete relationships involved a shared understanding of person-related and performance-related instruction. Limitations and practical implications will also be discussed.

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### **RANDOM RELATIVE TO BLOCKED PRACTICE PROMOTES AN EXTERNAL FOCUS AND LEADS TO MORE EFFECTIVE MOTOR LEARNING**

*Takehiro Iwatsuki, University of Nevada, Las Vegas, USA*  
*Chua Lee-Kuen, University of Nevada, Las Vegas, USA*  
*Reza Abdollahipour, Palacky University Olomouc, Czech Republic*

*Gabriele Wulf, University of Nevada, Las Vegas, USA*

Does random versus blocked practice promote different attentional foci, which may contribute to different learning outcomes? The repetitive nature of blocked practice conditions may promote a non-optimal internal focus on body movements. In contrast, random practice may facilitate an external focus on the intended movement outcome, given the constantly changing conditions (e.g., target distance). In the present study, 33 participants ( $M = 24.15$  years,  $SD = 4.72$ ) were randomly assigned to one of two groups (random vs. blocked practice). Participants performed an overarm throwing task with their non-dominant arm. There were 3 different target distances (2.0, 2.8, 3.6 m). The practice phase included a total of 60 trials (3 blocks of 20 trials). The blocked group performed one block of trials from each distance, with the order of distances counterbalanced across different sub-groups. The random group was assigned a different distance on each trial. Participants were requested to make verbal report regarding their focus of attention throughout the practice phase. Their verbal reports were classified as either an external focus,

internal focus, or other focus. Two days later, a retention test (3.6 m) and a transfer test (4.4 m) were conducted. Results indicated that the random group used more external foci and had higher retention and transfer scores than did the blocked group. These findings suggest that learner's attentional focus can differ as a function of the practice schedule, perhaps leading to different motor learning outcomes.

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### **ROLE OF SPORT SPECIALIZATION IN BURNOUT AND ENJOYMENT**

*Lori Gano-Overway, Bridgewater College, USA*  
*Sarah Carson Sackett, James Madison University, USA*  
*Greg Young, James Madison University, USA*  
*Nathan Hearne, Student, USA*

Over the past several years, there has been concern that early sport specialization may be detrimental for young athletes. Research investigating early sport specialization has found that specializers have an increased risk of burnout (Myer et al., 2015). For example, Strachan and colleagues (2009) found youth specializers reported higher levels of exhaustion than youth samplers. The purpose of this study was to extend previous findings by exploring whether differences in burnout and enjoyment occurred among college students who were specializers versus those who sampled through most of their developmental years. One hundred and twenty-four student-athletes (67 female, 54 male;  $Age=19.77$ ), who participated in organized sport in the past year, completed a 15-minute on-line survey recording their sport participation history and perception of burnout and enjoyment associated with their most recent sport experience. Burnout was assessed via the Athlete Burnout Questionnaire (Raedeke & Smith, 2009) and enjoyment was measured using the interest-enjoyment subscale from the Intrinsic Motivation Inventory (McAuley et al., 1989). Based on sport histories, the sample included 71 samplers and 53 specializers, who, on average, began specializing in 8th grade. Mean differences were tested using multivariate and univariate analyses of variance. A significant multivariate effect was discovered between groups on subscales of burnout, Wilk's  $\Lambda=0.94$ ,  $F(3,120)=2.64$ ,  $p<.050$ , partial  $\eta^2=.06$ . Follow-up univariate tests revealed that specializers ( $M=2.99$ ) experienced more emotional/physical exhaustion than samplers ( $M=2.54$ ,  $F(1,123)=8.01$ ,  $p<.005$ , partial  $\eta^2=.06$ ). No differences emerged for reduced sense of accomplishment or devaluation of sport participation. A separate ANOVA revealed no differences for enjoyment,  $F(1,123)=0.20$ ,  $p<.658$ . These findings align with previous research involving young athletes (Strachan et al., 2009). The implication for practitioners is that student-athletes who specialized are still at risk for experiencing elements of burnout during later sport participation and this appears to be more substantial than those who had longer sport sampling periods.

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### **STRENGTHS AND LIMITATIONS OF A LIFE SKILLS COACHING EDUCATION PROGRAM: A CASE STUDY**

*Lucas Silvestre Capalbo, Michigan State University, USA*

It is common to believe that youth learn life skills from simply participating in sports. However, scholars have defended the idea that life skills are effectively fostered when coaches are trained in this competence. With that being said, the goal of this case study was to identify the strengths and limitations of

a coaching education program focusing on enabling coaches to teach life skills and life skills transfer. Three soccer coaches were recruited from a youth club to receive the coaching education. The program followed an adapted version of Harwood's (2008) five stages for coaching education sessions. The life skills selected for this program were: meeting and greeting, managing emotions, resolving conflicts, getting help from others, and appreciating diversity. The coaches met once every two weeks to discuss and develop strategies to foster each life skill in their regular practices. In the end, based on discussions with the coaches, it was observed that they enjoyed being part of developing the strategies as a group instead of being told what to do, but they lacked knowledge on basic psychological skills training to make the strategies more effective. Once the coaches were informed of general strategies to foster certain life skills, they were then able to adapt these strategies to their regular practice plan. It was also observed that the coaches faced obstacles when applying the life skills in their practices. They argued that due to the dynamic pace of their sessions and specific aspects of their groups (e.g. gender), they were not always able to follow the strategies in their totality. In order to increase the effectiveness of coaching education within this competence, programs have to spend more time teaching coaches basic psychological skills training and ensure that the strategies developed will not be overwhelming for the coaches.

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### TAKING IT TO THE COACHES- INTRODUCING MENTAL SKILLS TO ATHLETES AND COACHES

*Mark Stanbrough, Emporia State University, USA*

Most coaches do not have the availability of a sport psychologist to develop and implement a Psychological Skills Training program (PST). This presentation will focus on a program called Taking It to the Coaches. The program consists of college undergraduate coaching minor students that have been trained to be part of a Sport Psychology Team. The team travels to local high schools and middle schools to present basic mental skills by using a variety of fun, interactive drills. The goal is to work with coaches to introduce and implement basic mental skills that will enhance performance. It is often a difficult challenge to convince coaches and athletes that a PST program is beneficial. (Gilbert, 2011, Johnson and Gilbert, 2014, Zakrajsek & Zizzi, 2008). This presentation will focus on a variety of practical activities that have been used to help coaches implement a PST program.

The emphasis in this presentation will be on specific activities that provide evidence on convincing athletes of the importance of PST: (1) use Chevreul's pendulum in a modified form using candy to establish the connection between the mind and the body, (2) use mental recall to establish the ideal goal scenario, (3) use a walk the plank activity to view the importance of negative versus positive thinking, (4) use a catching markers activity to emphasize the ability to focus. In addition, the use of famous athletes, mental training sport specific stories and use of the media will be presented in an activity format as evidence that a systematic PST program is highly beneficial.

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### THE INFLUENCE OF COACH TURNOVER ON ATHLETES' PSYCHO-SOCIAL STATES AND TEAM PROCESSES: AN EXPLORATORY CASE STUDY IN COLLEGIATE SPORTS

*Amber Shipherd, Texas A&M University - Kingsville / Next Level Mind Consulting, USA*

*Joann Wakefield, Georgia Southern University, USA*

*S. E. Stokowski, University of Arkansas, USA*

*Edson Filho, University of Central Lancashire, UK*

Previous studies have shown that coaching turnover is frequent, especially at NCAA Division I institutions (Winthrop, 2013). Coaches are vital to the athletic culture, thus organizations view coaching turnover as a significant obstacle to sustaining quality athletic programs (Raedeke, Warren, & Granzke, 2002). To date, however, there is scant research on how coach turnover might affect student-athletes' experiences in collegiate sports. To address this gap in the literature, we aimed to qualitatively explore how coaching turnover at the collegiate level might influence student-athletes' psycho-social states, as well as vital group processes. Eleven athletic teams at a Midwestern Division I NCAA institution having undergone coach turnover during the past four years were contacted to participate in the study. A total of four coaches, 21 student-athletes representing both independent (e.g., swimming) and interdependent (e.g., soccer) teams, and two administrative staff members participated in semi-structured interviews (coaches and administrators) and focus groups (student-athletes). Inductive data analysis, based on the constant comparative method (see Teddlie & Tashakkori, 2009), was applied to the verbatim data interview transcripts. Four first-level themes emerged from the data analysis, namely coach characteristics, athletes' psycho-social states, team dynamics, and environmental context. Our analysis suggested that, depending on their gender and personal characteristics, coaches' might have a positive or negative impact on athletes' psycho-social states (e.g., positive and negative affect), team dynamics (e.g., cohesion; athlete leadership), and the environment at large (e.g., athletic program). Thus, practitioners might facilitate the positive impact of coaching turnover by assessing whether the new coach is a "good fit" at the individual (micro), team (meso), and environmental (macro) level of analysis. Findings from this study may be used to advance best practice guidelines in coach education, influence athletic department hiring policies, and guide resources or interventions for student-athletes experiencing a coach turnover.

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### Collegiate Sport

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### AN EXPLORATION OF U.S. NCAA DIVISION I (DI) FEMALE SOCCER PLAYERS' PERCEPTIONS REGARDING SPORT MORAL STRENGTHS

*Terilyn Shigeno, University of Tennessee, USA*

*Leslee Fisher, University of Tennessee, USA*

Within the past 20 years, an increase in interest in positive psychology has surfaced within both the psychology and sport psychology literatures (e.g., Gould, 2002; McCarthy, 2011; Seligman & Csikszentmihalyi, 2000). For example, Seligman (2004) identified six classes of human virtues that are made up of 24 character strengths that have begun to be explored (e.g., Eades & Gray, 2017; Lottman, Zawaly, &

Niemiec, 2017; Quinlan, 2017). However, to date, no research exists examining these character strengths within sport. Further, little research exists with regard to sport morality in general, and even less on sport moral identity (e.g., Bredemeier & Shields, 1984, 1986; Kavussanu, 2007, 2008; Kavussanu, Willoughby, & Ring, 2012; Sage & Kavussanu, 2010; Sage, Kavussanu, & Duda, 2006; Shields & Bredemeier, 1995; Weiss, 1987). Thus, the purpose of the current study was to use interpretative phenomenological analysis (IPA; Smith, 1996) to explore 10 U.S. NCAA DI female soccer players' perceptions regarding their sport character strengths and moral identity. Participants ranged in age from 18 to 24 years ( $M = 20.1$  years) and had been competing in soccer for an average of 14.9 years. This is part of a larger study also exploring moral dilemmas identified by U.S. NCAA DI female soccer players. Results to be presented focused on female soccer players' moral values and: (a) definitions of moral self; (b) definitions of athlete self; and (c) dilemmas between athlete self and moral self. Suggestions are also given for how sport psychology consultants can become more aware of what elite-level female soccer players value in their sport as well as help them build on their moral strengths.

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### AN INVESTIGATION OF MINDFULNESS INTERVENTION WITH COLLEGIATE SOCCER PLAYERS

*Zeljka Vidic, Western Michigan University, USA*

*Mark St. Martin, USA*

*Richard Oxhandler, Western Michigan University, USA*

High levels of stress are not uncommon for most college-athletes. The increasing pressures to perform in today's athletic environment bring an additional set of challenges for college-athletes. These challenges take place in an environment where athletes' personal, academic and athletic worlds are closely interconnected. This interconnected nature of athletic, academic and personal lives means that success or struggle in one area may have a profound influence on the other areas of life. It is therefore important that practitioners identify appropriate interventions that can assist athletes in all of these domains of life. One technique that has been shown to be beneficial for stress reduction and improvements in the overall well-being is the practice of mindfulness (Keng, Smoski, & Robins, 2011). In order to explore the impact of mindfulness with athletes, this mixed-method study investigated the effects of a six-session mindfulness intervention on a NCAA Division III men's soccer team's ( $n=18$ ; ages 18-22) stress levels and the overall perceptions of the intervention. Participants completed pre- and post-test measurements of the Perception of Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), as well as reflective journals from which qualitative data was obtained. Quantitative results demonstrated overall decreases in stress over the course of intervention, albeit those findings were not statistically significant. Qualitative results indicated that mindfulness intervention was beneficial across various aspects of the athletes' lives in the form of enhanced focus, increased calmness, improved awareness and being more present. Overall, the findings of this study suggest that a systematic mindfulness training has the potential to be an effective approach to assisting athletes derive positive benefits in athletics, academics and their personal lives.

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### CONTINUING ATHLETIC PARTICIPATION: PERSONALITY PREDICTORS OF HIGH SCHOOL STUDENT ATHLETES' ADVANCEMENT INTO INTERCOLLEGIATE SPORTS

*Laura Theus, Barry University, USA*

*Douglas E Colman, Idaho State University, USA*

*Tera D Letzring, Idaho State University, USA*

This study went beyond examining physical abilities and statistical records as predictors of high school athletes' participation in intercollegiate athletics, and instead investigated personality traits and coping skills. Former high school student athletes ( $n=102$ ) who moved on to play sports at various intercollegiate levels including NCAA divisions 1 through 3, NJCAA, and NAIA were compared to high school student athletes ( $n=103$ ) who attended college but did not participate in athletics. This study found that Negative Emotionality (i.e. Neuroticism) ( $OR=.50$ ), Openness ( $OR=.59$ ), and Freedom-From-Worry ( $OR=1.69$ ) were significant predictors of athletic continuation. The results have important implications not only for coaches and athletes themselves, but also sport psychology consultants. Even though personality traits are fairly stable over time, sport psychology consultants can help athletes to regulate behaviors associated with Negative Emotionality and Openness. For example, sport psychology consultants can provide athletes the tools to manage anxiety, regulate arousal, and increase athletes' commitment to a sport in which they desire to compete at the collegiate level. Furthermore, identifying the factors that are predictive of high school athletes proceeding into collegiate sports may be an additional tool that could help high school coaches to support high school athletes in their endeavor to become part of an intercollegiate team. Additionally, university coaches could use this information during the recruiting process to help estimate potential team fit. Lastly, high school student athletes who are aware of their strengths and weaknesses may be in a better position to improve performance levels.

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### DESIGNING AND IMPLEMENTING A MENTAL GAME TRAINING PROGRAM FOR SMALLER COLLEGES AND UNIVERSITIES

*Curt Ickes, Ashland University, USA*

Collegiate athletic administrators understand the need for, and potential benefits of, sport psychology services (Schimmel et al., 2014; Wrisberg, Withycombe, Simpson, Loberg, & Reed, 2012). While Division I institutions have taken the lead in providing such services, most small colleges and universities are unable to do so due to challenges such as budget and personnel constraints. I will present a mental game training model with such constraints in mind. This model has been successfully implemented over the past 10 years with both baseball and softball players at a Division II institution. A discussion of various strategies related to: (a) building administrative support for performance training, (b) identifying and compensating trainers, (c) specific mental game skills taught, and (d) how the program can efficiently be implemented (a multilevel approach). This multilevel model incorporates classroom instruction, hands-on trials, individual assessment, the creation of a resource depository, and ongoing observation and feedback of actual game performance.

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**DEVELOPMENT AND VALIDATION OF LOCKER ROOM TALK SCALE**

*Emily Tyler, University of Kansas, USA*  
*Craig Warlick, University of Kansas, USA*

Research across high school and college has consistently shown that the sexual behaviors of student athletes are unique from their non-athlete peers', whether due to selection into sports or socialization within sport groups and organizations (Gage 2008; Grossbard et al. 2007; Humphrey & Kahn 2000; Murnen & Kohlman 2007; Taliaferro et al. 2010). Additionally, patterns of sexual behavior by athletic affiliation also vary by sex. In the majority of studies, male athletes report increased sexual activity and female athletes report somewhat lower levels of sexual activity relative to non-athlete peers however, male and female athletes participate in "hooking up" at higher rates than non-athletes (Allison, 2016).

In order to assess what factors constitute for athletics programs' student-athletes being more sexually active than their non-athlete peers, the Locker Room Talk Scale was developed and tested to measure both content and frequency of conversations about sexual activity and about perceptions of the opposite sex in their primary climate (i.e. locker room, practice field, sorority/fraternity, dorm, etc.). The instrument also measures the amount of pressure one feels from their peers to be more sexually active or hide the frequency or absence of their sexual experiences. To increase validity (Kazdin, 2003), researchers deduced items from theory; the items were reviewed by three doctoral experts. The study is currently in the final stages of institutional review and it is slated to occur across three different universities at the Division 1, Division 2, and NAIA levels. Planned analyses include reliability analyses, as well as factor analysis using exploratory and confirmatory factor analysis. Associations between locker room talk scores and content and frequency of sexual behaviors will be calculated. Implications for sports psychologists and athletic departments will be discussed.

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**EXPERIENCES OF FLOW AMONG INDIVIDUAL AND TEAM-BASED COLLEGIATE ATHLETES**

*Zachary Merz, Saint Louis University, USA*  
*Joanne Perry, Northwestern University, USA*  
*Michael Ross, Saint Louis University, USA*  
*Taylor Montgomery, Saint Louis University, USA*  
*Ashley Hansen, Saint Louis University, USA*

Purpose: Flow has been described as an optimal psychological state and is often delineated into nine components. Given the performance benefits of flow, this is a relevant construct to examine in athletes. The current study had three aims: (1) assess for individual versus team sport differences, (2) gender differences, and (3) sport differences in flow state experiences. Methods: 147 athletes (57 men, 90 women) were asked to reflect on a recent flow state experience and completed the Flow State Scale – 2 in relation to that performance. Participants: Participants included collegiate athletes from multiple sports (i.e., 27 basketball, 44 soccer, 17 field hockey, 56 cross country/track and field). Ages ranged from 18-22 years old ( $19.47 \pm 1.17$ ). Results: While significant differences

were not found between individual versus team sports with regard to flow state experience [ $\Lambda = 0.94$ ,  $F = 0.88$ ,  $p > .05$ ], significant gender differences were found [ $\Lambda = 0.88$ ,  $F = 2.05$ ,  $p < .05$ ], driven heavily by differences found for autotelic experience [ $F(1,144) = 6.58$ ,  $p = .01$ ]. Finally, significant sport differences were found for autotelic experience [ $F(3,142) = 11.58$ ,  $p < .05$ ]. Discussion: Most factors did not demonstrate gender or sport differences, suggesting that athletes generally experience flow in a similar manner. Having an autotelic experience was more representative of flow state in females, as well as soccer players in general. Experiencing a loss of self-consciousness was more characteristic of a flow state in basketball, when compared to soccer. This could be reflective of a generally greater number of spectators in basketball relative to soccer. By better understanding these group differences, sport psychological interventions can specifically target components most salient for each athlete.

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**INVESTIGATING FACTORS WHICH PREDICT SUCCESSFUL TRANSITIONS FROM SPORT UPON GRADUATION WITHIN COLLEGIATE STUDENT-ATHLETES**

*Olivia Knizek, Arizona State University, USA*  
*Lindsey Mean, Arizona State University, USA*  
*Nicole A. Roberts, Arizona State University, USA*

The construct of athletic identity, or the degree with which one identifies with the athlete role in both a public and internal manner, has been researched across varied levels of participation, from youth sports to professional athletics. Exclusivity of this identity is correlated with psychological and social difficulties during retirement transitions from sport regardless of the type of retirement, whether it be involuntary due to injury or team deselection, or voluntary such as planned retirement upon graduation from college. Similarly, research confirms that divestment from the athletic identity via various coping strategies (such as planning ahead, utilizing social support, pursuing alternate roles, etc.) leads to positive long term outcomes and a smoother transition. However, there is a gap in the current research regarding what factors positively predict successful transitions and in what ways. This study focuses on identifying key predictors and factors that (positively and negatively) impact preparation and transition to athletic retirement in the student-athlete population. Two hundred college student athletes will complete a survey at two time points: one to two months prior to graduation and sixth months post-graduation, with student-athletes continuing in a professional level of play excluded. Leadership development as well as career and academic success programs implemented through the institution will be identified through the athletic administration and protocols currently set up through the National Collegiate Athletics Association (NCAA). Measures included in the survey are: Satisfaction With Life scale (SWLS), to measure life satisfaction and positive affect; the Athletic Identity Measurement scale (AIMS); the General Health Questionnaire (GHQ-12); Emotional Regulation Questionnaire (ERQ) and Cohen's Perceived Stress scale. These findings can enable institutional career assistance and leadership development programs to include more impactful measures and programs to aid this population more effectively during this uncertain time of transition.

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**LONGITUDINAL TRACKING OF BIOPSYCHOSOCIAL PREDICTORS OF BURNOUT IN COLLEGIATE ATHLETES: A PILOT STUDY**

*Nikki Barczak, University of North Carolina, USA  
J.D. DeFreese, University of North Carolina, USA*

The psychosocial health and well-being of all athletes, especially student-athletes, is an important public health concern (Brown, Kroshus, & Wilfert; NCAA, 2014). One factor that may negatively influence an athlete's well-being is athlete burnout. Athlete burnout is a maladaptive psychosocial experience with symptoms of emotional and physical exhaustion, reduced feelings of accomplishment, and sport devaluation (Raedeke, 1997) and is associated with a variety of negative psychosocial outcomes (e.g., psychological stress). Despite a call for such efforts (Eklund & DeFreese, in press), extant research has underutilized biometric assessments as a means to understand the development of burnout relative to key biopsychosocial correlates. The present study examined associations among burnout and targeted biometric markers (non-sport physical activity and heart rate) utilizing a 6-week longitudinal design. To address this aim, collegiate club sport athletes (n = 11) were tracked over six weeks of active practice. Participants completed valid and reliable psychometric questionnaires (i.e., perceived stress, burnout) at baseline, two-, four-, and six-week follow-ups. Biometric devices continually monitored non-sport (i.e., outside of training/competition) physical activity and heart rate. Strong correlations were found between burnout and sport-related stress (r = .54 to .79) as well as average daily steps (r = -.55 to -.74) at most time points. Athletes reporting relatively higher burnout tended to report more sport-related stress and take fewer steps on average per day. Follow up repeated measures ANOVA revealed significant between-subjects effects for burnout across the study, (F(1,10) = 145.35, p < .01). Further understanding of associations among burnout perceptions and biometric markers represents an important step for clinicians. Specifically, tracking HRV and daily steps during training could aid clinicians in better predicting athlete burnout levels. Ultimately, such efforts could facilitate early intervention as a means to prevent the continued development of more intensive burnout experiences.

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**SEXUAL VIOLENCE ON COLLEGE CAMPUSES: MALE STUDENT ATHLETES AND RAPE MYTH ACCEPTANCE**

*Chelsey Bowman, Boston University, USA  
Melissa Holt, Boston University, USA*

Sexual violence on college campuses is a major public health crisis (Krebs et al., 2016). Recent incidents of sexual violence involving collegiate student athletes have garnered national attention (Grinberg, 2016; Vertuno, 2017). A meta-analysis that examined perpetration of sexual violence among male collegiate student athletes found a small but significant relationship between varsity athletic participation and self-report of sexually aggressive behaviors and a moderately significant relationship between student athlete status and rape-supportive attitudes (Murnen & Kohlman, 2007). Scant research has further examined the relationship between athletic membership and rape-supportive attitudes. Melnick (1992) speculated that binge drinking, a focus on hyper masculinity, and star male athletes' "carte blanche" may contribute to

increased sexual aggressiveness among male athletes. This poster will investigate other factors associated with rape myth acceptance among male collegiate student athletes with the goal of informing and improving sexual assault prevention programming for student athletes. Collegiate male student athletes (n=83) from a large Division I university completed online self-report surveys in the spring of 2017. To examine rape myth acceptance, participants completed the Illinois Rape Myth Acceptance Scale (IRMA) Short Form Revised (McMahon & Farmer, 2011). Participants also completed the Athletic Identity Measurement Scale (Brewer et al., 1993), the Perceived Belonging in Sport Scale (Allen, 2006), questions on alcohol use, bystander training participation, and about whether or not they would face discipline for off-field behavior related to sexual violence (Kroshus et al., 2015). Preliminary analyses reveal a mean Rape Myth Acceptance score of 79.42 out of a possible 95 with higher scores indicating greater rejection of rape myths. Surprisingly, there was no significant association between rape myth acceptance and athletic identity. Future analyses will examine the relationship between the variables listed above and rape myth acceptance while discussing how findings could improve sexual assault prevention programs for student athletes.

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**THE INFLUENCE OF PASSION ON EUDAEMONIC WELL-BEING AND THE SEARCH FOR MEANING IN LIFE IN ATHLETES**

*Joshua Coon, Fort Lewis College, USA*

Coaching athletes is an intense discipline involving managing a variety of roles and responsibilities intended to enhance athlete development, performances, and overall athletic experiences (Martens, 2012). Recently, a call for existential research in athletics has been stressed desiring sound theoretical perspectives that address eudaemonic well-being in athletics (Balague, 1999; Nesti, 2004, 2011; Ravizza, 2002; Ronkainen et al, 2015; Zescott et. al, 2016). The concept of passion (Vallerand et. al, 2003) has been established as an indicator of athlete wellness (Vallerand et. al, 2008). Recent research on passion and psychological well-being across the lifespan has suggested harmonious passion for an activity contributes to eudaemonic well-being (Philippe, Vallerand, and Lavigne, 2009; Rousseau and Vallerand, 2008). Data is needed to support these preliminary findings in athletic populations (Vallerand & Miquelon, 2007; Vallerand, 2015), to empirically demonstrate the link between the two types of passion and psychological well-being. The purpose of this study was to assess a potential relationship between an athlete's passion for a sport and eudaemonic/psychological well-being in athletic populations (N=150). The Passion Scale (Vallerand et al., 2003) and the Meaning in Life Questionnaire (MLQ) (Steger et al., 2006) were offered to NCAA collegiate athletes. The MLQ (Steger et al., 2006), brings about improvements in measuring psychological well-being with improved psychometric properties. The assessment of the search for meaning offers new insight into the relationship between passion and psychological well-being in athletes. Results indicate a correlation between harmonious passion and subjective well-being, in line with previous research. Discussion of the relationship between passion and psychological well-being as well as evidence concerning the search for meaning is presented. Implications for coaches and athletes are offered.

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**THE RELATIONSHIP BETWEEN GRIT AND LIFE STRESSORS IN COLLEGIATE STUDENT-ATHLETES: A PRELIMINARY INVESTIGATION**

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Jennifer Earl-Boehm, University of Wisconsin-Milwaukee, USA  
Monna Arvinen-Barrow, University of Wisconsin - Milwaukee, USA

Stress, “the response to an imbalance of physical and/or psychological demands” (McGrath, 1970, p. 20) is often related to performance concerns in sport, such as a perceived inability to meet the demands of achieving success (Weinberg & Gould, 2014). Life stressors (e.g., academic pressures, death in the family) can impede athletic performance and increase sport injury risk above and beyond stressors found in physical and environmental factors (Herring et al., 2006). Grit, a personality trait characterized by resilience and perseverance (Duckworth, Peterson, Matthews, & Kelly, 2007) is proposed to ameliorate the perception of life stressors. Grittier athletes may be able to cope better in stressful situations, but this relationship has yet to be established. Therefore, the main purpose of this study is to preliminarily explore a potential relationship between grit and life stressors in collegiate student-athletes.

345 athletes (48% male) from a Division I institution completed the 12-item Grit scale (Duckworth et al., 2007) and the Life Events Survey for Collegiate Athletes (Petrie, 1992). In general, athletes with higher levels of grit reported less life stressors. Regression analyses revealed that the effect of both negative and positive life stressors explained 24.4% of the variance in grit,  $R^2 = .059$ ,  $F(2, 432) = 13.6$ ,  $p < .01$ . The lower the perceived effect of a life stressor, the higher the level of total grit. Given that mentally tough athletes tend to cope better in stressful situations due to perceiving certain situations as manageable (Nicholls, Polman, Levy, & Backhouse, 2008), the current results suggest that perhaps a similar relationship exists with grit, given its shared variance with mental toughness (Ford, Gnacinski, Earl-Boehm, & Arvinen-Barrow, 2015). Further research is warranted as understanding an athlete’s level of grit has the potential to help coaches better recognize the extent to which a given stressor might impact an athlete.

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**VALUES DRIVEN DELIVERY: A QUALITATIVE CASE STUDY EXPLORATION OF THE EXPERIENCE IN A DIVISION I HOLISTIC INTEGRATED SPORT PSYCHOLOGY PROGRAM**

Katherine McLean, University of Missouri, USA

Self-affirmation theory states each person has a self-system motivated to maintain optimal self-integrity restored when people re-affirm their core values (Steele, 1988). Values, therefore, play a key role in our behaviors and motivation. From a sport psychology service standpoint, Poczwardowski, Sherman, and Ravizza (2004) understand values as one of five foundational elements that define professional philosophy. Personal core values are unique to each individual and provide a set of standards people choose to evaluate themselves (Cohen & Sherman, 2014).

Many research-practitioners shifted towards a holistic sport psychology (HSP) approach, emphasizing athletic performance and personal development (Anderson et al., 2001;

Bond, 2002; Danish & Nellen, 1997; Friesen & Orlick, 2010, 2011; Miller & Kerr, 2002; Owton et al., 2014; Ravizza, 2002; Wisberg et al., 2012). With this approach, a sport psychology professional’s (SPP’s) role includes understanding whole person development to facilitate performance enhancement (Bond, 2002; Friesen & Orlick, 2010). This involves awareness of non-sport areas, personal development, and emotional, psychological, physiological, and behavioral states of athletes (Friesen & Orlick, 2010). Observation of practices, team meetings/functions, and competitions is essential (Fifer et al., 2008; Friesen & Orlick, 2011; Poczwardowski & Sherman, 2011). Integration allows SPPs to develop trust, understand team culture, show commitment, and learn from coaches and athletes (Fifer et al., 2008).

The purpose of this study was to examine ways in which a nationally recognized mental performance staff provides HSP services integrated within a Division I athletics program. Specifically this study hoped to understand how personal values and self-integrity impact delivery services to teams from many role perspectives.

The sample consisted of five mental performance coaches (MPCs) and 27 coaches, athletes, and support staff who worked directly with those MPCs. MPCs participated in in-depth interviews ranging 90-150 minutes, while sport coaches, staff and athletes participated in interviews ranging 15-45 minutes. Former student-athletes participated in one reflective journal entry.

Findings support Poczwardowski and Sherman (2011) in relation to roles, readiness, and authenticity, while also identifying other values such as kindness and optimism. Findings offer suggestions for SPPs and athletics staff to further understand the wide range of roles integrated HSP delivery services can provide, included coach support.

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**Consulting & Interventions**

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**BREADTH OR DEPTH? EVALUATING PSYCHOLOGICAL, PERFORMANCE, AND INJURY OUTCOMES FOLLOWING MULTIDIMENSIONAL OR FOCUSED MENTAL SKILLS TRAINING IN MARATHONERS**

Andrew White, University of Minnesota, USA  
Hayley Russell, Gustavus Adolphus College, USA  
Kristin Wood, University Of Minnesota, Minneapolis, USA  
Diane Wiese-Bjornstal, University of Minnesota, USA

Recently, the number of Americans participating in running events has increased substantially, with over 17 million competing in 2016. Novice runners, those who may not be equipped with the physical and mental skills of experienced runners, are driving this trend. However, several theories (e.g., Andersen & Williams, 1998; Smirmaul et al., 2013) suggest that mental skills training could effectively improve performance and reduce injury risk in these novice runners. The present study compares the effectiveness of two mental skills training programs for novice runners (MAge = 20.8 years) training for a marathon. Both groups received four, 15-minute sessions involving an informational talk, discussion, and activities; participants also completed take-home work to develop the skills taught. One group received multidimensional training with one session each for goal-setting, self-talk, imagery, and relaxation, whereas the second group received four detailed self-talk training sessions. Despite not finding

statistically significant differences, effect sizes show there were small effects suggesting the self-talk group had better performance outcomes (e.g., change in two-mile time and final marathon time) and were more confident in their ability to run a marathon. There was also a small effect suggesting the multidimensional training group sustained injuries that were shorter in duration and had fewer training days impacted by injury. Both groups significantly improved their self-efficacy to run a marathon throughout training; however, when controlling for baseline running ability, this improvement was greater in those receiving in-depth training on self-talk ( $\eta^2 = .339$ ) compared to those in the multidimensional training group ( $\eta^2 = .103$ ). These results indicate that thorough training on a skill that is ubiquitous in distance running, self-talk, can promote improved performance outcomes, whereas instruction on an array of mental skills may equip runners with the coping resources required to protect them from having their training significantly impacted by injury.

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#### **BRINGING BACK WHAT'S GOLDEN: THE CAMERA AS A SWISS ARMY KNIFE FOR THE FIELD**

*William Way, West Virginia University, USA*

In its infancy, professional psychology relied heavily on projective assessments – several of which were structured around clients' interpretations of images. As put by Harper (2002), "images evoke deeper elements of human consciousness than do words; exchanges based on words alone utilize less of the brain's capacity than do exchanges in which the brain is processing images as well as words" (p. 13). Recently, there has been a proliferation in the use of images and photography as research tools in sport and exercise psychology (e.g., Phoenix & Smith, 2011; Strachan & Davies, 2012; Cope et al., 2014). Last year's conference also drew attention to how still images can be used in the classroom to facilitate critical thinking skills (Coumbe-Lilley, 2016). Finally, since a period of excitement in the 1970's and 80's (e.g., Stewart, 1979; Hunsberger, 1984), the use of photography as a creative counseling technique has also garnered new momentum (Ginicola et al., 2012), but does not appear to have documented usage in applied sport, exercise, or performance psychology consultation. This poster will provide practical suggestions for the theory-driven use of the camera as a "Swiss Army knife" with functional uses across the disciplines of research, teaching, and practice in applied sport and exercise psychology. Specifically, the poster will outline the current state of photography in empirical research and social outreach, how instructors might use Bloom's Taxonomy (2001) to conceptualize photo-based assignments in the classroom, and ways in which photography could be utilized to facilitate applied consultation and reflective practice.

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#### **CONCEPTUALIZING, COLLABORATING AND CREATING: THE PROCESS OF BUILDING AN ONLINE EDUCATION COURSE FOR HIGH SCHOOL STUDENT-ATHLETE LEADERSHIP DEVELOPMENT**

*Scott Pierce, Illinois State University, USA  
Jedediah Blanton, University of Tennessee, USA  
Daniel Gould, Michigan State University, USA*

Leadership is widely considered to be one of the most important life skills that young athletes acquire and develop through sport. It is concerning, however, that high school coaches have identified poor leadership as one of the most frequently cited problems among adolescent athletes (Gould, Chung, Smith, & White, 2006), and that captains are often not given opportunities to exercise advanced leadership skills in the high school sport setting (Voelker, Gould, & Crawford, 2010). One advance made to close this gap involves an education program delivered across a single state (see Gould & Voelker, 2010). However strong this program appears to be, a primary aim in helping student-athletes develop leadership skills is to reach as many interested young people as possible. This presentation will provide an overview of the development and launch of a free national online course for high school student-athlete leadership development. First, the process of conceptualizing the course will be explained to highlight the rationale for an online platform, and the intersection of literature from sport psychology, youth development, and online education research. Second, the importance of collaborating with 'champions' will be explored to reveal how sport psychology professionals, student-athletes, and state and national high school sport administrators worked together to develop the course. Finally, the intricacies of creating the online course will be shared to highlight the design and discuss the potential for an online platform to support the development of leadership skills for young athletes. Practical recommendations will be provided for athletes, coaches, and sport psychology professionals. Sport psychology professionals will be shown how to leverage the course to support young athletes and high school coaches and will be encouraged to connect with community partners to maximize the reach and utility of their sport psychology expertise.

### 135

#### **DEVELOPMENT OF THE SPORT PSYCHOLOGY OUTCOMES AND RESEARCH TOOL (SPORT)**

*Ashley Hansen, Saint Louis University, USA  
Joanne Perry, Northwestern University, USA  
Michael Ross, Saint Louis University, USA  
Taylor Montgomery, Saint Louis University, USA  
Zach Merz, Saint Louis University, USA*

**Introduction:** Sport psychology is an interdisciplinary field with a growing number of interventions derived from different fields of study. In order to responsibly evaluate the effectiveness of interventions, outcome measures need to utilize a multifaceted approach. The current study aims to develop a transtheoretical assessment tool to monitor progress and effectiveness of interventions.

**Methods:** The SPORT was developed in accordance to test development guidelines specified by Crocker and Algina (2006). Items were constructed based on a thorough review of the literature, an expert panel, and reviewed by student-athlete members of a NCAA Student-Athlete Advisory Committee

(SAAC). Items were written as affirmative statements and response options were provided on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Division 1 student athletes ( $n=73$ ) completed demographic information and the initial 80-item SPORT questionnaire. Reliability was assessed using Cronbach's alpha as a measure of internal consistency. Inter-item correlations were conducted on the full scale and each subscale to determine initial item selection.

Results: Each subscale and the total scale demonstrated acceptable reliability ( $>.70$ ), with the exception of the sport related distress subscale ( $<.70$ ). Items with inter-item correlations ranging between .15 and .50 were retained. The final SPORT consisted of 23 items across 5 domains: mental skills ( $n=5$ ), social support ( $n=4$ ), performance satisfaction ( $n=5$ ), mechanisms of success ( $n=5$ ), and sport related distress ( $n=4$ ).

Discussion: The current study introduces a new outcome measure to track progress and effectiveness of sport psychology interventions. The SPORT provides useful information for consultants across specific domains of athlete functioning and is easy to administer on a session by session basis. Current data collection is in progress for validation of the SPORT.

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#### POSTER WITHDRAWN

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#### GENDER-BASED PSYCHOLOGICAL DIFFERENCES IN RECREATIONAL MARATHON RUNNERS

*Eneko Larumbe, Texas Tech University HSC, USA*  
*David Peris, Sport Psychology Consultant, Valencia, Spain*  
*J. Joaquín García-Lluch, Sport Psychology Consultant, Valencia, Spain*  
*Eva M. Agea, Sport Psychology Consultant, Valencia, Spain*

Psyching teams at marathon race Expo are becoming widespread. We aimed to study runners' gender-based differences in experience, performance level, training methods, and opinion on sport psychology, in order to improve the quality of the interventions in this setting. A hundred and forty runners agreed to participate in this study (122 male and 18 female, according to the same approximate proportion observed for all registered participants). Age ranged 19–72 years ( $M=39.7$ ), running experience was 9.5 years on average (range 1–9.5 years), and 31% of the participants had not run a marathon race before. Motivation and exertion were similar in both men and women. However, we found that men tended to be more ambitious when they set their goals, and perceived higher self-confidence and physical fitness, although significantly overestimated their goals in ~10 minutes,  $t(101) = 6.29$ ,  $p < .001$ ,  $d = 0.38$ . Women were more conservative and showed very little difference between goals and performance (~0.1 minutes), perceived higher social support, and higher state anxiety levels. Women were more open to consult sport psychologists ( $\chi^2[1] = 4.91$ ,  $p = .027$ ), and to remunerate them for their services ( $\chi^2[1] = 5.55$ ,  $p = .019$ ). Practical and business-related applications of these differences are discussed.

### 138

#### INFLUENCE OF SELF-EFFICACY ON LONG TERM ATHLETES DEVELOPMENT PROGRAMME AMONG ATHLETES IN NIGERIA

*Benjamin Bello, Sport Psychology Association of Nigeria (SPAN), Nigeria*  
*Olufemi Adegbesan, Sport Psychology Association of Nigeria (SPAN), Nigeria*  
*Celina Adewunmi, University of Lagos, Nigeria*

Long-term Athlete Development (LTAD) is an athlete-centered approach to holistic athlete development in the psycho-sociological, physiological and physical domains of an individual, coordinated with proper sport-specific learning and teaching. An area of neglect which is not given prominence in the course of (LTAD) is self-efficacy which is a recognizable and valuable attribute within sport, especially with the potent effect on athlete thoughts, feelings and behavior during performance.

The dynamic interplay among athletes of efficacy enhancing strategies in (LTAD) is vital when high self-efficacy judgments about athlete's capability to perform a particular task at an elevated level, with certainty and repeatedly over time are made. Therefore, this study investigated the influence of self-efficacy as a component of (LTAD) programme in Nigeria.

Survey research design was used with male (139) and female (61) athletes involved in LTAD programme in teams and individual sports and their mean age was (19.78,  $sd$  7.14). Data were collected with the Sport Self-Confidence Questionnaire ( $r=.83$ ) and LTAD Questionnaire ( $r=.79$ ). Internal consistency at the total score level for the instruments were achieved. Statistical analysis was performed on the data with the appropriate parametric and non-parametric statistical model.

High positive significant correlation ( $P<.05$ ) was observed between LTAD and physical/mental preparation, demonstration of ability, physical self-presentation and situational favourableness respectively. Further results revealed that all the self-efficacy variables significantly ( $F(9,190) = 4.272$ ;  $P<.05$ ) jointly contributed to LTAD. While 16.8% of the joint contribution of self-efficacy variables were explained in the variance of the LTAD programme. Significant difference of mean values of self-efficacy ( $P<.05$ ) was observed among sport groups and not by gender.

One of the high sustainability factors of athletes to remain top in performance as they develop is the regular experience of high self-efficacy. This can be achieved when efficacy enhancing strategies are used appropriately for the LTAD programme.

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#### INVESTIGATING CONFIDENCE AND PERFORMANCE EFFECTS OF A PSYCHOLOGICAL SKILLS TRAINING PROGRAM ON AMATEUR GOLFERS

*Andrew Friesen, University of Wolverhampton, UK*  
*Shaun Galloway, University of Wolverhampton, UK*  
*Ian Clifton, University of Wolverhampton, UK*

Investigating the efficacy of psychological skills is a continuing mandate for sports psychology researchers. In order for practitioners to confidently teach strategies and techniques to improve mental and emotional performance to athletes, they must be confident in the utility of these strategies to bring about intended effects—both mental and performance.

Furthermore, it is important to establish evidence that these strategies can offer benefits to not only elite level athletes but to novice or amateur athletes as well. The aim of this study was to examine the effects of a psychological skills intervention on anxiety, confidence and performance in competitive amateur golfers. A multiple-baseline across-subjects design was used. Six male golfers ( $M_{age} = 26.16$ ) averaging 8.1 years of experience participated in this study. An intervention comprised of self-talk and centering strategies was applied throughout six competitive tournaments. Somatic and cognitive anxiety, and confidence values as well as match scores were collected for each participant during each round. Percentage of non-overlapping data points and visual inspection suggested the intervention increased confidence and resulted in improved performance but only marginally reduced somatic and cognitive anxiety. Social validation results indicated that most of the participants enjoyed using the mental skills and considered it a valuable learning experience. Results are situated within anxiety and broader emotion regulation theories that suggest that reducing anxiety might not be particularly instrumental to improving golf performance. Applied recommendations pertaining to psychological skills training in relation to interventions comprised of multiple psychological skills are offered.

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### **INVESTIGATION OF A BRIEF MINDFULNESS INTERVENTION TO ENHANCE ATHLETIC TASK PERFORMANCE: RESEARCH FINDINGS AND CLINICAL APPLICATIONS**

*Joanne Perry, Northwestern University, USA*  
*Michael Ross, Saint Louis University, USA*  
*Jeremiah Weinstock, Saint Louis University, USA*  
*Terri Weaver, Saint Louis University, USA*

**Introduction:** Research has supported mindfulness as a predictor of athletic success. This skill has demonstrated improvements in objective performance, as well as improvements in psychological variables related to success (e.g., flow, perceived stress). Past research has mostly examined mindfulness training programs that require multiple visits with a sport psychology professional; therefore, this study sought to explore the immediate performance gains following a single mindfulness session. **Methods:** A parallel trial design was used to examine the impact of a brief mindfulness training on task performance, flow state experience, and state anxiety during a golf putting task. Participants ( $N = 65$ ) were randomly assigned to an intervention or control group using a simple randomization strategy. Group-specific activities were completed between two trials of the putting task. **Intervention:** The mindfulness intervention (30 minutes) was largely adapted from the first two modules of the Mindfulness-Acceptance-Commitment (MAC) approach. Specific components included (1) introducing mindfulness, (2) exploring the benefits of mindful awareness and attention, (3) discussing task-focused attention and self-focused attention, (4) participating in and processing an experiential mindfulness exercise, and (5) identifying mindfulness strategies for subsequent task performance. **Results:** A series of  $2 \times 2$  repeated measures ANOVAs demonstrated significant effects of the intervention on improved objective putting performance, increased flow state experience, and decreased state anxiety ( $p < .05$ ). **Discussion:** Results suggest mindfulness may produce immediate performance improvements and psychological benefits after a brief training session. **Clinical Implications:** These findings suggest that single-session trainings may

be an option for practitioners. A brief model of training has potential to improve the dissemination of sport psychological services, as it prioritizes cost and time effectiveness. These findings also have implications for multi-session mindfulness training programs, as immediate performance gains might increase treatment motivation and adherence. Specific applications of this intervention within professional practice will be discussed.

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### **ITALIAN SPORT PSYCHOLOGY PERSPECTIVES ON THE UNDERSTANDING AND UTILIZATION OF MINDFULNESS-BASED INTERVENTIONS**

*Zella Moore, Manhattan College, USA*  
*Frank Gardner, Touro College, USA*

Mindfulness-based theory and interventions have gained increasing empirical and professional support for both performance enhancement and the enhancement of general psychological well-being, for nearly two decades. Individual sport psychology practitioners and sport training programs worldwide have increasingly sought to integrate research on and utilize mindfulness in their work with competitive athletes. Mindfulness-based programs are now commonly implemented at Olympic, professional, and collegiate levels, and within private consulting sport psychology practices. While research and utilization of this model within sport psychology has occurred rather rapidly, there remain questions as to the degree to which practitioners who incorporate mindfulness in their day-to-day work: 1) use a formal mindfulness-based protocol; 2) use a mindfulness-based protocol in a manner consistent with its theoretical foundation; and 3) use a mindfulness-based protocol as a stand-alone intervention or seek to integrate it into other intervention modalities. In the present study, approximately 30 Italian sport psychology practitioners were asked to complete a questionnaire assessing their use of mindfulness-based protocols, the degree to which they were being used as developed/presented, the degree to which such use was consistent with basic theoretical foundations of mindfulness-based models, and the degree to which mindfulness-based protocols were being used as stand-alone interventions or as part of a more integrative approach to intervention. Results among the Italian sample will be discussed in terms of use of a mindfulness-based protocol as prescribed; the need and/or desire of further training to insure fidelity to the intervention as empirically developed; awareness of theoretical considerations; and use of a mindfulness-based protocol as a stand-alone intervention. Results will also be discussed in terms of training and education of future scientist-practitioners of sport psychology, and implications for future international practice of sport psychology will be highlighted.

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### **PERFORMANCE ANXIETY PROFILES IN TABLE TENNIS PLAYERS: DIFFERENCES ACROSS TRAINING AND COMPETITION LEVELS**

*Tsz Lun (Alan) Chu, University of North Texas, USA*  
*Tao Zhang, University of North Texas, USA*  
*JoonYoung Lee, University of North Texas, USA*

It is well-documented that performance anxiety inhibits sport performance (Williams et al., 2002), but no research to our knowledge has examined the sport trait anxiety profiles and

their prevalence in relation to both training and competition levels. Therefore, the main purpose of this study was to examine table tennis players' sport trait anxiety profiles using cluster analysis.

Participants were 198 table tennis players (Mage = 40.45; 167 men) who completed a survey assessing sport trait anxiety (i.e., somatic anxiety, worry, and concentration disruption), training and competition experiences, and demographic variables. Hierarchical and nonhierarchical (k-means) cluster analyses were conducted to explore and validate a cluster solution of anxiety, respectively. Chi-square tests of independence were also performed to investigate any cluster differences based on training and competition experiences as well as gender and race/ethnicity.

The agglomeration schedule from the hierarchical cluster analysis demonstrated a large increase in the clustering coefficient from three- to two-cluster solution (50.1%). Inspection of the dendrogram indicated a two- or three-cluster solution, thus identifying three clusters as the best solution. Using the three cluster means as seed points, k-means procedures produced three new clusters that possessed similar cluster means and sizes. These analyses revealed three anxiety profiles in the sample, namely, "high performance anxiety" (n = 18), "moderate performance anxiety" (n = 84), and "low performance anxiety" (n = 96).

Chi-square analyses indicated significant differences in the anxiety profiles across training and competition experiences ( $p < .05$ ), but not gender or race/ethnicity. There was a larger proportion of moderate anxiety profiles and a smaller proportion of low anxiety profiles among players who received coaching and played sanctioned tournaments than those who did not. These findings suggest that table tennis players with formal training and competition experiences tend to have higher trait anxiety and may benefit from coping strategies.

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### SPORT TRANSITION, REINTEGRATION, AND OPPORTUNITIES FOR NEW GROWTH: STRONG

*Geoff Streeter, USA; Angela Breitmeyer, Midwestern University, USA  
Jared Chamberlain, Midwestern University, Glendale, USA*

Despite the immense popularity of professional, elite, collegiate, and high school sports in the United States (Heitner, 2015), sport psychology research has consistently demonstrated that many athletes struggle with the athletic retirement process, especially when it is unexpected (Hubbard, 2014; Hurley, 2014; Lavalley, Gordon, & Grove 1997). Specifically, retirement forces athletes to confront major economical, interpersonal, and psychological challenges (Lavalley et al., 1997). Although the issues associated with athletic retirement have been routinely documented and analyzed, there is a lack of empirically supported programs available to assist athletes with the retirement process (Lavalley, 2005; Morris and Cherry, 2007; Stambulova, 2010), especially within the United States. Therefore, the proposed program, Sport Transition, Reintegration, and Opportunities for New Growth (STRONG) utilizes a holistic approach aims to comprehensively address issues associated with athletic retirement. More specifically, STRONG's primary components include social support (Clement & Shannon, 2011 & Ford & Gordon, 1999), identity enhancement (Reifsteck, 2011), occupational skill development (Cosh, Lecouter, Crabb, & Kettler, 2013; McIlveen & Patton, 2007), holistic wellness skill development

(Myers Sweeny & Witmer, 2000), as well as maintenance and generalization post- program completion (Myers & Sweeny, 2004). The aforementioned objectives that comprise STRONG were chosen to build upon preexisting athletic transitional models. Therefore, the purpose of this poster is to introduce and describe an empirically based, holistic program designed to assist professional, elite, and collegiate athletes with the transition out of sport.

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### THE EFFECT OF SELF-GENERATED EMOTION ON SPRINT PERFORMANCE

*Patsy Tremayne, Western Sydney University, Australia  
Glenn Newbery, Western Sydney University, Australia*

In competitive sprinting, a few hundredths of a second can determine whether or not an athlete achieves a podium finish. Consequently, athletes and coaches are constantly on the lookout for strategies that might provide even the slightest of performance edges. The aim of this study was to investigate whether athletes can improve their sprint performance by self-generating certain emotional states immediately before an event. A sample of athletes (N = 25) participated in each of three emotion-induction conditions: happiness, anxiety, and emotion-neutral. For each condition, athletes completed a sprint task immediately after recalling a personal episode that elicited the relevant emotion. Also, for the anxiety condition, the athletes were asked to indicate whether the recalled episode involved a fight, flight, or freeze action tendency. According to Lazarus's (1991, 2000) cognitive-motivational-relational (CMR) theory, a self-generated emotional state will enhance performance on a motor task if the emotion's associated action tendency is functionally consistent with the task's movement demands. The action tendencies associated with happiness (i.e., "approach") and anxiety (i.e., "fight" and "flight") are considered to be functionally consistent with "running fast" (Rathsclag & Memmert, 2015). On the basis of this, we hypothesized that sprint performance would, relative to the emotion-neutral condition, be improved by self-generated happiness and by self-generated anxiety that was associated with fight or flight action tendencies. These hypotheses were not supported by the findings; no statistically significant difference in sprint performance across the three emotion-induction conditions was observed, and there was no statistically significant difference between anxiety action tendency sprint times and the corresponding emotion-neutral times. Nevertheless, the findings have important applied implications. Specifically, they suggest that the efficacy of the self-generated emotion intervention may depend on ensuring that the performer perceives the task in a manner that is metaphorically congruent with the emotion's action tendency.

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### THE EFFECTS OF GOAL PRIMING ON CORTISOL RESPONSES IN AN EGO-INVOLVING CLIMATE

*Michael Breske, Virginia Tech, USA; Mary Fry, University of Kansas, USA  
Andrew Fry, University of Kansas, USA  
Candace Hogue, University of Kansas, USA*

Researchers employing achievement goal perspective theory (AGPT) suggest that creating a caring, task-involving climate can have beneficial effects on participants in physical activity settings, even buffering the physiological response to

stress (Hogue, et al., 2016). However, less is known about how individuals might buffer that response when an ego-involving climate is occurring beyond their control. This study examined the potential for a motivational priming session to buffer the psychophysiological stress response to an ego-involving climate in a physical activity setting. Male college students (N = 38) between the ages of 18 and 30 years (M<sub>age</sub>=20.68, SD=2.66) participated in a juggling session characterized by an ego-involving climate. Prior to juggling, the experimental group received a motivational priming session that reviewed the AGPT literature (i.e., optimizing motivation among athletes), while the control group received information on the history of sport psychology as a professional field. Cortisol was measured at five time points throughout the study via saliva samples. Participants also completed the cognitive state anxiety inventory-2 (Martens, Burton, Vealey, Bump, & Smith, 1990). A marked increase in cortisol, as measured by percent change from baseline, was observed in the control group but not the experimental group. However, psychological responses were stable across groups. Linear Mixed Effects modeling showed a statistically significant interaction effect for Group X Time,  $F(1, 110.13) = 3.693, p = .014$ . Specifically, the model estimated change in salivary cortisol from baseline to immediately following the stressor was significantly higher (95% CI) in the control group than the primed group, suggesting AGPT priming may help buffer threatening stress responses triggered in ego-involving climates. In sum, providing athletes and exercisers with basic information on AGPT can reduce their physiological

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### THE EFFECTS OF SELF-TALK AND ATTENTIONAL FOCUS STRATEGY ON NOVICE GOLF PUTTERS: BEHAVIORAL AND PSYCHOPHYSIOLOGICAL EVIDENCE

*Alana Cesarz, Western Illinois University, USA*  
*Shital Joshi, Western Illinois University, USA*  
*Sadie Van Norman, Western Illinois University, USA*  
*Steven Radlo, Western Illinois University, USA*

Self-talk (ST) has been suggested to be more beneficial for those learning a new skill or one that involves precision (Theodorakis et al., 2000; Van Raalte, 1994). On the other hand, some researchers believe it is more beneficial for novice performers to focus their attention (AF) on external effects of an action rather than internally on movement patterns when learning a skill (e.g., Wulf, 2013; Wulf & Prinz, 2001). This alternative learning strategy is known as the action effect hypothesis (Prinz, 1997). Therefore, novice golf putters (n=24) used either internal ST (e.g., “nice and easy”; “good and firm”) or an external AF strategy (e.g., focusing on a mark on a golf ball). Spatial/visual tasks such as golf putting typically benefit more when the right hemisphere of the brain is more active than the left (verbal/analytical functioning) (Deeny et al., 2003; Radlo et al., 2002). Left and right temporal sites (T3, T4) EEG alpha brain wave activity was measured 3s to time of contact during golf putting. Absolute Error (AE) was measured for accuracy. ANOVA showed putters using the AF strategy performed with less error than the ST group,  $F(1,23)=17.42, p<.001$ . A Strategy x Block ANOVA interaction,  $F(3,69)=4.18, p<.01$ , showed that both groups scored similar on the first block but that the AF group shot with less error than the ST group for blocks 2, 3, and 4. With regard to EEG, ANOVA showed several main effects and interactions. Of most importance was a Strategy x Hemisphere x Block interaction,  $F(3,132)=13.83, p<.001$ . There was greater left hemisphere alpha power for AF group reflecting a quieter left brain/more

active right brain scenario, while greater right hemisphere alpha power for the ST group reflected a quieter right brain/more active left brain scenario. Findings support the action effect hypothesis and will be further discussed.

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### THE IMPACT OF A PERFORMANCE ENHANCEMENT INTERVENTION ON BURNOUT WITHIN AN INFANTRY COMPANY

*Erik Leslie, SAIC US Army, USA*  
*Derek Beirsto, SAIC US Army, USA*

A Company Commander from 1st Cavalry Division 12th Cavalry Regiment Chosen Company approached Human Performance Specialists with concerns about his infantry team struggling with behavioral problems, burnout, and creating an autonomy supportive environment before deploying to combat. Behavioral problems were at an all-time high and many soldiers were frustrated with the intense workload of the Army’s mission requirements. After continued observation the presenters concluded the soldiers were experiencing symptoms of high burnout. The four areas of focus became: 1. Reduce burnout symptoms 2. Increase motivation 3. Decrease behavioral problems 4. Increase measurable scores across all performances. Exploratory measurements for burnout with one component being motivation were conducted by the presenters using burnout and motivation profiles with a Likert scale of 1-10 and the MBI and MI-scale were given for post-tests. The performance enhancement training occurred in multiple settings including; on the job field operations, classroom education, and 1 on 1 coaching. Presenters will discuss multiple theories on burnout (Schmidt & Steins, 1991, Silvas, 1990) as well as methods to prevent and decrease burnout (Garcia-Campayo, Puebla-Guedea, et al., 2015). An eclectic approach was used focusing on different avenues including educating leaders on Self-Determination theory (Deci & Ryan, 2000), changing the culture based on values within the unit, and mindfulness training coupled with biofeedback. Qualitative results were an increased autonomy supportive environment, higher performance indicators for field operations and physical training, individual job satisfaction, and enhanced leadership effectiveness. Quantitative results consisted of indications of lower burnout levels, reduction in behavioral problems, increased motivation, and increase in enlistments. The presenters will also discuss lessons learned, areas of improvement for themselves and other practitioners.

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## Diversity & Culture

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## 148

### AN EXAMINATION OF THE EFFECTS OF DIFFERENT COMING OUT STRATEGIES ON HETEROSEXUAL ATHLETES’ BEHAVIORAL AND ATTITUDINAL REACTIONS

*Bradley Bryk, USA*  
*Frank D. Golom, Loyola University Maryland, USA*

Little is known about how gay athletes navigate the coming out process and how their doing so may impact a number of team-based outcomes. Therefore, the purpose of the current study is to contribute to our understanding of the impact of an athlete’s coming out in a team context, particularly on heterosexual teammates’ behavioral and attitudinal reactions.

Homophobic behaviors and attitudes, such as violence and aggression, continue to be present in a hegemonic masculinized culture of sport. These homophobic behaviors and attitudes that are produced are associated with masculine gender role stress. This type of stress may lend itself to competitive anxiety, which would lead to a decrease in an athlete's performance at high levels of competition. We hypothesize that indirect disclosure of sexual orientation will lead to better behavioral and attitudinal reactions than direct disclosure of sexual orientation. Our second hypothesis is that indirect emergent disclosure of sexual orientation will lead to better behavioral and attitudinal reactions than indirect educational disclosure of sexual orientation. Our final hypothesis is that direct pre-planned disclosure of sexual orientation will lead to better behavioral and attitudinal reactions than direct educational disclosure of sexual orientation.

To test these hypotheses, heterosexual male collegiate athletes will be asked to read one of four randomly assigned vignettes depicting a story in which a hypothetical gay male teammate comes out to them. Participants will then complete four scales to measure attitudes towards gay men, masculinity gender role stress, team integration, and engagement in certain behaviors related to the hypothetical gay teammate in the vignette. Demographic identifying information will also be collected, including sport played, years played in that sport, and year classification. Preliminary results will be provided and the discussion will focus on how the reactions of teammates' learning about a teammate's sexual orientation might impact team-based outcomes.

## 149

### AN EXPLORATORY STUDY OF THE UTILIZATION OF ACTIVITY TRACKERS AND EXERCISE MOTIVATION TO INCREASE EXERCISE PARTICIPATION AMONG FILIPINO WOMEN

*Gabrielle Salvatore, Temple University, USA*  
*Julia Trout, Temple University, USA*  
*Aisha Bhimla, Temple University, USA*  
*Michael Sachs, Temple University, USA*  
*Grace Ma, Temple University, USA*

**Background:** Physical activity (PA) behaviors among Filipinos are understudied, with this population in need of interventions to decrease chronic disease risk. This study examined the utilization of activity trackers and what exercise motives increase PA levels.

**Methods:** A cross-sectional survey among 42 Filipino women aged 30-85 years old from the Greater Philadelphia Area was conducted. Participants were recruited through Filipino community based-organizations. Measures included exercise motivation using the EMI-2, utilization of and beliefs surrounding activity trackers, and PA behavior and intention.

**Results:** Only 11.9% (n=5) engaged in more than 150 minutes of moderate PA per week, although 16.7% (n=7) indicated partaking in 75 minutes or more of vigorous activity per week. Most participants (78.6%) strongly or somewhat agreed that exercising reflected more the American culture compared to the Filipino culture. Most participants (52.4%) did not use a PA tracker; however, 85.7% said a tracker

would help them become more physically active. The mean EMI-2 subscales were ill-health avoidance (mean=4.28, SD=1.155), positive health (mean=4.25, SD=1.062), strength and endurance (mean=3.88, SD= 1.287), revitalization (mean=3.77, SD=1.250), weight management (mean=3.65, SD=1.420), nimbleness (mean=3.54, SD=1.397), enjoyment (mean=3.41, SD= 1.309, appearance (mean=3.39, SD=1.287), health pressures (mean=2.90, SD=1.520), challenge (mean=2.73, SD=1.488), affiliation (mean=2.50, SD=1.601), social recognition (mean=1.86, SD=1.542), and competition (mean=1.60, SD=1.455).

**Discussion:** Our study provides insight into the potential adoption of activity trackers in order to motivate Filipino women to increase their PA levels. Activity trackers could be used to enhance PA levels in future interventions. Filipino women choose to exercise in order to improve health, avoid ill-health, and build strength and endurance.

## 150

### ARE WOMEN ATHLETES IMPLICITLY PENALIZED? MASCULINE STEREOTYPES OF WOMEN ATHLETES AND IMPLICATIONS FOR WOMEN'S SPORT MOTIVATION

*Dana Manson, Rutgers University, USA*  
*Meghan McLean, Rutgers University, USA*  
*Laurie Rudman, Rutgers University, USA*  
*Anthony Roberson, Rutgers University, USA*

The present study investigated whether women athletes are implicitly viewed as more masculine than traditional women and whether an implicit woman athlete-masculinity bias is related to women's sport motivation and beliefs that womanhood is precarious in sports. Participants (n = 403) completed an Implicit Association Test in which they categorized pictures of traditional women and women athletes along with words representing men and women (he, she, sir, madam, etc.). Then participants completed multiple explicit measures. Results demonstrated that women athletes were implicitly associated with masculine concepts more so than traditional women and on average were explicitly rated as exhibiting more masculine stereotypes (aggressive, assertive, etc.). Implicit beliefs did not predict women's sport motivation. However, the more women participants explicitly believed that women athletes exhibited masculine stereotypes, the more likely they were to believe that weightlifting made them look unattractive. Explicit beliefs that women athletes were masculine also predicted beliefs that women athletes are gay and must defend their womanhood. Women participants also reported less motivation to exercise than male participants. The study suggests that women athletes are not only explicitly stereotyped as masculine, but that this bias exists at the implicit level. If women athletes both implicitly and explicitly lose their womanhood, they would be highly susceptible to backlash effects, social or economic punishments for acting in a counterstereotypical way (Rudman, 1998). Findings suggest that womanhood may be in a precarious state in sports. Women athletes may feel increased pressure to prove their femininity to escape social penalties and women may be demotivated to participate in certain sport activities for fear of appearing masculine and unattractive.

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**LIBERIAN'S YOUTH PERCEPTIONS OF VIOLENCE AND SOCIAL RESPONSIBILITY IN A SPORT FOR DEVELOPMENT PROGRAM**

*Jorge Ballesteros, Ball State University, USA*  
*Lindsey Blom, Ball State University, USA*  
*Mariah Sullivan, Ball State University, USA*  
*Kendall Bronk, Claremont Graduate University, USA*  
*James McConchie, Claremont Graduate University, USA*

It is estimated that over fifty percent of Liberia's current population is under the age of eighteen. Many of these youth were orphaned by the recent civil war and Ebola outbreak. As a result, many youth are traumatized, addicted to drugs, and leading lives devoid of purpose. A recent report from the World Bank (2013) on youth violence in Liberia indicates that these youth feel excluded and have perceptions of injustice that often leads them to respond with violence. Thus the purpose of this study was to explore the attitudes towards violence and social responsibility of youth involved in a sport for development program in three communities in Liberia, Cottontree, Dolo's Town, and Kakata. Cottontree and Kakata have high populations of street children and Dolo's Town was hit hard by the recent Ebola crisis. One hundred and eighty youth completed the Attitudes towards Violence survey (6 items; Bosworth & Espelage, 1995) and the Social Responsibility questionnaire (6 items; Flewelling et al., 1993). For the analysis, two-way ANCOVAs were conducted to examine the effect of participants' gender and current living situation on both their attitudes toward violence and social responsibility, while controlling for year in the program. The results demonstrated there were no statistical significant interactions between the effects of gender and current living situation while controlling for year in the program on youths' attitudes toward violence or social responsibility. However, there was a significant main effect difference between the three current living situation and youth's social responsibility  $F(3, 162), =2.48, p < .01$ , with youth living on the street having lower social responsibility scores than youth living in homes. Findings can help researchers gain awareness of the impact different living situations can have on youths' perceptions regarding violence and social responsibility and how sport can be used to assist in this development.

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**SEXUAL VIOLENCE MISCONCEPTIONS CORRELATED WITH INCREASED PARTICIPATION LEVELS IN SPORT**

*Olivia Knizek, Arizona State University, USA*  
*Melissa Pope, Arizona State University, USA*  
*Lindsey Mean, Arizona State University, USA*  
*Nicole A. Roberts, Arizona State University, USA*

Recent efforts among universities, including among collegiate athletics departments, have aimed to diminish sexual violence. This study tested whether college athletes (N = 144) uphold ideas about sexual violence, or "rape myths" (common societal beliefs and misconceptions that perpetuate sexual violence), more than students not engaged in sports through an updated version of the Illinois Rape Myth Acceptance (IRMA) scale. Current research has conflicting conclusions regarding the impact of athletic participation on the acceptance of rape myths and overall attitudes towards sexual violence. The current study investigates these beliefs across participant groups who did not participate in sports (n = 49); participated in sports during high school (n = 44);

participated informally or recreationally during college (n = 24); or were Varsity student-athletes playing for the university (n = 27). Participants read a vignette describing an ambiguous situation involving a male and a female, which led to the male being accused of sexual assault. Students were then asked to complete survey measures about their opinion of the events of the vignette, including an updated version of the IRMA scale. There was not a statistically significant influence of gender on the acceptance of the myths both across all groups and within the specified groups (p's > .70). There was a statistically significant difference between the groups based on their highest level of participation in sports and their rape myth acceptance with a linear trend throughout the groups suggesting the non-participatory group as the least accepting of the rape myths (mean = 48.18) and the formal collegiate athletes averaging a higher total score reflecting more acceptance (mean = 61.11). This finding constitutes a potential avenue for intervention to decrease sexual violence by dispelling these myths through education in addition to further exploration of the relationship between sport and these misconceptions.

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**Elite/Pro Sport**

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**A BIOPHYSIOLOGICAL PERSPECTIVE OF ATHLETE'S BURNOUT**

*Shamsi Sanati Monfared, Florida State University, USA*  
*Jean-Charles Lebeau, Florida State University, USA*  
*Justin Mason, Florida State University, USA*  
*Seongkwan Cho, Texas A&M International University, USA*  
*Itay Basevitch, Anglia Ruskin University, UK*  
*Inbal Perry, Florida State University, USA*  
*Daniel Alan Baur, Florida State University, USA*  
*Gershon Tenenbaum, Florida State University, USA*

Athlete's burnout is a complex syndrome which involves psychological, physiological, and biochemical markers. The present study provides a bio-physiological description of the burnout syndrome in high school student-athletes using Simmons' Self-Comfort Theory (SCT; 2001) as its conceptual framework. We examined changes in biomarkers and physiological factors which were related to athletes' perceived burnout and self-comfort factors (i.e., personal and social -coach, teammates, and performance). In the first study, 34 high school female soccer players filled out the Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001) and provided saliva samples for cortisol measures during the last two weeks of the postseason. In addition, arousal-related physiological markers such as heart rate, respiration rate, and skin conductance were recorded. The top and bottom 25% were categorized into high and low burnout groups. Results indicated that players scoring higher in exhaustion maintained higher cortisol levels than those scoring low (p < .04). Furthermore, cortisol levels displayed the highest association with exhaustion scores (r = .65, p = .02), and devaluation was associated with self-comfort in performance (r = .77, p = .03). In the second study, 15 males and 20 female student-athletes competing in various sports were recruited. Burnout and salivary cortisol levels were measured at the beginning and end of the season. In addition, physiological variables were measured at the end of the season. In general, burnout scores increased from pre to post season. Cortisol was strongly associated with burnout perceptions (r = .51, p = .03). Players with higher perceived burnout felt more

discomfort with their self-identity in sport, performance, and coaches. These findings suggest that athletic burnout can be affected by feelings of discomfort with the self and environmental factors, and can be monitored through physiological and biological indicators.

## 154

### DESIGNING AND DELIVERING A PERFORMANCE AND PERSONAL EXCELLENCE PROGRAM WITH ELITE ATHLETES

*Adam Miles, University of Otago, New Zealand*  
*Ken Hodge, University of Otago, New Zealand*

Life skills programs have been implemented to increase personal competence in various athletic populations (e.g., Lavallee, 2005; Jones, Lavallee, & Tod, 2011). Sport psychologists have encouraged the development and implementation of life skills programs to help athletes enhance both performance and personal excellence across their sports career (Miller & Kerr, 2002). Researchers have postulated that the development of skills associated with both performance and personal excellence will enable aspiring elite athletes to cope with several within-career transitions and their transition out of sport (Stambulova & Wylleman, 2014). Applied practitioners interested in designing and delivering life skills programs have been advised to explore the specific needs of their target population (Jones et al., 2011), underpin their program with a conceptual framework (Danish, Petitpas, & Brewer, 1992), and ensure their program facilitates life skills transfer (Hodge, Danish, & Martin, 2012; Pierce, Gould, & Camiré, 2016). The purpose of this presentation is to describe and explain the design and delivery of a life skills program for elite athletes. The performance and personal excellence program (PPEP) was delivered to seven male elite cricketers (Mage = 22.00yrs; Melite experience = 2.14yrs) at a residential high performance camp. These cricketers participated in six group workshops and completed nine online take-home tasks over a 3-month period. The program included life skills tasks focusing on identity exploration, reflection, and self-regulation. Practical recommendations are offered in relation to the design and delivery of life skills programs for elite athletes. Specifically, life skills programs will be discussed in relation to the specific needs of the participants, conceptual frameworks, and life skills transfer strategies.

## 155

### GROUP PROCESSES AND EFFECTIVENESS – WHAT TO DEVELOP IN THE PREPARATORY PERIOD TO IMPROVE SPORTS RESULTS OF TEAMS

*Zuzanna Wałach-Biśta, University of Silesia, Poland*  
*Eugenia Mandal, University of Silesia, Poland*

Since the 1960, sources of effectiveness of sports teams have been also sought in psychosocial factors. Both the existing theoretical models and research confirm that cohesion, collective efficacy and leadership are tied to the teams effectiveness (Carron et al., 2001; Feltz & Lirgg, 1998). However, most previous studies overlook the group-level effect and the analyzed group processes are assessed at various group development stages. The aim of the study was to verify the relationship between cohesion and collective efficacy developed in the preparatory period and the discrepancy between the preferences and perceptions of leadership behavior and efficacy of sports teams.

28 teams completed the Group Environment Questionnaire (Carron et al., 1985), Leadership Scale for Sports (Chelladurai & Saleh, 1980) and Sense of Team Efficacy Questionnaire (Wałach-Biśta, 2015) before the commencement of the league games and after the end of the season. Team efficacy has been determined based on the sports results achieved during the season. The statistical analyses were conducted on aggregated data, because the calculated indexes of agreement confirmed at least average effects of grouphood.

The results have shown that the effectiveness of teams is significantly and positively tied to social group integration ( $r = 0.44$ ), that it is negatively connected to the discrepancy between the preferences and perceptions of the coach's autocratic behavior ( $r = -0.57$ ) – but only in male teams. In female teams, the results achieved by the teams were also tied to the social cohesion, but negatively so ( $r = -0.43$ ), as well as with the discrepancy between the preferences and perceptions of leadership behavior in the positive feedback ( $r = -0.59$ ). Hierarchical regression analyses demonstrated that the only significant predictor of team effectiveness was collective efficacy ( $\beta = 0.39$ ).

The results are discussed with respect to the existing results and theoretical models.

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### “HOW MUCH ARE YOU WILLING TO GUT IT OUT AND SUFFER?”: THE WARRIOR SPIRIT OF FEMALE IRONMAN TRIATHLETES

*Emily Johnson, University of Tennessee, USA*  
*Leslee Fisher, University of Tennessee, USA*

Over the years, only a few researchers have systematically explored the experiences of female triathletes (e.g. Cronan & Scott, 2008). The purpose of the current study was to assess the potential for growth through adversity among female Ironman competitors. By focusing on growth through adversity, empowerment, and athletic potential, the objective was to gain a clearer understanding of how female athletes capitalize on adversity to experience empowerment and achieve their potential. Seven female Ironman competitors were interviewed using Interpretive Phenomenological Analysis (IPA; Smith, 2011); IPA researchers explore peoples' lived experiences, how they make sense of their experiences, and the meaning of their experiences (Smith, 2011). Participants averaged 49.8 years of age and had been involved in triathlons for about 13 years. All participants self-identified as Christian and middle- to upper-class; additionally, six self-identified as Caucasian and one as Asian. One participant was widowed, six participants were married, and six had children. Results revealed that participants embodied a warrior spirit. This spirit consisted of the mental qualities of perseverance, commitment, internal motivation, and intensity. Through triathlon participation, participants demonstrated mental toughness in the face of adversity. As one participant stated, “I’m drawn to the path of breaking yourself down to where you’re just really raw, but you keep going.” As more women enter the Ironman world, continued discussion pertaining to what growth through adversity means for women as well as what empowerment and mental toughness means is important (Connaughton, Hanton, & Jones, 2010; Galli & Reel, 2010; Galli & Vealy, 2008; Sarkar, Fletcher, & Brown, 2015; Tamminen, Holt, & Neely, 2013; Wadey, Clark, Podlog, & McCullough, 2012). Suggestions for application within sport psychology consulting are also given.

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**PREPARATION TIME, PSYCHOPHYSIOLOGICAL STATES AND PERFORMANCE IN GOLF PUTTING**

*Andre Aroni, Metrocamp University, Brazil  
Guilherme Bagni, UNESP - Sao Paulo State University, Brazil  
Edson Filho, University of Central Lancashire, UK*

To extend research beyond expert-novice differences, scholars have suggested the adoption of an expert-performance approach, wherein high-performing individuals are compared among themselves (rather than to novices) in order to uncover the underlying mechanisms of peak performance experiences (see Williams & Ericsson, 2005). In this context, we explored the linkage between peripheral physiological markers and performance in golf putting. Nine high-skilled youth golfers (Mage = 15.38; SD = 1.41), with approximately six years of experience in the sport (M = 6.75; SD = 2.25) participated in the study. They were asked to putt at 7 feet (2.13 m) and 12 feet (3.66 m) from a target hole in a laboratory environment, for a total of 100 trials. The independent variables included skin conductance, heart rate, respiration rate, and preparation time (i.e., time before hitting the ball). The Nexus-10 biofeedback system was used to record the psycho-physiological variables; the outcome measure was a dichotomous performance variable (i.e., holed putt; missed putt). Binary ordinal logistic regression was applied to the data until the simplest parsimonious model was obtained. The only significant factor predicting performance was preparation time (OR = 1.26; p = .01), with the overall model being significant and accounting for 7% of the variance. These results suggest that psycho-physiological variables may not differentiate high-performing youth golfers, akin to the IZOF model (see Hanin, 2007). Our findings also suggest that, as preparation time increases, the likelihood of successful putting increases as well. It is likely that high-performing golfers engage in strategic planning rather than reinvestment of attention prior to putting. Practitioners should encourage golfers to think-out-loud (see Arsal, Eccles, & Ericsson, 2016) during practice to uncover whether they are engaging in strategic planning or reinvestment of attention, thus tailoring interventions to aid performance while preventing choking under pressure.

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**WHEN THE GAME CHANGES: SPORT TRANSITION SERVICES IN THE NEW MILLENNIUM**

*Stephany Coakley, Maximum Mental Training Associates (MMTA), USA  
Kensa Gunter, Gunter Psychological Services, LLC, USA  
Lauren Loberg, National Football League, USA*

In sports, especially team sports, competition is usually divided into halves, periods or quarters. During the course of a sport career there are similar periods or transition periods that divide an athletes' career. The types of transitions that athletes are likely to face at each stage of their athletic careers are; anticipated transitions, unanticipated transitions and non-event transitions (Schlossberg, N., Waters, E., & Goodman, J., 1995). Historically, sport transitions were virtually ignored by all, including athletes, even though, preparation is essential for successful performance outcomes, for a long time no such preparation was offered for athletes in transition. Recently, however there has been a shift in momentum related to how athletes and others in the world of sport view sport transition periods e.g. high school to college, college to life after college,

or to professional sport. Universities, professional leagues and national governing bodies are making valiant efforts to provide structured programs to help athletes make healthy transitions to life after their playing days are over.

At almost every level of competition sport psychology consultants help administrators and league officials launch evidence-based education and training to meet the physical, mental, emotional, social, educational, professional, and spiritual needs of athletes in transition. The presenters will discuss the athletes in transition who benefit from their services. Each will provide a broad overview of their programs, available resources, organizational support, evaluation methods, limitations and future directions.

Programs that help athletes prepare for transitions serve as a firewall of protection enabling them to develop the competencies to successfully maneuver through sport transition periods. The goal is that athletes in transition not only survive the sport transition, but also flourish now and in the future.

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**Exercise/Health/Fitness**

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**ADULT USE OF COMPLEMENTARY AND INTEGRATIVE HEALTHCARE APPROACHES TO IMPROVE ATHLETIC PERFORMANCE**

*Conrad Woolsey, University of Western States, USA  
Will Evans, Mississippi State University, USA  
Harrison Ndetan, Parker University, USA  
Ronald Williams, Texas State University, USA  
Brittney Oliver, Mississippi State University, USA  
Michael Perko, University of North Carolina - Greensboro, USA  
Bill Steffen, Ohio University, USA*

In the U.S., approximately 38% of adults are using some form of complementary or integrative healthcare (National Health Interview Survey, 2012). Therapies or modalities that are considered "complementary or integrative care (CIC)" are often seen as being used in conjunction with conventional western medicine and are viewed as treating the whole person. The purpose of this study was to assess the use of complementary medicine and integrative healthcare approaches for the purpose of improving athletic performance among adults. Methods: Techniques evaluated in this study include exercises and therapies such as: yoga, deep breathing techniques, meditation, biofeedback, hypnosis, naturopathy, and homeopathy. Secondary data analysis of the Adult Alternative Health/Complementary Medicine file of the 2012 NHIS dataset was performed. The survey is a representative sample with over 34,000 respondents (median age of 36). Odds ratios and 95% confidence intervals were calculated using binary logistic regression to assess the likelihood that a respondent who reported use of a specific therapy found it helpful. Results: Thirty-four percent of all participants utilized CIC therapies for improved energy levels (96.7%; OR=1.67, 95%CI=1.08-2.57). Yoga was the most common technique reported with 50% of those using this CIC for enhancing athletic performance. Among those individuals, 98% stated it was helpful. Among participants who used the various techniques, the following percentages found them to be helpful: 100% for biofeedback, mediation, and naturopathy; 82% homeopathy; and 76% for hypnosis. Over 59% of participants reporting CIC use were female

and they were about three times more likely than males to report CIC use as helpful to improve athletic performance (OR=2.94; 95%CI,1.25-6.67). Conclusion: This study indicates high satisfaction among those who have integrated these modalities or therapies into their treatment regimen or practice routines. Future research could evaluate sport-specific use, potential physiological mechanisms for results, and how to better integrate CIC methods into practice.

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### **AN EVALUATION OF THE EXPERIENCES OF PEER MENTORS INVOLVED IN A PEER-LED PHYSICAL ACTIVITY INTERVENTION AIMED TO DECREASE SYMPTOMS OF DEPRESSION AND ANXIETY AMONG COLLEGE STUDENTS**

*Taylor Leenstra, Western Washington University, USA  
Linda Keeler, Western Washington University, USA  
Jessyca Arthur-Cameselle, Western Washington University, USA  
Keith Russell, Western Washington University, USA*

Interventions that utilize peer mentors to aid in altering the physical activity behaviors and attitudes of individuals have recently grown in popularity (Mellanby, Rees, & Tripp, 2000; Pfeiffer, Heisler, Piette, Rogers, & Valenstein, 2012). Specifically, peer-guided interventions geared towards individuals struggling with depression have shown to be more effective than usual care in decreasing depressive symptoms (Pfeiffer et al., 2012). However, while the mentees' experiences in such programs have been studied extensively, there is little research that explores how taking on the role of a peer mentor influences the mentor themselves. The Western Wellcat program is a peer-led physical activity intervention designed to improve the mental and physical well-being of students suffering with clinical depression and anxiety (Keeler, 2015; Rieck, 2012). Through the Western Wellcat program, peer mentors serve as supportive, reliable, and knowledgeable exercise partners for their peers (Keeler, 2015; Rieck, 2012). The purpose of this study was to qualitatively investigate the experiences of peer mentors involved in the Western Wellcat program. Participants for this study included eight former Western Wellcat peer mentors, who participated in the program in Winter 2015 (n = 4) and 2016 (n = 4). Using semi-structured interviews with open-ended questions, the researchers explored each former mentors' motivations to sign up for the program, expectations for their participation in the program, perceived influences of their participation in the program, and any suggestions for program improvement. An inductive coding procedure was performed for the entirety of all interview transcripts, revealing four categories: mentor motivation, mentor expectation, mentor experience, and program improvement. Deductive analysis based on the three basic human psychological needs according to the self-determination theory (Ryan & Deci, 2000) was then performed and confirmed for only the themes determined from the mentors' experience. Discussion and implications of findings will be presented.

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### **ANALYSIS OF PHYSICAL FITNESS LEVEL AND MOOD STATES CHANGE IN BASIC MILITARY TRAINING FOR PROSPECTIVE CADETS: APPLICATION OF LATENT GROWTH MODELING**

*Sungho Kwon, Seoul National University, South Korea  
Hyo-Yeon Ahn, Seoul National University, South Korea  
Sang-uk Kang, Seoul National University, South Korea  
Yongse Kim, Seoul National University, South Korea*

The purposes of this study are to repeatedly examine the fitness levels and mood states of the prospective cadets in identical during in basic military training (BMT) of Korea Naval Academy, and then to verify what changes are happening during the period through such longitudinal data. The results can later be used as base data needed for creating a scientific training program that considers the physical and psychological levels as well as characteristics of participants. Also, there is academic significance in revealing whether the relationship between exercise and emotion have similar characteristics in terms of military training. 285 prospective cadets who participate in BMT volunteered to answer a questionnaire measuring mood states. Three times of fitness test records and mood state test results were used in the study. We carried out the structural fit test on latent growth model, then relationship between fitness and mood state were confirmed. The results were as follow: First, during BMT, the fitness levels of the prospective cadets increased rapidly, and the rate of change was much larger for those that had lower initial fitness levels than those with higher initial fitness levels. Second, during BMT, the prospective cadets showed a tendency for positive changes in mood states. However, initial mood states and rate of change per measurement period did not show a significant relationship. Third, during BMT, the prospective cadets with low initial fitness levels showed negative changing tendencies in initial mood states. Those with high initial fitness levels showed high rate of change for mood states. Also, depending on the initial fitness level, there were large differences for mood states. It was confirmed that there were differences in the TMD level as participants' initial fitness levels. Therefore, we suggested that to consideration not only fitness level but also psychological aspect during in BMT.

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### **COMPARISON OF THE AFFECTIVE RESPONSES TO CONTINUOUS AND HIGH-INTENSITY INTERVAL TRAINING PROTOCOLS: APPLICATION OF THE DUAL-MODE MODEL**

*Sheila Alicea, Humboldt State University, USA  
April Parrott, Humboldt State University, USA  
Tina M. Manos, Humboldt State University, USA  
Young Sub Kwon, Humboldt State University, USA*

High-intensity interval training (HIIT) is time-efficient and has physiological benefits similar or greater than that of continuous training (CT); however, there are mixed results regarding how HIIT protocols influence affect. The Dual-Mode Model (DMM) is a theoretical framework for measuring this intensity-affect relationship. This presentation summarizes research conducted to compare acute affective responses between CT and HIIT protocols over time using the DMM. Participants were healthy females (n = 12) ages 19-28. Participants completed a CT protocol set at their respiratory compensation

point (RCP; ~80% VO<sub>2</sub>max) and a HIIT protocol consisting of a 2-minute work interval (100% VO<sub>2</sub>max) followed by a 2-minute rest interval (~55% VO<sub>2</sub>max) in a crossover design. Protocols were matched for average intensity, total duration for each participant, and energy expenditure. After blood pressure, anthropometrics, body composition, and VO<sub>2</sub>max measurements were taken, responses were recorded for affect (Feeling Scale), arousal (Felt Arousal Scale), and Rate of Perceived Exertion (RPE) before each protocol, during the last 10 seconds of every two minutes during the protocol, and at time points 2-, 5-, and 10-minutes post-protocol. Heart rate (HR) was also monitored continuously prior to/throughout protocol. A repeated measures ANOVA revealed no significant differences in affect between CT (M=2.5, SD=2.1) and HIIT (M=2.6, SD=2.1) protocols  $F(1.16, 1.73) = 0.49$  ( $p=0.648$ ) over the duration of the exercise. There were no significant differences in average HR ( $t=-0.314$ ,  $p=0.759$ ), RPE ( $t=0.333$ ,  $p=0.745$ ), or post-protocol enjoyment ( $t=-0.288$ ,  $p=0.492$ ) between CT and HIIT. A visual depiction of the DMM showed there were no differences in patterning between the two protocols. Altering the HIIT protocol could potentially produce different results/explain discrepancies in affective responses observed among studies. In conclusion, a HIIT protocol at RCP and 2:2 exercise:rest intervals did not result in a different affect response or enjoyment level when compared to a CT protocol at RCP.

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### EFFECTS OF ATTENTIONAL FOCUS STRATEGIES DURING JOGGING ON EXERCISE ENJOYMENT, MOOD ALTERATION, AND PERCEIVED EXERTION

Bonnie Berger, Bowling Green State University, USA

Matthew Jones, University of Tennessee, USA

Lynn Darby, Bowling Green State University, USA

David Owen, Brooklyn College of the City University of New York, USA

David Tobar, Bowling Green State University, USA

Yin-Kai Chen, Bowling Green State University, USA

Although the performance benefits of attentional strategies for high performance athletes have been examined (e.g., Brick, MacIntyre, & Campbell, 2015), fewer studies have investigated the differential effects on enjoyment and mood in recreational exercisers. Thus, a purpose of this study was to examine potential relationships among attentional strategies and subsequent exercise enjoyment, mood, and perceived exertion while jogging at a moderate intensity. College males ( $N = 21$ ) who habitually exercised at least 120 minutes/week were randomly assigned to either association or dissociation strategies while jogging 1.5 miles. In a second session, participants employed the remaining strategy. Exercisers completed the Profile of Mood States (POMS) before and after exercising and also the Physical Activity Enjoyment Scale (PACES) after each of the two exercise sessions. Heart Rate and Perceived Exertion (RPE) were recorded. Results of an ANOVA (Strategy  $\times$  Order) on PACES scores showed a significant interaction ( $F(1, 19) = 4.85$ ,  $p \leq .05$ ). Results of subsequent analyses indicated that joggers enjoyed the first exercise session more than the second one. There was no evidence of a difference in enjoyment between the two strategies. Results of a MANOVA (Strategy  $\times$  Pre- Post-exercise  $\times$  Order) on the POMS subscales showed a 3-way interaction ( $F(6, 14) = 2.88$ ,  $p \leq .05$ ). In follow-up analyses, joggers using the dissociation strategy first reported decreases in Tension, Depression, and Confusion after jogging; in none of the other combinations were the results so clear. Exercisers reported significant increases in RPE over time as the number of laps

increased in both exercise sessions ( $p \leq .05$ ). In conclusion, recreational joggers enjoyed the first exercise session more than the second session regardless of the attentional focus strategy employed. There were more numerous mood changes when using the dissociation strategy, although this influence was affected by order of strategies.

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### REASONS FOR EXERCISE PROFILES: THEIR ROLE IN ADULTS' MOTIVATION, PASSION, AND PHYSICAL ACTIVITY LEVELS

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Do certain exercise goals relate to greater or lesser physical activity (PA) patterns? When identifying factors associated with different PA categories, reasons to exercise profiles provided evidence about the types of cognitive and behavioral patterns associated with self-selected PA patterns. However, previous studies (Friederichs et al., 2015) have examined motivational profiles in isolation, prompting this study to use cluster analysis to assess whether the reasons people exercise can be captured by a limited number of naturally-occurring profiles in a large sample of adults engaging in a range of physical activities. A second purpose examined how PA profiles differed on psychosocial (i.e., motivational regulation, passion, and mindsets), and behavioral outcomes. Participants included 1,275 (M age = 46.5 years) adults when responding to the REx Scale (Kercher & Burton, 2017), the BREQ-3 (Markland & Tobin, 2004), Passion Scale (Vallerand et al. 2003), CNAAQ-2 (Wang & Biddle, 2001) and the IPAQ (Craig et al., 2003). Cluster analysis revealed four unique reason profiles and five PA profiles that were compared on a variety of psychosocial and behavioral dimensions. MANOVA results revealed support for hypothesized reason and PA profile differences, including: (a) all five behavioral regulations subscales, (b) both harmonious and obsessive passion, (c) growth and fixed mindsets, and (d) PA categories. Among the reason profiles, individuals exhibiting more autonomous-focused reasons had greater PA levels, whereas sedentary behavior (i.e., sitting) was significantly lower compared to profiles exhibiting more control-focused exercise reasons. Additionally, the number of valued reasons for exercise led to more desirable outcomes compared to profiles with fewer valued reasons. Among the PA profiles, exercisers that engage in higher or moderate-intensity PA valued autonomous-focused reasons more than did exercisers who are more sedentary. The present study expands on research examining the reasons people have for exercising and PA levels, particularly how profiles differ significantly across motivation, passion, and mindsets.

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### RECREATIONAL RUNNERS AND FLOW: GENDER, RUNNING HABITS, AND PERCEPTION OF CHALLENGE

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Alexandra Leopold, Edinboro University, USA

Madison Holland, Edinboro University, USA

Hannah Fitzgerald, Edinboro University, USA

Kasey Jones, Edinboro University, USA

Flow is a psychological state in which one can feel simultaneously cognitively efficient, motivated, and at ease; and optimally challenging tasks are associated with flow (Moneta & Csikszentmihalyi, 1996). Elbe, Strahler, Krustup,

Wikman, and Stelter(2010) studied the impact of different forms of exercise on flow, finding that all forms of exercise increased the experience of flow, with running being associated with the greatest increase in flow in female participants. Martinez and Scott (2016) studying both male and female runners found that runners often develop a sense of achievement and purpose by overcoming long distances. They found that ultra distance runners experienced more flow than short distance runners, suggesting that the distance of running may be related to flow. (Martinez & Scott, 2016).

Given this research on running and flow, we were curious about the relationship between recreational runner's experience of flow; and runners' average weekly mileage, how long they have been regularly running, and gender. In addition, we wanted to examine the relationship between perceived challenge associated with running and flow.

A total of 105 recreational runners completed two self-report online instruments: 1) The Flow Short Scale (FSS) (Engeser and Rheinberg, 2008), and 2) The Running Habits Survey (RHS) which was developed for this study.

A multiple regression analysis was calculated to predicts FSS scores based upon three variables from the RHS: 1) gender, 2) "How long have you been running?", and 3) "On average, for the past three months, how many miles do you run each week?" This was not found to be significant,  $F(3,101) = .429$ ,  $p = ns$ , with an  $R^2 = .013$ .

A Pearson's  $r$  was calculated to assess the relationship between total flow scores and a rating of perceived challenge provided by running. There was a small, but significant correlation between the two variables ( $r=0.196$ ,  $n=105$ ,  $p=.023$ .)

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### RELATIONSHIP BETWEEN FITNESS ACTIVITY TYPE AND EXERCISE MOTIVES

*Erica Smith, The University of North Texas, USA*  
*Paul Yeatts, University of North Texas, USA*  
*Daniel Marshall, University of North Texas, USA*  
*Scott Martin, University of North Texas, USA*

Although the 2008 Physical Activity Guidelines indicates improved health benefits with regular physical activity (PA), the Centers for Disease Control and Prevention (2014) reported that less than half the U.S. population achieve the recommended amounts of PA per week. Because adults engage in less PA than recommended, exercise motives have been examined. However, limited information exists on how these motives relate to different types of PA. Thus, this study examined exercise motives (i.e., appearance, enjoyment, health pressures, and weight management) for engaging in aerobic and muscular strengthening activities. College kinesiology students, 91 men and 105 women ( $Mage = 19.94 \pm 2.77$  years), completed the Exercise Motivations Inventory-2 (Markland & Ingledew, 1997) and reported the number of minutes per week they engaged in aerobic and muscular strengthening activities. Overall, men reported engaging in 140 ( $\pm 160$ ) minutes of aerobic exercise and 156 ( $\pm 132$ ) minutes of muscular strengthening exercise, whereas women reported 129 ( $\pm 117$ ) minutes of aerobic exercise and 92 ( $\pm 89$ ) minutes of muscular strengthening

exercise. Bivariate correlations were calculated separately for men and women to examine the relationship between time spent engaging in aerobic and muscular strengthening exercise and various exercise motives. For men, muscular strengthening exercise related to enjoyment ( $r = .38$ ,  $p < .001$ ), health pressure ( $r = -.21$ ,  $p < .05$ ), and positive health ( $r = .25$ ,  $p < .05$ ). For women, only appearance motivations related to aerobic exercise ( $r = -.20$ ,  $p < .05$ ), and only enjoyment related to muscular strengthening exercise ( $r = .27$ ,  $p < .01$ ). The findings suggest that motives may differ for aerobic and muscular strengthening activities. While most relationships were small in magnitude, enjoyment shared a moderate relationship with muscular strengthening exercise, particularly among men. Focusing on type of PA motives may empower people to make long-term behavior change.

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### ROCK MY WORKOUT: THE EFFECT OF MUSIC ON RUNNING PERFORMANCE AND AFFECTIVE RESPONSES

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*Selen Razon, West Chester University of PA, USA*

Music helps improve performance in physical activity (Lane, Davis, & Davenport, 2011). Potential benefits of using music during activity include delaying fatigue, decreasing aversive sensations, and increasing task enjoyment (Karageorghis et al., 2013). Nevertheless, the more common use of athletic samples within research has limited the generalizability of these findings, rendering it difficult to advance practical recommendations for best use of music towards general populations within field settings.

The purpose of this study was to investigate the differential effect of music use on running performance and affective responses in a sedentary population of college students within a field setting. Twenty-seven students (17 Females, 10 Males;  $Mage = 22.11$ ,  $SD = 5.12$ ) completed three separate running trials, each of one mile. In the course of their run, participants listened to either self-selected music, researcher-selected music (i.e., Audiofuel app), or no music at all, in counterbalanced order. Affective responses were assessed before, during, and after each trial. Mile time was recorded at task completion. A single open-ended item to gauge participants' music type preference was administered following the final running session.

Repeated Measures ANOVA analyses revealed that participants reported less fatigue pre to post run when listening to self-selected music ( $p < .05$ ). Music type did not have an effect on mile time ( $p > .05$ ). Qualitative analysis of open-ended responses indicated that most participants preferred self-selected music, citing increased motivation, focus, comfort, and enjoyment compared to the other music conditions.

In light of the existing literature and current findings, practical implications for best use of music to increase performance, promote exercise adoption and adherence will be outlined. From an evidence-based practice standpoint, recommendations regarding the use of music with sedentary and high-risk populations (Joseph, Royse, Benitez, & Pekmezci, 2014) will be advanced.

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### **SYMPTOMS OF INSOMNIA RELATED TO AEROBIC FITNESS IN COLLEGE STUDENTS**

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*Paul Yeatts, University of North Texas, USA*

*Amanda Leibovitz, University of North Texas, USA*

*Scott Martin, University of North Texas, USA*

Students with symptoms of insomnia tend to report greater depression, fatigue, worry, a poorer quality of life (Trockel, Barnes, & Egget, 2000). Regular exercise and increased fitness can positively influence health and mental wellness. In addition, improvements in physical fitness may relate to a reduction in the experience of symptoms of insomnia. Therefore, the purpose of this study was to examine how the experience of insomnia symptoms related to components of physical fitness (i.e., body composition, aerobic capacity, and muscular strength and endurance). Participants were 150 college students (Mage = 21.12 ± 3.12 years) enrolled in health and wellness courses. Students completed fitness tests that assessed body composition (i.e., body fat percentage), aerobic capacity (i.e., 20m shuttle run), and muscular strength and endurance (i.e., push-up and curl-up tests). They also responded to the Insomnia Severity Index (Morin, 1993) that included 7 items designed to measure symptoms of insomnia. The scale can be used to place respondents into one of four groups that include no clinical insomnia, sub-threshold, moderate clinical insomnia, and severe clinical insomnia. Overall, participants fell into the insomnia categories of sub-threshold (n = 30), moderate clinical insomnia (n = 68) and severe clinical insomnia (n = 52). One-way ANOVAs were conducted to examine insomnia group differences in aerobic capacity, body composition, push-ups, and curl-ups. Only the analysis for aerobic capacity yielded a statistically significant group difference,  $F(2, 147) = 4.02, p = .02$ . Post-hoc testing indicated that the clinical moderate group had significantly higher aerobic capacity scores than the clinical severe group ( $d = .54, p < .01$ ). This finding demonstrates that individuals who experience clinically severe levels of insomnia tend to have lower levels of aerobic fitness. Therefore, engaging in daily exercise that results in improvements in aerobic fitness may protect against the experience of insomnia symptoms.

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### **THE MEDIA'S PORTRAYAL OF THE EXCEPTIONALLY-FIT BODY AND THE INCREASE OF BODY IMAGE CONCERNS WITHIN COLLEGE-AGED INDIVIDUALS**

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*Levi Henry, California State University, Northridge, USA*

*Paula Thompson, California State University, Northridge, USA*

The media creates a stereotype of what is considered culturally attractive and, currently in America, the "exceptionally-fit" body is considered to be "in." However, the portrayal of this image is often of bodies that are extremely difficult to develop and unattainable (Homan, et al., 2012). Current college-aged individuals are the first generation that is saturated by images of this exceptionally-fit body (Readdy, Watkins, & Cardinal, 2011). For individuals who internalize this stereotype, body image concerns and health risks are probable. As such, the purpose of this study was to examine the extent to which the media's portrayal of the exceptionally-fit body causes increases in body image concerns and body dissatisfaction in both college-aged males and females, as well as to examine how these increases influence the development

of characteristics associated with muscle dysmorphia. 74 subjects (males= 36, females= 38) were recruited from local gyms and given a questionnaire packet which included a demographic questionnaire, Sociocultural Attitudes towards Appearance Questionnaire-3, Body Comparison Scale, The Obligatory Exercise Questionnaire, Drive for Muscularity Scale, and the Muscle Dysmorphia Inventory. As expected, the results concluded that higher levels of internalization of the physically attractive stereotype from the media were associated with increased body image concerns for both males and females. Furthermore, females experienced more pressure to attain the ideal body portrayed in the media and expressed a desire to be thin, but also possessed a drive for muscularity to a moderate degree with some characteristics of muscle dysmorphia. Body comparison was also found to be a common practice between both males and females. The findings in this study suggest that the growth and popularity of social media should be an area of interest for future research done on body image concerns.

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### **THE RELATIONSHIP OF FITNESS CENTER MEMBERS' GOAL ORIENTATIONS AND PERCEPTIONS OF THE MOTIVATIONAL CLIMATE TO VARIABLES RELATED TO WELL-BEING AND MOTIVATIONAL RESPONSES**

*Lauren Easton, University of Kansas, USA*

*Mary Fry, University of Kansas, USA*

*Susumu Iwasaki, Fort Lewis College, USA*

The purpose of this study was to examine the relationships between members' goal orientations and perceptions of the motivational climate (caring, task, and ego) at their fitness center, to their psychological well-being, positive affect, exercise enjoyment, and commitment. Members (205 males, 174 females Mage = 37.87 years, age range: 18-65 years) at two sites of a Midwestern fitness center franchise completed an anonymous survey that included the following measures: the Perceived Motivational Climate in Exercise Questionnaire (Moore, Fry, & Brown, 2015), Caring Climate Scale (Newton et al., 2007), Goal Orientation in Exercise Measure (Duda & Nicholls, 1992), Ryff's (1995) Psychological Well-Being Scale, the positive affect subscale from the Mental Health Continuum (Keyes, 2008), the Enjoyment Subscale (IMI; McAuley et al., 1989), and Commitment to Exercise Scale (Alexandris, Zahariadis, Tsoarbatzoudis, & Grouios, 2002). A canonical correlation analysis was utilized to explore the relationship between motivational climate and goal orientation scores to the four outcome variables. The canonical correlation analysis revealed one statistically significant function, Wilks' Lambda = .578,  $F(20) = 9.349, p < .05$ . The canonical correlation was .54 with 30% overlapping variance. The loadings indicate participants' perceptions of a high caring/task-involving climate at the fitness centers, and high task-orientation, accompanied by a low ego-involving climate, were associated with high levels of psychological well-being, positive affect, exercise enjoyment, and commitment. The benefits of exercising in a caring/task-involving climate extend beyond the health benefits directly associated with exercise, and the benefits of a more pleasant exercise experience via enjoyment and commitment. In fact, the climate may be important for contributing to members' experience heightened psychological well-being. Following members longitudinally to track their perceptions of the climate and their psychological well-being would be a valuable area for future inquiry.

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**Injury/Rehabilitation**


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**171****BRAIN REST AND MTBI***Rose Schnabel, Topmind Performance Center, Canada*

Background: The first treatment recommendations for sports related mTBI is physical and cognitive rest (ONF, 2014). However, literature review findings indicate that there is vague and inconsistent information on the definition of brain rest; in particular, duration, type and frequency required for return to previous cognitive activity (Sternberg and Ivanson, 2014). Recent studies (DiFazio et. al., 2016) indicate that too much brain rest can negatively effect recovery. Social/sensory withdrawals for brain rest to occur may increase pre-existing depression or anxiety. Intuitively, too little brain rest will not allow for full recovery to occur.

The purpose of this study is to provide a systematic literature review of multidisciplinary evidenced-based definition of brain rest. Families and athletes may find it challenging to comply with brain rest recommendations. Providing some clarification brain rest could potentially bridge the gap in developing clear strategies for achieving brain rest and self-management. For example, insight on ideal rest time could possibly reduce post-concussion symptoms and expedite return to play time with minimal social/ emotional effects on injured players.

Methods: Systematic Literature Review of Cognitive Rest and mTBI. using databases of OT, PT, psychology, and neurological disciplines.

Results: The systematic review on the definition of brain rest indicated that emotional, social, and psychological factors are the defining components of brain rest. All studies used for the multidisciplinary review include comprehensive, evidence-informed, population-specific, and practical insight for an operational definition of brain rest.

Conclusion: Initial findings indicate that in addition to a comprehensive definition of brain rest, individual-specific circumstances need to be accounted for in the communication between families, coaches, medical personnel and the athlete for treatment and recovery,

**172****CAN A PROGRAM COMBINING MINDFULNESS AND STRETCHING EXERCISES PREVENT SPORT INJURIES AMONG JUNIOR ELITE SOCCER PLAYERS?**

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*Katri Kylmä, Halmstad University, Sweden*  
*Urban Johnson, Halmstad University, Sweden*  
*Andreas Stenling, Umeå University, Sweden*

To become injured is often related to several negative consequences for the athletes. Examples of negative consequences are decreased well-being, forced termination from sports, and high levels of pain. The aim of this study was to examine the extent to which a mindfulness based intervention could reduce the number of sport injuries in a sample of junior elite soccer players. A total of 34 junior elite soccer players (both males and females), aged between 16 and 19 years, were randomly assigned to a treatment group or an active

control group. The treatment group took part in a 7-session program, where mindfulness techniques were combined with different stretching exercises. The active control group was offered 7-sessions of sport psychology presentations with a particular focus on soccer. The participants experienced 28 acute injuries in total during the study period. The participants in the treatment group had on average 0.65 injuries/person (on average 11.77 days missed from soccer participation), whereas the participants in the control group had on average 1.0 injuries/person (on average 20.35 days missed from soccer participation). A Bayesian regression analysis showed that group was a credible predictor of injury frequency ( $\beta = .18$ , 95% credibility interval = [.04, .32]). This result, which is in line with results from previous studies (e.g., Ivarsson, Johnson, Andersen, Fallby, & Altemyr, 2015), implies that an intervention program focusing on strategies for improving awareness can decrease the risk of becoming injured. Soccer coaches should consider including a combination of mindfulness and stretching exercises into their injury prevention programs.

**173****EFFECTS OF INSTRUCTIONAL SET ON MEASURES OF PSYCHOLOGICAL READINESS TO RETURN TO SPORT AFTER INJURY**

*Nara Kim, Korea University, South Korea*  
*Britton Brewer, Springfield College, USA*  
*Judy Van Raalte, Springfield College, USA*  
*Faith Ide, Springfield College, USA*  
*Andrew Toce, Springfield College, USA*

The "sport ethic" (Hughes & Coakley, 1991) emphasizes the importance of athletes playing through pain and making sacrifices for their sport. Accordingly, some athletes may attempt to portray themselves as more psychologically ready to return to sport than they actually are after injury. It is important, therefore, to devise measures of psychological readiness that are not susceptible to deception. The purpose of this experiment was to examine the effects of instructional set on responses to self-report and non-self-report measures of psychological readiness to return to sport after injury. Participants were 29 undergraduates (23 women, 6 men) who had previously sustained a sport injury that required rehabilitation. After being randomly assigned to the mentally ready (MR), not mentally ready (NMR), or control condition, participants were asked to imagine that they: (a) had sustained a long-term sport injury; (b) were nearing completion of rehabilitation; (c) had been declared physically ready to return to participation in their sport by their sports health care professional; and (d) depending on their condition, that they were mentally ready to return to sport (MR), not ready to return to sport (NMR), or (control). Participants then completed online questionnaires that included exploratory implicit, self-report, and information processing measures of psychological readiness to return to sport after injury. Significant effects of instructional set were found for all 5 of the self-report scales, but only 3 of the 9 implicit and information processing scales. Significant effects were generally in the direction expected, with the scores of participants in the MR group more indicative of psychological readiness to return to sport after injury than those of participants in the NMR group. The findings suggest that self-report measures of psychological readiness to return to sport are transparent to respondents and that development of measures that are less susceptible to deception is warranted.

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**EXAMINING RELATIONSHIPS BETWEEN REHABILITATION UNDER-ADHERENCE, OVER-ADHERENCE, AND STRESS-RELATED GROWTH**

*Megan Granquist, University of La Verne, USA  
Jill Tracey, Wilfrid Laurier University, Canada*

Adherence to sport injury rehabilitation is recognized as an important component for positive rehabilitation outcomes (Niven, 2007; Wadey, Podlog, Galli, & Mellalieu, 2016). Stress-related growth, described as the ability to create positive growth from what can be thought of as a stressful experience, such as a sports injury, has been recognized (Salim, Wadey, & Diss, 2015; Tracey, 2011; Wadey, Evans, Evans, & Mitchell, 2011) and may be an important factor to address during rehabilitation. However, to date there is limited data on the relationship between adherence rates and stress-related growth, yet researchers are encouraging investigation to examine the extent to which injury-related growth occurs and how factors such as adherence might be related (Podlog, Wadey, Stark, Lochbaum, Hannon, & Newton, 2013). Therefore, the purpose of this study was to examine the relationship between self-reported rehabilitation adherence and perceived stress-related growth in athletes who have completed rehabilitation for a sport-related injury. Thirty participants (14 male, 15 female, 1 no-gender-report; mean age 20.43 years) completed the study. Survey measures included the Rehabilitation Adherence Measure for Athletic Training (RAdMAT; Granquist et al., 2010) for under-adherence, the Rehabilitation Overadherence Questionnaire (ROAQ; Podlog et al., 2013) for over-adherence, and the Stress-Related Growth Scale (SRGS; Roesch et al., 2004). Statistical results indicate there is no significant relationship between the RAdMAT or ROAQ and SRGS. Scale means were: RAdMAT 56.6 (range 41-64), ROAQ 25.07 (range 14-42), SRGS 34.27 (range 8-58). Although not statistically significant, males scored higher than females on all measures. Follow-up analysis showed the RAdMAT and ROAQ are inversely related ( $r_s = -0.488, p = 0.013$ ). Future research should explore athletes' reframing rehabilitation as from a performance framework and intervention studies should be conducted examining the utility of and outcomes related to facilitating athletes' reframing of the rehabilitation experience and incorporating stress-related growth.

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**IMPLICIT MEMORY IN HIGH SCHOOL ATHLETES WITH A HISTORY OF CONCUSSION**

*Jamie McAllister-Deitrick, Coastal Carolina University, USA  
Tracey Covassin, Michigan State University, USA*

Little research has explored implicit memory following sport-related concussion (SRC). Previous research, conducted with adult populations, found those athletes with a history of SRC demonstrated markedly reduced implicit memory via the Serial Reaction Time Task (SRTT) compared to control athletes with no history of SRC. At this time, research has yet to explore the effects SRC may have on implicit memory in youth and adolescents; however, research following moderate to severe traumatic brain injury (TBI) in children suggests implicit memory remains intact following TBI. The purpose of the current study was to examine the differences in scores of implicit memory acquisition across concussion history groups (i.e., no concussion, one or more previous concussion(s)) in adolescent athletes. Athletes completed

demographic questionnaires and the SRTT. Utilizing only the first block of the SRTT, 58 high school athletes (26 female, 32 male) reached 90% response accuracy and participated in the current study; 41 had no history of SRC. Further, athletes were removed from analysis if they had a positive implicit memory ratio, suggesting no implicit learning had occurred. A linear regression analysis was used to explain the variance in implicit memory acquisition in adolescents by concussion history. The effect of concussion history on implicit memory was not significant ( $F(1,50) = .250, p = .619, \text{adj. } R^2 = .015$ ). While previous research has demonstrated deficits in implicit memory acquisition in previously concussed, asymptomatic adults, the current study did not replicate these results in an adolescent population. These findings suggest, in adolescents, SRCs may not be associated with implicit memory acquisition, however, more research is warranted.

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**INJURY REHABILITATION IN SPORT: FROM ABSTRACTION TO APPLICATION**

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Stacy Gnacinski, Drake University CPHS, USA  
Barbara Meyer, University of Wisconsin-Milwaukee, USA*

Injury rehabilitation is a common and sometimes arduous experience many athletes encounter. As such, research efforts aimed at optimizing athletes' rehabilitation experience and outcomes have been increasing within sport psychology. Despite these efforts, return to sport outcomes remain suboptimal such that many athletes' injuries result in premature career termination (Arden et al., 2012), failure to return to pre-injury levels of play (Arden et al., 2012), re-injury upon return (Orchard et al., 2005), and associated mental health concerns (e.g., loss of identity, depression [Appaneal et al., 2009]). Although these undesirable outcomes are well documented in literature, and important advances have been made in rehabilitation research, changes in practice to improve the experience and outcomes for athletes remain inconsistent. The abovementioned gap from research to practice is not surprising given the preponderance of literature aimed at understanding philosophies of care and theoretical models of injury rehabilitation, and the dearth of research aimed at exploring concrete professional practice approaches. As such, current research may be lacking in the necessary level of specificity to successfully translate theories to practice (Aoyagi & Poczwardowski, 2013). Consistent with the scientist-practitioner paradigm, there is a need to utilize established philosophies of care and theoretical models to inform development of and changes to professional practice. As such, the purposes of the current lecture are to: (a) provide a historical context for the current philosophies of care and theoretical models of injury rehabilitation; and (b) translate the collection of philosophical and theoretical literature into concrete implications for professionals in practice, and specific areas of inquiry for researchers.

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**MENTAL SKILLS TECHNIQUES FOR INJURED ATHLETES RETURNING TO COMPETITION**

John Walsh, Ball State University, USA  
Ashley Coker-Cranney, USA

Taylor and Taylor's (1997) Return to Play Model demonstrates the physical and psychological steps athletes transition through on their journey back to full health. As every athlete is unique, these steps may not always occur in order and the athlete may not endure each one. However, it is important for athletes to carefully consider the unique aspects of the rehabilitation process they may encounter and understand that this process can be difficult. It also is important that athletes understand the rigor they face mentally throughout the rehabilitation process in addition to the physical struggle. Because the mental side of rehabilitation often is overlooked, we have created a manual that outlines the stages of Taylor and Taylor's Return to Play Model and the mental skills interventions implemented for each respective stage. These interventions are intentionally implemented in their respective stages in order to facilitate the most beneficial outcomes. The stages and mental skills interventions include Initial Return (goal setting; rehabilitation; biofeedback), Recovery Conformation (self-talk: increasing confidence & motivation; social-support-based interventions), Return of Physical & Technical Abilities (imagery; goal setting: back to 100%), High Intensity Training (biofeedback; self-talk: maintaining confidence & motivation), and Return to Competition (relaxation; goal setting: moving forward). We believe this manual can help foster the most positive rehabilitation process possible and allow the athlete to return to his or her respective sport both mentally and physically stronger. In this poster presentation we will present each stage of the Return to Play Model and each intervention designed for that stage.

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**NURTURING SPORT INJURY-RELATED GROWTH: PHASES AND STRATEGIES RECOMMENDED BY SPORT PSYCHOLOGISTS**

Kylie Roy-Davis, University of Roehampton, UK  
Ross Wadey, St Marys University, UK  
Lynne Evans, Cardiff Metropolitan University, UK

Research has demonstrated that sport injury can serve as a means for athletes to experience growth (i.e., 'Sport Injury-Related Growth' [SIRG]; Roy-Davis, Wadey, & Evans, 2017). However, while recent research has developed our understanding of what SIRG means in the lives of injured athletes, we know little about how to facilitate growth. The purpose of this study was to examine how experienced sport psychologists who have worked with injured athletes have nurtured SIRG. Specifically, the aim of this study was to identify the: (a) phases of SIRG development, (b) skills and strategies used to nurture SIRG, and (c) personal and contextual factors that have promoted and/or hindered SIRG. Underpinned by critical realism and modified dualism/objectivism, semi-structured interviews were conducted with 10 purposively sampled sport psychologists (Mage=40.7 years; SD=4.03). Data was analyzed using content analysis. The authors acted as 'critical friends' to each other to encourage reflection upon, and exploration of, alternative explanations and interpretations of the data (Sparkes & Smith, 2014). Findings identified a fluid developmental framework: (a) Reactionary

Phase (i.e., emotional venting), (b) Preparation Phase (i.e., understanding the recovery process), (c) Reflection Phase (i.e., identifying personal values), (d) Application Phase (i.e., investing in personal values), and (e) Monitoring Phase (i.e., observing growth). Within each phase, a corresponding set of skills and strategies were identified (e.g., active listening, reflective practice). Facilitative and impeding factors were also identified and included personal (e.g., level of emotional intelligence) and contextual factors (e.g. sporting culture), with facilitative factors providing positive support that matched athlete's individual needs. These findings extend previous research by offering practitioners who work with injured athletes a developmental framework to nurture SIRG. Future avenues of research and issues associated with SIRG are also discussed.

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**PURPOSE IN LIFE OF ATHLETES ASSOCIATED WITH THE PREVENTION-INTERVENTION PROGRAMME FOR SPORTS INJURIES CONDUCTED IN THE ACADEMIC SPORTS CENTRE IN GDAŃSK**

Marcin Krawczyński, Atheneum University in Gdansk, Poland

Objectives: To assess the effects of a multi-modal intervention programme, including psychological trainings, with injured athletes.

Design: Longitudinal pre-experimental design with 2-weeks follow-up.

Methods: The programme was designed to improve physical, mental, and spiritual well-being and incorporated rehabilitation and relaxation training, combined with seminars that addressed issues of sport psychology, philosophy of life, and social support. Programme participants (n=60) were involved in activities for 10 h a week over a period of 2 weeks and were examined two times: before the programme began and immediately after its completion. One psychological parameter was assessed: a sense of purpose in life by Polish version of Purpose in Life Test (Crumbaugh, Maholic, 1964).

Results: Participants demonstrated statistically significant improvements in all measured psychological variables between the first and second assessment.

Conclusions: Within the limitations of the research design, the programme appeared successful in improving the quality of life of injured athletes.

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**TEMPORAL STABILITY OF MEASURES OF PSYCHOLOGICAL READINESS TO RETURN TO SPORT AFTER INJURY**

Nara Kim, Korea University, South Korea  
Britton Brewer, Springfield College, USA  
Judy Van Raalte, Springfield College, USA

Psychological factors can be important influences on the return to sport after injury, but what it means to be psychologically ready to return to sport is unclear (Forsdyke, Smith, Jones, & Gledhill, 2016). Recent research suggests that athletes who are psychologically ready to return to sport tend to possess realistic expectations, low levels of anxiety, and high levels of confidence and motivation (Podlog, Banham, Wadey, & Hannon, 2015). Little is known about how psychological readiness to return to sport changes over



the course of rehabilitation. Consequently, the purpose of this study was to examine the stability of psychological readiness to return to sport over time during sport injury rehabilitation. Participants were 29 undergraduate student athletes (22 men and 7 women) who had sustained a sport injury that required rehabilitation of two months or longer. Approximately one month after beginning rehabilitation, participants completed a series of questionnaires assessing anxiety, confidence, motivation, and unrealistic expectations pertaining to the return to sport after completion of rehabilitation. Participants completed the questionnaires again approximately one month later. Test-retest correlations over the one-month assessment period were strong for all four proposed aspects of psychological readiness to return to sport after injury. Longitudinal comparisons indicated that all measures were stable over the assessment period, perhaps due to generally high levels of readiness reported at the first administration of the measures. The findings suggest that for athletes as a group, psychological readiness to return to sport after injury may not change dramatically during the rehabilitation process for athletes. Further refinement of measuring instruments is needed, with an emphasis on ensuring sensitivity to acute changes in psychological readiness over the course of rehabilitation.

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### UTILIZING INDIVIDUALIZED EPIC TREATMENT FOR SUSTAINED IMPROVEMENT OF PCSS FOLLOWING MTBI

*Brittany Prijatelj, University Of Utah, USA*  
*Braden Tucker, Cognitive FX, USA*  
*Wing Benjamin, Cognitive FX, USA*  
*Mark Allen, Cognitive FX, USA*  
*Alina Fong, Cognitive FX, USA*

Current treatment guidelines for mild traumatic brain injury (mTBI) center on limiting physical and cognitive activity while reducing exposure to symptom-aggravating stimuli until it is deemed that the patient has returned to normal function. Although promoting patient recovery from some mTBI symptoms, this treatment approach may fail to address longitudinal alterations in cognitive, occupational, emotional, and neuromuscular function. Consequently, there is need for a therapeutic approach that addresses the prolonged symptomatic model, post-concussion syndrome (PCS). We aim to provide practice-based evidence supporting our enhanced performance in cognition (EPIC) care treatment program that utilizes objective, functional neurocognitive imaging (fNCI) in tandem with conventional post-concussion symptom scale (PCSS) measurements to direct therapeutic efforts. The power of such an approach may successfully address persistent cognitive, occupational, emotional, and neuromuscular dysfunction through individualized, targeted therapy. 270 mTBI patients were assessed pre- and post-treatment using both objective (fNCI) and subjective (PCSS) measures, establishing pre-treatment benchmarks to measure therapeutic effectiveness. PCSS surveys were weighted according to symptomatic severity using a standardized concussion assessment protocol. Based upon objective and subjective measures, a targeted, sustained, cyclical, and multimethod therapeutic approach was structured for each patient and conducted over a consecutive, multiday period. Self-reported PCSS measures display a symptomatic

improvement of at least 50% in 87% of patients. fNCI-directed measures reported an average improvement in cognitive activation of 73%. Observations in longitudinal reassessment continue to show maintained improvement for both fNCI and PCSS measures on average 8.6 months post-treatment. We present an evidenced-based practice that combines the standardized power of PCSS measurements with the objective reliability of fNCI in the therapeutic treatment of PCS. Combining these reliable measurement techniques, we have successfully developed an individualized cognitive, occupational, emotional, and neuromuscular therapy showing significant and accelerated improvement in a large patient sample across both measures.

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## Mental Health

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### ATHLETIC IDENTITY AS A PREDICTOR OF SELF-CONCEPT CLARITY IN TRANSITIONING ATHLETES

*Brittany Calaluca, Barry University, USA*  
*Brittney Damato, Barry University, USA*  
*Thomas Andriani, Barry University, USA*  
*Heather Kiefer, Florida State University, USA*  
*Kimberly Cologgi, Barry University, USA*

The purpose of the study was to examine relationships among athletic identity, reason for retirement, self-concept clarity, and loneliness during the transition process out of competitive athletics. The study was a large comprehensive sample of over 200 former high school athletes no more than 12 months removed from their last competitive event. Self-concept clarity and loneliness were chosen as outcome variables due to the highly social nature of sport, and known literature supporting role exits effects on overall self-concept (Light and Visser, 2013). Results showed that athletic identity significantly and negatively predicted the self-concept clarity of transitioning athletes. Additionally, athletes retiring for voluntary reasons showed higher self-concept clarity during the transition phase, as compared to athletes involuntarily ending their sporting careers. Self-concept clarity moderated the relationship between athletic identity and loneliness. Understanding the factors that contribute to an athlete's self-concept clarity and loneliness during the transition process allows practitioners to take a proactive approach by preventing some of the negative consequences associated with these variables including low self-esteem, neuroticism, negative affect, depression, and anxiety (Campbell, 1996).

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**IMPLEMENTATION OF A MULTI-COMPONENT MENTAL HEALTH PROGRAM FOR ADOLESCENT MALE ATHLETES IN COMMUNITY SPORTING CLUBS**

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 Andrea Fogarty, *Black Dog Institute and University of New South Wales, Australia*  
 Christian Swann, *University of Wollongong, Australia*  
 Matthew Schweickle, *University of Wollongong, Australia*  
 Helen Ferguson, *University of Wollongong, Australia*  
 Jo Telenta, *Australian Catholic University, Australia*  
 Sandra C. Jones, *Australian Catholic University, Australia*  
 Frank Deane, *University of Wollongong, Australia*  
 Diarmuid Hurley, *University of Wollongong, Australia*  
 Sarah Liddle, *University of Wollongong, Australia*  
 Katherine Boydell, *Black Dog Institute and University of New South Wales, Australia*

**Background and objective:** Half of all mental health problems have their onset before the age of 14, yet adult men often report significant and harmful delays in help-seeking. Given this, young adolescent men are at high risk of mental health problems and suicide. Ahead of the Game is a multi-component intervention aimed at reducing the risk of mental health problems and promoting wellbeing in adolescent males by engaging with athletes aged 12 to 17 years, coaches, parents and the extended community in grass-roots sports clubs. For optimal knowledge translation outcomes, it is essential to develop and test implementation strategies in different community contexts to understand the feasibility of the intervention and the barriers and facilitators to uptake.

**Methods:** Ahead of the game was implemented in over 40 sports clubs, academies of sport, and sports high schools. Guided by the RE-AIM framework (reach, efficacy, adoption, implementation, maintenance), a multi-level evaluation of multiple implementation strategies was undertaken. Data include interviews with key stakeholders, pre-post data on primary and secondary outcomes, and data on expenditure for each implementation strategy.

**Results:** Clear and significant barriers exist in the implementation of a mental health program in community sporting clubs. Nonetheless, top-down processes appear to be more cost-effective to implement, and may also result in greater uptake and engagement than bottom-up processes. However, there is a trade-off between the use of top-down processes and potential reach of the programs.

**Conclusion:** Strong, evidence-based evaluations of multiple implementation strategies can help to inform effective knowledge translation in the area of sports-based mental health promotion. This information is critical for researchers, practitioners, and administrators who seek to implement mental health programs in sport.

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**“MAN UP!”: INTERSECTIONS OF SPORT PARTICIPATION, MASCULINITY, AND PSYCHOLOGICAL DISTRESS**

Joey Ramaeker, *Iowa State University, USA*  
 Trent Petrie, *University of North Texas, USA*

Masculinity has been identified as a domain of empirical and clinical importance (e.g., Levant, 2011), and contemporary views have explored how socialized masculine ideologies influence, particularly negatively, the lives of men (Smiler,

2004). Adherence to traditional masculine norms has been inversely associated with life satisfaction yet positively related to psychological distress and substance use (e.g., Blazina & Watkins, 1996; Schopp et al., 2006). Though sport has been conceptualized as an environment in which hyper-masculine ideologies (e.g., indifference to pain) are learned and reinforced (Messner, 1992) few studies have explored how, or if, masculinity differs between athletes and nonathletes and the ways in which masculine ideologies relate to their experience of psychological distress.

Based on samples of male collegiate athletes ( $n = 220$ ) and nonathletes ( $n = 205$ ), the present study explored (a) differences in masculinity between male athletes and nonathletes; and (b) relations between masculinity and psychological/behavioral outcomes (e.g., depression, substance abuse) in athletes and nonathletes. Multivariate analyses indicated that athletes endorsed greater conformity to masculine norms,  $F(1,421) = 100.85$ ,  $p < .001$ , and experienced more gender role conflict,  $F(1, 421) = 23.27$ ,  $p < .001$ , than nonathletes. Greater conformity to masculine norms, but not role conflict, predicted increased alcohol use (athletes  $\text{Adj. } R^2 = .072$ ,  $F[2, 217] = 9.52$ ,  $p < .001$  vs. nonathletes,  $\text{Adj. } R^2 = .206$ ,  $F[2, 200] = 27.26$ ,  $p < .001$ ); both role conflict (e.g., conflict between work and family) and norm conformity predicted depressive symptomatology (athletes,  $\text{Adj. } R^2 = .135$ ,  $F[3, 216] = 12.14$ ,  $p < .001$  vs. nonathletes,  $\text{Adj. } R^2 = .234$ ,  $F[3, 199] = 20.27$ ,  $p < .001$ ). Results suggest that other factors (e.g., pressure to perform, time restrictions) should be considered to better understand these behaviors in male athletes.

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**PERSONALITY DIMENSIONS OF AN EXERCISE ADDICT**

Dalit Lev Arey, *Tel Aviv Academic College, Israel*  
 Klary Gisler, *Tel Aviv Academic College, Israel*  
 Gil Goldzweig, *The Academic College of Tel Aviv-Yaffo, Israel*

Exercise has favorable effects on people's physical health and mental well-being. However, excessive exercise may elevate negative consequences (e.g., physical injuries, negligence of everyday responsibilities). Lately, there has been growing interest in exercise addiction, defined as craving for physical activity that results in extreme workout sessions and generates negative physiological and psychological symptoms (e.g., withdrawal symptoms, tolerance, and social conflict). Exercise addiction is conceptualized as a behavioral addiction, yet it is not included in the DSM-IV, mostly due to lack of significant research. Specifically, there is scarce research on the relationship between exercise addiction and personality dimensions. The purpose of the current study was to examine the relationship between primary exercise addiction symptoms and: three of the 'Big Five' dimensions (Neuroticism, Conscientiousness and Extroversion), Perfectionism and Subjective-Affect. Participants were 152 trainees (running, cycling, swimming), who worked out for a minimum of 5 hours per week, for at least a year. Participants answered the EDS-R (Exercise Dependent Scale-Revised), Mini-IPIP ("Big Five" measure), PANAS (Negative Affectivity), SAPS (Perfectionism measure) and EAT-26 (Risk for Eating Disorder measure). Hierarchical linear regression with forced blocks entry was performed. Results indicated that Neuroticism and Conscientiousness significantly and uniquely predicted exercise addiction symptoms (11% of the variance,  $p < 0.001$ ; 9% of the variance,  $p < 0.05$ , respectively). Extroversion did not have any contribution to the model. Perfectionism and Negative-Affect had a significant correlation with exercise dependent

symptoms, but did not have unique contribution to the model. Unexpectedly, family status had a unique contribution prediction (10% of the variance,  $p < 0.05$ ); divorced and single people were at a higher risk for addiction compared to married people. Overall, the model explained 30% of the variance in exercise addiction. Conclusions: Emotional instability and negative affectivity (Neuroticism), as well as lack of control and impulsiveness (low Consciousness) are risk factors for exercise addiction.

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### **TENNIS: WE WON THE DAVIS CUP BUT WE CAN'T WIN FED. CUP MATCHES! WHATSUPP? FATHERS; MOTHERS AND DAUGHTERS!**

*Patricia Wightman Wortelboer, CENARD: Argentine National Training Center for Elite Athletes, Argentina*

Although the majority of children experience positive benefits from sport participation, some experience abusive behaviors in the sport context. Lack of intervention studies, or even applied initiatives, within junior performance tennis is surprising, given the depth of research that has explored parental involvement (Harwood & Knight, 2012). Negative parent behaviors include overemphasizing winning, holding unrealistic expectations, and criticizing their child. (Gould et al 2006). Relational maltreatment: physical, sexual, emotional abuse, occurs when there are abusive behaviors within a critical relationship in which one individual is dependent, fully or in part, on another individual for her or his sense of safety, trust and fulfillment of needs Crooks & Wolfe, 2007. This year's Australian Open 2017 highlighted various international women tennis players who had experienced parental abuse. During adolescence it is important to understand and manage female athletes preferences for parental behavior because a decrease in girls participation in sports is common (Statistics Canada, 2008). Five cases of relational maltreatment are registered in tennis Sport Psychology Assessment (SPA) in the Argentine National Training Center, Elite Athletes. All of these players were physically abused by their fathers. They were all WTA/ITF players standing in top world positions. Three of these with exposure to parental intimate partner violence previously which led to divorce. No such records exist with male players which may be the cause of Davis Cup results. The purpose of the present study is to emphasize SPA experiences with abuse: often working on a one-to-one basis athletes disclose their experiences or feelings of emotional distress. Leahy (2008). SPA must understand how to manage these situations. Given the duty of care for the well-being of athletes (Association for Applied Sport Psychology), a working knowledge of child/adolescent protection issues within this population is critical. The consequences with these five players will be discussed.

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### **THE MARGINALIZATION OF PHYSICAL ACTIVITY: PSYCHICAL AND PSYCHOLOGICAL RESULTS**

*Brian Butki, Colorado State University, USA*

According to the Surgeon General, childhood obesity and its comorbidities are the primary health concern in the United States. Currently, over 35 million America children are overweight or obese, and this number increases annually. As schools are a very important behavioral influence on childhood development, the information (and behaviors) children experience in schools are important factors in changing

health behaviors. Over the past several years, the role of physical activity (and physical education) has been declining in the schools, and it is likely that the perceived importance of physical activity is declining as well. The purpose of this study was to examine changes in physical education instruction in American schools in light of the childhood obesity epidemic and the concurrent changes in perceptions about the importance of physical activity for development among elementary school students. As an example, the state of Colorado, until recently the least obese state in the US, has been steadily falling in the rankings over the past several years, and now sits in the middle of the US relative to childhood obesity rates. Curriculum changes, including both physical education classes and physical activity opportunities, were reviewed and compared to curricula from 1975, before the obesity trend became apparent. Further, long-term teachers (minimum 20 yrs experience) were interviewed from several elementary school regarding their perceptions about physical activity in the schools, including relevance to academic and personal performance. Finally, elementary school students were interviewed to examine their attitudes about the importance of physical activity relative to both physical and mental health. Results are discussed relative to the impact of curriculum changes on perceived importance by students, and the lifelong physical and psychological impact of childhood physical activity behaviors.

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### **TRANSITIONING FROM SPORT: RETIREMENT AND FORMER FEMALE COLLEGIATE ATHLETES' SATISFACTION WITH LIFE, DEPRESSIVE SYMPTOMATOLOGY, AND BODY SATISFACTION**

*Karolina Wartalowicz, University of North Texas, USA  
Trent Petrie, University of North Texas, USA*

Retirement from elite sport can be highly distressing for athletes, and many athletes report elevated depression and anxiety or body dissatisfaction when going through this transition (e.g., Rice et al., 2016). Factors that appear to be important in determining a higher level of adjustment in retirement include feeling in control of when and how retirement occurs, planning occupationally for after sport, and having achieved sport goals, to name a few. Thus, we examined how such factors related to former female collegiate athletes ( $N = 218$ ) satisfaction with life, depression, and body satisfaction. Two to six years post retirement, athletes completed an online questionnaire that measured their Satisfaction with Life (Diener et al., 1985), depressive symptomatology (Kroenke et al., 2001), and body satisfaction (Petrie et al., 2002); retirement factors were measured by the 12-items from the BALANCE scale (Lavalle & Wylleman, 1999). Through regression analyses, we examined the extent to which each of the 12 retirement factors was related to life satisfaction, depression, and body satisfaction; time since retirement was unrelated to these outcomes. For life satisfaction (Adj.  $R^2 = .29$ ), significant predictors were achievement of sport goals ( $\beta = .17$ ) and having a new focus after retirement ( $\beta = .35$ ). Lower levels of depressive symptoms (Adj.  $R^2 = .26$ ) were predicted by continued involvement in sport ( $\beta = -.19$ ), achievement of sport goals ( $\beta = -.30$ ), and having a new focus ( $\beta = -.20$ ). For body satisfaction (Adj.  $R^2 = .17$ ), continued involvement in sport ( $\beta = .26$ ), identity foreclosure ( $\beta = .17$ ), and having a new focus ( $\beta = .19$ ) were significant predictors. Across the three outcomes, having a new focus after retirement, achievement of goals in sport, and remaining involved in sport were most important. Future research might address the transition immediately following retirement.

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**Non-Sport Performance Applications**


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**189****FROM THE COURT TO THE STAGE: UTILIZATION OF COGNITIVE STRATEGIES FOR MANAGING AUDITION ANXIETY IN THEATRE STUDENTS**

*Elizabeth Pacioles, Marshall University, USA*  
*Nicole Perrone, Marshall University, USA*

Just as tryouts may be career changing and anxiety provoking for athletes, auditions commonly elicit performance anxiety for actors and actresses. The purpose of this exploratory study was to assess the utilization of cognitive strategies for managing performance anxiety, typically used with athletes, in audition situations for theatre students. It was predicted that using cognitive strategies would be related to lower anxiety and an increase in self-reported ability to manage anxiety. Eight college students in a theatre auditions class participated in a 75-minute workshop introducing cognitive strategies for managing performance anxiety, including reframing physical symptoms, best performance imagery, shifting from outcome- to task-focused thinking, identifying intrinsic motivations for performance, and using a mantra. Over the course of an eight week period and five in-class mock auditions, participants reported anxiety levels, impact of anxiety on performance, utilization of the cognitive strategies, ability to manage anxiety, and provided written comments on their audition experiences. Results showed that shifting from outcome-focused thinking to task-focused thinking was the most utilized strategy, whereas reframing physical symptoms was the least utilized strategy. Specific strategies were related to level and management of anxiety. For example, using a mantra was related to lower anxiety levels. Use of task-focused thinking and best performance imagery were related to an increase in ability to manage anxiety. This study provides an example of how sport psychology strategies can be applied in other performance settings. Further research is necessary to assess the similarities and differences in how athletes and performing artists utilize cognitive strategies. In addition, trials assessing the impact of specific cognitive strategies on anxiety and performance outcomes in theatre students will help to guide development of effective interventions for managing performance anxiety in this group.

**190****IMPLEMENTATION AND EVALUATION OF A PERFORMANCE PROFILE INTERVENTION WITH COLLEGIATE DANCERS: A COMPARISON BETWEEN THE ORIGINAL AND REVISED PERFORMANCE PROFILING PROCEDURES**

*Elmer Castillo, Florida State University, USA*  
*Graig Chow, Florida State University, USA*

Since its inception nearly three decades ago, the performance profile technique has undergone several modifications and been employed exclusively in the sport domain. Hence, the purpose of this pilot study was to extend the application of the performance profile technique to dance performance and to systematically compare the utility and efficacy of the original performance profile procedure (Butler & Hardy, 1992) with the revised performance profile procedure (Gucciardi & Gordon, 2009). A systematic intervention protocol was developed for each performance profiling procedure and utilized to guide the implementation of the intervention.

Participants were four college-level dancers (3 belly dancers, 1 circus dancer) who were randomly allocated into one of two intervention conditions – original PP (n = 2) or revised PP group (n = 2). The specific outcomes evaluated were intrinsic motivation and self-awareness, measured by a dance-modified version of the behavioral regulation in sport questionnaire (BRSQ; Lonsdale, Hodge, & Rose, 2008) and a self-awareness measure developed from a review of the performance profiling literature, respectively. Additionally, a dance-modified version of the athlete performance profile questionnaire (APPQ; Weston, Greenlees, & Thelwell, 2011) was employed as a post-workshop evaluation to quantify the impact of the performance profile session from a dancer's perspective. Comparison of descriptive statistics revealed that both intervention groups increased scores on various intrinsic motivation subscales and self-awareness. Furthermore, both groups perceived the performance profile as being useful and felt that they would benefit from a similar session in the future. Applied implications and future directions are discussed.

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**Professional Development, Supervision, and Mentoring**


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**191****ARE CLUB SPORTS A VIABLE OPTION FOR GAINING APPLIED SPORT PSYCHOLOGY EXPERIENCE? PERSPECTIVES FROM A SEMESTER-LONG INTERNSHIP**

*Jeffrey Ruser, California State University, Fresno, USA*  
*Nimarta Grewal, California State University, Fresno, USA*  
*Tyler Baxley, California State University, Fresno, USA*  
*Michaela McLean, California State University, Fresno, USA*  
*George Robinson, California State University, Fresno, USA*  
*Jenelle Gilbert, California State University, Fresno, USA*

Sport psychology graduate students desire to consult with athletes as early as possible in their program (Durand-Bush & Bloom, 2001). However, graduate students' novice status, coupled with the importance of winning in competitive sport may lead coaches to favor more experienced sport psychology professionals. According to Fitzpatrick, Monda, and Wooding (2016), graduate students should consider seeking supervised opportunities in "diverse settings." One such setting, which may still afford the opportunity to work with competitive athletes is Club Sports. Therefore, the purpose of the presentation is to present the experiences of a graduate student group who interned within the Club Sport setting and to discuss the viability of using Club Sports to gain supervised consulting experience. Club Sports provide college students with opportunities to have competitive athletic experiences at the collegiate level. Because these teams are not sanctioned by the NCAA or NAIA, sport psychology professionals working within the Club Sport setting face no restrictions related to interacting with student-athletes at practice or competition. This affords greater access to student-athletes and purposeful, real-time discussion. However, Club Sport teams are established and run by college students, who are in charge of organizing and managing team practices, meetings, competitions, budgets, and fundraisers, while simultaneously attending school full-time. Because of this, attendance at training events and overall sport commitment wane and present a serious challenge to establishing a consistent, systematic approach of applied sport psychology consulting. This and other challenges associated with the Club Sport context (e.g., accountability, conflict of interest, lack of communication, stated interest vs. buy-in, time management, etc.) will be discussed with a goal of sharing lessons learned.

It is anticipated that this presentation will prepare other sport psychology supervisors and their graduate student interns should they decide to explore the Club Sport setting for the attainment of supervised consulting hours.

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### EVALUATING STUDENT-ATHLETE LEADERSHIP DEVELOPMENT

*Alyssa Lombardi, Kansas State University, USA*  
*Ian Connole, K-State Athletics, USA*  
*Cori Pinkett, Kansas State University, USA*  
*Lisa Rubin, Kansas State University, USA*  
*Brian Weber, Kansas State University, USA*  
*Heather Papp, Kansas State University, USA*

Three years ago, the inaugural Leadership Academy class stepped into its first meeting together. Through monthly meetings, student-athletes learned their strengths and how to apply them into team settings. Through lessons taught by the program's co-founders (Director of Sport Psychology & Director of Student-Athlete Development), student-athletes were able to develop their leadership style in their respective sports. I know this, because I was one of these student-athletes. But how can someone who did not have this experience know what the impact was? How, as practitioners, can we evaluate leadership programming? This presentation addresses these challenges through presenting the evolution of three years' worth of evaluation of student-athlete leadership development.

Research has shown that evaluation is a central part of leadership development (Kennedy, Carroll, & Francoeur, 2012). Throughout this program, yearly qualitative interviews assessed self-perceptions of leadership growth and the impact of the Leadership Academy. Originally, Janssen's (2007) Team Leadership Evaluation, a 24-question survey assessing vocal leadership and leadership by example, was used as part of a 360° student leadership evaluation. Additionally, the Sport Leadership Behavior Inventory (SLBI) (Glenn & Horn, 1993) was utilized to triangulate data with qualitative findings, but results were limited and the program discontinued the use of the SLBI. In order to find a more easily applied and empirically validated approach to quantitative assessment of student-athlete leadership, the Leadership Academy moved to the Leadership Practices Inventory (Student LPI) for 360° student leadership evaluation (collecting data from leaders, peers, and coaches). The Student LPI assesses five leadership practices: modeling the way, inspiring a shared vision, challenging the process, enabling others, and encouraging the heart (Kouzes, 2014). Evaluating leadership development and its impact is a challenging yet important process. Throughout this presentation we will share lessons learned to help others further evaluate both leadership programs and their participants' development.

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### WHAT ARE SPORTS PSYCHOLOGY PRACTITIONERS REPORTING AS IMPORTANT ELEMENTS TO THEIR SERVICE DELIVERY?

*Andrew Friesen, University of Wolverhampton, UK*  
*Chantale Lussier, Elysian Insight, Canada*  
*Tracey Devonport, University of Wolverhampton, UK*

A sports psychology practitioner's professional philosophy can and should have a tremendous influence on how they practice. This influence can be manifested in the relationships with athletes and coaches, intervention goals, and the strategies they teach athletes to use to manage their psychological performance. Therefore, research that explores professional philosophies in performance psychology is an important endeavour. Many practitioners have published case studies, reflections, or have been interviewed about their professional philosophies (e.g., Friesen & Orlick, 2010; Lindsay, Breckon, Thomas, & Maynard, 2007). Other scholars have discussed the importance of professional philosophies from a broader perspective (e.g., Aoyagi, 2013; Poczwardowski, Sherman, & Ravizza, 2004). Recognizing this importance, we are completing a systematic review of applied sports psychology practitioners' professional philosophies as reported in scholarly literature. The systematic review was completed according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. A comprehensive search of the SPORTDiscus, PsychINFO, MEDLINE, and Psychology and Behavioural Sciences databases from (2010-2016) yielded 2,270 articles of which, 251 remained after title screening. In synthesising findings, we will be reporting three specific pieces of information: (a) We will identify the most commonly reported elements of practitioner philosophies that inform subsequent intervention goals and strategies; (b) We will detail new components of professional philosophies that have not been previously considered in the sports psychology literature; (c) We will provide an assessment of the quality of published reports in terms of whether or not authors have provided adequate information on their professional philosophies to help readers understand the professional judgement and decision making that guides their practice. Implications from the study will be presented and addressed to practitioners, researchers of applied practice, and academic journal editors.

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#### Professional Issues & Ethics

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## 194

### METHODOLOGICAL CONSIDERATIONS FOR INTERCOLLEGIATE RESEARCH WITH ATHLETES

*Kate Hibbard-Gibbons, Western Michigan University, USA*  
*Mark St. Martin, Western Michigan University, USA*  
*Zeljka Vidic, Western Michigan University, USA*

It is not uncommon to encounter challenges in research with student athletes due to the constraints within several interconnected systems, such as the university academic and athletic departments, institutional review boards, and the NCAA. Challenges in research include student-athletes' lack of time to participate in research, fear that research outcomes

will lead to negative perceptions of the university, difficulty presenting unfavorable results to stakeholders, and an over-reliance on single administration due to limited access to student-athletes (Coakley, 2008; Petrie & Falkstein, 2008). In 2008, Coakley highlighted the challenges in navigating these issues. However, since that time, there has not been an updated literature review that provides a discussion of the methodological challenges encountered when assessing student-athletes. Therefore, the purpose of this poster is three-fold. First, an updated review of the literature on methodological challenges commonly encountered will be provided. It is important that psychologists in the field of sport continue to have discussions about how to effectively and efficiently gather data with college athletes. Second, the learned experiences of researchers who have developed effective and efficient methods of accessing, recruiting, and retaining student-athlete participants for research will be described. It is critical that practitioners and researchers reflect on their learned experiences in research and share that knowledge to promote the success of other researchers. Finally, in line with the mission to promote the development of science, recommendations for overcoming research barriers when working with student-athletes will be provided.

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#### Research Design

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**195**

**ARE THERE BAD WINS AND GOOD LOSSES? OUTCOME EFFECTS IN SPORT**

*Richard Inglis, Florida State University, USA*

Performance outcomes have been shown to distort feeling states, performance evaluations, and subsequent performances. This retrospective distortion represents an outcome bias; a phenomenon that has been studied extensively in a wide array of disciplines and domains. However, the effects of performance outcomes have received little attention in the sport corpus. To remedy this oversight, 60 participants with basketball experience were recruited to take part in a free throw shooting competition. Participants completed two rounds of 20 free throws. Following their first round, they were randomly assigned to either a negative outcome (lose by one shot) or a positive outcome (win by one shot). Subsequently, participants were asked to reflect on their first round performance and to respond to a modified version of the CSAI-2 and a performance evaluation item. It was hypothesized that the positive outcome group would rate their performance as better, report lower levels of cognitive anxiety and higher levels of self-confidence, and improve their score in a subsequent shooting trial. The analyses failed to support these hypotheses. However, a Cohen's *d* coefficients revealed a medium effect on cognitive anxiety in the hypothesized direction. Further, outcome had a medium effect on future performance. Males who received a positive outcome following round 1 performed better in round 2 and vice versa. These results provide some support for an outcome bias. In light of these findings, implications for practitioners and other sport professionals are offered and lines of future research are recommended.

**196**

**QUANTIFYING THE FLOW ZONE THROUGH ADVANCES IN MODERN MEASUREMENT**

*Damon Bryant, LDAA/MVR, USA*

The purpose of this work is to present a complementary view of flow theory from a psychometric perspective. The focus is on one of the important precursors to entering the flow state: challenge-skill balance. This complementary view is explained using modern measurement models from item response theory. Key concepts from flow theory (i.e., challenge, skill, and challenge-skill balance) are defined in modern measurement terms. Specifically, skills are psychometrically defined as theta in the one-dimensional case and theta vector in the multidimensional case. Challenge is defined as an item with a certain level of difficulty and discrimination. More importantly, challenge-skill balance is operationalized in terms of the location on the theta scale where maximum information is achieved for an item (i.e., the optimal interaction or match between the skills of a person and a challenge). Bryant's theta maximum (Psychometrika, 2005) is proposed as the metric for challenge-skill balance in both unidimensional and multidimensional cases. Implications for future research are discussed.

**197**

**REPORTED COGNITIVE APPRAISAL, MENTAL EFFORT, CORTISOL RESPONSE AND SHOOTING PERFORMANCE**

*Claire Rossato, University of Greenwich, UK  
Itay Basevitch, Anglia Ruskin University, UK*

Identifying and understanding stressors has become an important area within sport psychology (Thatcher & Day, 2008). Furthermore, it has been suggested that stressors encountered in a sporting situation can have an impact upon performance (Wagstaff, Fletcher & Hanton, 2012); in particular, cognitive appraisals and the resources available to cope with the demands of the task. The Theory of Challenge and Threat in Athletes model (TCTSA; Jones et al, 2009) indicate that neuroendocrine responses such as noradrenaline, adrenaline and cortisol release are associated with Challenge and Threat appraisal within Athletes. In addition it has also been suggested that mental effort will decrease with a Challenge state (Jones et al, 2009), however this has been seldom examined within the literature. The aim of this study was to explore whether there was any association between Challenge and Threat appraisal, mental effort self-report, cortisol response and shooting performance. Thirty nine participants (mean age=25.16, SD=2.01) included within the study gave self-report of Challenge and Threat (Cognitive Appraisal Ratio (CAR); Tomaka et al, 1993) and mental effort (Rating Scale Mental Effort (RSME; Zijstra, 1993). In addition, cortisol responses were measured pre and post a shooting performance task within a laboratory setting. Data analysis suggested there was a significant correlation observed between report on the CAR and cortisol response ( $r=.38$ ,  $p<0.05$ ) and cortisol response and mental effort ( $r=-.40$ ,  $p<0.05$ ). However there was no significant relationship with performance ( $p>0.05$ ). This data suggested that a decrease in mental effort is potentially associated with Threat based upon cortisol response and self-report of Threat is positively associated with cortisol response. However performance data is not linked to Challenge, Threat, cortisol response or mental effort in this instance. Further studies should examine adrenaline and cortisol response to self-report measures of stress appraisal and sporting performance.

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**Tactical Populations**

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**198**

**ACING ARMY SCHOOLS: INTEGRATING PERFORMANCE ENHANCEMENT TRAINING & ACADEMIC PERFORMANCE TRAINING WITH AN ARMY INFANTRY UNIT**

*Daniel Abrams, SAIC, USA  
Arlene Bauer, Science Applications International Corporation (SAIC)  
Marc Stevens, AFSC/Magellan Federal, USA*

While over ninety percent of active-duty military personnel are high school graduates, fewer than eighteen percent are college graduates (Taylor et al., 2011) implicating a lack of organizational and test-taking skills necessary to succeed in Army schoolhouse settings. Over the course of eight months, soldiers in a long-range surveillance infantry unit located at Fort Hood, TX, received training from Master Resilience Trainer – Performance Experts (MRT-PE's) who integrated Performance Enhancement Training (PET) and Academic Performance Training (APT) in preparation for attending a multitude of Army schools.

APT skills assist soldiers in passing academically rigorous Army courses. Lessons and skills include: Learning Mindset, Plan and Prioritize, Study Effort, Memory, Active Reading, Note Taking, Peer Learning, and Test-Taking.

PET is designed for soldiers to maximize their readiness by learning and internalizing sport psychology mental skills to enhance skill development during training and execution during performance. Lessons and skills include: Mental Skills Foundations, Building Confidence, Attention Control, Energy Management, and Integrating Imagery.

Rationale for the integration of APT and PET was twofold. First, skills in each training supplement one another. Second, skills in both trainings require deliberate practice involving planning, monitoring, and evaluating of one's own progress (Ericsson, Krampe, & Tesch-Römer, 1993). Results indicate soldiers who received integrated training prior to attending Army schools either met or exceeded historical pass rates.

The poster will contain a table that highlights the type of Army school, number of soldiers receiving integrated training, and number of soldiers passing compared to traditional Army pass rates. The poster will also describe the integrated training to include learning objectives, teaching methods, and materials used.

*References: Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. Psychological review, 100(3), 363.*

*Taylor, P., Morin, R., Parker, K., Cohn, D., Funk, C., & Mokrzycki, M. (2011). The Military-Civilian Gap: War and Sacrifice in the Post-9/11 era. Pew Research Center: Washington, D.C.*

**199**

**AN EXPLORATION OF THE USE OF JOURNALING TO INTRODUCE MENTAL SKILLS TRAINING AND DELIBERATE PRACTICE TO ACTIVE DUTY SOLDIERS AND VETERANS AT AN ARMY REGIONAL TRIALS FOR WARRIOR GAMES**

*Jennifer Knight, AFSC/Magellan Federal, USA  
John Stubbs, AFSC/Magellan Federal, USA  
Derek Bearsto, AFSC/Magellan Federal, USA*

DoD Warrior Games is a competitive opportunity in adaptive sports for wounded, ill, and injured active duty and veteran populations of different service branches, including the U.S. Army. Athletes compete in multiple sports over the course of a week. The U.S. Army stages 3 Regional Trials in the Fall, in order to choose pool to compete in March at Army Trials, from which a team will be chosen to represent the Army in Chicago in 2017 at the Warrior Games. Sport Psychology Consultants were on-site for the week of Regional Trials at Ft. Hood, Texas with the purpose to introduce the role of sport psychology consultants and mental skills training to athletes in the hope the athletes would be motivated to incorporate sport psychology into their training during the 6 months leading to Army Trials and subsequent 3 months leading up to Warrior Games. The 50 athletes in attendance were from many locations, varied in their sport backgrounds, knowledge of sport psychology, and the majority were new to the Warrior Games process. Schedules were intense with either a competition or training with coaches scheduled each morning, afternoon, and several evenings for the week, as well as additional formal social events on alternate evenings. Sport Psychology practitioners focused on building rapport, explaining how to incorporate mental skills after the competition, and normalizing a deliberate approach to each training. In order to reach these goals, the consultants decided on the use of journals. The created training journals allowed options for daily pre-training and post-training reflection exercises. Anecdotally, athletes and coaches noted the journals allowed for reset before training, increased self-awareness, developed strategies, identified focus for practices, organized thoughts, solidified techniques, and enjoyment of the process. This poster will highlight purpose, contents, and usage of journal throughout the week of Regional Trials.

**200**

**DOING A TEST OF THE TESTS: ARE STANDARDIZED US ARMY PERFORMANCE MEASURES A TRUE INDICATOR OF COMBAT PERFORMANCE?**

*Fiona Purcell, SAIC, USA*

A Soldier in the United States Army is considered a high performer if he/she performs well on standardized tests, specifically the Army Physical Fitness Test (APFT) and Basic Rifle Marksmanship (BRM). The APFT is designed to ensure maintenance of a base level of fitness essential for every Soldier and is a measure of muscular endurance through the Soldier's ability to handle his/her own body weight during physical tasks (FM 7-22, October 2012). BRM is based on the concept of marksmanship as the paramount Soldier skill, and Soldiers should understand common firing principles and be confident in applying their firing skills in combat. A Parachute Infantry Regiment Battalion Commander designed a training

exercise to examine if when a Soldier is placed under extreme physical and cognitive stress (e.g., combat situation), his/her APFT and BRM score are true indicators of performance, or whether performance is a combination of technical, tactical and mental skills. Therefore, the Performance Coaches (PCs) were asked to assist with the training exercise by reinforcing skills that have been taught over the past 9-12 months with Soldiers, specifically Imagery and Deliberate Breathing. Prior to the Soldiers receiving instructions to complete the training exercise, the PCs encouraged the Soldiers to use opportunities throughout the training exercise to engage in Imagery and Deliberate Breathing. The PCs observed the Soldiers during the exercise, paying close attention to their use of the mental skills. After the exercise was complete, the PCs asked the Soldiers questions about their use of Imagery and Deliberate Breathing and their thoughts during the exercise. The results of the training exercise indicate that the Soldiers who scored highest on this exercise did not have the highest AFPT or BRM scores, but they did have the most effective mindset (Dweck, 2006) and utilized Imagery and Deliberate Breathing during the exercise.

## 201

### ENHANCING THE RESILIENCE AND OVERALL PERFORMANCE OF CADETS UNDER STRESS

*Bernice Lin Ying Goh, The Republic of Singapore Air Force (RSAF), Singapore*  
*Kenneth Wee, Republic of Singapore Air Force, Singapore*

The Republic of Singapore Air Force (RSAF) implemented a training programme to enhance the resilience and overall performance of 18-to-25-year-old cadets under stress. Through the infusion of positive and sports psychology techniques, the programme focused on enhancing cadets' resilience skills, and improving their composure, mental focus, and self-regulation abilities. The programme was implemented over a duration of 18 to 24 months, and consisted of three developmental phases: (i) Awareness, which was an educational package in the form of workshops, to deliver the theories to cadets; (ii) Application; whereby cadets were guided through various activities including self-reflections and facilitated discussions in the workshops; and (iii) Action, whereby the skills taught were infused into training curricula by leveraging training activities. In particular for the Action phase, cadets were given challenging scenarios across 10 training events to practise and apply the skills and techniques that they have learnt. Instructors would then observe and provide individual feedback where necessary to help the cadets consolidate and internalise their learning. This was aided by the use of rubrics worksheets where instructors would record their observations of behaviours displayed during the scenarios and how they are related to the competencies. To monitor the training programme's effectiveness, the rubrics worksheets of the cadets were collected and coded. Analysis (paired sample t-tests) revealed that there were significant improvements in cadets' proficiencies rated by the instructors in a few of the skills observed. In conclusion, there is empirical support for the programme's effectiveness.

## 202

### PERFORMANCE IN AUSTERE ENVIRONMENTS: EXTREME HEAT

*Scotty Hanley, University of Denver, USA*  
*Jacob Hyde, University of Denver, USA*

Significant consequences to performance levels occur in athletes, military forces, and work teams in environments which provide brief or prolonged exposure to extreme heat conditions. Extreme heat influences human's physiological and psychological processes; some changes are readily recognizable or corrected, while others are challenging to quantify or reverse (Hindle & Henning, 2013). Athletes that are not acclimated to heat show performance gains running short distances, whereas athletes competing in endurance events demonstrate significant performance reduction (Guy, Deakin, Edwards, Miller, & Pyne, 2015). Water loss of 2% body weight can impair physical performance, additional water loss of 6% or more can result in dizziness, dyspnea, headaches, indistinct speech, and loss of motor control (Montain & Ely, 2012). Given this, the most important nutritional and performance-influencing considerations in extreme heat are hydration and electrolyte replacement (Day, Young, & Askew, 2012). Extreme heat exposure can also alter caloric requirements leading to increased energy and water requirements, inappropriate thirst response, and negative energy balance which results in diminished work capacity, depleted muscle glycogen, and impaired effectiveness (Day et al., 2012). As fatigue and exertion increase, the expected degradations include impaired mood, decreased communication, delayed reaction times, decreased accuracy, and diminished physical skill (Fletcher, Wesensten, Kandelaars, & Balkin, 2012) which in athletes may lead to subpar performance or competition loss, and in military personnel may result in mission failure or increased mortality. Pragmatically, assessment tools that are easy to administer with minimal practice effect are ideal to detect cognitive impairment. If monitoring equipment is not realistic in the field, physical deterioration can be monitored by peers, leaders, or the individual, utilizing behavioral observation and checklist modalities. Considerations for how to study physiological and psychological changes exhibited by elite athletes, tactical athletes, and military special operations medical assets within extreme heat will be reviewed and discussed.

## 203

### RESILIENCE AND VETERAN COMMUNITY REINTEGRATION: AN EXPLORATORY STUDY

*Elmer Castillo, Florida State University, USA*  
*Graig Chow, Florida State University, USA*

While resilience is an undeniable asset for thriving in the military environment, the potential association between resilience and thriving out of the military context has not been thoroughly investigated. Hence, the purpose of this study was to explore resilience and its application to military veterans during their transition back to civilian life. It was hypothesized that higher resilience to stressful experiences would be associated with lower perceived difficulties with veteran community reintegration (VCR). Additionally, certain demographic (e.g., age, education level) and military experience (e.g., pay grade, number of combat deployments) variables were hypothesized to predict resilience levels and VCR outcomes. This study employed two relatively novel scales that were developed for use with a military population: The Response to Stressful

Experience Scale (RSES; Johnson et al., 2011) and Military to Civilian Questionnaire (M2C-Q; Sayer et al., 2011). An online survey was developed and disseminated via social media and in-person at student veteran centers of local college campuses. A total of 45 participants (38M, 7F) completed the survey. A multiple regression analysis indicated that 25.2% of the total variance on the M2C-Q was accounted for by RSES scores and months out-of-service. Hypothesis one was confirmed by observing a relationship between the RSES and M2C-Q. Support for hypothesis two was only observed for time out-of-service. These findings lend support to the utility of the RSES and M2C-Q as measures of military resilience and VCR, respectively. Applied implications and avenues for future research are presented.

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## Teaching

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### 204

#### **APPLICATION OF SPORT AND EXERCISE PSYCHOLOGY MATERIAL TO OTHER KINESIOLOGY DISCIPLINES: TARGETING THE CAREER INTERESTS OF ALL STUDENTS**

*Heather Deaner, California State University, Stanislaus, USA*

A sport and exercise psychology (SEP) course is a common requirement for many Kinesiology degree programs today. Thus, it is common to have students with varied career goals enrolled in SEP courses. These career goals might include the fields of Physical Therapy, Occupational Therapy, Personal Training, and Health Promotion to name a few. In order to maximize the learning that takes place and the students' ability to apply the material in their future professional roles, it is important that the relevance of the SEP material to their career goals be established.

The presenter will underscore the applicability of SEP material to a variety of Kinesiology related career paths and their associated populations. For example, a future physical therapist can benefit from learning about the role of stress and anxiety on client behaviors, a future corporate wellness coordinator can benefit from learning about group dynamics and cohesion, a future nurse can benefit from learning about imagery, and a future fitness center owner can benefit from learning about exercise adherence. The presenter will summarize the SEP material most relevant to other Kinesiology disciplines, provide classroom examples and activities that can be used during lectures and small group discussions to target different career paths, and share assignments that can be utilized to have students connect SEP constructs, theories, and skills to their future professional roles.

### 205

#### **INVESTIGATING DECISION MAKING UNDER STRESSED CONDITION**

*Ayumi Tomioka, Japan*  
*Fumio Mizuochi, Nihon University, Japan*

In a sports competition, athletes do not always choose the optimal play through a rational judgement. They experience a decline in the accuracy of their play that accompanies an increase in negative feelings and excessive muscle tonus

caused by pressures. Such a performance decline by the athletes' transient increase in stress reaction is not only affected by deterioration in playing due to behavior modification, but also suggests the influence of play preference determined by decision making.

This study carried out a play preference experiment with a Boccia-like ball throwing task by referencing the Prospect theory (Kahneman and Tversky, 1979) that is established in behavioral economics and explains decision making under uncertainty. Subjects were asked to sit on a chair to throw a ball at a target line four meters away 15 times. The closer to the line the ball is, the more points the player gets, but if the ball crosses the line, he or she loses all the points accumulated. The evaluation criterion of the play preference was set by mathematical model calculation to gain a rational expected value, the place of the ball where the player can get a high total score by avoiding risks. The play preference and feeling state were evaluated for 20 subjects with two conditions: the stressed condition using TSST (Trier Social Stress Test) as a psychosocial stressor and the control condition. The stressed condition involved speech and mental calculation tasks, and the control condition involved viewing a relaxing video. Consequently, a risk preference tendency toward the expected value of the ball throwing task was observed in the stressed condition comparing to the control condition, so that the players aimed at a closer place to the target line.

### 206

#### **THE INFLUENCES OF PROJECT-BASED LEARNING ON PRE-SERVICE PHYSICAL EDUCATION TEACHERS' CREATIVE TEACHING BEHAVIORS AND CREATIVITY ABILITY**

*Chienchih Chou, University of Taipei, Taiwan*  
*Mei-Yao Huang, National Taiwan Sport University, Taiwan*

The purpose of this study was to examine the effects of Project-Based Learning (PBL) integrating into teaching method in physical education on the creative teaching behaviors and creativity ability of pre-service teachers. Seventy-five pre-service teachers were recruited from two colleges of Physical Education in northern Taiwan. Thirty-seven pre-service teachers were assigned to PBL Group, and Thirty-eight pre-service teachers were assigned to Lecture Learning Group. Both groups met once a week with 100 minutes per session for 16 weeks. The Creative Teaching Behaviors Scale and the New Creative Thinking were administered before and after the intervention. A two-way mixed analysis of variance was used to analyze. For the PBL integrating into teaching method in physical education, the PBL Group had significant improvement on creative teaching behaviors and creativity ability from the pre-test to post-test. However, the PBL Group also had significant better than the Lecture Learning Group on creative teaching behaviors and creativity ability. The present study examined the PBL in the course of teaching method in physical education, which could increase pre-service teachers' creative teaching behaviors and creativity ability. However, their creative teaching behaviors and creativity ability could be improved by providing an innovative climate for team discussion and idea sharing.

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**THE RELATIVE FACTORS OF THE DEVELOPMENT AND CONTINUANCE OF “HOT HAND” IN THREE-POINT SHOTS IN BASKETBALL GAMES***Chihoko Gorai, Nihon University, Japan  
Fumio Mizuochi, Nihon University, Japan*

In basketball, the phenomenon of “hot hand” is widely believed in by players. It is claimed that if a player makes a three-point shot or a free throw and then the next shot again, his or her shots continues to be successful. Gilovich et al. (1985) reported it to be a misconception. On the other hand, Larkey et al. (1989) suggested the existence of the “hot hand” by detailed analysis, which was confirmed by many researchers.

This study investigated the existence of the hot hand and the factors of its psychological influence by a qualitative analysis of interview data from elite male basketball players as well as a consecutive shooting experiment with three-point shots. As a result of the qualitative analysis, most players recognized the existence of the hot hand, and mentioned that a “shooting touch” is related to its development and continuation. However, their information sources of the “shooting touch” differed individually. From among the series of motion in catching the ball to releasing it, they picked up elements such as the feel of the ball in the hands when catching it, the snap of the wrist, or fingertip control. In addition, it was considered that the development of the hot hand was related to random events and concentration of attention, and that the continuation of the hot hand changed the players’ state of feelings such as comfortableness. In the consecutive shooting experiment, a three-dimensional action analysis was performed with the videos of shooting action. Consequently, in the hot hand state, temporal and spatial stationarity in the sequential movement of body member was confirmed, thus suggesting the motor coordination between the forearm and the hand, which could be the information source of the shooting touch. An upward tendency toward comfortableness and activity was also observed.

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**Youth Sport**

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208

**AN INTEGRATIVE, PRAGMATIC, AND APPLIED APPROACH TO CONSTRUCTIVELY INFLUENCE YOUTH SPORTS PARTICIPATION***Andrea Corn, Self, USA*

Upwards of 35 million young athletes play organized sports, yet by age 13, there’s an enormous exodus. The reasons for the attrition have been well documented over the years. Parents and coaches can benefit hearing pragmatic advice on how to effectively guide children through youth sports, especially considering 70% (or 24,500,000 youngsters) drop out before reaping all the developmental benefits.

This AASP Sport Psychology consultant has educational and informative advice to share, starting with the physical, emotional and psychological changes occurring with the onset of puberty and the emergence of separation-individuation strivings, intensifying a young athlete’s departure. Additionally, interpersonal variables and family dynamics matter too. Unrealistic criticisms, unfavorable comparisons (of size, coordination, capability -- whether accurate or inaccurate)

plus unrelenting pressures all affect performance besides fueling ongoing parent-child conflicts, persistent anger, or potentially leading to low self-esteem, a risk for bullying, withdrawing or other psychological concerns.

This lecture will highlight 5 key take-away points drawing upon developmental and psychosocial theory (encompassing Erikson, Piaget, and attachment theory), the sports psychology literature, 20 years of private practice, and a co-authored book to put into perspective what really matters: keeping fun in the forefront, emphasizing the positive values inherent in youth sports, and guiding caring adults about their role for maintaining consistency and structure.

Furthermore, parents and coaches must be able to empathize with the fears, frustrations, and disappointments and demonstrate how sports serves a springboard for mental and emotional growth; developing problem-solving and concentration skills along with healthy social-emotional interactions. Yet, it’s through the lived experience of playing with integrity, not giving up, challenging oneself, becoming resilient, pursuing through adversity, and not letting negative thoughts or feelings override all the good attained through dedication and effort, becomes a life-long template for what can transcend any field, track, court, or rink.

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**AUTONOMY SUPPORT FOR CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW OF THE EFFECTIVENESS OF CONTROLLED INTERVENTIONS WITH PHYSICAL EDUCATION TEACHERS AND YOUTH COACHES***Johannes Raabe, University of Tuebingen, Germany  
Katrin Schmidt, University of Tuebingen, Germany  
Johannes Carl, University of Erlangen-Nuernberg, Germany  
Oliver Höner, University of Tübingen, Germany*

While insufficient physical activity represents a key health risk factor many individuals adhere to sedentary lifestyles (WHO, 2016), emphasizing the importance of instilling a preference for an active lifestyle at an early age. Previous researchers consider motivation a key determinant of physical activity (e.g., Sebire, Jago, Fox, Edwards, & Thompson, 2013) and point to various factors which can impact children’s and adolescents’ motivation (e.g., Vallerand & Losier, 1999). In physical education (PE) and youth sport, the more they evaluate their teachers and coaches to be autonomy-supportive, as opposed to controlling, the more self-determined they are in their motivation to engage in PE and sport (e.g., Adie, Duda, & Ntoumanis, 2012). Therefore, it appears valuable for researchers to help teachers and coaches optimize their interactions with the individuals they work with. However, there is currently no comprehensive overview with respect to the effectiveness of such interventions. Consequently, the current research was designed to systematically review the literature related to autonomy support interventions with PE teachers and youth coaches. A search of relevant databases revealed 2,748 potentially pertinent articles, which were subsequently reviewed by two independent researchers. Based on well-defined inclusion criteria, this systematic process helped to identify 12 studies. Overall, interventions in the reviewed studies had a significant positive influence on more than half of the assessed variables. More positive significant effects were found for variables assessed in the PE setting (74.4%) compared to those in organized sport (10.7%). Interventions were most successful in enhancing teachers’ and coaches’ perceptions toward autonomy support ( $Mdn(d)=1.28$ ), while

the lowest level of significance was found for students' and athletes' motivation ( $Mdn(d)=0.29$ ). Thus, further research appears justified to foster self-determined motivation among children and adolescence. How to use information obtained from this systematic review to shape future interventions with teachers and coaches will be discussed.

## 210

### **CHILDREN WITH DEVELOPMENTAL DELAYS CAN EXCEL IN THE MARTIAL ARTS**

*Gary Brosvic, Rider University, USA*

While it was once thought that children with Developmental Coordination Disorder (DCD) would simply outgrow their motor difficulties, research tells us that DCD persists throughout adolescence into adulthood. Children with DCD can and do learn to perform certain motor tasks well, however, they have difficulty when faced with new, age-appropriate ones and are at risk for secondary difficulties that result from their motor challenges. Although there is currently no cure for DCD, early intervention and treatment may help to reduce the emotional, physical and social consequences that are often associated with this disorder. Sixty children with DCD and 20 age-matched controls completed a three-month martial arts program. Training included daily one-hour sessions, four days per week for 12 weeks, culminating in group and individual evaluations for Yellow Belt. Performance was averaged across the evaluations with testing scored only by masters-level practitioners from multiple schools other than those at which any control or test participant had trained. By parental consent 20 DCD children served as controls, 20 DCD children practiced using mirrors, and 20 DCD children practiced with peer mentors. The DCD groups did not differ on any diagnostic criterion when evaluated by OT, PT, Ph.D., or pediatric neurodevelopmentalist; they were significantly lower on each non-IQ measure than their age-matched/non-DCD controls. Both control groups practiced in the absence of mirrors and peer mentors. In comparison to DCD controls, those using mirrors or peer mentors were significantly more likely to pass with Satisfaction. Upon completion of the study 10 DCD controls completed training with mirrors and 10 completed training with peer mentors; both attained comparable levels of performance. Participation in the martial arts, when met with success, fosters the DCD child's sense of accomplishment in an activity both highly-respected by peers and in which they see non-DCD peers engaging in similar struggles.

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### **EFFECTS OF A PSYCHOLOGICAL SKILLS TRAINING PROGRAM ON HITTING PERFORMANCE OF ELITE YOUTH BASEBALL PLAYERS.**

*Paul Wright, Lindenwood University, USA*  
*Andrew Hamerlinck, Lindenwood University, USA*

The purpose of this study was to assess the effects of an 8-weeks Psychological Skills Training program on hitting performance of elite youth baseball players. 35 athletes participated in a pre-season conditioning and hitting program and were exposed to an 8-week mental skills training program emphasizing: self-talk, goal-setting, mental toughness, arousal regulation, mental imagery, concentration, and dealing with adversity. This program was offered once a week by the principal investigator. Each session lasted between 35-

50 minutes and was scheduled weekly during the 8-week pre-season practice period. Participants participated in a scored pre-test of hitting and a post-test hitting test at the conclusion of the program. The dependent variable was an objective score on hitting percentage. The ASCI-28 was used to assess athlete strengths and weaknesses in terms of perceived mental skill competency. Athletes participating in the program significantly improved their hitting percentage from the start to the finish of the season and significant increases were also noted from comparisons of previous end of season hitting scores. Additionally, higher scores on the ASCI-28 were also highly correlated with improvements in hitting score. Results of this study suggest that youth athletes can gain significant benefits from participating in a short-term psychological skills training program that targets improvements in a specific targeted behavior.

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### **EXPLORING CONNECTIONS BETWEEN PARENTS' AND CHILDREN'S SPORT LEADERSHIP PARTICIPATION**

*Bruce Klonsky, The State University of New York at Fredonia, USA*  
*Paul Blanchet, Baylor University, Communication Sciences and Disorders, USA*  
*Rosemary Phillips, The State University of New York at Fredonia, USA*  
*Robert Piato, The State University of New York at Fredonia, USA*

In recent years, there has been increased research on leadership development in childhood, adolescence, and early adulthood. Reichard and Palik's (2011) review suggests that leadership skills can be developed and that early leadership experiences may be more impactful than interventions in adulthood. Qualitative research (Murphy, 2011; Popper, 2011) suggests that secure attachment (with parents and non-family members) might enhance youth leadership participation. Klonsky (1983) has specifically investigated the role of parenting styles in the development of athletic leadership. Little if any research has explored how parents' sport leadership participation influences their own children's sport leadership participation. Consequently, the major objective of the current study was to assess the influence of parental sports leadership participation upon children's expression of leadership roles and leadership ability. Parents and teachers of 354 public school students (131 males and 223 females ranging from kindergarten through 12th-grade) completed questionnaires. Parents provided demographic information about themselves and their children. The parents described their own sport participation and evaluated their child's sport leadership roles and ability. Teachers also provided ratings of their students' sport leadership roles and ability. The impact of parental leadership roles on children's leadership involvement and leadership ability was investigated with a series of 2 (High vs. Low Parental Involvement) X 2 (Sex of Child) X 2 (Sex of Parent) ANOVAs. Children of parents high in sport leadership participation (current or past) exhibited significantly greater sport leadership participation and ability than children of parents low in sport leadership participation (significance levels of either .01 or .001). The impact of parental leadership involvement in the workplace and in community roles was also assessed. Parenting practices (e.g., Klonsky, 1983), mentoring approaches (e.g., Ensher & Murphy, 2005) and extracurricular activities (e.g., Chelladurai, 2011) that foster sport leadership involvement and leadership development will be highlighted.

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**HELPING A WOMEN'S INTERSPORT NETWORK PROVIDE A WINNING EXPERIENCE FOR GIRLS IN THEIR SUMMER SPORT CAMPS***Karynn Glover, University of Kansas, USA**Mary Fry, University of Kansas, USA**Hannah Weingartner, University of Kansas, USA*

Young girls have one of the highest risks of living an unhealthy life due to the decrease in physical activity that occurs across childhood years leading into adolescence (Sarrazin, Guillet, & Curry, 2001). In addition to low physical activity levels, some girls often report low confidence because of constant comparisons and pressures to outperform others that are reinforced by coaches, adults, and peers. Given this, it is essential to have strong outlets, such as summer camps, for girls that build confidence and allow for the enjoyment of physical activity. The purpose of this study was to assist a Women's Intersport Network train their volunteer camp leaders to foster a highly caring/task-involving climate for the campers, and assess the campers' experience with leaders and peers. Leaders (N=100) participated in a 4.5-hour training session that provided numerous strategies for creating a caring/task-involving climate. Campers (N=491) participating in the two sessions of camp completed a pre/post survey that included abbreviated versions of the Perceived Motivational Climate Scale Questionnaire and Caring Climate Scale, as well as peer and leader items. Mean scores were extremely high for the caring and task-involving scales. A canonical analysis was conducted to examine the relationship between the climate scales to the campers' self-reported relationships with leaders and peers and revealed one significant function analysis [ $L = .42$ ,  $F(12) = 13.67$  ( $p < .001$ )  $C_{corr} = .68$  with 46% overlapping variance]. Campers' perceptions of a highly caring/task-involving climate and a low ego-involving climate were significantly related to stronger peer and leader relationships. Specifically, campers indicated their leaders and other campers liked them, their leaders were helpful, and their peers welcomed them. These results suggest that a positive, supportive climate may play an important role in young girls' experience at summer sport camps.

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**PARENTS' PERCEPTIONS OF THEIR ROLES IN A COMPETITIVE YOUTH SWIM CLUB: AN EXPLORATORY STUDY***Seth Swary, West Virginia University, USA**Erin Carmone, USA*

The purpose of this exploratory study was to examine parents' perceptions of their roles and how they fulfill those roles in their child's competitive youth swimming experience. There is an increasing need to explore the beliefs and opinions of parents of youth athletes directly as they are highly involved in their child's sport, can provide immediate feedback, and have the ability to positively and negatively influence their child's experience (Fredricks & Eccles, 2004). Four parents (three mothers, one father) of children ages 11 to 13 who were involved in a competitive youth swim club participated in individual semi-structured interviews. Interpretive description methodology served as a suitable framework as it allows researchers to find themes and patterns within participants' subjective perceptions. Data analysis suggested that parents' perceived their roles to be either that of a supporter or facilitator of the experience. Parents' perceptions of their

fulfillment of these roles were themed as adapting to the child (age, personality), to the sport, and providing balance in their child's life. Practical implications for future work with parents of youth athletes are discussed.

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**PSYCHOMETRIC PROPERTIES AND INITIAL VALIDATION OF THE CAREER ADAPT-ABILITIES SCALE—DUAL CAREER FORM (CAAS-DC)***Tatiana Ryba, University of Jyväskylä, Department of Psychology, Finland**Chun-Qing Zhang, Hong Kong Baptist University, Hong Kong**Zhijian Huang, Hong Kong Sports Institute, Hong Kong**Kaisa Aunola, University of Jyväskylä, Finland*

Talented adolescent athletes often face multiple risks to sustain their academic and vocational training alongside increasing demands of their athletic career, which subsequently may hinder young people's employability and adaptation to life after elite sport. Therefore, it is necessary to better understand the specific competencies that youth athletes can draw upon to successfully combine sport and education into a dual career pathway. Building on the existing Career Adapt-Abilities Scale (Savickas & Porfeli, 2012), we developed a Dual Career Form of the Career Adapt-Abilities Scale (CAAS-DC) for the use with student-athletes. A sample of 391 Finnish-speaking athletes completed the CAAS-DC at the beginning of their freshman year in sport high school. Adequate factorial validity of the CAAS-DC and internal consistency reliabilities of its five subscales were demonstrated in both exploratory structural equation modelling (ESEM) and confirmatory factor analysis (CFA). Concurrent validity of the CAAS-DC was revealed with positive and significant associations with self-esteem, sport task values, school task values, and career construction; and negative association with school and sport burnout. Finally, partial strong measurement invariance was also demonstrated across males and females. The evidence from this study suggests that the CAAS-DC is a promising self-report inventory that can be used by sport psychology researchers and applied practitioners to assess youth athletes' psychosocial competencies necessary for designing an adaptive dual career pathway.

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**SELF-ESTEEM AND EMPOWERMENT AS PREDICTORS OF INCREASED WORK EFFORT WITHIN A SPORTS RELATED AFTER-SCHOOL PROGRAM FOR AT-RISK ADOLESCENTS***Brad Conn, USA*

The principal investigator examined various predictors of change in work effort in at-risk youth that participated in the after-school sports program, A World Fit for Kids (WFIT) (N=41). The program assists participants (ages 15-19) in academic achievement, life skills and employment training. Through employment training, participants learn to develop sports coaching skills, which then leads to the responsibility of coaching a latency aged sports team, which is a paid employment position. The purpose of the study was to see if age, race, gender, intervention program, self-esteem, and empowerment contributed to change in work effort. Additionally, self-esteem was moderated by empowerment sub-scales competence and impact on the WFIT participants post work effort. Age, race and gender had no effect on

change in work effort; however, intervention of program, empowerment, and competence were shown to be predictors of change in work effort. Additionally, self-esteem, moderated by competence, showed a significant effect on post work effort. Results demonstrate that participating in after school sports programs, along with having strong levels of self-worth and assertiveness, increase levels of work-effort. These findings suggest that after-school sports programs may assist participants in realizing their potential in school and in future employment.

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### THE EFFECT OF MOTIVATIONAL MUSIC AND TASK INTENSITY ON PERFORMANCE AND PSYCHOPHYSICAL RESPONSES IN YOUTH SWIMMERS

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*Jasmin Hutchinson, Springfield College, USA*

The purpose of this study was to examine the effect of motivational music on performance and a range of psychological variables (affective valance, attentional focus, motivation, and enjoyment) during swimming at three different intensities. Competitive swimmers (N = 21; mean age=14.8 years) completed six 200-yard swim trials; three trials with motivational music and three with no auditory stimuli. Within each condition the participants swam at three different intensities - 50%, 70%, and 90% max effort - using perception-based intensity regulation (Kang et al., 2009). Each trial was timed, and trial order was counterbalanced across participants. Measures of affective valance, attentional focus, task motivation and enjoyment were taken immediately following each trial. Using multivariate analysis of variance. It was found that the music had no effect on performance time ( $p = .830$ ). Affective valance was the most positive in the music condition for all intensities ( $p = .000$ ). Attentional focus was most dissociative in the low intensity trials and most associative in the high intensity trials ( $p = .002$ ), and was more dissociative in the music conditions than control ( $p = .000$ ). Task motivation and enjoyment were both highest in the music condition across all intensities ( $p = .000$ ). In sum, motivational music had a positive effect on psychological variables, but not performance, at all swimming intensities. Enhancing the psychological experience of swimming may hold potential in an applied setting for participant motivation and prevention of burnout and disengagement with the sport.

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### THE INFLUENCE OF PEERS ON SOCIAL MOTIVATION AND PERCEIVED BELONGING IN ADOLESCENT MALES AND FEMALES IN SPORT

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*Robyn Braun, University of Texas of the Permian Basin, USA*

There are numerous social reasons to participate in sport, such as affiliation, wanting to be part of a team or group, and social status (McCallagh, Matzkanin, Shaw, & Maldonado, 1993; Passer, 1982). Moreover, multiple studies have shown that athletics aids academics (Ahn, & Fedewa, 2011; Tomporowski, Lambourne, & Okumura, 2011). The purpose of the current study was to examine gender differences of adolescents and the influence of peers on social motivation and perceived belonging in sport. Additionally, perceived belonging in sport was investigated as a predictor of academic performance using athletes' grade point average (GPA) and their scores

on the State of Texas Assessment of Academic Readiness (STAAR) in English and biology. The three subscales of social motivation: affiliation, social status, and social recognition were evaluated using the Social Motivation Orientation for Sport Scale (SMOSS) and perceived belonging was evaluated using the Perceived Belonging in Sport Scale (PBS). No gender differences were revealed on any of the social motivation subscales or perceived belonging. However, the affiliation subscale was trending towards significance ( $p = .08$ ). Furthermore, perceived belonging cannot be used to predict GPA or STAAR scores. The results of this study adds to the literature on social motivation which is lagging far behind in experimental and observational data compared to other motivational theories (Juvonen & Wentzel, 1996). Additionally, results from this study indicate that the link between academics and athletics is not effected by perceived belonging.

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### YOUTH SOCCER AND SOCIAL MEDIA: CHANGES IN SPORTS SECLUSION PLACE

*Elmer Castillo, Florida State University, USA*  
*Andre Aroni, Sport Psychology Professor and Visiting Scholar, Brazil*  
*Guilherme Bagni, Sport Psychology Professor and Visiting Scholar, Brazil*  
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Sports seclusion space is a period of time and a secluded area in which athletes (e.g., South American, European) are placed in prior to major competitions. Although this approach removes athletes from the social world in hopes of optimizing competitive concentration, the perceived impacts and benefits of such an approach have yet to be empirically investigated. Hence, the purpose of this qualitative study was to investigate youth athletes' perceptions of sport seclusion place and social media and technology influences on sport performance. Participants were 211 male soccer players competing in the "Copa São Paulo de Futebol Júnior", the highest soccer championship in Brazil for athletes under 20 years old. A questionnaire, comprised of six open-ended questions exploring athlete perceptions of sport seclusion space, social media, and technology impacts on performance, was developed to allow in-depth exploration of the participants' personal opinions on the relevant matters. Inductive content analysis revealed that 54% of athletes viewed sports seclusion place in a positive light and felt that it facilitates successful performance. Similarly, 62% of the athletes perceived this space as a means to enhance their focus and reduce distractions in preparation for games. The majority of the athletes (89%) reported that the use of social media and other electronic devices helps facilitate adaptation to different cities and allows them to stay connected with significant others. Taken together, it appears that social media and electronic devices have impacted the sporting environment in different ways and may negatively or positively influence performance (e.g., attention, concentration, communication, adaptation). Although our sample had disparate opinions about the topic, the general belief was that complete social isolation does not benefit subsequent sport performance.

## SYMPOSIA

### SYM-01

#### COACHING THE COACHES: UTILIZING A COACH AS YOUTH WORKER FRAMEWORK TO MEET YOUTHS' NEEDS

*John McCarthy, Boston University, USA  
Val Altieri, Jr., Boston University, USA  
Fritz Ettl Rodriguez, Boston University, USA*

Physical Activity-Based Youth Development (PABYD) programs utilize physical activity as a “hook” to promote social-emotional learning goals. However, how well these goals are met depends on the competence of coaches. In these types of programs, coaches occupy a dual role as both sport coaches and youth workers. Learning to operate in this dual role often requires guidance and training that helps coaches implement effective context-specific strategies and behaviors. While researchers have been examining how youth coaches effectively help youth develop skills such as character and leadership (Danish, 2002; Gould et al., 2006; Smith & Smoll, 1979), little attention has been given to how to train PABYD coaching practitioners to apply these strategies and behaviors.

In this symposium, we will: (1) underscore barriers to quality PABYD programs; (2) highlight an evidence-based framework for working in physical activity settings; and (3) explain a professional development designed to prepare youth workers to support that framework. The first presentation will discuss how to overcome two major barriers to attaining the outcomes we seek for youth in PABYD programs: (1) failure to implement frameworks to guide youth development work and (2) a lack of practitioner training models that help us deliver quality instruction within those frameworks. The second presentation will describe an extensively implemented and researched physical activity-based framework called Teaching Personal and Social Responsibility (TPSR) (Hellison, 2011). The third presentation reveals key aspects of an approach to training coaches on a specific TPSR-based program called “Coach as Youth Worker.” This professional development aligns with national standards for sport coaching (NASPE, 2006) and physical education and aims to develop coaches’ counseling, teaching, and youth development skills that better prepares them for the complexity of their work. Finally, the challenges of preparing and supporting young professionals in the Coach as Youth Worker role will be considered.

### SYM-01A

#### IDENTIFYING BARRIERS TO DELIVERING QUALITY PHYSICAL ACTIVITY-BASED YOUTH DEVELOPMENT

*John McCarthy, Boston University, USA*

Physical activity settings have the potential to help youth have positive movement experiences (Agans et al., 2013). Such experiences can lead to a “cascade effect” upon participants allowing them to benefit from a broader array of positive psychosocial and physical outcomes. Therefore, it is important to recognize how program directors can intentionally construct learning environments to promote positive youth outcomes. In addition to shaping the learning environment, they are responsible for developing the coach, teacher, and/or mentor: or what we call “coach as youth worker.”

The purpose of this presentation is to identify the two major barriers that often hinder key youth development outcomes: (1) failure to use a framework to guide youth development work and (2) a lack of context-specific training. First, many program leaders and coaches do not work from a framework that guides an intentional youth development approach. Second, even when a framework is in place, there remains a need for coaches to be trained to competently deliver the strategies and activities in a specific and often evolving context (Hellison, 2011).

### SYM-01B

#### A FRAMEWORK THAT RESPONDS TO YOUTH NEEDS: TEACHING PERSONAL AND SOCIAL RESPONSIBILITY THROUGH PHYSICAL ACTIVITY (TPSR)

*Val Altieri, Jr., Boston University, USA*

Teaching Personal and Social Responsibility Through Physical Activity (TPSR) is a youth development framework that utilizes physical activity as a vehicle to teach personal and social responsibility (Hellison, 2011). TPSR has had a long history that predates the youth development movement (Hellison, Martinek, & Walsh, 2008). The framework was initially designed for physical educators and then later was implemented in out-of-school time physical activity programs. As the youth development and physical activity-based youth development fields emerged, researchers began to see how their work was aligned with the already established TPSR framework. Hellison (2000) asserts, “consistent with the assumptions of youth development, TPSR treats kids as whole people, with emotional and social as well as physical needs and interests, and as individuals, not just members of a gender or race or other group” (p.35). The purpose of this part of the symposium is to share key elements of the TPSR framework which include its values, ideas, and implementation strategies. A rationale will be given for this framework as a potential starting point when planning physical activity-based youth development programs or for enhancing already existing programs.

### SYM-01C

#### PEDAGOGICAL STRATEGIES TO CONSIDER WHEN DESIGNING PROFESSIONAL DEVELOPMENT FOR THE TPSR FRAMEWORK

*Fritz Ettl Rodriguez, Boston University, USA*

The roles and responsibilities of youth sport coaches require a unique skill-set where coaches must be adept at delivering both sport-based outcomes and youth development outcomes. While there exist specific coaching competencies (NASPE, 2006; NCCP, 2005) and youth worker competencies (National Collaboration for Youth Development Worker Competencies, 2004) that can help practitioners in these fields learn what they need to be able to do in the context of these fields, there are few people who acquire training that teaches them to do both. Hellison’s (2011) Teaching Personal and Social Responsibility-based youth development curriculum comes close by providing an effective model for how to organize programming at the youth level. However, there is little written that describes detailed training frameworks that teach practitioners how to become competent TPSR practitioners. Therefore, we developed a professional development training that aimed to fill that gap by borrowing pedagogical approaches from competency-based frameworks (Brachlow & Sullivan, 2006; Demers et al., 2006). The pedagogy focused on skill development using methods such as role-play so

that coaches could practice performing TPSR-based youth development strategies with peers. The purpose of this part of this presentation is to highlight key pedagogical strategies to consider when designing training and/or professional development for physical activity leaders.

## **SYM-02**

### **SUPERVISION IN SPORT PSYCHOLOGY: FROM RESEARCH TO PROVISION**

*Jean-Charles Lebeau, Florida State University, USA*  
*Gily Meir, Florida State University, USA*  
*Savanna Ward, Florida State University, USA*  
*Graig Chow, Florida State University, USA*  
*Ashely Fryer, Florida State University, USA*  
*Matteo Luzzi, Florida State University, USA*  
*Lindsay Garinger, Florida State University, USA*  
*Aaron D'Addario, Florida State University, USA*

Supervision is a distinct professional practice involving a collaborative relationship between the supervisee and supervisor that is hierarchical and evaluative, extends over time, and aims to enhance the development of competence and science-informed practice of the supervisee. It comprises monitoring of service quality, protecting the public, and serving as a gatekeeper for entry into the profession (Bernard & Goodyear, 2014; Falendar, 2014). Supervised experience is an essential component in the education and training of sport psychology practitioners and a requirement for becoming a certified consultant of the Association for Applied Sport Psychology (CC-AASP). Just as practitioners strive to implement science-based practice with clients, supervisors aspire to provide supervision that is informed by theory and research. Accordingly, this symposium includes four presentations that span research and provision of supervision in sport psychology, and has implications for researchers, supervisors, and supervisees. The first presentation is a systematic review of the empirical, peer-reviewed research on supervision in sport psychology, identifies gaps in the literature, and offers future research directions to advance this line of inquiry. The second presentation is a qualitative study with sport psychology supervisors who completed a semi-structured interview during which they were asked about how they structure supervision and the supervision practices they employ with trainees. The third presentation is a quantitative study that examined the influence of student-supervisees' perceptions of their supervisor's supervisory skills on satisfaction with supervision and perceived service-delivery competence. The final presentation describes a supervision model in a sport psychology graduate program that was developed based on the supervision literature as well as program and supervisee needs, and will highlight strengths, challenges, and lessons learned. A discussant who has knowledge and experience in both supervision research and provision will be included in the symposium.

## **SYM-02A**

### **PAST, PRESENT, AND FUTURE OF SUPERVISION IN SPORT PSYCHOLOGY RESEARCH**

*Jean-Charles Lebeau, Florida State University, USA*  
*Gily Meir, Florida State University, USA*  
*Savanna Ward, Florida State University, USA*  
*Graig Chow, Florida State University, USA*

Supervision aims to foster supervisee's competence and to ensure client welfare (Bernard & Goodyear, 2014). While a large body of supervision research in clinical/counseling psychology exists that can serve as a guide for the provision of supervision in sport psychology, there are educational (e.g., limited departmental support, doctoral internships), practical (e.g., lack of certified consultants), and legal (e.g., licensure) differences that may preclude complete adoption of this research. Andersen and Williams-Rice (1996) argued that supervision research can serve as useful starting points for one of the most important things we do in sport psychology; the training and supervision of future sport psychologists. The first published works on supervision in sport psychology appeared in the mid 1990's. Since then, supervision research in sport psychology has been limited, sporadic, and remained mostly at a descriptive level. The purpose of this study was to review the empirical, peer-reviewed research on supervision in sport psychology, and to identify gaps in the literature to facilitate future research on the topic. In an effort to locate all relevant empirical research, an extensive literature search was conducted using databases, manual searches of references from key articles, and recommendations from prominent authors. A total of 20 articles were identified: Eight were qualitative, seven were quantitative, and five were classified as records and reflections (e.g., journals and case notes). The research reviewed comprises data regarding supervisees, supervisors, and supervision. For example, prevalence of receiving supervision among trainees and professionals, supervisee learning experiences, supervisee self-reflection, supervisee anxiety and self-doubt, prevalence of supervision provision, supervisor competency, supervision relationship, ethical and complex issues in supervision, and structure of supervision. Specific recommendations to advance supervision in sport psychology research will be discussed such as supervisor education and training, development and adaption of quantitative supervision measures, and examination of supervisor-supervisee-client relationships.

## **SYM-02B**

### **SUPERVISION STRUCTURE AND PRACTICES EMPLOYED IN SPORT PSYCHOLOGY GRADUATE PROGRAMS IN THE US**

*Gily Meir, Florida State University, USA*  
*Graig Chow, Florida State University, USA*

Supervision is a cardinal part of the training of sport psychology consultants as it affects their overall development, growth, and preparedness to practice autonomously (Sachs, 1993). Semi-structured interviews were conducted with 10 supervisors and directors of supervision representing nine doctoral programs in the US to investigate how supervision is structured and what supervision practices are used and deemed effective in enhancing the competence of sport psychology trainees. Supervisors (4 females, 6 males) had between two and 26 years of experience providing supervision ( $M = 17.3$ ). Interviews were transcribed verbatim and data were analyzed both deductively as guided by research questions, and inductively as themes emerged.

Results revealed significant variability among graduate training programs with respect to the centrality and approach taken towards supervision. The structure of supervision and supervision practices employed were dependent on the size, nature, and culture of the programs. Programs housed in psychology departments appeared to have more structure in their approach, while programs in sport sciences/sport psychology had fewer resources and provided more informal supervision. However, similarities in the supervision practices reported as effective and aspired were observed, regardless of the different constraints in providing and applying the specific supervision practices. These effective practices correspond with the supervision literature in clinical and counseling psychology. For example, direct supervision was reported by most supervisors as an effective and aspired practice to enhance the competency of supervisees. Similarly, case presentations were used by most supervisors and reported as an effective learning tool. Based on the results of this study, the field should continue to learn from and adopt supervision practices recommended in clinical and counseling psychology while making modifications to account for the unique culture and constraints inherent in sport psychology graduate programs as well as differences in the nature of sport psychology service delivery.

### SYM-02C

#### STUDENT SUPERVISEES' EVALUATIONS OF SUPERVISORS' SUPERVISORY SKILLS AND SELF-EVALUATIONS OF SERVICE-DELIVERY COMPETENCE

*Savanna Ward, Florida State University, USA  
Graig Chow, Florida State University, USA*

Supervisors play an important role in the development of professional skills of student-supervisees; a competent supervisor lays the foundation for the supervisee to develop into a competent practitioner and prevent harm to the client. Falender et al. (2014) emphasize that supervisors must be competent as a professional and as a supervisor; supervisory skills are complex and include multiple dimensions. Student-supervisees are expected to develop skills and knowledge that impact their ability to provide adequate services to clients. The purpose of the study was to examine how supervisors' supervisory skills are perceived by student-supervisees and investigate the extent to which these perceptions predict their overall satisfaction with supervision and their perceived service-delivery competence. Student-supervisees (N = 52) completed the Sport Psychology Supervisory Skills Inventory (SPSSI; Andersen et al., 1994), Supervisory Satisfaction Questionnaire (SSQ; Ladany et al., 1996), and the Service-Delivery Competence Questionnaire (SDCQ). The SDCQ was developed based on the recent AASP Job Task Analysis for sport psychology certification. Six performance domains were identified and divided into 21-component tasks which were used as survey dimensions and items, respectively. Perceptions of supervisory skills predicted supervision satisfaction for student-supervisees ( $F(5,42) = 10.294, p < .01, R^2 = .551, R^2_{Adjusted} = .497$ ). The evaluation of supervisory skills significantly predicted four of the six competence domains including: Rapport, Roles and Expectations ( $F(5,42) = 3.972, p < .01, R^2 = .321, R^2_{Adjusted} = .240$ ); Goals, Outcomes and Planning ( $F(5,42) = 5.462, p < .01, R^2 = .394, R^2_{Adjusted} = .322$ ); Implementation ( $F(5,42) = 3.746, p < .01, R^2 = .308, R^2_{Adjusted} = .226$ ); and Evaluation ( $F(5,42) = 3.992, p < .01, R^2 = .322, R^2_{Adjusted} = .241$ ). This confirms what past researchers have stated; supervisors and their ability to provide effective supervision and service provision impacts how students feel about their own service-delivery abilities.

### SYM-02D

#### NOVEL AND INNOVATIVE SUPERVISION APPROACHES AND STRATEGIES: BUILDING GROWTH AND COMPETENCY IN NEOPHYTE SPORT PSYCHOLOGY PRACTITIONERS

*Ashely Fryer, Florida State University, USA  
Matteo Luzzi, Florida State University, USA  
Lindsay Garinger, Florida State University, USA  
Aaron D'Addario, Florida State University, USA  
Graig Chow, Florida State University, USA*

This presentation is geared toward neophyte sport psychology trainees, supervisors, and directors of practicum and supervision. We will highlight our applied sport psychology supervision process, which is part of a graduate program in sport psychology (masters and doctoral) at an R1 university. While challenging to excel in both research and applied, our program's unique combination of practicum, supervision, and research is one reason prospective students gravitate towards applying, and this has resulted in increased departmental and college resources allocated to our supervision process. Nevertheless, the disproportionate supervisor-to-supervisee ratio was identified as a barrier to effective supervision by trainees and faculty, so we collaboratively reshaped our supervision process to better ensure client welfare and foster the development of supervisee competency (Bernard & Goodyear, 2014). In less than three years, despite many challenges, we have revamped the philosophy, organization, and practices of supervision while considering supervisee developmental levels. In this presentation, we discuss strengths of our supervision process including a formal peer mentoring program; an applied sport psychology handbook that provides expectations, guidelines, and tools; a Blackboard site that has resources for each level (shadow, apprentice, practitioner, mentor) such as intervention protocols; an emphasis on training in the classroom and on the field; intervention trainings from expert practitioners; and leadership of advanced doctoral trainees. We will discuss how our multilevel, developmental approach to supervision facilitates feedback, reduces anxiety and self-doubt, fosters collaboration and social support, and instills a preparedness to consult. Our hope is that by sharing our model of supervision, its strengths and areas for improvement, and lessons learned, we can help others enhance their supervision process.

### SYM-03

#### WE PLAY DODGEBALL IN SPORT PSYCH LAB?! AN INNOVATIVE APPROACH TO ENHANCING STUDENT ENGAGEMENT, LEARNING, AND PERSONAL AND PROFESSIONAL DEVELOPMENT IN AN APPLIED SPORT PSYCHOLOGY COURSE

*Jenny O, California State University, East Bay, USA  
Shannon Webb, California State University, East Bay, USA  
Penny McCullagh, California State University, East Bay, USA  
E. Missy Wright, California State University, East Bay, USA  
Frank Ely, California State University, East Bay, USA  
Nastassia Hamor, California State University, East Bay, USA*

The notion of representative designs in research is not new (e.g., Brunswick, 1956), but, its advocacy in sport psychology and motor learning research has become more prevalent in recent years (e.g., O et al., 2013; Pinder et al., 2013). Constructing an experimental setting that approximates the "real world" in which the variables under examination (i.e., representative design), increases the validity of our applied research efforts. Indeed, sport psychology practitioners are highly encouraged

to adopt evidence-based approaches to consulting and intervention design and implementation (e.g., Cropley et al., 2010). However, can representative designs be used within applied sport psychology university courses to enhance course content learning and transfer of learning? This approach may create a more authentic student learning environment wherein students can engage, experience, and subsequently reflect upon how they interact with their environment and with others in learning and performance situations. The focus of this symposium is to overview and discuss student, teaching assistant (TA), and instructor experiences within a group dynamics laboratory course utilizing a representative design. This highly complex laboratory experience is theoretically-framed in self-regulation (e.g., Zimmerman, 1990) and self-determination (e.g., Ryan & Deci, 2000) theories, and challenges students to work in small groups to critically apply lecture and laboratory content to enhance group development and cohesion. The first presentation will provide the rationale and an overview of the group dynamics laboratory experience. The second presentation will explain the roles of the course instructor and TA, with particular emphasis on theoretical- and research-based underpinnings of role construction. The third presentation will speak to outcomes of the laboratory experience from both enrolled student and TA perspectives. Last, the discussant will provide a “big picture” discussion of the laboratory experience in the context of higher education, student engagement, and personal and professional development.

### **SYM-03A**

#### **SETTING THE SCENE: RATIONALE AND OVERVIEW OF THE GROUP DYNAMICS LABORATORY EXPERIENCE**

*Jenny O, California State University, East Bay, USA  
Shannon Webb, California State University, East Bay, USA  
Penny McCullagh, California State University, East Bay, USA*

Some sport psychology researchers and practitioners have suggested that a temporal lag exists between psychological skills intervention and subsequent cognitive and/or behavioral effects (e.g., Bandura, 1986). Unfortunately, due to various resource constraints, laboratory experiences in applied sport psychology courses are often very contrived. At times, quasi-experimental ABA intervention designs (i.e., baseline, intervention, and post-intervention) are employed which are housed within a single laboratory class period. In our opinion, such designs are not accurate representations of applied sport psychology work; these designs grossly misrepresent the expertise required and the effort expended (by both consultant and learner/performer) in “real world” sport psychology interventions. Moreover, to create an authentic group dynamics laboratory experience (i.e., representative design; e.g., Brunswick, 2003), we must allow the many complex and highly dynamic interactions between environment, situation, individual(s), and/or group(s) - which occur in authentic group experiences - to naturally evolve and manifest throughout the laboratory experience. Compounding this challenge of implementing a representative design is the understanding that a nested design also exists within real world group experiences; the many interactions noted previously can occur at the individual (within), small group (between), as well as population (e.g., all student groups, aggregated) levels. This presentation will overview our attempts to implement a representative design to a group dynamics university laboratory experience. Students participate in a nine-week, non-dominant-hand, competitive dodgeball league (teams of three), managed and led by the course instructor and TAs. The “preferred” team goal proffered to teams is to optimize

group development and cohesion using what they learn as they go through lecture and laboratory readings, lectures, discussions, and activities. This presentation will outline dodgeball league and laboratory experience infrastructure, couched in self-regulation (e.g., Zimmerman, 2002) and self-determination theory constructs (e.g., Deci & Ryan, 2010).

### **SYM-03B**

#### **STRUCTURED IMPROVISATION: INSTRUCTOR AND TEACHING ASSISTANT ROLES**

*Jenny O, California State University, East Bay, USA  
E. Missy Wright, California State University, East Bay, USA  
Frank Ely, California State University, East Bay, USA*

In this part of the symposium, we provide an overview of instructor and TA roles, highlighting their centrality in the laboratory experience. These roles require us to function as both managers and leaders of the experience, which, in and of itself, creates significant role conflict that must be thoughtfully navigated (e.g., Sage, 1987). As managers, we collectively facilitate the dodgeball league, ensure student safety, and evaluate student performance relative to student learning outcomes. Such managerial responsibilities can fuel student perceptions of being “judged” or “controlled”. In stark contrast, in the leadership role, we attempt to motivate students to engage in self-regulated learning (Zimmerman, 1990) and to adopt more self-determined motivation (Ryan & Deci, 2000). Effective leadership in this context is critical in getting students to push themselves to pursue learning methods outside of their “comfort zone”, and in line with recommendations to enhance depth and permanence of learning (e.g., Day & Goldstone, 2012). We also facilitate a performance climate wherein students feel safe to “be themselves”, so as to enable an authentic group development experience (i.e., representative design). In order to optimally learn about themselves or themselves as group members, students must feel comfortable being their “true” selves during the experience. To accomplish this, we must ensure groups and students progress through the experience “naturally”, that is, free from instructor or TA imposition or insistence of personally-biased structures, processes, or norms. We will discuss these roles in light of the representative design of the laboratory experience, and share our thoughts regarding how this metacognitive approach to these highly structured, but at the same time, highly improvisational roles ultimately allow students to see the importance of roles within their own dodgeball teams. Last, we will discuss how our individual teaching (and coaching) philosophies contribute to our own laboratory experiences.

### **SYM-03C**

#### **SEEING BEHIND THE CURTAIN: FORMER STUDENT, CURRENT TEACHING ASSISTANT PERSPECTIVES**

*Frank Ely, California State University, East Bay, USA  
Shannon Webb, California State University, East Bay, USA  
Nastassia Hamor, California State University, East Bay, USA*

This presentation will be delivered from the perspective of former students who are now TAs. As TAs, we are able to provide a unique perspective on the laboratory experience, having lived the experience first-hand, and then, having had time to transfer skills learned through the experience to our new role as TAs. Reflecting on our perceptions of student experiences, self-determination theory (Deci & Ryan, 2000) posits that students may be more or less self-determined to

self-regulate their engagement in the laboratory experience. This frames our discussion of the student experience as students are given great autonomy in their level of personalized engagement with the individual and group concepts covered in the course. This level of autonomy leads to both positive and negative student perceptions, and we will discuss our belief that these perceptions are often dependent on students' ability or motivation to self-regulate their own learning (c.f., Schunk & Zimmerman, 2012). Many students thrive while attempting to manage the deliberate lack of explicit structure provided by the laboratory's representative design. Others, however, fail to critically examine how their behavioral decisions influence group dynamics and thus, fail to see the value in self-regulating their learning and course motivation. Regardless of whether individual groups reach optimal group development or cohesion, anecdotal evidence suggests that the benefits of the laboratory experience are often transferred to other life domains, including professional careers. Professional development and self-discovery are benefits that we will discuss as we reflect on our TA experiences. Through delivery of course concepts and critical evaluation of groups, we gain invaluable teaching experience through analyzing, developing, and delivering course content to college-aged students. Furthermore, by delivering sport psychology consultations to dodgeball teams, we gain invaluable professional experiences with a population representative of those whom we will likely encounter in our future careers.

## **SYM-04**

### **FROM THE SURGERY CENTER TO THE STAGE – HOW SKILL BUILDING & LEADERSHIP TRAINING MATTER**

*Eric Bean, HigherEchelon, INC, USA*  
*Lois Butcher-Poffley, Temple University, USA*  
*Stephen Walker, Health & Sport Performance Associates / Podium Sports Journal, USA*  
*Kevin Peters, HSPA, USA*

This symposium presents three non-sport performance populations: 1) A team of surgeons and programming to enhance their performance mindset; 2) A look at the challenges and the day-to-day goings on of a middle school music teacher and her orchestra as they prepare for performance night; and 3) The oftentimes fluid team structure a rock band and how it influences improvisation, song writing, and rehearsed performance. We will focus on components that support or take away from teamwork, examine the training environment, the organizational culture, and how individuals can influence one way or another the quality of performance.

## **SYM-04A**

### **EXPLORING SELF-AWARENESS IN SURGERY AS A LEADER AND AS A SURGEON**

*Eric Bean, HigherEchelon, INC, USA*

In many ways, surgery is very similar to athletics. Surgeons have a clearly defined objective, they must execute both gross and fine motor skills under intense pressure (at times), and are required to execute in an environment that is not free of distraction. The physical hospital environment, not unlike an athletic environment, can be distracting, noisy, and busy.

The intangible environment can be challenging as well, with high levels of stress, informal and formal rules, and many levels of bureaucracy. A training hospital adds in another layer of challenge for performance psychology because there are both residents and attending physicians, rarely does a surgeon work with the same team each time in the operating room, and the stakes are just as high as they are at a traditional hospital.

After successful implementation of a performance psychology program with the ophthalmology residency program, I was asked to work with residents from another surgical residency program within the training hospital. As part of the program, I assessed residents using the Test of Attentional and Interpersonal Style (TAIS) questionnaire, and taught various strategies to enhance their performance mindset, increase their ability to learn, and work well within a team. The director of the program completed the TAIS as well and during his debrief we discovered that the source of his stress as a leader had more to do with his interpersonal styles than with what was happening with his residents. Discussion of roles and the challenge of the shift in going from a practicing surgeon to a program director and attending physician will be examined. We will also examine how senior residents can either hinder or help the successful adoption of the performance psychology program.

## **SYM-04B**

### **MUSIC EDUCATION AND THE USE OF MST FROM THE CLASSROOM TO THE STAGE**

*Lois Butcher-Poffley, Temple University, USA*  
*Stephen Walker, Health & Sport Performance Associates / Podium Sports Journal, USA*  
*Kevin Peters, HSPA, USA*

Music teachers are performing artists in a hundred different ways, particularly those teaching in middle school environments. They serve in so many roles it can become quite complicated and the skill sets they are required to acquire are far beyond teaching music. They are guides, directors, conductors, trainers, counselors, motivators, parental coaches, organization development consultants, and producers of orchestral performances all at the same time. The challenges never end.

Stage fright is common amongst performing artists. They must overcome this difficulty, or they will never achieve the quality they aspire to. To manage their own emotions, develop both a growth mindset and in addition, provide the kind of leadership and coaching ability to bring 25 musicians together in a series of performances is daunting, to say the least.

This program will get up-close and personal with one such orchestra. We will illustrate the normal every day goings on in the music room, and follow our teacher and students through their various stages in preparation all the way to performance night. Various assessments illustrating the challenges of our teacher, team building exercises they went through, and the efforts involved in preparing each student and the orchestra will be discussed. Included in our presentation will be the implications for working with teams, and preparing leaders to organize, motivate and build cohesion in the group. (Hays, 2009, Hays & Brown, 2004, Maisal, 2008).

## **SYM-04C**

### **ROCK MUSIC AS A TEAM SPORT**

*Lois Butcher-Poffley, Temple University, USA*

Training in music parallels training in the athletic world: Intense physical cross-training (lessons, coaching, conditioning), auditions (tryouts), the rehearsal process (practice), and the performance (game time) resonate in this analogy. Music is also a team sport. Musicians have their turn at bat (solos), they need to coordinate (play well) with others, substitutions occur, injuries happen, and players get traded. Band musicians require the same adaptability, physical stamina, concentration, and coordination we attribute to any sports team. Of course, there are differences, but the essence is there.

Like most teams, some folks get along, some folks don't, and this can make for drama within the team. The best-designed plays can go awry and require collaboration and improvisation to rein them back in. Leaders emerge, players need to collaborate, and everyone must play his/her position. But the ways in which success is achieved occur in unique ways. The purpose of this lecture is to provide insight to the similarities between music and sport, while focusing on what makes performance enhancement in a rock band such a unique challenge. To that end, we will examine the parallels and differences using a practical lens. Discussion of roles (e.g., captain) and positions (e.g., point guard) will be examined in terms of strategy and control in performance as it applies to structure and function in the rock world. We will examine dynamics of leadership in the band, the ability to flow easily from role to role (soloist, back-up, front person), look at the singular aspects of improvisation, the need to be proficient in more than one "position" (e.g., guitar to hand percussion) and the problems that may arise in the improvisational nature of the jam band (Giddings, 2008).

## **SYM-05**

### **BRIDGING THEORY, RESEARCH AND PRACTICE IN YOUTH SPORTS: SPORT PSYCHOLOGY'S PARTNERSHIP WITH POSITIVE COACHING ALLIANCE TO ENHANCE YOUTH SPORT**

*Susumu Iwasaki, Fort Lewis College, USA*

*Christopher Reid, University of Kansas, USA*

*Jim Thompson, Positive Coaching Alliance, USA*

*Mary Fry, University of Kansas, USA*

The purpose of this symposium is to consider the benefit of sport psychology researchers partnering with organizations such as the Positive Coaching Alliance (PCA) to enhance a positive culture within youth sport. PCA was established in 1998 at Stanford University, and founder Jim Thompson has guided the development of the organization into a national nonprofit that provides sport education training to 1000s of youth sports leaders, coaches, parents and athletes each year. A strength of PCA is that their materials are based on strong research in sport psychology and other disciplines. PCA's mission statement is "Better Athletes, Better People," and this symposium is designed to provide an example of how research in sport psychology provides evidence that a positive culture will enhance athletes' experience, setting the stage for them to become better athletes and better people. Presentation 1 will provide a brief overview of research on the benefits of athletes perceiving a caring and task-involving climate on their sport teams, and the link to outcomes that are directly related to becoming better athletes. Presentation

2 will provide a brief overview of research linking a positive climate to outcomes directly related to athletes becoming better people. In Presentation 3, the PCA CEO will discuss how research in sport psychology has guided PCA's development, and demonstrate examples of how tools based on sport psychology research are used in the more than 2,500 live workshops PCA delivered last year. In Presentation 4, a discussant will highlight the benefits of sport psychology professionals partnering with organizations like PCA.

## **SYM-05A**

### **EVIDENCE FROM SPORT PSYCHOLOGY RESEARCH THAT A POSITIVE CLIMATE LEADS TO BETTER ATHLETES**

*Susumu Iwasaki, Fort Lewis College, USA*

Sport psychology researchers have conducted extensive research in youth sport that indicates young athletes will reap many benefits when they are in a caring and task-involving climate that focuses on giving their best effort and working together with coaches and teammates. Three primary benefits evident in numerous research studies are that 1) athletes consistently have more fun, 2) give greater effort, and 3) want to continue their participation in sport when they are in a positive climate. In addition, athletes like their coaches and teammates more when they are in a caring/task-involving climate, and engage in more caring behaviors towards them. Athletes also have reported greater mental skills, a heightened ability to be mindfully engaged in their sport, and better practice strategies when they perceive a caring/task-involving climate. In terms of their health, athletes in a caring/task-involving climate experience lower stress levels as evidenced in both self-report data as well as salivary cortisol (stress hormone) responses, and indicate they would tell their coaches if they were experiencing symptoms of a concussion. Athletes in a caring/task-involving climate also report greater pride and less shame in their sport performance, and evidence is mounting that athletes who perceive a positive climate perform better and develop skills more quickly. In summary, these research findings provide strong support that young athletes will be more likely to become better athletes, and continue their participation over time when they experience a positive sport climate.

## **SYM-05B**

### **EVIDENCE FROM SPORT PSYCHOLOGY RESEARCH THAT A POSITIVE CLIMATE LEADS TO BETTER PEOPLE**

*Christopher Reid, University of Kansas, USA*

Researchers have identified a strong link between young athletes' perceptions of a caring and task-involving climate and their development as mature and healthy human beings. Specifically, athletes who perceive a caring/task-involving climate report greater empathy for their peers and greater emotional regulation. Negative emotional regulation refers to individuals being able to deal and cope with the challenges they face without experiencing frequent emotional letdowns, whereas positive emotional regulation refers to individuals' ability to express joy when good things happen. Emotional regulation is an important skill for young people to develop. In addition, athletes who perceive a caring/task-involving climate report greater psychological well-being, greater hope and happiness, and less sadness and depression. Youth also indicate they engage in less bullying and more caring

behaviors towards their peers, are more committed to building a strong world, and believe that sport should make athletes better global citizens. Overall, the research on positive climates in sport is resoundingly consistent in identifying the many avenues through which a positive climate can help athletes become better people.

### **SYM-05C**

#### **POSITIVE COACHING ALLIANCE'S INCORPORATION OF RESEARCH IN SPORT PSYCHOLOGY**

*Jim Thompson, Positive Coaching Alliance, USA*

Positive Coaching Alliance ([www.positivecoach.org](http://www.positivecoach.org)) was started as a nonprofit organization at Stanford University's Department of Athletics in 1998 to transform the culture of youth sports away from an entertainment culture to a Development Zone™ culture in which the goal is to develop Better Athletes, Better People. PCA defines better athletes as a Triple-Impact Competitor® who makes self, teammates and the game better by the way he or she competes. Such an athlete is an "Elevater," who looks for opportunities to elevate whatever situation he or she is in. From the beginning, PCA has been committed to using research from sport psychology and other disciplines to create practical tools and frameworks that youth leaders, coaches, parents and athletes can use to make the youth sports experience a positive, character-building experience. PCA has developed a distribution network of 150+ PCA Certified Trainers who delivered more than 2,500 live workshops around the U.S. last year. We have developed online workshops, which thousands of coaches, parents and athletes have taken. PCA has also created the Development Zone Resource Center ([devzone.positivecoach.org](http://devzone.positivecoach.org)), which has thousands of video and print resources (including many provided by academic researchers) to help youth sports practitioners address challenges they face. In this presentation PCA founder and CEO Jim Thompson will demonstrate practical examples of how PCA uses academic research to provide practical tools and frameworks to youth sports leaders, coaches, parents and athletes.

### **SYM-05D**

#### **THE PARTNERSHIP OF SPORT PSYCHOLOGY PROFESSIONALS WITH THE POSITIVE COACHING ALLIANCE: A WIN-WIN RELATIONSHIP**

*Mary Fry, University of Kansas, USA*

A major strength of the sport and exercise psychology field is that researchers have conducted an amazing body of scholarship that should inform and guide practice, and make sport an activity that helps youth develop into stronger athletes and people. Ironically, one of the frequent criticisms of the field of sport psychology is that it has been less successful in carrying out this application into real world settings. Certainly, there are pockets of researchers who have made a huge impact in providing coaching education, but overall, across the country, more work is needed to positively change the culture of youth sport. One of the reasons that the research-to-practice link has been slow is that it has been on the shoulders of university faculty in sport psychology to package and disperse the research. However, many faculty have increased responsibilities at their institutions. Particularly at research institutions, faculty spend significant time engaged in research, teaching, and service to their universities and to their profession. The increased work responsibilities that many

faculty face may limit their efforts to work with youth sport organizations to enhance their programs. The discussant will highlight these issues and share some of the benefits that occur when university faculty partner with organizations like the Positive Coaching Alliance, a group committed to creating a positive culture within sport. This nationwide nonprofit organization is equipped with the personnel and resources to package and dispense high quality materials that are used to train youth sport leaders, coaches, parents, and athletes to create a positive culture. PCA has brought an amazing group of outstanding coaches, athletes, academic researchers and organization leaders together on its National Advisory Board to be powerful advocates for youth sport as a venue for youth to become better athletes and better people.

### **SYM-06**

#### **BODIES-IN-MOTION: EVIDENCE-BASED PROGRAMMING FOR ENHANCING POSITIVE BODY IMAGE AND WELL-BEING AMONG FEMALE COLLEGIATE ATHLETES**

*Dana Voelker, West Virginia University, USA  
Trent Petrie, University of North Texas, USA  
Deborah Wright, University of Missouri, USA*

Researchers have identified female athletes as at-risk for the development of disordered eating and body image concerns (Anderson & Petrie, 2012). Although programming to reduce risk has been examined among female nonathletes (Stice, Shaw, & Marti, 2007), few programs have been designed for, and evaluated among, female athletes (Becker et al., 2012). In this symposium, we will discuss the development, implementation, and empirical evaluation of Bodies-in-Motion; a program specifically designed for female athletes based on cognitive dissonance and mindful self-compassion. In the first paper, we will provide the theoretical rationale for the program and discuss its structure, content, and purpose. In the second paper, a sport psychologist will share her practical experiences in implementing the program as a trained Bodies-in-Motion Program Leader and cover topics such as time commitment, recruitment, and involvement with the Bodies-in-Motion social media platform. She will provide anecdotes that highlight the successes and challenges she experienced. In the final paper, we will present the results of the program's empirical evaluation. Female collegiate athletes (intervention = 88; control = 58) completed questionnaires the week prior to the program's start and again during the week following its completion. Statistical analyses revealed improvements across multiple outcomes, such as internalization, body image concerns and positive mood, as a result of the program. We will discuss possible mechanisms underlying these changes, including improvements in self-compassion and mindfulness. A sport psychologist who works at an eating disorder treatment facility will serve as the discussant. He will critically evaluate the program and discuss its role in the prevention and treatment of disordered eating among female athletes. Research for this project was conducted with the support of the NCAA. Any opinions, findings, and conclusions are those of the authors and do not necessarily reflect the views of the NCAA.

## **SYM-06A**

### **BODIES-IN-MOTION: INNOVATIVE PROGRAM CONTENT AND STRUCTURE**

*Dana Voelker, West Virginia University, USA  
Trent Petrie, University of North Texas, USA*

Bodies-in-Motion innovatively combines a cognitive dissonance approach with mindful self-compassion to promote positive body image and psychological well-being among female collegiate athletes. Cognitive dissonance, robustly supported in programming with non-athletes (Stice, Shaw, Becker, & Rohde, 2008), helps women lessen internalization, or the degree to which they adopt negative body pressures as their own, by learning how to actively challenge them. Mindful self-compassion, examined extensively by Neff and colleagues (2013; 2015), helps women to respond to themselves with self-kindness, as they would a teammate or friend, versus criticism and remain non-judgmental of their thoughts and feelings in the present moment when faced with negative body pressures. Bodies-in-Motion consists of an introductory meeting followed by four, 75-minute, face-to-face sessions. Groups of approximately 5 to 8 mixed-sport female athletes engage in discussion-based, experiential, and reflective activities that allow them to identify the body pressures they experience, become aware of triggers for thinking and feeling negatively about their bodies, and practice a more mindful and self-compassionate approach towards themselves. Learning and relationship-building in session are extended through completion of a Bodies-in-Motion Workbook and an invitation to an ever-expanding internet platform that demonstrates how social media can be used in positive and instrumental ways that empower women. When applied broadly, Bodies-in-Motion may promote body-healthy environments such that female athletes not only acquire skills to effectively cope with negative body pressures, but the sources of those pressures are also addressed. This presentation will share information on the program's content and structure and the research support from which it was developed. In addition to presenting sample session material, we will discuss how audience members and their colleagues may adopt and implement the program at their own institutions.

## **SYM-06B**

### **BODIES-IN-MOTION: NOVEL PERSPECTIVES FROM A TRAINED PROGRAM LEADER**

*Deborah Wright, University of Missouri, USA  
Dana Voelker, West Virginia University, USA  
Trent Petrie, University of North Texas, USA*

Bodies-in-Motion was strategically designed with a fully manualized Program Leader Guide and materials so that professionals from a diversity of educational backgrounds and expertise, such as sport psychology, nutrition, and athletic training, could facilitate the program with ease. Interested Program Leaders participate in approximately 6 to 8 hours of training with the co-developers prior to implementing the program at their institutions. This presentation will offer a storied account of this training and subsequent program implementation, including comments on group process and perceived impact on program participants, from the perspective of a trained Bodies-in-Motion Program Leader. Topics to be discussed include time commitment, recruitment,

familiarization with materials, ease of implementation, involvement in the social media platform, unexpected issues, anecdotal stories of both the athletes' and facilitators' experiences, and suggestions for professionals considering this program. In illustrating different program components, the presenter will de-identify all information from the athletes who participated.

## **SYM-06C**

### **BODIES-IN-MOTION: ESTABLISHING PROGRAM EFFECTIVENESS**

*Trent Petrie, University of North Texas, USA  
Dana Voelker, West Virginia University, USA*

Bodies-in-Motion was implemented within nine NCAA institutions across the U.S. A total of 146 female athletes (intervention = 88; control = 58) participated. Mean age was 19.5 years (SD = 1.19); athletes were evenly distributed across year in school, represented a wide range of sports, and predominantly identified as Caucasian/White. All athletes completed measures of general and sport pressures regarding body and appearance, internalization, disordered eating, body image concerns, positive and negative affect, mindfulness, and self-compassion during the week prior to starting the program (Time 1) and again during the week following completion of the program (Time 2). Through a series of ANCOVAs with Time 1 measures serving as the covariate, we found improvements among the intervention athletes in the internalization of thinness pressures, body image (i.e., reductions in body shape concerns, increases in body appreciation), positive affect (i.e., increases in confidence, happiness, and pride), mindfulness, and self-compassion as compared to the control group at Time 2 ( $p$ 's < .05). The two groups did not differ at Time 2 in their reported general and sport-specific body pressures, negative affect, and disordered eating behaviors, though such changes may occur in the longer term. The intervention group also evaluated the program on a four point scale (1, strongly disagree, to 4, strongly agree) and rated each element of the program at 3.50 or higher. In summary, the intervention group showed improvements in their mindfulness and self-compassion as well as in the extent to which they internalized societal ideals about thinness, how they felt about their body shape and size, and in their positive mood. These favorable outcomes resulted even though the intervention group did not necessarily experience fewer pressures from society and their sport regarding their body weight, appearance, and eating. Program impact and future research directions will be discussed.

## **SYM-07**

### **INEQUALITY IN SPORTS: FEMALE ATHLETES**

*Mary Foston-English, Stanford University & Private Practice, USA  
Hannah Bennett, Augusta University, USA*

This Women's SIG-sponsored symposium will focus on a presentation of females athletes ongoing struggle for equality in sports. The purpose is to open the discussion on inequality in female sport leadership, pay inequity, media, women of color, and lesbian/transgender concerns (womeninsport.com, 2015). The first presenter will cover the key issues

of extremely limited leadership by females (Belzer, 2015), pay inequity throughout professional sport (Barajas, 2016) and in funding college scholarships, and media coverage is even less than 30 years ago (Cooky, Messner, & Musto, 2015). The second presenter will discuss women of color in sports highlighting “gaps” in their history (Rhoden, 2012) and the connection to race relations. Finally, the inequities of transgender and lesbian issues are covered (Genel, 2017). Following the presentation, there will be a brief question and answer period.

## SYM-07A

### INEQUALITY EXPERIENCED BY WOMEN OF COLOR

*Mary Foston-English, Stanford University & Private Practice, USA*

According to a 2007 report by the United States Department of Education, among high school sophomores, white girls had a 51 percent participation rate in sports, compared with 40 percent for black girls. The percentages were lower for Asian/Pacific Islanders (34 percent) and Hispanics (32 percent) (Rhoden, 2012).

This talk will discuss some of the women pioneers in sports highlighting the “gaps” in the history of women of color in sports and how this correlates to the history of race relations in America. A brief video will be shown to stimulate questions and discussions about the importance of incorporating race as a variable in the inequity of women in sports. Since discussions about race and ethnicity can be difficult to have (Young, 2013), this talk will follow other presenters who will help desensitize the subject matter.

## SYM-07B

### TRANSGENDER/LESBIAN CONCERNS

*Hannah Bennett, Augusta University, USA*

The necessity to address inequalities surrounding athletes who identify as lesbians and also athletes who identify as transgender is imperative in this day and age. Athletes who identify as transgender face many obstacles when it comes to the differing regulations throughout sporting organizations (Genel, 2017; Jones, Arcelus, Bouman, & Haycraft, 2016) and acceptance of gender identification related to their sport participations (Jones et al., 2016). These athletes may struggle to navigate the binary-defined sport world to find a place of recognition and appreciation. Although females who identify as lesbian have not faced the same inequalities in sport, their struggles are still seen. Female athletes who identify as lesbian are seen through judgments of disclosure (i.e., Anderson, 2013), body shaming (Krane et al., 2004), and what Waldron (2016) described as the “myth of the lesbian athlete” (p. 337). It is our duty to expose these inequalities through sport and to work on creating spaces that invite individuality and differences.

## SYM-08

### THE ROLE OF SPORT PSYCHOLOGY IN THE TREATMENT AND REHABILITATION OF CONCUSSION

*Anthony Kontos, University of Pittsburgh/Dept of Orthop, USA  
Erin Reynolds, University of Pittsburgh, USA  
Jonathan French, University of Pittsburgh, USA  
Kristie Charek, University of Pittsburgh, USA  
Megan Byrd, John F Kennedy University, USA  
Sam Zizzi, West Virginia University, USA  
Marc Cormier, University of Kentucky, USA  
Adam Lepley, University of Connecticut, USA*

The purpose of this symposium is to provide sport psychology professionals a framework for working with and alongside sports medicine professionals in the treatment and rehabilitation of athletes with concussion. This topic is significant for many reasons. First, the incidence rate of sport concussion per athletic exposure (number of practices and competitions in which an individual actively participates) in high school sports is 4.9 per 10,000 athletic exposures and collegiate sports is 3.4 per 10,000 athletic exposures (Gessel, et al., 2007; Hootman Dick, & Agel, 2007; Lincoln et al., 2011). Secondly, emotional symptoms following concussion are categorized as a discrete symptom cluster (Pardini, et al., 2004), yet are not often treated separately from physical and somatic symptoms. One emotion exhibited by athletes following concussion is anxiety and rates of general anxiety disorder (GAD) in persons following TBI has been reported at rates that are double those found in the general population (Hiott & Labbate, 2002). The effects of concussion on mental statuses are more subtle than obvious, often making them difficult to identify and fully characterize on routine clinical examination (McCrea, 2001), thus highlight the important role a sport psychology consultant in concussion treatment. The first presentation will provide an overview of a Targeted Evaluation and Active Management Approach (TEAM) to concussions and a clinical model for developing treatment pathways based on concussion profiles. The second presentation will discuss emotional experiences of ten collegiate athletes, focusing on feelings of anxiety. The third presentation is centered from the athletic trainer and sports medicine perspective in regards to their knowledge and awareness of emotional responses and anxiety following concussion.

## SYM-08A

### USING CLINICAL PROFILES AND TARGETED INTERVENTIONS TO ACTIVELY TREAT ATHLETES WITH CONCUSSION

*Anthony Kontos, University of Pittsburgh/Dept of Orthop, USA  
Erin Reynolds, University of Pittsburgh, USA  
Jonathan French, University of Pittsburgh, USA  
Kristie Charek, University of Pittsburgh, USA*

Sport-related concussions (SRC) are heterogeneous and require a targeted, personalized medicine approach to provide athletes with the best outcomes. Our recent work in this area (Collins et al., 2016; 2014) has highlighted the importance of a clinical model that involves: 1) conceptualizing concussion using clinical profiles (anxiety/mood, cognitive, vestibular...) that incorporate athlete risk factors (migraine history, sport, removal from play...), 2) conducting a comprehensive assessment of multiple domains (symptoms, cognitive, oculomotor, vestibular...) associated with this injury, and 3) providing targeted and active treatment interventions

(exertion, vestibular, vision behavioral therapies...) to enhance recovery. Sports psychology professionals are in a unique position from which to provide athletes with select clinical care and support following a SRC. We will emphasize the role of the sport psychology professional on an interdisciplinary concussion treatment team and explore new avenues from which sport psychology can contribute to the clinical care and research on clinical concussion outcomes. We will also focus on the role of behavioral and other psychological-based interventions across all clinical profiles of SRC. Finally, and perhaps most importantly, we will review emerging evidence for the preceding approach and identify gaps in knowledge that warrant attention from sport psychology professionals and researchers alike.

## **SYM-08B**

### **A MIXED-METHODS INVESTIGATION OF ATHLETES' EXPERIENCES OF ANXIETY FOLLOWING CONCUSSION**

*Megan Byrd, John F Kennedy University, USA*  
*Sam Zizzi, West Virginia University, USA*  
*Anthony Kontos, University of Pittsburgh/Dept of Orthop, USA*

Anxiety following concussion has been studied rigorously in a clinical population following concussion, but these findings have not been extended to an athlete population. This study used a multi-method approach to examine experiences of anxiety in collegiate athletes following sport concussion. A repeated-measures design, followed by semi-structured interviews was utilized. Ten collegiate athletes (M= 20.10 years old, SD= 2.92) completed surveys 10 and 20 days post-concussion, followed by interviews 30 days post-concussion (27% response rate). Eighty percent of athletes reporting self or others noticing a difference in mood or behavior following their concussion. Findings supported decreases on symptoms and anxiety between 10 and 20 days post-concussion. All participants indicated some feelings of anxiety (M = 10, SD = 3.68) 10 days post-concussion, with 50% of participants' scores reflecting a probable clinical diagnosis of anxiety. Inductive coding revealed the fear of the unknown and return to play as emergent themes. The results demonstrate the need to include specific anxiety measures as part of a comprehensive return to play assessment. The findings also highlight the role of sports medicine and sport psychology professionals in monitoring and treating anxiety in collegiate athletes following concussion.

## **SYM-08C**

### **SPORT MEDICINE PROFESSIONALS PERCEPTIONS AND KNOWLEDGE OF EMOTIONAL RESPONSES TO CONCUSSION**

*Marc Cormier, University of Kentucky, USA*  
*Adam Lepley, University of Connecticut, USA*

Certified athletic trainers (ATs) play a key role in the identification an initial sideline screening for concussions in high school and collegiate sports, as well as in the critical return to play decision. Often referred to as "front-line counselors" (Clement & Shannon, 2013; Cormier & Zizzi, 2015), ATs were recently found to be on site for at least 70% of the reported concussions suffered by high school athletes (Meehan, d'Hemecourt, & Collins, 2011). When present, they were nearly always (94%) involved in the initial assessment of an athlete for a concussion and responsible for important

follow-up screenings, both physical and psychological. In many cases, however, ATs may only make recommendations regarding playing decisions and rarely, if ever, have "carte blanche" to sideline athletes who have recently suffered a concussion. Thus, the objective of this presentation is to share findings from ongoing research that has explored the perceptions of sports medicine professionals' regarding their role in the identification of symptoms related to, and protocols following, sport-related concussion. Focus groups were utilized to gather perspectives and experiences of sports medicine professionals working in Division I athletics. Preliminary findings have revealed no uniformity in concussion protocol despite recent NATA recommendations (e.g., Broglio et al., 2014) and that best practices are largely dependent on available resources (e.g., Head AT, Head of Sports Medicine, assessment tools, etc.). Additionally, many sports medicine professionals reported feeling "underprepared" and "lacking overall competencies" in symptom management, particularly related to emotional responses such as anxiety and depression. Findings will continue to provide sports medicine and sport psychology professionals with much-needed recommendations in identifying gaps in education and preparation, as they relate to symptom identification and management following a concussion.

## **SYM-09**

### **DEVELOPING RESILIENCE: THEORY TO PRACTICE**

*David Fletcher, Loughborough University, UK*  
*Mustafa Sarkar, Nottingham Trent University, UK*  
*Peter Haberl, USOC, USA*  
*Daniel Gould, Michigan State University, USA*  
*Stephen Gonzalez, The College at Brockport, State University of New York, USA*  
*Nicole Detling, HeadStrong Consulting, USA*  
*Nick Galli, University of Utah, USA*  
*Angus Mugford, Toronto Blue Jays, USA*  
*Patrick Steinfort, Toronto Blue Jays, USA*

The aim of this symposium is to provide practitioners with sound information about developing resilience that is immediately applicable to their work. The first presentation outlines a mental fortitude training program – an evidence-based approach to developing psychological resilience for sustained success. The program facilitates a holistic and systematic approach to developing resilience for aspiring performers. The second presentation focuses on how mindfulness and third wave behavior therapies such as Acceptance and Commitment Therapy (ACT), can benefit Olympic athletes' and teams' resilience on their journey to Olympic success as they navigate a path filled with adversity. The third presentation integrates research on the benefits of adversity in elite athletes and life skills in adolescent high school athletes to outline strategies for using youth sports as a vehicle to develop resilience-related skills in young athletes. Strategies for facilitating transfer of skills developed in sport to other life contexts is also discussed. The fourth presentation addresses the role of environmental and social protective factors in developing athlete resilience. Specifically, suggestions for how practitioners can best support athletes in leveraging social relationships and identifying and using their environmental resources are offered, while also providing directions for future research. The fifth presentation outlines a case study taking a systems approach to creating an optimal developmental and performance environment. Specifically, insights will be shared from the perspective of the developmental journey for Major-League Baseball (MLB)

players, and the need to understand and carefully consider organizational resilience in order to impact scalable change and management. The symposium concludes by opening the floor for an interactive discussion between the presenters and the audience about the topic of developing resilience.

## SYM-09A

### MENTAL FORTITUDE TRAINING: AN EVIDENCE-BASED APPROACH TO DEVELOPING PSYCHOLOGICAL RESILIENCE FOR SUSTAINED SUCCESS

*David Fletcher, Loughborough University, UK  
Mustafa Sarkar, Nottingham Trent University, UK*

Underpinned by resilience-related theory and research, in this presentation, we will present an evidence-based approach to developing psychological resilience for sustained success (Fletcher & Sarkar, 2016). To this end, the presentation will be divided into three main sections. The first section will describe the construct of psychological resilience and explain what it is. Drawing on the existing body of knowledge in this area, the second section will outline and discuss a mental fortitude training program for aspiring performers. The mental fortitude training program focuses on three main areas – personal qualities, facilitative environment, and challenge mindset – to enhance performers' ability to withstand pressure. One of the most important implications of the mental fortitude training program is that the development of psychological resilience for sustained success is a multifactorial endeavour. Although the three areas will be presented separately to facilitate understanding, in practice, we argue that they will need to be addressed and integrated collectively rather than in isolation to maximize their effect. The third section provides recommendations for practitioners implementing or undertaking this program. Specifically, we reflect on our experiences of implementing the program to provide recommendations for professional practice in this area. It is hoped that this presentation will facilitate a holistic and systematic approach to developing resilience for sustained success.

## SYM-09B

### FAILURE IS YOUR BEST FRIEND! ADVERSITY, RESILIENCE, AND MINDFULNESS AT THE OLYMPIC GAMES

*Peter Haberl, USOC, USA*

Haidt (2006) proposed that adversity, if encountered at the right time, by the right person, and to the right degree is indispensable for personal flourishing. Sarkar et al. (2015) found support for Haidt's adversity hypothesis in the Olympic environment: Olympic gold medalists not only experienced adversity on their Olympic journey but they perceived these experiences as essential in their performance development. So actively training Olympic athletes to be resilient in the face of adversity is important for sport psychology consultants (Fletcher & Sarkar 2012). So far, Cognitive Behavioral Therapy (CBT) focused resilience training programs have been deemed to be effective (Robertson et al., 2015). In contrast to the CBT approach, using case examples from the Olympic Games, this presentation will focus on how mindfulness and third wave behavior therapies such as Acceptance and Commitment Therapy (ACT), with a focus on attention, awareness and values, can benefit Olympic athletes and teams on their journey to Olympic success as they navigate a path filled with adversity.

## SYM-09C

### YOUTH SPORTS AS A VEHICLE FOR DEVELOPING RESILIENCE IN YOUNG PEOPLE

*Daniel Gould, Michigan State University, USA*

Sport psychologists have shown considerable interest in better understanding the role resilience plays in elite athlete performance (Fletcher & Sarkar, 2012). Investigators have also begun to understand how athletes develop resilience and the cognitive behavioural and meta skills that help athletes cope and grow from stressful encounters (Sarkar & Fletcher, 2014). At the same time, a number of researchers have been exploring how sport can be used to develop life skills in young people (Gould & Westfall, 2014). While at first glance these two areas of research seem to be disconnected, much can be learned from examining each body of knowledge. For example, retrospective studies of elite athletes show that experiencing and overcoming adversity is critical to the psychological development of these outstanding performers (Sarkar et al., 2015), while recent studies of adolescent high school wrestlers show mental skills are developed and transferred to nonsport arenas after participating in a camp specifically designed to develop psychological and life skills by exposing athletes to stressful situations (Driska et al., in press; Pierce et al., 2016). It is clear, then, that youth sports can be used to develop resilience-related skills when a number of conditions occur. Hence, this presentation is designed to integrate this research and outline strategies for using youth sports as a vehicle to develop resilience-related skills in young athletes. Specifically, these skills and attributes are more likely to be developed when they are intentionally taught/fostered by knowledgeable coaches who form strong relationships with participants. Evidence also suggests that experiential learning is critical for developing these skills, especially creating situations where participants can apply these skills in stressful environments where some failure is experienced. Repetition is also critical in making these skills habitual. Strategies for facilitating transfer of skills developed in sport to other life contexts will also be discussed.

## SYM-09D

### IT TAKES A VILLAGE: THE ROLE OF ENVIRONMENTAL AND SOCIAL PROTECTIVE FACTORS IN DEVELOPING ATHLETE RESILIENCE

*Stephen Gonzalez, The College at Brockport, State University of New York, USA*

*Nicole Detling, HeadStrong Consulting, USA*

*Nick Galli, University of Utah, USA*

For the last decade, research on psychological resilience in sport has rapidly expanded. The ability for an athlete to display resilience, or the process of promoting facilitative responses to stressors and protecting them against adversities (Fletcher & Sarkar, 2012), is vital given that athletic settings are laden with stressors and adversity (Sarkar & Fletcher, 2014). Athletes must negotiate stressors that are competitive (e.g., underperforming), organizational (e.g., poor interactions with coaches), and personal (e.g., family difficulties) in nature. Thus, the promotion of resilient outcomes is an important undertaking for practitioners as they work to enhance both athlete performance and well-being. The purpose of this presentation is to discuss how practitioners can leverage the protective factors that contribute to the development of resilience. Protective factors, which are resources and characteristics that enable individuals

to display resilience in the presence of stressors and adversity (Rutter, 1985), come from three sources: individual, social, and environment (Werner & Smith, 1992). Although many researchers and practitioners focus on individual protective factors (e.g., optimism, motivation, passion; Galli & Gonzalez, 2015), there is a need to focus on how social and structural resources in the sporting environment also contribute to resilient (or non-resilient) outcomes. Gaining further insights into resilience from a holistic perspective in sport is much needed to continue high quality research and practice for sport psychology professionals. Based on Gonzalez, Detling, and Galli's (2016) resilience framework, the community youth development model (Benard, 2007), and our own practical experiences, we will address the role that organizational resources and important others (e.g. coaches, teammates) play in athletes' responses to adversity. We will offer suggestions for how practitioners can best support athletes in leveraging social relationships and identifying and using their environmental resources, while also providing directions for future research.

## **SYM-09E**

### **ORGANIZATIONAL RESILIENCE IN PROFESSIONAL BASEBALL: IMPLICATIONS FOR A SYSTEMS APPROACH**

*Angus Mugford, Toronto Blue Jays, USA*  
*Patrick Steinfort, Toronto Blue Jays, USA*

Resilience is a key attribute in many sports, with the key feature that there is an exposure to significant adversity and positive adaptation (Masten, 2001). For some elite athletes, their first failures and experience of adversity come as a professional, so their team and organizational context can have a significant bearing on their ability to demonstrate resilience. The case study presented here takes a systems approach to creating an optimal developmental and performance environment, where the role of the interdisciplinary support and coaching team is key for each athlete in the system (Reid et al., 2004). Research from numerous domains suggest that the impact of positive leader expectations, organizational support, and interpersonal relationships may have significant ramifications on the performance and coping abilities of team members (McNatt, 2000; Mummery et al., 2004; Rhoades & Eisenberger, 2002). Indeed, the alignment between the front office leadership, coaches, support staff, and players, underscore the type of environment created (Pain & Harwood, 2008; Weinberg & McDermott, 2002). Insights will be shared from the perspective of the developmental journey for Major-League Baseball (MLB) players which typically involve multiple transitions throughout a career. This could include working their way through as many as eight affiliate clubs within one organization, from rookie ball to a Major-League roster. Organizational factors that can impact these players can range from consistency of coaching and cultural barriers, to limited resources and the challenge of focusing on development goals during a season of 140 games in roughly 150 days. Fletcher and Wagstaff (2009) referred to the context of organizational, inter-group, intra-group, and individual levels which are relevant to identify the complexity of impact. These layers represent the need to understand and carefully consider organizational resilience in order to impact scalable change and management.

## **SYM-10**

### **THE ROLE OF SPORT PSYCHOLOGY IN PROFESSIONAL COACH DEVELOPMENT**

*Kristen Dieffenbach, WVU – Athletic Coaching Ed, USA*  
*Melissa Thompson, The University of Southern Mississippi, USA*  
*Goran Kentta, The Swedish School of Sport and Health Science, Sweden*

Sport has a rich history, centuries old. The names of great athletes such as Theagenes of Thasos, Marshall Taylor and Babe Didrikson Zaharias have been passed down and revered for their athletic achievements. As sport has grown as a recreational pursuit, entertainment source, and revenue stream, so too have the sciences supporting related to training and preparing athletes. Interestingly, while the 20th century finally saw the recognition of legendary coaches and the coach role in the training of athletes became a considered factor in the literature towards the end of the 20th century (Gilbert & Trudel, 2004), until recently, coaching as a trained profession and the field of coach development has received remarkably little notice. Sport coaching, as a profession, is complex and multifaceted (Lyle & Cushion, 2016), requiring specialized knowledge (Côté & Gilbert, 2009; ICCE 2016), context specific preparation (ICCE, 2015) and a “re-conceptualization of the role” as noted by Jones (2006). This professionalization of coaching has resulted in a need for qualified coach developers to implement coach development programs. Thus, to date, little discussion has taken place of how sport psychology can support this need. This symposium will explore the expanding academic and applied fields of coaching education and professional development in coaching as independent disciplines and examine the role of sport and exercise psychology within the broader context of coach development. Emphasis will be placed on highlighting new and overlooked areas for sport psychology application as well as suggest models of integration of sport psychology into comprehensive educational program design recommendations for professional coach and professional sport coach developer training.

## **SYM-10A**

### **FACILITATING GREAT SPORT EXPERIENCE IS COMPLEX, SO WHY HAS COACH TRAINING BEEN SO SIMPLISTIC?**

*Kristen Dieffenbach, WVU – Athletic Coaching Ed, USA*

Despite the deep cultural significance of sport, high personal value placed on quality sport experiences by many, research supporting the positive benefits of sport engagement (e.g. Australian Institute of Sport, 2015; U.S. Department of Health and Human Services, 1996), and research supporting the essential role a coach plays in creating a safe, healthy and productive sport experience (e.g. Fraser-Thomas, Tolkin & Deakin, 2007; Gould & Carson, 2008), the preparation of coaches and requirements to coach have been woefully under addressed. As noted by Lyle and Cushion (2016), coaching is a complex and multifaceted profession, yet most coach training models rely one-time workshops and experience alone. In 2013, the International Council for Coaching Excellence published the International Sport Coaching Framework, providing a research based framework that called for the recognition of the unique and specialized professional development needs of coaches. Further, they advocate for a coach development system with both breadth and depth, across all contexts of sport engagement, differentiating it from the fields of physical

activity and recreation. Subsequently, in 2016, the ICCE published guidelines for the professional development of sport coaches in academic undergraduate programs. As noted by Côté and Gilbert (2009), coaching required sport content, interpersonal, and intrapersonal knowledge and skills. Quality holistic preparation of coaches required both core knowledge and the integration of disciplines such as motor learning, biomechanics, nutrition, pedagogy, exercise physiology and sport and exercise psychology. This presentation will explore the role sport and exercise psychology should play within the context of the growing field of professional coaching education and coach development and how a multi-discipline collaborative learning environment might be facilitated. Further, areas where the field of sport and exercise psychology can make primary and secondary contributions, specifically within the knowledge and skill areas related inter and intra personal development will be highlighted.

### **SYM-10B**

#### **SPORT PSYCHOLOGY AND THE EVOLVING ROLE OF COACH DEVELOPER**

*Melissa Thompson, The University of Southern Mississippi, USA*

In an attempt to better understand the factors associated with athlete performance, researchers have explored a plethora of internal and external variables. A factor frequently cited as being highly impactful is the influence of the coach (Gillet, et. al., 2010; Gould et. al., 2002). This finding has given rise to coach education and training programs of all shapes and sizes. However, it wasn't until recently that an emphasis on preparation and training for those leading coach education programs emerged. In 2014, the ICCE released the International Coach Developer Framework (ICDF) on the premise that coaches, as professionals, should be continually developing their skills and abilities, and accordingly, a group of expert coach developers was necessary to guide coach learning. The ICDF serves as a guidance document for the development of quality coach development pathways and highlights several standards and capabilities of coach developers. The purpose of this presentation is twofold: 1) to highlight the skills and capabilities of coach developers that share space with sport psychology and 2) to discuss the graduate level training necessary to start down the path of becoming a coach developer.

Coach developers must possess a number of capabilities and skills that overlap with sport psychology training. For example, mentoring skills and leadership skills are two hallmarks of good coach developers (ICCE, 2014). Therefore, the first segment of the presentation will focus on the application of these skills, along with others, in the coach developer setting. Following, a brief discussion of other skills that are marginally related to sport psychology will occur. After reviewing the skills and capabilities of coach developers, the presentation will conclude with elements of graduate training that would aid those interested in pursuing the role of coach developer.

### **SYM-10C**

#### **THE ROLE OF SPORT PSYCHOLOGY SUPPORT WITH ATTENTION TO PROFESSIONAL LONGEVITY IN HIGH PERFORMANCE COACHING**

*Goran Kentta, The Swedish School of Sport and Health Science, Sweden*

Research has identified professional-, interpersonal- and intra personal knowledge as fundamental domains of expertise and effectiveness in coaching (Côté & Gilbert, 2009). Professional knowledge related to sport science and sport specific issues together with interpersonal knowledge such as leadership and communication skills have received extensive attention in coach education. The latter have often been linked to sport psychology support. In contrast, the intrapersonal or self-knowledge of high performance coaches has received far less attention, especially in regard of self-care and well-being.

At the core of self-management is self-awareness, and it has been argued that self-awareness influences one's ability to experience the present moment and thereby become informed of personal psychological needs that are necessary to fulfill in order to sustain health and prevent burnout (Hayes, Strosahl, & Wilson, 2012). Consequently, self-awareness may be a core skill as it concerns an important quality of self-reflection and thinking that inform decision making. Self-awareness has been described by GoogleDictionary as the conscious knowledge of one's character, feelings, motives, and desires.

This presentation will address the role that sport psychology may have in theory (i.e., more formal coach education) and in practice (i.e., various applied support interventions) in order to develop the profession of high performance coaching with special attention to sustainability. More specifically, the focus will be on self-monitoring as a method to enhance self-care and ultimately self-awareness with emphasis on psychological flexibility and well-being. A daily self-reflective log is applied with the purpose to better understand daily stressors and recovery events experienced. The aim is to become more aware of recovery needs, learn effective recovery strategies, and ultimately increase some value consistent behaviours related to vitality and well-being. Finally, future directions will be discussed with emphasis on support across the blurred lines between performance enhancement and mental health issues (Baltzell, 2016).

### **SYM-11**

#### **SIGNATURE PRACTICES FOR PERFORMANCE EXCELLENCE: FOUR EXPERTS AND FOUR KEY PRACTICES**

*Sebastian Brueckner, Muenster University, Germany  
Elizabeth Shoefeldt, Western Kentucky University, USA  
Goran Kentta, The Swedish School of Sport and Health Science, Sweden  
Stiliani "Ani" Chroni, Inland Norway University of Applied Sciences, Norway*

In this symposium, four sport psychologists, with close to a century of combined experience, offer insight and direction on four signature practices that have led to successful consulting experiences. The first presenter will adopt a holistic life span perspective and will describe a comprehensive program used by a national team during the 2016 Olympic cycle to develop performance excellence through self-regulation skills. Specific tools and training exercises leading to better awareness, self-regulation, and acceptance of emotional challenges will be

presented that can be integrated into one's consulting and that complement mindfulness interventions and traditional psychological skills training. The second presentation will focus on the critical practice of pre-season strategic planning and how to incorporate this into a team's goal setting process. The presenter will discuss techniques to facilitate the identification of specific roles, responsibilities, and the levels of performance requisite to accomplishing team outcome goals and the role of the sport psychologist in facilitating this process. As sport psychologists, we pay considerable attention to pre-event preparation and support during performance. The third presenter will focus on the often-overlooked process of existing out major events (such as the Olympic Games) after failure, and how the consultant can facilitate a smooth transition. ACT (Acceptance Commitment Therapy) provides the theoretical basis for the key components of accepting uncomfortable situations, experiencing the present, and sustaining value-consistent actions after failure. The fourth presenter brings attention to the challenges consultants face when traveling with and spending considerable time with athletes at profound moments in their lives and the concomitant anxiety that may arise with athletes' significant others. The presenter will discuss practices employed and boundaries set to clarify work roles and procedures. Those in attendance will learn four key practices that can be incorporated into their sport psychology consulting and practice.

### **SYM-11A**

#### **A HOLISTIC SCIENTIST-PRACTITIONER APPROACH TO DEVELOPING PERFORMANCE EXCELLENCE: A SIGNATURE INTERVENTION FOSTERING EMOTIONAL SELF-REGULATION**

*Sebastian Brueckner, Muenster University, Germany*

Holistic life span perspectives addressing multiple levels and stages of development have been advocated by both sport psychology researchers (Wylleman & Lavallee, 2003) as well as practitioners. Building a comprehensive program to develop performance excellence through self-regulation skills training was a focus of the German Badminton National team's coaching and high-performance staff during the Rio 2016 Olympic cycle (Brueckner, 2016). Adopting a scientist-practitioner approach, specific interventions and programs were implemented at the German Badminton Association's National Training Centers. Kuhl's (2006) Personality Systems Interaction served as the theoretical foundation informing this praxis. The presentation will focus on specific tools implemented and the individual consulting approach adopted. Specifically, signature interventions supporting this holistic approach will be discussed and presented. Incorporating Kuhl's Volitional Components Inventory (VCI; Kuhl & Fuhrmann, 1998) as a diagnostic tool, self-regulation intervention is one of the integral parts of this consulting approach to performance excellence. However, training in specific exercises identified in Storch's (2004) Zurich Resource Model (ZRM) is another vital component used to foster athletes' sport specific and general emotional self-regulation skills. The ZRM describes multiple resource-activating methods to enhance self-management. Specifically, an exercise called "somatic markers" and the subsequent identification of athletes' "affective schemata" has proven very effective in helping athletes develop better awareness, self-regulation and acceptance when faced with emotional challenges. Such "emotional literacy" benefits athletes not only in sport performance, but also when navigating academic demands, solving psychosocial challenges and advancing their

psychological development. Thus, transitions across all four levels of Wylleman and Lavallee's (2003) developmental model are positively influenced. Attendees will learn how the specific exercises "somatic markers" and "affective schemata" can be integrated in their own consulting approach. Furthermore, how those self-regulation interventions can complement specific mindfulness interventions and build on traditional psychological skills training will be discussed.

### **SYM-11B**

#### **STRATEGIC GOAL SETTING: A SIGNATURE INTERVENTION INTEGRATING PRE-SEASON STRATEGIC PLANNING IN THE TEAM GOAL SETTING PROCESS**

*Elizabeth Shoenfelt, Western Kentucky University, USA*

The efficacy of setting individual and team goals is well established, provided the goals meet certain parameters and are paired with feedback (e.g., Locke & Latham, 1990; Weinberg, 2010). This presentation will describe the annual goal setting process I use with intercollegiate team sports (e.g., basketball, volleyball, softball, soccer) in which team outcome goals are identified, as well as the requisite process goals that will help ensure the achievement of the outcome goals. A critical component of the goal setting process is the strategic planning reflected by the process goals. That is, the coaches and players discuss specific roles, responsibilities, and levels of performance required by individual athletes and the team for the team to reach their overarching goals for the season. A detailed example of this strategic goal setting process will be described step-by-step. Before the team meeting, players are required to submit individual season goals to the coach. The sport psychologist meets with the team to first identify outcome goals for the season, which vary only slightly from season to season. Next, for each outcome goal, the sport psychologist facilitates a discussion between the coaches and players that targets who on the team has primary responsibility for the goal and the specific performance(s) required to accomplish the goal. Team values are reinforced to players and coaches, and likewise serve as a guide for how the goals will be accomplished. The particulars of the strategic planning vary from season to season depending on the skill mix of the players, characteristics of the competition, and the coach's priorities for the season. The outcome and process goals are recorded and, after each competition, players receive individual and team level feedback on their performance relative to the goals. The audience will learn how to implement strategic goal setting with teams.

### **SYM-11C**

#### **REVISITING THE JIGSAW-PUZZLE SOLUTION FROM LONDON 2012 OLYMPICS THROUGH THE LENS OF ACCEPTANCE COMMITMENT THERAPY**

*Goran Kentta, The Swedish School of Sport and Health Science, Sweden*

The Olympic Games often is regarded as the most stressful and demanding event an athlete may experience; everything is a performance issue (McCann, 2008). Thus, service delivery models for sport psychologist pay considerable attention to preparation before important events and support during athlete performance. To facilitate a smoother transition for athletes exiting the Olympic Games, the presenter will argue that sport psychologists need to give more attention to the specific window of ending and exiting out of the Games.

Acceptance Commitment Therapy (ACT) is commonly referenced as part of the third wave of Cognitive behavioral therapy in clinical psychology (Hayes, 2004). More recently, various approaches of ACT have been applied to the context of sports (Baltzell, 2016; Gardner & Moore, 2006). Conceptually, brief interventions of ACT can be described by three core pillars represented by open, aware and engaged (Strosahl, Robinson, & Gustavsson, 2012). Being open is the ability to accept uncomfortable sensations and distress without resistance and struggle. Awareness is essentially the ability to experience the present moment and to gain perspective on the self and the story about self. Engaged is the behavior oriented dimension and is the ability to sustain value-consistent actions. The presenter will revisit an intervention applied in the preparation, during, and at the end of the London Olympic Games through the lens of brief-ACT. At the time in 2012, the jigsaw puzzle was primarily developed and applied for preparation for the games and to enhance identified target behaviors during the Games. The specific adaptation to cope additionally with failure and consequently an early exit out of the Games was not initially a part of the intervention. Finally, the presenter will discuss future directions with an emphasis on ACT-interventions applied to the elite sports specific to the exiting out of major events such as the Olympic Games.

### **SYM-11D**

#### **FEMALE CONSULTANT WORKING WITH JANE DOE'S HUSBAND: CHALLENGES, BOUNDARIES, AND PRACTICES**

*Stiliani "Ani" Chroni, Inland Norway University of Applied Sciences, Norway*

The ethics, practices, boundaries, and crossing of boundaries with clients in sport psychology practice have received restrained attention by researchers (Moles, Petrie, & Watkins, 2016), though vital topics in the education and supervision of future professionals (Petitpas, Brewer, Rivera, & Van Raalte, 1994). Sport psychology consulting differs from traditional clinical practice. Many of our practices may represent boundary crossing; for example, working on the sports field, in locker rooms, coaches' offices, team buses and cars, or hotel lobbies, as well as traveling with the team, sharing lodging and meals with them, and celebrating after medal ceremonies (Haberl & Peterson, 2006; Moore, 2003). While these practices may facilitate the development of trusting and credible relationships - as Haberl and Peterson (2006) indicated, sport psychologists must meet the athletes where their sport takes place - these practices also may raise anxieties in the partners of athletes-clients. The presenter will bring attention to the challenges of consultants in terms of partner concerns when spending considerable time at profound moments with their significant other. The presenter is a female consultant who started working with professionals at the age of 27; yet this challenge did not surface during her education and supervision. Support from the literature was limited and mainly from neighboring disciplines. The APA and AASP codes of ethics addressed boundary crossing, but this was not the challenge faced by the consultant. The key challenge was clarifying her work practices and roles based on clear boundaries for all involved. The presentation will build on both more and less successful cases of clarifying her work/role with wives of male athletes, while elaborating on the challenge, the practices employed, the boundaries set, and how these impacted the construction of her gender on the job. Age and experience will be brought in as 'variables' that influenced practices.

### **SYM-12**

#### **KEEP YOUR BRAIN IN THE FIGHT: AN INTERVENTION DESIGNED TO ENHANCE ADAPTIVE THINKING, ATTENTIONAL SHIFTING, AND MANAGEMENT OF ENERGY IN A TACTICAL ENVIRONMENT**

*Steve DeWiggins, Digital Consulting Services, USA  
Maximillian Pollack, Digital Consulting Services, USA  
Shawn Pretat, Modern Army Combatives Program (MACP), USA  
Shane Flores, US Army, Modern Army Combatives Program (MACP), USA*

Soldiers in the United States Army receive combatives (hand-to-hand combat) training as part of their readiness training for pending missions or deployments. The Modern Army Combatives Program (MACP) conducts a level 1 and level 2 training where Soldiers are required to perform in high-pressure situations that are likely to generate fight, flight, or freezing reactions. Performance Experts were invited to develop and apply interventions designed to enhance attentional shifting, composure, and communication skills in an effort to maintain high-order thinking while operating in volatile and complex training environment. In this presentation, we will report how the mental skills training approach was scientifically refined over the course of several training iterations in order to prepare Soldiers for the culminating task of clearing a building. The room clearance task requires fire teams, comprised of 3-4 personnel, to maneuver through challenging scenarios where opposing forces of a compliant and non-compliant nature present them with opportunities to use combatives techniques and display control of self and team. We will present a detailed explanation of the applied techniques integrated into the training, along with the observed empirical evidence supporting their use in combatives training environments. The variety of Qualitative and Quantitative data imply that the training protocol utilized improved effectiveness in the areas of; scanning for indicators, identifying threats, acting under motor control, communicating intentionally, and self-regulating behaviors. MACP Instructors communicated a desire to share the beneficial outcomes observed across the Army's Combatives programs. Finally, we would like to share the future directions for integrating mental skills into MACP, then take questions and comments from the audience.

### **SYM-12A**

#### **PROPOSED THEORY FOR EXPLAINING THE LIMITING EFFECTS OF GOING "LOW-ROAD"**

*Steve DeWiggins, Digital Consulting Services, USA  
Maximillian Pollack, Digital Consulting Services, USA*

The neuronal structures of the cortex, responsible for complex thought, are accessible in most situations and allow us to be deliberate and intentional about the types of thoughts we have in order to create effective emotions and activation levels for performance. However, in certain situations, the (often sub-conscious) appraisal of information creates a change in how our brain operates. In order to create a sense of safety, the brain shifts away from the more complex cortical regions and relies on the more rudimentary and less adaptive limbic structures. The less nuanced sub-cortical areas of the brain generate faster, but more defensive responses to a potential threat or danger. Under threat, we can lose certain abilities (temporarily) to adaptively "think" as we perform, and, instead, rely on more basic responses such as fleeing from the environment, freezing, or feigning. Although these responses may be

designed to preserve life, in more complex situations, they can limit our ability to truly adapt our thinking and planning in accordance to the protocols, procedures, morals, and ethics that dictate everyday behavior. Army Soldiers tend to operate within environments that are volatile, uncertain, complex, and ambiguous in which complex thought and decision-making is of critical importance. The Modern Army Combatives Program offers a unique opportunity to observe behavior of individuals placed in threatening, demanding, and fear-provoking situations. These observations yielded a training program designed to help Soldiers maintain and regain access to high-order thinking, thus, allowing them to “keep their brain in the fight.”

## **SYM-12B**

### **THE INTENT AND OUTCOMES REPORTED FROM INSTRUCTOR AT THE MODERN ARMY COMBATIVES PROGRAM (MACP)**

*Shawn Pretat, Modern Army Combatives Program (MACP), USA*

*Shane Flores, US Army, Modern Army Combatives Program (MACP), USA*

Modern Army Combatives Program (MACP) instructors identified a need for Performance Experts that would address errors in the training environment. Participants experienced tunnel vision, rapid depletion of energy, freezing within highly stressful environments, getting distracted or over-stimulated, and lack of communication during times of importance or crisis. Intent was to increase overall control in an unfamiliar yet highly combative room clearing scenario through effective breathing control, verbal communication, proper focus, and agile thinking to improve the collaboration of the team. To meet this intent, Combatives instructors created overwhelming room clearing scenarios while Performance Experts designed a mentally and physically taxing training. Collaboration of the two programs, resulted in Soldiers becoming more vocal, tactically patient and deliberate in movement (situational awareness), controlling energy throughout duration of room clearing, and maintaining assigned responsibilities according to the role in their Squad. Teams became more trusting of their individual members by keeping integrity within their roles. Enhanced situational awareness and tactical thinking improved avoidance of dangerous or threatening actions from enemy personnel. The teams showed increased communication and resilience when confronted with danger. At the conclusion of training, participants gave positive feedback on ability to manage energy, noticing and increased attention span while distractions occur, and enhanced communication in high stress environments such as room clearing. The impact of the performance-based training can go far beyond Combatives programs Army wide. This training has the ability to enhance the readiness of soldiers across the Army in a variety of domains and MOS's (Military Occupational Speciality). We will present a detailed explanation of the outcome of this training in regards to the Army Combatives population at the Fort Carson, Colorado Army Post. We will also explain the different ways other Performance specialists can get involved and assist in performance enhancement training in tactical populations.

## **SYM-13**

### **IMPLEMENTING MINDFULNESS INTERVENTIONS IN MULTIPLE SPORT SETTINGS: MULTI-NATIONAL PERSPECTIVES**

*Amy Baltzell, Boston University, USA*

*Goran Kentta, The Swedish School of Sport and Health Science, Sweden*

*Ian Connoles, K-State Athletics, USA*

*Robert Diehl, Boston University, USA*

*Sebastian Brueckner, Muenster University, Germany*

*Trevor Cote, Boston University, USA*

*Frank Gardner, Touro College, USA*

*Zella Moore, Manhattan College, USA*

This symposium features applied scientist-practitioners from Sweden, Germany and the United States who offer mindfulness-based interventions in elite sport settings. Presentations range from focusing on mindfulness-based consulting with US Pro Sports, German and Swedish Olympians, as well as Division I teams in the US. Presentation 1 describes a new version of mindfulness training, Mindfulness Meditation Training for Sport (MMTS 2.0). Self-care considerations for Swedish Olympic athletes, the rationale for integrating self-compassion into MMTS 2.0 and specific MMTS 2.0 self-compassion exercises will be presented. Presentation 2 will focus on the implementation of MMTS 2.0 with two Division I university teams. Presenters will discuss the practice-oriented strengths and challenges of this specific mindfulness-based intervention, especially regarding the concept of self-compassion. Additionally, pre- and post-quantitative results from this sample of athletes will be reported, including changes in self-compassion and mindfulness. Presentation 3 highlights the implementation of MMTS 2.0 in a cross-cultural, high-performance setting. MMTS 2.0 was translated and adapted so it could be implemented with German national team athletes. Qualitative interview data of participating athletes evaluating MMTS 2.0-delivery will be shared. Presenters will discuss how, based on athlete interview data, program delivery impacted performance on and off the court. Discussion will include considerations how athletes' perceptions can help tailor future MMTS 2.0-delivery to individual teams' and athletes' needs. Presentation 4 will reflect on implementing the Mindfulness-Acceptance-Commitment approach to enhancement of athletic performance and enrichment of personal well-being in sports over the past 17 years. The focus will be on relevant factors to optimize results within the intense and stressful high-performance environment of US professional sports. Finally, time will be allotted for the audience to discuss emerging themes, empirical results, applied experiences as well as “lessons learned” and “best practices” with the panel.

## **SYM-13A**

### **MINDFULNESS MEDITATION TRAINING FOR SPORT (MMTS) UPGRADE FROM VERSION 1.0 TO 2.0, AND KEY 2.0 SELF-COMPASSION EXERCISES**

*Amy Baltzell, Boston University, USA*

*Goran Kentta, The Swedish School of Sport and Health Science, Sweden*

The purpose of this presentation is to discuss the rationale for integrating self-compassion into the new version of Mindfulness Meditation Training for Sport (MMTS) 2.0. All mindfulness interventions in sport are not equal, they each are distinct in terms of emphasis and recommended practice,

dose and duration of myriad mindfulness based practices. We need to clarify the content of varying mindfulness meditation intervention in sport such that we can match the intervention to the needs of the athlete- or performer-consumer. Mindfulness based interventions in sport began with Jon Kabat-Zinn and colleagues' mindfulness meditation intervention with collegiate and Olympic Rowers (Kabat-Zinn, Bealle & Rippe, 1985). Since this time there have been four mindfulness based protocols offered in the sport psychology literature including the Mindful Acceptance Commitment (MAC) Approach (Gardner & Moore, 2007), Mindful Sport Performance Enhancement (MPSE) (Kaufman, Glass & Arkoff, 2009), mPEAK (Haase et. al., 2015) and MMTS (Baltzell & Summers, 2016).

The purpose of MMTS is to enhance participants' 1) concentration, 2) clarity, particularly their ability to adapt and adjust to performance demands, and 3) equanimity to promote composure when dealing with performance distress or difficult situations (Baltzell & McCarthy, 2016). The shift from 1.0 to 2.0 is based on the re-design of having a strictly mindful approach, of practicing acceptance and curiosity in present moment experience to infusing self-compassion practices throughout the training. Self-compassion, recognizing one's personal suffering, wanting to alleviate the distress via kind understanding (Neff, 2003), is particularly helpful when contending with distressful thoughts and feelings associated with failure and anxiety (Neff & Germer, 2013), or performance dukkha. Finally, a greater attention to the question, what do I need right now. is important to address well-being (Baltzell, 2016). Pressure for performers is on the rise, and the integration of self-compassion was incorporated to offer athletes more direct ways to strengthen equanimity. Specific self-compassion exercises used in MMTS 2.0 will be presented.

### **SYM-13B**

#### **IMPLEMENTATION OF MINDFULNESS MEDITATION TRAINING FOR SPORT (MMTS) 2.0 WITH TWO DIVISION I TEAMS: APPLIED CONSIDERATIONS AND QUANTITATIVE RESULTS**

*Ian Connole, K-State Athletics, USA*  
*Robert Diehl, Boston University, USA*

Mindfulness and acceptance-based models to performance enhancement have been implemented and empirically investigated for nearly two decades (Gardner & Moore, 2012). The core practice of these approaches, mindfulness meditation, has been shown to improve learning and execution of new skills (Fatemi, 2016; Kee & Wang, 2008), cultivate resiliency (Meiklejohn et al., 2012), and reduce (Roeser et al., 2013) with athletes and performers. Baltzell and Summers' (2016) Mindfulness Meditation Training for Sport (MMTS 2.0) represents one mindfulness-based intervention (MBI) in sport that seeks to introduce athletes to the practice of mindfulness meditation with an emphasis on self-compassion to support performance excellence and strengthen distress tolerance. Presenters will discuss the fidelity of implementation of the MMTS 2.0 with two Division I teams as well as the practice-oriented strengths and challenges of a scientist-practitioner approach to this MBI in sport psychology. Discussion of implementation will highlight the balance of structure and individualization, as well as the benefits of the shared team experience and processing.

Given the lack of evidence-based support for MBI's in sport psychology (Sappington & Longshore, 2015), presenters will

report the quantitative results from this sample of athletes from two division I teams who participated in the MMTS 2.0. Analyses from the combined sample of athletes revealed significant ( $p .05$ ) increases in mindfulness, self-compassion, and psychological flexibility over the course of the six-week MMTS 2.0 program. Given the challenges inherent to rigorous applied research, presenters will discuss the rationale for study design, assessment choice, and challenges to the empirical investigation of performance. Future recommendations for the quantitative investigation of MMTS 2.0 will be provided to both enhance efforts by scientist-practitioners investigating the efficacy of MBI's in sport and to support the culture of competency in the field at large.

### **SYM-13C**

#### **IMPLEMENTING MINDFULNESS MEDITATION TRAINING FOR SPORT 2.0 IN A MULTI-NATIONAL SETTING: ATHLETES' EXPERIENCES AND CROSS-CULTURAL PERSPECTIVES**

*Sebastian Brueckner, Muenster University, Germany*  
*Trevor Cote, Boston University, USA*

Over the past 16 years, mindfulness based exercises have grown from being an interesting and specialized sport intervention into a "mainstream option for sport psychologists across the globe" (Gardner, 2016, p. 147). Yet, very little data has captured the athlete experience of completing a sport based mindfulness meditation intervention. Thus, the goal of this multi-national study was to gain an in-depth understanding of (student-)athletes' experiences completing a sport-tailored mindfulness meditation program, Mindfulness Meditation for Sport 2.0 (MMTS 2.0; Baltzell, 2016). Specifically, presenters will discuss implementing MMTS 2.0 at a German high-performance training center, with a group of 13 athletes gearing up for the 2020 and 2024 Olympics. Semi-structured interviews were conducted with college student-athletes from two Division I universities as well as members of the German National Badminton team who completed the MMTS 2.0. Results included the following themes that emerged across samples: uniqueness of the training program environment, learned performance strategies (e.g., dealing with distractions, bringing warmth to self and others, ability to adjust during performance), sport specific gains (e.g., improved focus, new perspective to performance, and enhanced ability to overcome challenges), and outside of sport gains (e.g., improved approach to academic pressures and quality of life). Additional findings highlighted group size, schedule as a (student-)athlete, and discomfort with formal meditation as challenges of completing the program. The presenters will discuss how insight into the (student-)athlete perception of MMTS 2.0 can aid the continued development of MMTS as well as further advance the sport and performance field in how to best tailor a mindfulness meditation intervention to individual athletes and teams. Specific examples of how implementation of the MMTS 2.0 program impacted performance development on and off the court for the German Olympic contenders will be used to highlight this discussion.

## **SYM-13D**

### **USING THE MINDFULNESS-ACCEPTANCE-COMMITMENT (MAC) APPROACH IN AMERICAN PROFESSIONAL SPORTS**

*Frank Gardner, Touro College, USA  
Zella Moore, Manhattan College, USA*

Professional sports in North America are intense high pressure environments in which highly paid athletes must work and compete under intense public scrutiny, with tremendous internal and external pressures, often with and through a number of painful physical maladies. High levels of performance within this intense and stressful environment require a great deal of personal sacrifice and psychological as well as physical commitment. It is within the context of American professional sport that this presentation seeks to describe the varied uses of the Mindfulness-Acceptance-Commitment model of sport psychology. The MAC approach to the enhancement athletic performance and the enrichment of personal well-being has been growing rapidly in empirical evidence and practitioner interest over the past 17 years. Included in this presentation will be a discussion providing answers to the fundamental questions of: (a) what MAC entails; (b) how MAC can be utilized; (c) where MAC can be implemented (the varying times and places), (d) when MAC is best used; (e) why one would chose MAC vs. alternatives; and (f) through which formats, by whom and in what dosages. This discussion will also seek to clarify the varied possible organizational roles of the consultant utilizing MAC, education and training factors, the role of coaching and development staff in the development of MAC-related skills, and the interface between consultant and professional sport organization that may best optimize results.

## **SYM-14**

### **INTEGRATING SPORT INTO DEVELOPMENT AND PEACE OBJECTIVES: THEORY, RESEARCH, AND PRACTICE**

*Lindsey Blom, Ball State University, USA  
Jane Ellery, Ball State University, USA  
William Massey, Concordia University, Wisconsin, USA  
Meredith Whitley, Adelphi University, USA  
Megan Wilkison, Concordia University, Wisconsin, USA  
Laura Hayden, University of Massachusetts Boston, USA  
Courtney Hess, University of Massachusetts Boston, USA*

The purpose of this symposium is to highlight links between research-theory-and -practice from three different vantage points as it related to sport for development and peace (SDP) objectives. There have been recent calls for the SDP field to become more theoretically grounded and work more collaboratively with other disciplines (Darnell & Black, 2011; Hartmann & Kwauk, 2011). The field is limited without sufficient theory and overarching frameworks for practitioners and organizations to utilize when planning and implementing programs. Thus the goal of this symposium is to offer theoretical concepts that synthesize multidisciplinary approaches (e.g., peace-building, community development, wellness, counselling psychology, youth development) to SDP practice that have been empirically assessed. The first presentation will place an emphasis on theory, and how the use of safe spaces and “placemaking” can assist SPD practitioners in promoting community development through place. While focused more on the theoretical, the presenter will apply these concepts to applied SDP practice in Tajikistan, Liberia, Jordan, and the United States, while also discussing practicalities in outcome evaluations for such projects. The

second presentation will place an emphasis on research. Specifically, this presentation will discuss qualitative research that has aimed to build theory within SDP and how this theory can inform future SDP practice. The final presentation will place an emphasis on practice and how physical activity and sport can be infused into school curricula to enhance youth development outcomes. In doing so, the presenter will discuss outcomes research on the program as well as links between practice, research and theory. At the conclusion of each individual presentation, a discussant will facilitate an open discussion making links between each presentation, as well as research, theory, and practice within the SDP field.

## **SYM-14A**

### **BUILDING OF SPORTING AREAS AS A PLACEMAKING PROCESS FOR PEACE-BUILDING**

*Lindsey Blom, Ball State University, USA  
Jane Ellery, Ball State University, USA*

As the field of sport for development and peace (SDP) advances, the specific mechanisms that underlie the effectiveness of sport as a peace-building approach need to be identified. Researchers in the SDP field are exploring sporting areas (e.g., fields, courts) as safe spaces that can assist in community development (Spaaij & Schlenkorf, 2014). A safe space is “a psychosocial and experiential space more or less aligned with separated, physical space” (Stengel & Weems, 2010, p.5). Researchers outside of sport are discussing placemaking, a process of community members developing public spaces that capitalize on the local community’s strengths and potential (PPS, 2017), for use in a similar manner. Both types of spaces are more than physical spaces. Spaaij and Schlenkorf (2014) argue that safe spaces are multidimensional with physical, psychological, sociocultural, political, and experimental aspects and PPS (2017) explain placemaking as a multifaceted process of community members developing public spaces that capitalize on the local community’s strengths and potential. This presentation will discuss the potential for sporting areas to assist in peace-building when a deliberate process of placemaking and safe space design is utilized. More specifically examples from SDP work in Tajikistan, Liberia, Jordan, and locally will be discussed. Universal access to safe, public spaces, especially for marginalized groups, is specifically named as a 2030 United Nation Sustainable Development Goal. Because the act of making the Place has been shown to be as valuable as the PLACE itself (Silberberg, et. al, 2013), involving communities in placemaking practices shows promise in connecting individuals both to each other and to the place that emerges. In addition to the SDP examples, theoretical foundations offered by Antonovsky (sociology) and Ostrom (political science) and that provide initiation support for this approach will be highlighted.

## **SYM-14B**

### **A SYSTEMS THEORY OF DEVELOPMENT THROUGH SPORT FOR TRAUMATIZED AND DISADVANTAGED YOUTH**

*William Massey, Concordia University, Wisconsin, USA  
Meredith Whitley, Adelphi University, USA  
Megan Wilkison, Concordia University, Wisconsin, USA*

As research and practice in the field of sport for development and peace (SDP) continues to grow, scholars have called for more integration of theory into SDP work (e.g., Massey et

al., 2015), as well as data coming directly from the voices of participants and stakeholders in the SDP domain (e.g., Darnell et al., 2016). The purpose of the current study was to develop a systems theory of positive development through sport for youth from traumatized and disadvantaged backgrounds. A constructivist epistemology underpinned a methodological approach that combined narrative and grounded theory traditions (Lal et al., 2012). In doing so, this study builds specifically on primary data from previous research by the lead investigators. Notably, themes and core concepts developed in the aforementioned research was utilized to inform the purposeful sampling of community members who could make connections between sport and development in the target population. Participants ( $n = 14$ ) included police officers, psychologists, teachers, coaches, trauma specialists, community developers, and heads of NGOs with expertise and experience using sport for developmental purposes in traumatized and disadvantaged youth populations. All participants participated in interviews lasting approximately 45-120 minutes. Interviews were transcribed verbatim and then coded for overall themes and areas of connection independently by two members of the research team. Following this, data for each interview was used to create a systems map of the interconnected factors contributing to youth development through sport participation. Vignettes were then written to describe the systems maps in more detail, utilizing the participants' voice to highlight key factors. Next, following an iterative process, the systems maps from each participant were combined to develop an underlying theory of development through sport. The presentation will focus on the key factors identified, and how these factors interact within a system to produce change.

### **SYM-14C**

#### **TRAINING PRACTITIONERS: USING PHYSICAL ACTIVITY-BASED PROGRAMMING TO BUOY YOUTHS' SOCIO-EMOTIONAL DEVELOPMENT**

*Laura Hayden, University of Massachusetts Boston, USA*  
*Courtney Hess, University of Massachusetts Boston, USA*

While sport and physical activity have been credited with cognitive, socio-emotional, and academic improvements, they are becoming removed from the typical school experience. However, there is evidence to support the intersection of positive youth development (PYD) and physical activity, with the corollary aim of developing diverse competencies to help youth succeed in various areas of life (Gould & Carson, 2008). Researchers (e.g., Danish, Forneris, and Wallace, 2005; Wright & Weidong, 2009) suggest school-based PYD programs that incorporate physical activity be used to facilitate social and emotional development. The quandary, however, is that PYD programs do not guarantee sustainable school-based change. To that end, this presentation will focus on training practitioners to incorporate physical activity into classroom settings using an existing curriculum guide that was informed by Hellison's Personal and Social Responsibility Model and the collective knowledge of three experts in the field of youth development, and includes 12 weeks of sample lessons, evaluation tools, and activities. We will discuss how this curriculum has been used to train practitioners (e.g., school counselors, teachers, coaches) in service delivery in the classroom setting. Furthermore, we will present and explore evidence to suggest the need, interest, and consequences of this type of programming, which requires leadership and advocacy by mental health professionals, collaboration among invested stakeholders, and commitment from the school.

### **SYM-15**

#### **WELL-BEING IN COLLEGIATE SPORT: THEORETICAL, EMPIRICAL, AND PRACTICAL CONSIDERATIONS**

*Christopher Bilder, James Madison University, USA*  
*Gregg Henriques, James Madison University, USA*  
*Robert Harmison, James Madison University, USA*  
*Chad Doerr, James Madison University, USA*  
*Kaleb Cusack, James Madison University, USA*  
*Thomas Kuster, III, James Madison University, USA*  
*Bridget Smith, James Madison University, USA*  
*Cierra Williams, James Madison University, USA*

The NCAA has placed a strategic priority on student-athlete mental health and well-being, as evidenced by recent NCAA Sport Science Institute publications to promote better understanding and supporting of student-athlete mental wellness (i.e., Mind, Body and Sport, Mental Health Best Practices) and grant programs to support research and projects designed to enhance student-athlete well-being (i.e., NCAA Innovations in Research and Practice Grant Program). As noted previously in the literature (e.g., Seligman & Csikszentmihalyi, 2000) the field of mental health as a whole has tended to focus on the maladaptive aspects of human functioning, a fact not lost on those who practice sport/performance psychology. The rise of positive psychology has brought about an enhanced focus on well-being and attempts to arrive at a deeper understanding of the construct (e.g., Diener, 1994; Ryff & Singer, 2008). Despite its emerging central role in mental health today, well-being remains a nebulous construct in need of greater conceptual clarity to lead to empirical and practical advances within psychology in general and student-athlete mental health in particular. This symposium will present an innovative way to conceptualize well-being, provide a model of the well-being-athletic performance relationship, and discuss practical applications regarding collegiate student-athlete well-being. Specifically, the first presentation will offer a framework of well-being that will allow sport psychology researchers and practitioners to obtain a more holistic and useful view of well-being in sport. The second presentation will outline a model of performance excellence that considers the complimentary roles that well-being and mental toughness play in achieving high-level performance in sport. The third presentation will describe efforts to foster well-being in college student-athletes and highlight practical ideas and strategies currently in use to promote optimal mental health within two collegiate athletic departments.

### **SYM-15A**

#### **CONCEPTUALIZING AND UNDERSTANDING STUDENT-ATHLETE MENTAL HEALTH: THE NESTED MODEL OF WELL-BEING**

*Christopher Bilder, James Madison University, USA*  
*Gregg Henriques, James Madison University, USA*

This presentation will offer an innovative framework of well-being that will allow sport psychology researchers and practitioners to obtain a more holistic and useful view of well-being in sport. Traditionally, well-being has been viewed through two lenses: hedonic (Diener, 1984) and eudaimonic (Deci & Ryan, 2000; Ryff, 1989; Seligman, 2011). Hedonic well-being consists of pleasure or happiness (Kahneman, Diener, & Schwarz, 1999), and eudaimonic well-being consists of fulfilling one's potential (Ryan & Deci, 2001). Research and practice in sport psychology also has viewed well-being through the hedonic (see Gaudreau & Anti, 2008; Kleiber &

Brock, 1992) and eudaimonic (see Edwards & Steyn, 2008; Gagne, Ryan, & Bargman, 2003; Reinboth & Duda, 2006) lenses. Dubuc-Charbonneau and Durand-Bush (2015) was the only study found in the sport psychology literature that assessed both hedonic and eudaimonic well-being. Although research-to-date examining well-being in sport has provided a sizable amount of knowledge, there is room within the field for a more holistic approach to understanding and fostering well-being in sport. The presenter will describe and outline the major tenets of the Nested Model (NM) of well-being (Henriques, Kleinman, & Asselin, 2014) to offer conceptual clarity to the historically nebulous construct. Grounded in the unified theory of psychology (Henriques, 2011), the NM maps four related but separable nested domains of well-being: (a) the subjective domain, which is the first person experience of happiness along with reflected levels of satisfaction with life and its domains; (b) the health and functioning domain, which includes biological and psychological health; (c) the environmental domain, which includes both the material and social environment; and (d) the values and ideology domain, which refers to the morals, ethical perspective, and worldview of the evaluator (Henriques, Kleinman, & Asselin, 2014). Applications of the NM to understand and foster collegiate student-athlete well-being will be discussed.

## **SYM-15B**

### **INTEGRATING WELL-BEING AND MENTAL TOUGHNESS INTO A MODEL OF PERFORMANCE EXCELLENCE**

*Robert Harmison, James Madison University, USA  
Chad Doerr, James Madison University, USA  
Kaleb Cusack, James Madison University, USA*

This presentation will outline a model of performance excellence that considers the complimentary roles that mental toughness and well-being play in achieving high-level performance in sport. Harmison (2011) conceptualized mental toughness as a complex, relatively stable social-cognitive personality construct that consists of cognitive-affective processing units that form a schema through which athletes view sport and respond to their competitive experiences. The proposed model positions mental toughness as a schema that serves to efficiently organize athletes' cognitions, affects, and self-regulation skills, allowing them to display mentally tough behaviors as a result (i.e., performing at their best when needed the most, consistently making superior, tactical decisions, and doing the "little things" necessary for success). Sport-specific traits (e.g., trait sport confidence) and characteristic adaptations (e.g., task-involving goals) are hypothesized to influence the development of these mentally tough cognitions, affects, and skills, thus functioning as latent causal agents of mentally tough behaviors. In addition, well-being is hypothesized to have both an indirect and direct effect on performance. Specifically, the psychological domain of well-being is believed to influence the development of mentally tough cognitions, affects, and skills through processes such as self-acceptance, environmental mastery, personal growth, and positive social relations. Well-being also is thought to influence performance directly through optimal psychological functioning (e.g., pursuing goals,

striving to achieve potential) and biological functioning (e.g., being fit and strong, sleeping well, lacking in chronic illness/injury). Furthermore, environmental factors, such as the coach-created motivational climate surrounding athletes, are believed to play a role in fostering mentally tough cognitions, affects, and skills and well-being. Initial findings from an ongoing longitudinal study that is exploring the relationship between well-being and mental toughness in a sample of college student-athletes will be presented. Implications of the proposed model for sport psychology practice will be discussed as well.

## **SYM-15C**

### **FOSTERING STUDENT-ATHLETE WELL-BEING WITHIN NCAA ATHLETIC DEPARTMENTS**

*Thomas Kuster, III, James Madison University, USA  
Christopher Bilder, James Madison University, USA  
Chad Doerr, James Madison University, USA  
Bridget Smith, James Madison University, USA  
Cierra Williams, James Madison University, USA  
Robert Harmison, James Madison University, USA*

This presentation will describe various efforts being made to foster college student-athlete well-being within two NCAA athletic departments. First, an Associate Athletic Director will overview the Integrated Health and Sports Performance Model recently rolled out at an NCAA Division I university. This model was the direct result of strategic planning that identified student-athlete well-being and performance development as a major strategic theme. The model reflects the athletic department's commitment to assist its student-athletes in realizing their full potential, minimizing their risk of injury, achieving competitive excellence, and having an exemplary student-athlete experience. The Associate AD will discuss the creation of an interprofessional, multidisciplinary team that includes a team physician, sport psychologist, sport dietitian, clinical psychologist, and counselor to better coordinate the care and recovery enhancement of the student-athletes and promote the view throughout the athletic department that mental health is similar to physical health. Attempts to educate the athletic trainers, coaches, and student-athletes about well-being and optimal mental health will be described. Strategies to screen for and comprehensively assess well-being will be outlined as well. Next, sport psychology doctoral students will discuss a psychoeducational outreach program based on the Nested Model (NM) (Henriques et al., 2014) that is designed to promote well-being within an NCAA Division III athletic department. The outreach program consisted of seven workshops that strived to provide tangible applications of each level of the NM. Four workshops were provided to the entire student-athlete population, and three workshops targeted athletic department staff. The athlete workshops provided ways to increase happiness, manage stress, increase sleep and proper nutrition, and understand and live by valued states of being. The athletic department workshops presented an overview of the athlete workshops, provided staff with tools to collaborate with athletes with differing value systems, and provided ways to promote a culture of well-being.

**SYM-16****INTERPERSONAL RELATIONSHIPS WITH A TEAMMATE, COACH, PARTNERS, AND PARENTS: ISN'T ACHIEVEMENT IN SPORTS COMPLICATED ENOUGH ALREADY?**

Brooke Lamphere, University of Denver, USA  
 Kirsten Allen, University of Denver, USA  
 Rendy Marican, Eating Recovery Center, USA  
 Artur Poczwadowski, University of Denver, USA  
 Peter Haberl, USOC, USA  
 Cody Sohn, USA  
 Shawn Saylor, Digital Consulting Services, USA  
 Robert Diehl, Boston University, USA  
 Natalia Stambulova, Halmstad University, Sweden

Research has clearly documented the impact of interpersonal relationships on athletes' experience of satisfaction and performance success (Poczwadowski et al., 2006; Jowett, 2003), particularly in elite sport (Jowett & Cockerill, 2003). Interpersonal dynamics have been shown to impact the quality of experience, both athletes' and coaches' personal growth, team functioning, and level of athletic performance (e.g., Poczwadowski, Barott, & Henschen, 2002). Through the application of existing theoretical knowledge on interpersonal dynamics in sport (specifically, athlete-athlete and coach-athlete relationship dynamics), this symposium will enhance the understanding of the complex performance system of elite athletes, and elucidate the process by which athletes navigate interpersonal relationships with teammates, coaches, romantic partners, and parents. First, we will explore the role of interdependence and Jowett and colleagues' (2007; 2002; 2000) 3+1 Cs model in Olympic athlete-athlete dyads, highlighting essential interpersonal components that contributed to the performance success of these partnerships. Next, we will discuss a potential map to Olympic success in dyadic sports, while reflecting on the pieces of the map that are still missing and of interest to the applied sport psychology consultant. Then, we will explore the under-researched pre-relationship stage in coach-athlete (CA) relationships to expand understanding of the overall CA life cycle for elite sport dyads. Finally, we will discuss methods of navigating crisis situations and career transitions related to interpersonal functioning through the application of Stambulova's (2010) mobilization model of counseling in crisis-transitions. Each of these presentations adds substantially to our understanding of the role of interpersonal relationships in facilitating or detracting from success in elite athletics. Implications for athletes, coaches, and sport and performance psychology professionals alike will be discussed.

**SYM-16A****ATHLETE-ATHLETE RELATIONSHIPS: AN EXPLORATORY STUDY OF INTERPERSONAL COMPONENTS WITHIN SUCCESSFUL BEACH VOLLEYBALL DYADS**

Brooke Lamphere, University of Denver, USA  
 Kirsten Allen, University of Denver, USA  
 Rendy Marican, Eating Recovery Center, USA  
 Artur Poczwadowski, University of Denver, USA  
 Peter Haberl, USOC, USA

An athlete-athlete partnership is a form of athletic dyad in which both members equally share power and responsibility (Wickwire, Bloom, & Loughhead, 2004). Fourteen dyadic sports

are currently included in the Olympic Games, yet minimal research exists exploring athlete-athlete partnerships in sport. The purpose of this study was to explore the interpersonal components of successful, elite athlete-athlete beach volleyball partnerships. To build on Wickwire et al.'s (2004) exploration of athlete-athlete partnerships, the current study explored the components of Olympic-level beach volleyball dyads through the lens of interdependence theory and Jowett and colleagues (2000; 2003; 2007) 3+1C's Model of coach-athlete relationships. Interpretative Phenomenological Analysis (IPA) was utilized in this exploratory study through semi-structured interviews. Four athletes (three male and one female) were interviewed. Various interpersonal components within a dyadic relationship contributed to the effectiveness and overall success of the partnership. Analysis of the interview transcripts revealed six higher-order themes: (a) compatibility, which included partnership chemistry, motivation, philosophy, and personality; (b) commitment, which included affective investment, personal sacrifice, goal achievement, and physical and mental preparation; (c) complementarity, which included ability level, decision making, role definition, and partnership development; (d) co-orientation, which included perceptual congruence and intentional collaboration; (e) closeness, which included mutual trust, mutual respect, mutual dependence, and dyadic coping; and (f) environmental factors. Interpersonal awareness and interpersonal maturation were identified as two over-arching meta-findings; environmental factors were found to affect all components of partnership success; and interdependence was determined to be the foundation of successful partnerships. The results of the study extended research on athletic dyads by studying athlete-athlete dyads and revealed essential interpersonal components specific to the success of a beach volleyball partnership.

**SYM-16B****A POTENTIAL MAP TO SUCCESSFUL DYADIC PARTNERSHIPS AT THE OLYMPIC GAMES**

Peter Haberl, USOC, USA

British Track Cycling's Performance Director David Brailsford introduced the notion of marginal gains into the psychological lexicon of competitive excellence at the Olympic Games (Moore 2013). It's the idea of finding 1 % improvements in everything you do. One area of improvement from a marginal gains perspective in dyadic team sports such as Beach Volleyball is without a doubt the quality of the relationship between the partners. Poczwadowski et al.'s (2015) study gives us a first marker of what the end result of a successful relationship at the very highest level of performance excellence looks like. Now part of the map of the territory that is a successful partnership is captured, namely the final stage. This presentation will reflect on the still missing parts of the map that are of particular interest to the applied sport psychology consultant. How can we contribute to a successful relationship knowing its importance for performance? How can the findings help us optimize the marginal gains of successful relationships and extend the map from the end stage to the very beginning of the partnership? Gottman's (2000) sound relationship house theory, along with an ACT-based approach to relationships (Harris 2009) may fill in the missing pieces on this map to build the relationship from the ground up and shepherd it through the inevitable ups and downs of the roller coaster ride to the Olympic Games.

## **SYM-16C**

### **COACH-ATHLETE RELATIONSHIPS IN ELITE SPORT (PRE-RELATIONSHIP STAGE)**

*Cody Sohn, USA*

*Shawn Saylor, Digital Consulting Services, USA*

*Robert Diehl, Boston University, USA*

*Artur Poczwardowski, University of Denver, USA*

Given the significance of social support to the quality of sport participation for athletes (Daragh, Coffee, & Lavellee, 2014), effective coach-athlete (CA) relationships represent an important area of empirical investigation in the fields of sport and performance psychology and coaching (Carr, 2012). In addition, reviews of recruiting at the Division I college level have revealed that many prospective student-athletes' decisions during the recruiting process are based upon relational dynamics with potential coaches (McCaw, 2014). While prior research has focused on coach-athlete dyads during later relationship phases (e.g., Jowett & Poczwardowski, 2007), presenters will explore the largely unexamined pre-relationship phase, operationalized as the duration from initial recruiting contact until arrival on campus and sport participation. Given the dearth of research investigating this critical CA relationship stage, this presentation seeks to expand the understanding of the overall CA life cycle for sport dyads, set within elite sport. Participants recruited for this study consisted of 4 total dyads, with each dyad representing one recruited high school female athlete and their female college coach. Purposive sampling ensured that each dyad was considered an elite team due to the future professional potential of each athlete. Semi-structured interviews were conducted to phenomenologically explore this CA relationship stage, including expectations for the future. Consistent with Creswell (2013), content analysis was conducted to identify higher order themes, including the following: (a) relationship foundations similar to Jowett's (2005) 3-C model of CA relationships (closeness, commitment, and complementarity), and (b) environmental factors (e.g., self-determination and motivational climate). Of interest, a meta-theme of assumed similarity will be reviewed. Lastly, future directions for research will be discussed including diversity of samples and applied recommendations for sport psychology practitioners to support both athletes and coaches during this critical CA relationship stage (e.g., assessment of alliance during recruiting phase).

## **SYM-16D**

### **ATHLETES' RELATIONSHIP CRISES: CASE EXAMPLES AND RESOLUTION STRATEGIES**

*Natalia Stambulova, Halmstad University, Sweden*

A body of knowledge exists in sport psychology about the dynamic social context of athletes' development and the roles of the people involved (Jowett & Lavellee, 2007; Jowett & Poczwardowski, 2006). In many senses, other people (coaches, managers, parents, peers, opponents, sport psychology practitioners, etc.) make athletes' careers possible and meaningful (Jowett, 2003; Stambulova, 2010). Therefore, harmonious relationships are key pre-conditions for successful careers, whereas problematic relationships often lead to deterioration in athletes' well-being, performance, and non-sport life (Sandström, Linnér, & Stambulova, 2016).

In this presentation athletes' problematic relationships will be analyzed from a career transition perspective; that is, as crisis phases in their careers that athletes can't cope with on their own and often require formal intervention. One educational tool that can be used in working with athletes experiencing relationship crises is the mobilization model of counseling in crisis-transitions (Stambulova, 2011) that is aimed at helping the clients to analyze crisis situations, find possible ways to cope, and further develop their social and other coping skills. In this presentation, a real case involving a young talented female swimmer who could not balance contrasting expectations of her coach, parents, and her boyfriend in term of her athletic role, and consequently experienced frustration and disharmony in the relationships with all of them will be shared and analyzed using the mobilization model. The analysis will follow six steps, including: (1) collecting and sorting out the client's information, (2) identifying, prioritizing and articulating the problem issues, (3) analyzing the current status of the client's coping resources and barriers, (4) discussing the transition alternatives and stimulating the client to make the strategic decision, (5) goal setting and planning relevant to the decision made, and (6) concluding and providing follow-ups.

## **SYM-17**

### **UNIQUE PERSPECTIVES OF THE IMPACT OF MEDIA ON SPORT PSYCHOLOGY**

*Karen Cogan, USOC, USA*

*Joan Steidinger, Dr. Joan Steidinger, USA*

*Harold Shinitzky, Private Practice, USA*

*Michele Kerulis, Northwestern University, USA*

This Media in Sport SIG-sponsored symposium examines media interactions through a scientist-practitioner model and provides information practitioners can apply the minute they walk out of this session. The Media in Sport SIG "aims to explore how sport psychology is represented in various aspects of the media like TV, film, newsprint, radio, the internet, and other technologies" (AASP, n.d.). Attendees of this session will hear from four experts in the field about media-related issues that impact sport psychology. First, the effects of media on Olympic athletes (Greenleaf, et al., 2001) and components of an effective media plan balanced with training and competitions will be discussed. Next, audience members will learn about how gender impacts media coverage and how female athletes have been described as extensions of their male partners and also described in terms compared to male athletes (Landsbaum, 2016). The third expert will discuss challenges faced by athletes after the conclusion of their careers and the importance of sharing key factors by sports psychologists during media interviews to help reveal the struggles that athletes face in their lives and facilitate more compassionate understanding and empathy by the consumers of sports-related media stories. Finally, ways to work with the media in ethical ways (AASP, n.d. ACA, 2014, APA 2017) that decrease stigma related to seeking services, media opinions of what is newsworthy (Strombak, Karlsson, & Hopmann, 2012), and the role race plays on public perception of athletes (Cranmer, Bowman, & Goldman, 2017) will be examined. Audience members will have the opportunity to engage in a lively Q&A session.

**SYM-17A****IN SEARCH OF OLYMPIC SUCCESS: USE EVERY MEDIA OPPORTUNITY OR HIDE FROM THE PRESS?***Karen Cogan, USOC, USA*

Successful Olympic performance results from numerous variables coming together the right way at the right time. Olympic competition is on a grand scale unlike any other, and the media shows up in full force to document every aspect of the Games for the world. Many athletes are thrust into the media spotlight in ways they have not faced in the past. Greenleaf et. al. (2001) noted that a major factor perceived to negatively influence performance at the Olympics includes media distractions. Knowing how to manage interactions with the media is a performance factor that many athletes don't address until it is too late. Athletes want media opportunities and find them fulfilling, but the time spent in these interactions takes athletes away from their typical training routine and moves them off their game. This presentation will focus on the magnitude of media activities during the Olympics Games and the effect on athletes. Examples of athletes' choices in addressing media requests will be presented to illustrate the downside as well as upside of media attention. Athletes who have developed good media plans often come through the Olympic Games with more success. Types of components to consider in developing an effective media plan will be outlined as well as some examples of balancing media opportunities with training and success.

**SYM-17B****FEMALE ATHLETES AND THE MEDIA***Joan Steidinger, Dr. Joan Steidinger, USA*

This presentation will address how female athletes and leaders are treated in the media and how this needs to change. In recent years, inequality in sports has been viewed in the media as primarily focused on the issue of the pay differential between female and male athletes. The argument remains that women will never get enough attendance at their games to warrant higher pay or more media coverage. The 2015 television viewing of the women's World Cup in soccer showed the public that highly talented female athletes can draw an audience with about 24 million viewers (Tucker Center, 2017). Recent figures show that 43% of sports participants are female, yet the media covers them only 4% of the time. Women received more coverage during the 2016 Olympics. Despite this coverage, the medal award-winning women were placed in lesser profile positions and defined by the men in their lives. Katie Ledecky accomplished another world record and was called the "female Michael Phelps" and it was noted "that she swims like a man" (Landsbaum, 2016). Suggestions about how to address the gender differences in media will be provided.

**SYM-17C****LIFE AFTER SPORT: PROMOTING A COMPASSIONATE MEDIA MESSAGE***Harold Shinitzky, Private Practice, USA*

All too often consumers of sports related media stories do not appreciate nor understand the challenges faced by most athletes after the conclusion of their career. A common belief is athletes are privileged individuals and wasted their opportunities. As depicted in the ESPN (2012) Film's 30 for 30 documentary, "Broke," many elite athletes file for bankruptcy. Typical and tantalizing articles posted for consumption by the public included, Newsweeks' "Why Athletes Aren't Role Models" (Kelley, 2010) and The Atlantic's "The Shame of College Sports" (Branch, 2011). King provided an excellent analysis of gender difference portrayed by the media (King, 2007). This presentation will elucidate numerous obstacles which athletes experience that can interfere with life after sport. A few key factors that will be addressed in this presentation include a pattern of reinforced "specialness" by society; long-term consequences of sports-related injuries (e.g. concussions, etc.); addiction; disordered eating; high school/collegiate/professional myopic athletic focus; a lack of business awareness; financial illiteracy; and institutional policy restrictions or contract limitations. Additionally, this presentation will address steps to prevent athletes from these pitfalls and methods to increase the probability of success for their life after sport. The importance of sharing these key factors by Sports Psychologists during media interviews will help reveal the struggles that athletes face in their lives and facilitate more compassionate understanding and empathy by the consumers of sports-related media stories.

**SYM-17D****REJECTING STEREOTYPES AND SUPPORTING THE TRUTH IN SPORTS MEDIA***Michele Kerulis, Northwestern University, USA*

Working with the media is a way for sport psychology professionals to promote the field in a positive way and to decrease the stigma related to receiving consultation and mental health services. This discussion will focus on how to interact with the media and how to respond to news stories that promote negative stereotypes in sport. In addition to understanding the changing climate of news reporting (Lynch, 2010) and differing opinions of what is newsworthy (Strombak, Karlsson, & Hopmann, 2012), it is important to understand the ethics associated with media, confidentiality, social media, and professionalism (AASP, n.d. ACA, 2014, APA 2017). Cases of elite athletes seeking services (Larkin, Levy, Marchant, & Martin, 2017), the use of websites to emphasize gender (Barnett, 2017), and the role race plays on public perception of athletes (Cranmer, Bowman, & Goldman, 2017) are hot topics that can be addressed by our field. Recommendations on how to take steps to promote healthy media relations will be examined and Q&A will allow audience members to ask specific questions about this topic.

## WORKSHOPS

### WKSP-01

#### **DEVELOPMENT OF PROFICIENCY IN APPLIED SPORT PSYCHOPHYSIOLOGY BY INTERNING UNDER SUPERVISION OF QUALIFIED PROFESSIONALS**

*Wesley Sime, University of Nebraska Emeritus, USA*

The goal of this workshop is to inform students and professionals about new advances in Applied Sport Psychophysiology (ASP) that are user friendly and which can be learned in a practical sense through quality internships. There are very few courses found in Sport Psychology curriculums addressing ASP. To obtain a solid foundation, candidates must identify professional training programs because the academic coursework specific to sport is limited. AASP has not consistently provided sufficient Pre-conference workshops.

In this workshop, user-friendly, practical demonstrations and guidance regarding objective measures of HR, HRV, EMG, EEG, Skin Conductance, Reaction Time, Choice Reaction Time, Rhythm / Timing (Interactive Metronome) and Visual Attention (Quiet Eye) will be provided. Awareness of these objective measures and how they can be used for both research and consulting practices is critical to development of well-rounded, aspiring young professionals coming into the field. Illustrations of the widely disparate differences between self-report (e.g., anxiety, confidence, composure, tension, tenacity, flow, etc.) and ASP measures will be offered along with interpretations of what it means for research purposes as well as in practical terms to the athlete as well as the coach regarding the achievement of personal best performances.

Included in the presentation will be examples of where such ASP training can be obtained in the classroom as well as how to identify a “paired” supervisory team for “cross-over” mentoring which includes an AASP Certified Professional and an equally qualified Biofeedback and Applied Psychophysiology professional to conduct high quality supervised interning experiences. There are many ASP trained professionals who would relish the opportunity to work with our students to advance the field. The AASP SIG Group on Applied Psychophysiology and Biofeedback is a good place to start identifying resources available to develop proficiency by interning under the supervision of qualified mentoring professionals.

### WKSP-02

#### **CLOSING THE DEAL: THE ART OF SUCCESSFUL NEGOTIATION IN SPORT PSYCHOLOGY**

*Duncan Simpson, IMG Academy, USA*  
*Jonathan Fader, SportStrata, USA*  
*Angus Mugford, Toronto Blue Jays, USA*

The business side of sport psychology has received greater attention in recent years (see Carlson & Pfenninger, 2014; Taylor, 2015). One key business skill sport psychology consultants (SPCs) need is the ability to negotiate effectively (Mugford, Hesse, Morgan, & Taylor, 2015). Yet, many practitioners are untrained and unfamiliar with the intricacies of negotiation with potential clients. While SPCs must first understand their value (see Taylor & Herzog, 2015) negotiation skills are essential for “closing the deal.” At a broad level the workshop

will consider the process of negotiation and consider a range of important topics that need to be considered if mutually beneficial outcomes are to be achieved for all parties involved. The workshop will address key questions such as: What is negotiation? What am I negotiating for (e.g., Time, money, freedom)? Should I negotiate? If so, when? What is the other side trying to achieve? What will they be happy with? Is this a position or interest-based negotiation? The specific learning objectives for this workshop are: (a) To help practitioners determine their value (time, money, freedom of choice etc.) (b) To develop a clear understanding of the benefits of effective negotiation to both parties (c) To critically consider a framework of effective negotiation (d) To develop practical negotiation skills for SPCs. The workshop will be delivered utilising a range of different pedagogic approaches including: some presentation of important information, role-plays, audience scenario ‘acting’ episodes, discussion, and debate. A range of materials will be shared with delegates in the workshop including: copies of any slides that appear on screen, links to relevant applied practice materials, and online video materials.

### WKSP-03

#### **OVERCOMING OBSTACLES IN MENTAL SKILLS TRAINING: A WORKSHOP ON MOTIVATIONAL INTERVIEWING**

*Jonathan Fader, SportStrata, USA*  
*Hannah Thurley, SportStrata, USA*  
*Benjamin Oliva, SportStrata, USA*

While mental skills training has been shown to be highly effective in boosting athlete performance (Greenspan & Feltz, 1989; Hatzigeorgiadis, Zoubanos, Mpoumpaki, & Theodorakis, 2009; Mamassis & Doganis, 2003; Thelwell & Greenless, 2001) many athletes remain resistant to sport psychology consultation (Martin, 2005). Research in the fields of Clinical Psychology and Health Psychology suggests that, compared to education-only approaches, Motivational Interviewing (MI) can be an effective technique for treating problem behaviors when confronted with resistance (Eakin et al., 2014; Resnicow et al., 2002).

Motivational Interviewing is a non-judgmental and non-confrontational technique used to increase intrinsic motivation for behavioral change (Lundahl & Burke, 2009; Miller & Rollnick, 2012; Moyers & Rollnick, 2002). Several meta-analyses support MI as an effective counseling method for fostering motivation to change (Hettema, Steele, & Miller, 2005; Rubak, Sandbæk, Lauritzen, & Christensen, 2005; Burke, Arkowitz, & Menchola, 2003). In addition, research on MI has shown its effectiveness in promoting physical activity and exercise adherence in non-athletes (Sandoval, Wood, Neumann, & Spray, 2010; Brodie & Inoue, 2005). MI is a modality that is growing in the field of sport and performance psychology.

This workshop, relevant for both the experienced and beginning consultant, will rely on the presenter's experience as a national MI trainer utilizing MI with professional sports teams and athletes. This is a practical workshop wherein attendees will learn the basics of how to apply MI techniques in their daily interaction with athletes, in the interest of reducing resistance to mental skills training. Discussions surrounding the spirit, theory, and technique of MI will be paired with experiential practice focused on responding to resistance and increasing intrinsic motivation. Handouts containing additional information and resources on MI will be provided.

**WKSP-04****MAKE TIME FOR THE “AHA!” MOMENTS: LEADING AN EFFECTIVE DEBRIEF**

*Abby Keenan, Intrepid Performance Consulting, USA  
Kathryn Thompson, Special Operations Cognitive Enhancement for Performance, USA*

For any Sport Psychology Consultant (SPC) leading an interactive activity, the most desired outcome is that athletes learn from the experience, internalize it appropriately, and apply this new knowledge in the future. One established way to promote learning, growth, and application is through debriefing (Dewey, 1938; Lederman, 1992; Dennehy, Sims, & Collins, 1998; Cummings, 2008). Effective debriefing enables athletes to review, process, and reflect on an interactive activity or experience. Through this process, athletes personally connect with the activity's learning objective and gain a new understanding of how to improve their performance. Unfortunately the debriefing process is often rushed, overlooked, and underutilized by SPCs. Deliberately structuring activities based on the Experiential Learning Cycle (Kolb, 1984) and effectively asking questions grounded in the After-Action Review Process (Morrison & Meliza, 1999) ensures that athletes gain the intended knowledge and skills from interactive activities and experiences. In this workshop we will: (1) Introduce theories related to debriefing; (2) Provide demonstrations of the debriefing process; and (3) Offer tips and strategies for generating learning, growth, and application of knowledge through the utilization of effective debriefing. Attendees will participate in group and individual activities which will be followed by a debrief demonstration. Tips and strategies for facilitating maximum-impact debriefs will be provided in order to improve learning outcomes, sport-specific application, and real-world relevance. Finally, attendees will have the opportunity to practice debriefing in small groups and get feedback from their peers. All attendees will receive a list of sample debriefing questions they can use to guide their future debriefs.

**WKSP-05****PSYCHOLOGICAL SKILLS TRAINING IN YOUTH HOCKEY: A STATION-BASED APPROACH**

*Teresa Fletcher, Adler University, USA  
Joshua Zettel, Adler University, USA  
Brandon Kaput, Adler University, USA  
Shaheen Bronkowski, Adler University, USA  
Emily Hart, Adler University, USA*

Psychological skills training is encouraged in youth sports (Gucciardi et al. 2009) in order to become more proactive and align with physical skill development rather than reactive in adulthood to overcome already established dysfunctional patterns and habits (Vealey, 1988). As psychological skills training in youth sport is valuable and necessary, adaptations to content and delivery are recommended for athletes to both enjoy the process and develop life skills while enhancing performance (Foster, Maynard, Butt, & Hays, 2016). Typically, sport organizations will adapt rules, equipment or size of playing surface based on age, size, strength, or capabilities to optimize physical skill development. As such, it makes sense to have congruent psychological skills training that mirrors this approach. Hockey organizations and more specifically, USA Hockey, developed the American Development Model (ADM) for training youth hockey players to optimize both

activity and long-term development (See [www.usahockey.com](http://www.usahockey.com)). As players learn better by doing, coaches design practices with high activity levels and age-specific drills. They develop practice plans and divide the ice into stations and isolate basic skills (i.e., skating, puck handling, shooting, passing, etc.) where kids are in smaller groups for shorter durations. Consistent with this philosophy, a station-based PST session was successfully developed and implemented by graduate students in sport psychology with a high school hockey team and coaching staff. The purpose of this presentation is to: 1). Provide an overview of the literature for the role of psychological skills training in youth sport, specifically ice hockey; 2). Describe the strengths and lessons learned from the experiences (mental toughness, visualization, concentration/focus, and communication) 3). Promote graduate education by engaging more students in planning and implementing multiple, shorter PST stations several times within the same setting while adapting and improving delivery of skills while establishing systematic PST delivery for future sessions.

**WKSP-06****TEACHING PSYCHOLOGICAL THEORIES TO ARMY LEADERS THROUGH EXPERIENTIAL LEARNING**

*Arlene Bauer, Science Applications International Corporation (SAIC), USA  
Christine Rikertsen, SAIC, USA  
Marc Stevens, AFSC/Magellan Federal, USA*

Army leaders regularly take part in both non-commissioned officer professional development (NCOPD) and officer professional development (OPD). Master Resilience Trainer-Performance Experts (MRT-PEs) attached to units are often asked to present topics at both. When preparing the content of these professional development sessions it can be difficult to determine a balance between traditional teaching styles such as lecture, and more interactive learning modalities. In an effort to have more participant involvement, the consultants presenting this workshop adopted lessons from Piaget's Experiential Learning Theory (Kolb, 2014). One of the premises of Experiential Learning Theory is to bring out the learner's beliefs and theories, then examine and test them while integrating new information in a facilitated process. The content of this workshop is based on the research behind Deci and Ryan's (2011) Self-Determination Theory, specifically the sub-theory of Organismic Integration Theory, and Dweck's (2000) work on entity and incremental theories of intelligence. The goal of the workshop is to demonstrate ways of teaching psychological skills theories to army leaders, using experiential learning strategies. Participants will have time to discuss how they can implement the demonstrated strategies into their own consulting practices.

**WKSP-07****THE SCIENCE AND IMPLEMENTATION OF MINDFUL SPORT PERFORMANCE ENHANCEMENT (MSPE)**

*Keith Kaufman, Keith A. Kaufman, PhD, PLLC, USA  
Carol Glass, The Catholic University of America, USA  
Timothy Pineau, Marymount University, USA*

Mindful sport performance enhancement (MSPE) has emerged as a leading mindfulness-based intervention in sport psychology, with a forthcoming book to be published by the American Psychological Association in 2017. Initial studies, including a recent RCT, have produced promising

results, and ongoing research with diverse groups of athletes (e.g., youth, collegiate), as well as coaches, is adding to the empirical base.

The goal of this workshop is for attendees to understand the theory behind, empirical support for, and primary components of MSPE, so they can begin to incorporate it into their practices. Learning objectives include: (1) defining the concept of mindfulness as it is applied in MSPE, (2) explaining the rationale for why mindfulness benefits athletic performance, (3) elucidating the core mental skills developed through MSPE (e.g., regulation of attention and emotions), and (4) providing exposure to a sample of MSPE exercises.

The leaders of this workshop have extensive experience with MSPE, and will offer a blend of educational and experiential content. The educational portion will include didactic presentation of MSPE's theoretical foundation, development, rationale, empirical support, and targeted skills, as well as suggestions for how mindfulness practice can be integrated into an existing sport training routine. In the experiential portion, attendees will be guided through a selection of MSPE exercises with the opportunity for group discussion of what is experienced and potential applications to their own work and daily lives.

Finally, attendees will receive two handouts: (1) a summary outline of the MSPE 6-session protocol and (2) a list of helpful tools and resources (e.g., articles, websites) for learning more about MSPE and mindfulness in sport.

## **WKSP-08**

### **STILL BETTER TOGETHER: A CASE STUDY WORKSHOP FOR STUDENTS**

*Chelsea Wooding, National University, USA*  
*Ashley Coker-Cranney, USA*  
*Mark Aoyagi, University of Denver, USA*  
*Jesse Michel, Houston Astros, USA*  
*Taryn Morgan, IMG Academy, USA*

Although many students benefit from peer networking within their respective programs, opportunities to benefit from peers outside those programs is often limited to regional conferences and texts (e.g., Aoyagi, Poczwardowski, & Shapiro, 2017). To bridge that gap, last year AASP offered the first student case study workshop at its national conference. The workshop was well received by attendees who noted: "For the last four years I have wondered why the case-study seminar was limited to CC-AASPs. Awesome to see this offered as an opportunity for students. The session was well run and impactful." and "[The] student case study session was fantastic – really a good opportunity for our students, who represent half the membership, to hear/learn from professionals they don't normally see." One attendee even listed the workshop as one of their favorite moments of the conference. Given last year's positive experience and the benefits of peer mentorship (e.g., Chester et al., 2013; Dennison, 2010; Furnisky et al., 2013), we aim to continue to provide peer-networking opportunities this year through the Case Study Workshop for Students.

During the workshop, two cases will be presented for discussion. In groups, students will discuss a specific topic – conceptualization, intervention development, ethical considerations, and evaluation planning. During large group discussion, students will share their ideas and hear expert panelists' reactions. Panelists will provide students with unique perspectives as they represent various training backgrounds and diverse work settings. To provide additional peer-networking opportunities, groups will be re-assigned between cases. Students are encouraged to build on peer networks started in the workshop to create lasting networks that enhance professional practice over time. This workshop provides an invaluable opportunity for the development of peer networks, strengthening skills, enhancing the appreciation of diverse backgrounds, and building confidence in the next generation of CCs.

## **WKSP-09**

### **NO PAIN, NO GAIN?: THEORY, PRACTICE, AND ACTION UTILIZING A MULTIDISCIPLINARY APPROACH TO OPTIMAL RECOVERY**

*Robyn Braun, University of Texas of the Permian Basin, USA*  
*Jodiann Yambor, Thomas University, USA*  
*Alyssa Yambor-Maul, University of Florida, USA*  
*Steve Trocchio, Monahans Physical Therapy, USA*

During the past decade, physical and mental recovery in sport has received increasing attention (Kellmann, 2002; Richardson, Andersen, & Morris, 2008). Recovery is a multidimensional process involving a number of systems (Jeffrey, 2005). A practical definition of recovery is the deliberate use of interventions designed to enhance an athlete's capacity to adapt to the physical and mental demands of preparation and performance. Most elite coaches recognize that recovery is crucial within the sport setting and are seeking more recovery activities for their athletes (Williams & Kendall, 2007). More specifically, coaches are seeking guidance on techniques to optimize training and performance. Optimum performance requires a balance between training stress and recovery. The recovery process needs to encompass a range of methods and techniques that are all systematically integrated into a program, ideally on an individual basis. Therefore, the objective of this workshop is twofold: (1) to introduce participants to a multidimensional approach to recovery and (2) to offer strategies and techniques to promote optimal recovery through the perspectives of a NCAA Division I collegiate student-athlete, physical therapist, and sport psychology consultants. Strategies and techniques will include monitoring training programs, managing stress levels, post workout/game strategies, sleep, and emotional and relaxation strategies. Teaching methods will include both a didactic and experiential component including case study analyses. Finally, through both small and large group discussions, we will provide an opportunity for attendees to develop a plan for promoting optimal recovery with athletes. A handout with a summary of the information presented will be shared to attendees.

**WKSP-10****LET'S GET PHYSICAL: UTILIZING STRENGTH & CONDITIONING TO TRAIN MENTAL SKILLS**

Taylor Stutzman, IMG Academy, USA  
 Zach Brandon, IMG Academy, USA  
 Andrea Wieland, IMG Academy, USA  
 Leslie Larsen, IMG Academy, USA  
 Lindsey Hamilton, IMG Academy, USA  
 DJ Andreoli, IMG Academy, USA  
 Ryan Ingalls, IMG Academy, USA  
 Taryn Morgan, IMG Academy, USA  
 David Hesse, IMG Academy, USA  
 David da Silva, IMG Academy, Athletic & Personal Development, USA  
 Christian Smith, IMG Academy, USA  
 Duncan Simpson, IMG Academy, USA

A major precursor to an effective consulting relationship is the sport psychology consultant's (SPC's) ability to develop trust and gain support from all levels of an organization (Ravizza, 1988). This process includes earning the trust and respect of other support staff (e.g., strength & conditioning coaches) within the organization in addition to collaborating with these individuals to provide a multidisciplinary approach to training (Reid, Stewart, & Thorn, 2004). Sport organizations have also reported transitioning to a more holistic, integrated, and multidisciplinary approach to training at the elite level (Gnacinski et al., 2015). Despite the support for "why" multidisciplinary collaboration may be beneficial to sport training, there has been a limited discussion on "what" this might look like and "how" it can be implemented. Thus, the objective of this workshop is for SPC practitioners to share how they collaborate with other support staff, specifically, strength and conditioning coaches, and provide attendees with an opportunity to explore how they might utilize mental skills training (MST) within physical conditioning. Workshop presenters will address the following key elements through stories, video footage, and educational materials: 1) how to develop collaborative relationships with strength & conditioning coaches 2) how to periodize a MST program with physical conditioning 3) how to structure combined sessions 4) ethical considerations and 5) how to evaluate the program effectiveness. Furthermore, small group discussions will be organized so attendees can participate in reflective practices with peers (McEwan & Tod, 2015) and brainstorm different ways various mental skills can be enhanced through physical conditioning. Finally, workshop presenters will provide handouts for attendees that highlight an example 6-week periodized MST program (Holliday et al., 2008) that utilizes physical conditioning for youth athletes.

**WKSP-11****UTILIZING BRIEF INTERVENTIONS FROM AN ACCEPTANCE AND COMMITMENT THERAPY (ACT) APPROACH**

Adam O'Neil, Pinnacle Performance Psychology at DISC, USA  
 Jessica Bartley, University of Denver, USA  
 Robert Diehl, Boston University, USA

Traditional models of Acceptance and Commitment Therapy (ACT) as applied specifically to performers tend to follow a structured process over a specified number of sessions (Gardner & Moore, 2012; Moore, 2009), with the ideal scenario being that the performer-client will gradually and sufficiently acquire, build on, and crystalize ACT-based mental skills. However, the underlying theoretical foundation, the supporting

research, and the practical utility of empirically supported ACT-based skills can be applied in the form of brief interventions (Hayes, 2005; Mahoney & Hanrahan, 2011). Additionally, there is evidence to suggest that the effectiveness of ACT-based mental skills training is largely influenced by a process of collaboration and creativity between the therapist and the performer-client, which may not always occur in a structured consulting format (Moran, 2011). The learning objectives of this workshop are threefold: to review ACT-based theory and empirically supported interventions specific to performance populations; utilizing this knowledge, to work collaboratively with workshop attendees to generate brief interventions based on ACT theory and research; and to create scenarios (e.g., role plays) to practice the presentation of brief interventions. Sensitivity to issues of diversity and cultural awareness are vital for successful outcomes using an ACT approach (Masuda, 2014; Woidneck et al., 2012), and therefore the workshop is designed to actively address the importance of developing cultural competency as a consultant. Attendees will learn best practices from each other; to collaborate on the development of novel, brief interventions designed for use with performers; and attendees will receive active coaching and instruction from the moderators, all of whom have had formal training and professional experience using ACT with a population of high performers.

**WKSP-12****CONSULTING IN THE BUSINESS REALM: USING SPORT PSYCHOLOGY SERVICES TO IMPROVE ORGANIZATIONAL EFFECTIVENESS AND EMPLOYEE WELL-BEING**

Megan Byrd, John F Kennedy University, USA  
 Stefanee Maurice, West Virginia University, USA  
 Dan Leidl, Production Resource Group, USA

The application of sport psychology skills in populations outside of athletics is a growing sector within the field of sport and exercise psychology. The corporate world is utilizing these skills and techniques at an increasingly high rate. In 2010, 90% of US-based Global 100 companies were using 'coaches' to improve employee well-being and organizational effectiveness (Grant, Passmore, Cavanagh, & Parker, 2010). Production Resource Group (PRG), a privately held global production company, is one such organization that is regularly employing the principles of sport psychology. Specifically, PRG is delivering sport psychology workshops throughout its North American facilities in partnership with Sport Psychology masters and doctoral student interns. Workshop topics include health and wellness, stress management, communication, resilience, empowerment, and more, and have been met with great appreciation from PRG's staff. Through this workshop participants will explore the creation, organization and lessons learned from PRG's unique and effective programming alongside two previous interns and the program's designer. Through this highly interactive, multimedia presentation, the presenters will engage participants through video, group discussion, a specific case study, photos, statistics, story and more. Additionally, participants will discuss the future of implementing sport psychology skills into the business setting, as well as the potential impact sport and exercise psychology can have on corporate environments. The learning outcomes are as followed; a deeper understanding of corporate opportunities in comparison to more traditional Sport Psychology paths, a fundamental understanding of how Sport Psychology skills and trainings can positively impact corporate entities, and an increased insight into a specific case of a company that has implemented Sport



Psychology theory and training. Workshop participants will be given samples of an actual PRG workshop, a detailed description of the PRG Professional Development Program, along with videos, quotes and theory expressed through the PRG program.

## **WKSP-13**

### **IT'S NOT WHAT YOU DO IT'S HOW YOU DO IT: APPLIED SPORT PSYCHOLOGY SERVICE DELIVERY IN NCAA COLLEGIATE ATHLETICS**

*Brian Zuleger, Adams State University, USA*  
*Scotta Morton, University of Missouri, USA*  
*Katherine McLean, University of Missouri, USA*

As applied sport psychology professionals we often focus a lot of our attention on the science (what) of mental skills training. This is beneficial and necessary, but often what is missing in the development process as a consultant is a focus on the art (how) of delivery of that knowledge on mental skills training. Learning objectives for this workshop will focus on teaching participants the most effective methods for how to deliver mental skills training to coaches and athletes in NCAA athletic departments and how to effectively become integrated within sports teams. Teaching methods used will include demonstration of models and examples used by the CC-AASP consultants leading the workshop, interactive activities, and discussion around best practices. Specific techniques will include taking a values based approach when establishing rapport with coaches and athletes. This takes into consideration how the consultant's beliefs, values and philosophies are developed to form a holistic approach that emphasizes athletic performance and personal development (Anderson et al., 2001; Bond, 2002; Danish & Nellen, 1997; Friesen & Orlick, 2010; 2011; Miller & Kerr, 2002; Owton et al., 2014; Ravizza, 2002; Wrisberg et al., 2012). This is consistent with prior research regarding gaining entry and working with athletic personnel and athletes (Fifer, Henschen, Gould, & Ravizza, 2008; Ravizza, 1988; 2001). Materials that will be shared with participants include examples of holistic sport psychology service delivery models and interventions from a variety of sports at a large NCAA DI institution as well as at a small NCAA DII institution.

## **WKSP-14**

### **FIRST TO SEE, FIRST TO SHOOT**

*Kate Colvin, IMG Academy/1SFG THOR3, USA*  
*Seth Haselhuhn, Booz Allen Hamilton, USA*  
*Brian Wade, IMG/THOR3, USA*  
*Marcus Washington, IMG/THOR3, USA*  
*Samuel Whalen, IMG Academy, USA*

As the Global War on Terror continues to evolve, so does the Special Operation Forces (SOF) firearms training. Operators live in a "kill or be killed" environment, therefore they need to be more accurate and lethal than ever. Innovations are made regularly in regards to tactical equipment and procedures. However, one area of training still lagging is sports vision training for the combat shooter (Kennedy, 2016). The first to see is the first to shoot, so why is vision not the first skill trained for combat shooters? Vision is more than eyesight. It refers the ability to identify incoming visual information, process that information accurately, then obtain meaning

from it (Getz, 1973). The objective of this workshop is to provide attendees with an understanding of the importance of vision training as well as an opportunity to engage in various vision drills for combat shooters. The workshop will include a brief lecture addressing the fundamentals of vision training as well as procedures for testing vision (Asbury & Frederick, 2002; Geobel et al, 2007; Jasmin, 2013; Maino, 2010;). Vision drills will then be led by five mental performance specialists currently working with SOF to target spatial awareness, visual recognition, target tracking, proprioception and ocular endurance using SIRT pistols. The workshop will conclude with an open period for attendee prompted questions. Attendees will leave this workshop with a framework for effectively assessing and training vision for combat, competitive or recreational shooters.

## **WKSP-15**

### **TEACHING SIG WORKSHOP: HOW TO USE FIELD BASED LEARNING TO ENGAGE STUDENTS IN SPORT PSYCHOLOGY PRINCIPLES AND PRACTICES**

*John Coumbe-Lilley, University of Illinois at Chicago, USA*  
*Amber Shipherd, Texas A&M University - Kingsville / Next Level Mind Consulting, USA*  
*Sarah Carson Sackett, James Madison University, USA*

This hands-on activity based workshop will help college educators be inspired to take sport psychology experiential learning to another level. The benefit of experiential learning is the transfer of learning from structured instructional environments to dynamic contexts where evidence based practice and critical thinking is required (Eyler, 2009). Experiential learning can take several forms, including faculty-led field studies and service learning initiatives. Faculty-led field studies are often used in fields like anthropology, sociology and business to learn about how individuals function, relate and perform in a given context. The common approaches are to immerse oneself in the environment of the individuals, groups or populations one is intending to study. Service learning has received attention from both researchers and educators in a variety of disciplines (Kenworthy-U'ren, 2008), and the benefits to both the organization and students involved make it an ideal fit for a sport or exercise psychology classroom. Often inherent in service learning is the use of a train-the-trainer model (Orfaly et al., 2005). Through this approach, students are empowered to develop and apply knowledge and skills in discipline-relevant contexts and with a variety of different populations while still remaining supported by the resources and expertise of an instructor or larger organization. The balance of the workshop will be 40% presentation and 60% hands-on learning with presenters working as a team to facilitate small group activity. The specific experiential activities addressed in this workshop will be: 1) field studies, in which the objective is to connect theory to application by engaging students in a common immersive experience; 2) service learning, which has been found to benefit both community organizations and has cognitive benefits for the students in addition to increasing student's civic awareness (Yorio & Ye, 2012); and 3) a longitudinal, Center-based approach to engaging students in service learning throughout their academic careers. Attendees should leave this workshop with three micro teaching plans to implement each approach.

**WKSP-16****CREATING AN OPTIMAL PERFORMANCE GROUP FOR INJURED ATHLETES: LESSONS LEARNED YEAR ONE TO THREE***Kristin Webster, USA**Jodiann Yambor, Thomas University, USA*

Sport psychology consultants working with professional, university, college, or high school athletic teams routinely encounter athletes who have sustained injury that prevents them from participating in sport for extended periods of time. This specific population of athletes can benefit immensely from the use of performance enhancement strategies and participation in a supportive and interactive setting (Cupal & Brewer, 2001; Johnson, 2000). As part of an optimal performance training program within a collegiate athletic department, a group that focuses on the unique challenges of rehabilitation of injury instituted so that athletes would have the opportunity to work with their peers meaningfully supporting each other in their respective recoveries. In cooperation with the athletic department, athletic trainers, and coaches, the sport psychology consultants created a group based on the model set forth by Granito and colleagues (1995) and then tailored the program to the athletes who were present at each meeting. The first three years of the Optimal Performance Group each presented new challenges and learning experiences for the consultants ranging from recruitment of athletes to relationships with coaches and trainers. Additionally, coaches, trainers, and participating athletes were interviewed in order to enhance the effectiveness of the group.

The objectives of this workshop are for attendees to become familiar with methods of identifying and meeting the challenges of creating a group of this nature; for the attendees to engage in several hands-on activities specific to this special population; and to discuss approaches for further facilitation of an injured athlete group in the future. Attendees will participate in a short PowerPoint presentation, role play a group setting, and finally, work through mental training techniques used in the optimal performance group. Attendees will receive copies of the PowerPoint and short descriptions of the activities for use in their own injured athlete groups.

**WKSP-17****CONSULTING FROM THE EDGE: THE LEGAL AND ETHICAL ISSUES TO CONSIDER WHEN CONSULTING WITH CLIENTS FROM A DISTANCE***Ed Etzel, West Virginia University, USA**Jack Watson II, West Virginia University, USA**Brandonn Harris, Georgia Southern University, USA*

Electronic communication has revolutionized many functional aspects of the field of applied sport psychology. Professionals and clients have come to expect communication and connectivity much more rapidly and personally than in the past. At the same time, the use of electronic modalities has made aspects of applied sport psychology work more complex, by introducing new ethical and legal challenges. As the use of technology for the provision of services for clients has evolved, several organizations, including the APA, have developed telehealth guidelines to provide guidance and best practices for practitioners interested in providing distance services (Luxton, Nelson & Maheu, 2016). While AASP has lagged in comparison to other allied helping professionals in this area, this workshop will outline the ethical and legal

issues, and best practices for providing distance services using related organizations as a reference. The objectives of the workshop will be to: 1) overview the ethical principles and standards applicable to service provision from a distance including competency, confidentiality, beneficence, and non-maleficence; 2) overview the legal implications including service provision across state and provincial lines, scope of practice, and possible malpractice issues, 3) expose participants to the common yet challenging ethical scenarios existing within distance service provision, and 4) participate in discussions about how to use ethical decision making strategies to navigate these dilemmas using the Guidelines for the Practice of Telepsychology (2013). While this workshop will begin with some didactic overview of relevant issues, it will conclude with facilitator-led small and large group discussions related to common ethical scenarios in telepsychology. Role playing and dyad work will be integrated to address strategies for ethically and legally managing these difficult situations to promote professional development. Attendees will be provided copies of cases and a practical resource of best practice guidelines to help facilitate discussion and future service provision.

**WKSP-18****TRAVELING THE GLOBE IN ONE SESSION: BEST PRACTICES FOR WORKING WITH TRANSNATIONAL GROUPS***Leslie Larsen, IMG Academy, USA**Christian Smith, IMG Academy, USA**Andrea Wieland, IMG Academy, USA**Taylor Stutzman, IMG Academy, USA**Ryan Ingalls, IMG Academy, USA**Duncan Simpson, IMG Academy, USA**Zach Brandon, IMG Academy, USA**Taryn Morgan, IMG Academy, USA**Lindsey Hamilton, IMG Academy, USA**David da Silva, IMG Academy, Athletic & Personal Development, USA**DJ Andreoli, IMG Academy, USA**David Hesse, IMG Academy, USA*

Multicultural competence within applied sport psychology is defined as the ability of sport psychology consultants (SPCs) to gain the knowledge, awareness, and skills necessary for them to work effectively with clients from diverse cultural backgrounds (Foltz et al., 2015). While research supports that culture can influence performance and the use of mental skills, applied sport psychology training programs and workshops often fail to educate SPCs about the important role cultural variables can play within performance as well as within the consulting relationship (Foltz et al., 2015; Martens et al., 2000). Peter and Williams (2009) assert that ignoring these cultural variables can lead to less effective relationships between SPCs and their clients, higher attrition rates, and negative outcomes for clients. The potential for the negative effects caused by a lack of multicultural competence led the International Society of Sport Psychology to release a position stand that challenged SPCs to not only rethink the content of their deliveries but also the methods of delivery to ensure that clients from different cultures can benefit from the services provided (Schinke et al., 2015). Therefore, the purpose of this workshop is to respond to Schinke and colleagues' challenge and provide SPCs with culturally competent ways to rethink the what and the how of delivering mental skills training sessions to transnational groups. Schinke et al. (2009) suggest that multicultural competence can be enhanced through the development of cultural sensitivity, exposure

to multicultural settings, and applied experiences. With this in mind, the workshop will use a combination of teaching methods including case studies, reflections on personal experiences, and group discussions to help workshop attendees gain a better understanding of (a) what it is to be culturally self-reflexive, (b) how the setting plays a role, and (c) how to deliver mental skills to transnational groups.

## **WKSP-19**

### **TRAINING THE COMPLETE POLICE OFFICER: ENHANCING PERFORMANCE DURING CRITICAL INCIDENTS, IMPROVING OFFICER LONG-TERM HEALTH AND EMPOWERING OFFICERS TO BUILD COMMUNITY**

*Petra Kowalski, Digital Consulting Services, USA*

Police officers are expected to perform optimally on a wide range of duties and responsibilities - from peacekeeping and community building to policing and law enforcement - each presenting a unique set of challenges and requiring specific skills and optimal mindset. Without proper training, marshaling the right skills and the right mindset in an uncertain, complex and ambiguous situation can create high levels of stress. Unfortunately, increased public scrutiny of police officer performance during critical incidents has highlighted what research has already shown: the psychological and physiological stress experienced by police officers during critical incidents can shape the outcome of the incident (Arnetz, Arble, Backman, Lynch & Lublin, 2013; Arnetz, Nevedal, Lumley, Backman & Lublin, 2009). Additionally, research has also shown that maladaptive stress responses can have a negative effect on health, wellness and performance over time (Covey, Shucard, Violanti, Lee & Schucard, 2013; Violanti, 2010; Violanti, 2005). Despite this research, deliberate mental skills and resilience training for police officers remains uncommon.

This workshop will demonstrate an interactive, experiential learning approach used to train mental skills with police officers and cadets. A secondary learning objective is to discuss best practices in, and barriers to, implementing mental skills training within the police force. The teaching method will consist of an introductory didactic, experiential learning activities where participants will gain hands-on experience with the exercises used to train police officers and a concluding group discussion. The proposed workshop will be conducted in a 60 minute block and utilize audio recordings, biofeedback and practical exercises.

## **WKSP-20**

### **PERIODIZATION IN SPORT PSYCHOLOGY: APPROACHING MENTAL TRAINING THE SAME WAY AS PHYSICAL TRAINING**

*Gloria Balague, SportPsych Consulting, USA*  
*Jim Taylor, Dr. Jim Taylor, USA*

This workshop will explore the role of periodization in the development of mental training programs for athletes. Periodization involves the strategic use of different types of mental training based on the phase of the season and across seasons. Four key aspects of periodization will be considered: 1) Identifying what specific mental training strategies are

appropriate for each phase in the training and competitive cycle of each season; 2) Identifying what specific mental training strategies are appropriate in the career arc of athletes from season to season based on their athletic and personal development; 3) Creating and implementing a periodized mental training program based on the needs and goals of athletes; and 4) Developing a curriculum of mental training across seasons comprised of increasingly more sophisticated information and strategies that complement athletes' physical, technical/tactical, competitive, and personal development. Attendees will leave the workshop with a more sophisticated understanding of how periodization can be used to maximize the benefits of mental training to the athletes with whom they work and practical information and tools to develop periodized mental training programs.

## **WKSP-21**

### **MOTIVATIONAL INTERVIEWING TO ADDRESS NEEDS OF SUBSTANCE-USING STUDENT-ATHLETES**

*Ido Heller, Gavin Foundation, USA*  
*Rebecca Edelberg, Program Coordinator at Alosa Health,  
Boston MA, USA*

Substance abuse among student-athletes is well documented in national studies (e.g., Lisha, & Sussman, 2010; Taylor, Ward and Hardin, 2017), yet few effective clinical interventions to address this negative phenomenon are available, and those that exist address only alcohol (Donohue, Dowd, Philips, Plant, Loughran, & Gavrilova, 2016, Martens, Kilmer, Beck, Zamboanga, 2010). This workshop, based on the substance abuse program (SAP) offered by the Gavin Foundation for over a decade, presents counseling strategies for substance-using student-athletes who present pre-completion to active attitudes toward changing this habit.

In agreement with Donohue and colleagues' (2016) research, youth' statements in the SAP teach us that substance use emerges from dysfunctional thoughts and stress, dysfunctional family system, poor academic performance, adjustment problems and direct peer pressure. Specifically, student-athletes' overestimate substance use of their peers, forming a non-direct peer pressure, in which they wish to increase their substance use (Dams-O'Connor, Martin & Marten, 2007). Student-athletes are first and foremost developing young people in transition, who are in the process of defining their identity, and it must be recognized that drug use does not occur in a vacuum.

This workshop encourages graduate students and early professionals who work with student-athletes to avoid beginning counseling sessions with a direct attempt to change substance use behavior. Rather we teach clinicians to nurture ambivalence and post-conventional level of insight to support self-efficacy and optimism. Specific topics discussed include social norm theory and effect of cultural background on substance use perception. Additionally, participants will leverage motivational interviewing, a promising intervention to reduce problematic use (Carey, Scott-Sheldon, Carey, DeMartini, 2007). Finally, participants will leave the workshop with knowledge of medical assisted treatment and addiction to illicit drugs, preparing them to interact effectively with other medical professionals and to increase significant adult (e.g., parents) presence who play a role in youth development.

**WKSP-22****SENSITIZE THROUGH EXERCISE: STUDENT RESPONSIBILITY CURRICULUM FOR PRACTITIONERS**

*Laura Hayden, University of Massachusetts Boston, USA*  
*Courtney Hess, UMass Boston, USA*

**Rationale:** Using physical activity for youth development in a school setting is supported by literature (e.g., Danish, Forneris, & Wallace, 2005) policies (NASPE, 2004) and recommendations (U.S. Department of Education, 2013), yet schools continue to forego physical activity for increased classroom time. Given the role of counselors as advocates of youths' socio-emotional development, they can pioneer integration of physical activity and responsibility development. We created a curriculum guide (Hayden, Cook, & Whitley, 2014) that presents 12 classroom-based lessons to be delivered in collaboration with school counselors. **Specific objectives:** Participants will (1) understand why physical activity should be used for school-based responsibility development and how it can be incorporated into a classroom, and (2) engage in a demonstration, allowing for an assessment of appropriateness of the lessons for their specific environments. **Teaching methods:** Using a didactic approach, we facilitate an open dialogue allowing for participant engagement. We encourage active participation, engage the audience in a fun, strength-based approach to delivery, followed by a group reflection. **Specific Techniques:** First, we provide an overview of a curriculum we published in 2014, which was designed to support integration of physical activity and responsibility development in the classroom. The book provides 12 weeks of sample lessons, evaluation tools, and activities, based on a combination of Hellison's Personal and Social Responsibility Model and the knowledge of three experts in the field of positive youth development. Second, we lead the audience through a modified version of two lessons. Third, we provide an opportunity for participant reflection. **Description of Materials:** Participants will receive an electronic copy of the curriculum guide, which includes a conceptual description, delivery materials, and evaluation materials.

**WKSP-23****WE'RE ALL IN IT TOGETHER: THE IMPACT OF INJURY ON ATHLETES, COACHES AND TEAMS**

*Hayley Russell, Gustavus Adolphus College, USA*  
*Jill Tracey, Wilfrid Laurier University, Canada*  
*Hannah Silva-Breen, Gustavus Adolphus College, USA*

The impact of a sport-related injury (SRI) extends beyond the individual athlete. Recent research has demonstrated that a SRI can also impact the coach (Martinelli, Day, & Lowry, 2016) as well as the team (O'Neill, 2008; Surya, Benson, Balish, & Eys, 2015) and brought into question coaches' roles in rehabilitation of their athletes (Podlog & Diongi, 2010). Injury provides both challenges and opportunities for coaches and sport psychology consultants in working with athletes and teams. The specific learning objectives for this workshop are 1) To briefly review current literature on the impact of injury on athletes, teams, and coaches, 2) To provide evidence-based strategies for coaches and sport psychology consultants to promote stress-related growth with injured athletes (Wadley, Clark, Podlog, & McCullough, 2013). 3) To provide evidence-based strategies to promote positive team dynamics with teams with an injured player. 4) To allow attendees to try the evidence-based strategies covered in the workshop. In order to achieve these objectives this workshop is composed

of a didactic and experiential learning activity. Presenters will facilitate a research- and experience-based discussion about working with injured athletes and teams with an injured team member. We will then provide an opportunity to apply evidence-based strategies for athletes and teams through the use of case studies. The workshop will conclude with attendees having the opportunity to reflect on their own experiences with injured athletes and generate feedback and suggestions from the presenters and fellow-attendees. The presenters will share slides and summaries of evidence-based strategies with attendees.

**WKSP-24****HOW TO USE IMPROV AND HUMOR IN A TEAM SETTING "IMPROV FOR ATHLETES"**

*James Leath, IMG Academy, USA*  
*Will Drumright, IMG, USA*  
*Cathlyn Pistolas, USA Swimming, USA*

Many cohesive teams have two things in common—a shared language and inside jokes (Banning & Nelson, 1987). For example, the use of humor is an important part of team and organizational culture (Romero & Cruthirds, 2006). One form of delivering humor is through improvisation which involves creating something from nothing and trusting those around you to play along (Maheux & Lajoie, 2010). The main rule in Improvisation is acceptance, known in the improv' community as "Yes, and." Deliberately creating situations that require a teammate to offer a suggestion (e.g., I am a pirate who is afraid of water) and have a teammate accept that suggestion and add to it (e.g., I am a swim instructor) allows for athletes to develop trust for one another and develop rapport through struggling to complete the story. When humor is used in such ways it can be a "social lubricant" which facilitates communication and a positive environment (Romero & Cruthirds, 2006). The purpose of this workshop is to demonstrate how mental coaches can use humor and improvisation to facilitate team cohesion and an inclusive team culture through a range of team-building activities. The learning objectives of this workshop include a) how to communicate effectively (e.g., verbal and non-verbal), b) how leadership skills can be developed (e.g., learning to be a great follower and use the strengths of the group to find success) and c) how to develop an inclusive team culture (e.g., race, sex, ability). The workshop will be delivered using a range of group-based experiential activities, role-plays, and improvisation games. A list of activities and games will be shared with workshop participants.

**WKSP-25****EVERYBODY WINS: TEACHING SPORT AND EXERCISE PSYCHOLOGY THROUGH SERVICE-LEARNING**

*Selen Razon, West Chester University of PA, USA*  
*Margaret Ottley, West Chester University, USA*  
*Leeja Carter, Long Island University - Brooklyn, USA*

Service learning is a teaching method that bridges community service with instructional goals. Within a service learning course student teams organize a service and philanthropic project to solve a public problem or respond to a well-recognized community need. Service learning is not commonly associated with sport and exercise psychology (SEP) education, however this method helps inform students of the intersections of sport, social justice, and psychology.

The purpose of this workshop is to provide SEP course instructors with a foundational knowledge in SEP service learning curriculum development and design. After completing this workshop, participants will be able to implement service learning in their courses and plan community-based research in collaboration with identified community partners.

In the course of this interactive workshop, three experienced service-learning instructors will share their experiences designing and implementing service-learning projects within SEP courses. Participants will explore the definitions and examples of service and community-engaged learning, distinct pedagogy of service-learning, best practices for creating and teaching service learning courses, and quick tips on how to get started. A special emphasis will be placed upon what distinguishes service learning from other forms of volunteering and experiential learning. Unique benefits of service learning such as allowing students to gain hands on applied work experiences with community members, promoting sustainable and beneficial partnership between universities and local organizations, and providing the instructor with community-based data and scholarship opportunities will be highlighted.

Group activities will include: 1) participants' identifying a local community agency in need, 2) outlining an initial action plan to create a service-learning project to address the identified need, and 3) outlining ways in which the project may benefit all stakeholders including the students, community partners and the course instructor. Participants will receive a course design workbook and several group activity handouts throughout the duration of the workshop.

## **WKSP-26**

### **STRATEGIES FOR EMBEDDING PERSONAL AND SOCIAL RESPONSIBILITY INITIATIVES WITHIN COMBAT SPORT EXERCISES**

*John McCarthy, Boston University, USA*  
*Jacob Cooper, Boston University, USA*  
*Fritz Ettl Rodriguez, Coaching4Change, USA*  
*Val Altieri, Boston University, USA*  
*Robert Diehl, Boston University, USA*

Evidence has long indicated that youth who participate in combative sports such as boxing, aikido, tae-kwon-do, or karate can experience a tremendously positive impact on their overall fitness along with their long-term psychomotor and psycho-social development. (Falk & More, 1996; Boudreau, Folman, & Konzak, 1995; Violan, Small, Zetaruk, & Micheli, 2001; Melhim, 2002.) However, many sport based youth development programmers hold a justifiable concern regarding the safety of combative sports while designing curriculum (Winkle & Ozmun, 2003). Although research has shown that the injury rates in combative sports are lower than most mainstream physical activities, fears regarding combative sport exercises often result in them being left out of physical activity programming (Buschbacher and Shay, 1999). To this end, theory informed program design with an ethical and philosophical grounding can help maximize the positive impact of combative sport exercise while minimizing risks. The purpose of this interactive workshop is to share strategies that utilize combative exercise to promote a sense of self-mastery and agency in youth. The approaches have been developed within a longstanding positive youth development program in the Northeast. Specifically, the learning objective of embedding concepts of personal and social responsibility within realistic learning environments will be explained. This objective will be met through interactive demonstrations with boxing equipment, partner work, and small group discussions. Reflection with participants about deontological aspects becoming an "ethical protector" that promotes caring and peace through learned self-defense skills will be considered (Humphries, 1987). Focus mitts, striking drills, and defensive techniques will be used to show how we integrate the teaching of the concepts of creating "safe spaces" and "doing your job while understanding others." Sample drills and relevant program protocols will be shared in handouts. Finally, participants will have the opportunity to reflect upon their experience while utilizing a TPSR approach (Hellison, 2003).

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## Notes

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## Notes

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