

International society of sport psychology position stand: Athletes' mental health, performance, and development

Robert J. Schinke^{a*}, Natalia B. Stambulova^{ib}, Gangyan Si^c and Zella Moore^d

^a*School of Human Kinetics, Laurentian University, Sudbury, Ontario, Canada;* ^b*School of Health and Welfare, Halmstad University, Halmstad, Sweden;* ^c*Department of Health and Physical Education, Hong Kong Institute of Education, Hong Kong, China;* ^d*Department of Psychology, Manhattan College, Bronx, NY, USA*

(Received 6 February 2017; accepted 20 February 2017)

Mental health is a major resource for athletes in relation to their performance and development. Concurrently, athletes experience additional mental health risk factors compared to non-athletic population, such as high training loads, tough competitions, and a stressful lifestyle. Contemporary statistics demonstrate a substantial growth in athletes' mental health-related problems, such as concussion, overtraining, and identity crisis. Therefore, the International Society of Sport Psychology through this Position Stand provides support to sport psychology researchers, practitioners, sport participants, and stakeholders in understanding: (a) mental health phenomenon based on continuum-type models outlining mental illness (prevalence vs. absence) and mental health in association with peak performance, (b) major findings of research dealing with athletes' performance, career and personal (e.g. identity) development in relation to mental health issues, and (c) interventions aimed at monitoring and maintaining athletes' mental health as well as preventing various forms of mental ill-being. Five major sections reflect the logic outlined above (i.e. from definitions and theories to research and practice), complemented by 10 postulates summarising the International Society of Sport Psychology message intended to spur further discussions on how to make athletes healthier and, thus, more resourceful for (and through) sport.

Keywords: mental health; elite athletes; career stressors; holistic development

Mental health is significantly important in relation to sport, with data indicating high rates of psychological distress and disturbance among athletes (Markser, 2011). Athletes experience mental health risk factors similar to non-athletes, though health decline can also be associated with their sport engagement, as with concussion (Guskiewicz et al., 2007), overtraining syndrome (Peluso & deAndrade, 2005), or a crisis-transition (Stambulova, Alfermann, Statler, & Côté, 2009). Thus, it is important that coaches, medical staff, sport psychologists, and teammates, become aware of the presence of subclinical and clinical mental conditions, cultivate help-seeking behaviours, and provide or refer athletes for evidence-based interventions.

Credentialing societies are clarifying what belongs in a professional's zone of competence, to effectively support athletes' mental health from various vantages, be they clinical psychologists, sport psychologists, sport psychiatrists, and sport scientists (Guignon, 2015; Wylleman, 2015). With this International Sport Psychology Position Stand, we consider what is known about mental health to spur dialog, contributing to research and services that support aspiring athletes,

*Corresponding author. Email: rschinke@laurentian.ca

particularly at the subclinical level. This position stand is divided into five sections. We begin by introducing a clinical view of mental health and continue with key aspects of athletic performance and mental health. We utilise the next sections to explore mental health in relation to athletes' whole careers, identity, and culture. We proceed by discussing mental health-related interventions, and complete the paper with postulates summarising our message.

Clinical understandings of mental health

Health can be defined as positive physical, mental, and social well-being (World Health Organization, 2016), that contributes to efficient human functioning. This global term reflects each individual's ability to adapt and respond when encountering physical, mental, or social challenges. Defining health in this way does not differentiate between physical and mental health, which intertwine. Physical challenges within sport, including intense training and sport injury, can have psychological consequences, including cognitive, emotional, and behavioural sequelae. Psychological challenges such as relational problems, traumatic stress, anxiety, depression, aggression, disordered eating, and substance-use, can culminate in serious physical consequences (Castonguay & Oltmanns, 2013; Moore, 2012). Physical stress/injuries and psychological stress can also impact upon athletic performance and hinder training, career transitions, interpersonal functioning, and physical rehabilitation, unless properly treated (Gardner & Moore, 2006).

Wylleman, Rosier, and De Knop (2015) recently used the following definition of mental health provided by the United States Department of Health and Human Services in relation to athlete mental health: "a state of successful performance or mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity" (1999, p. 4). Historically, the term "mental health" was used dichotomously as a way of discriminating between optimal and sub-optimal personal functioning. Based on the classic medical model, those using the term would assume that an athlete either did or did not have a disease or disordered state (see Murphy, 2012). This approach led to misconceptions and negative connotations that have been an impediment for appropriate or necessary help-seeking behaviours (Gulliver, Griffiths, & Christensen, 2012a; Watson, 2005). Contemporary psychological science holds that the traditional bifurcated view of mental health versus mental illness is too simplified and forces overstatements (Gardner & Moore, 2006). Instead, some contemporary psychological scientists maintain that there is a mental health continuum, with one end representing the status of being high-functioning individuals whose psychological states do not interfere with daily activities, and the other representing low functioning individuals whose psychological states consist of a variety of problematic cognitive, emotional, or behavioural characteristics, often referred to as mental illness (Lardon & Fitzgerald, 2013). This continuum is not a discreet fixed state of mind, or mood. Rather, one's current status might be understood on a continuum from (a) active mental illness, to (b) sub-syndromal illness (frequent symptoms), to (c) normal (occasional symptoms), to (d) good mental health (asymptomatic), and to (e) peak performance (flow or zone states). This continuum-based model allows for a fuller appreciation that between the two continuum extremes lie degrees of psychological wellness/distress and effective/reduced functioning. Researchers have demonstrated that subclinical levels of psychological distress (which refer to psychological issues not quite meeting criteria for clinical diagnosis, but nevertheless manifesting several characteristics of a given disorder) have a negative impact on individual functioning, similar to what is found among individuals meeting the full criteria of a clinical disorder (Gulliver et al., 2012a). Viewing athletes via a dimensional approach helps to recognise that individual differences will exist among the athletes who fall above or below a categorical diagnostic threshold whilst appreciating the nuances of athletes' overall psychological well-being, distress levels, and levels of functioning (Moore & Gardner, 2011).

Keyes (2002) also proposed a two continuum model of separate, though correlated dimensions. Keyes posited that mental health is not only an absence of mental disease, but also a state where each individual recognises personal strengths and capacities that could be used to support mental wellness. Consequently, one of two continuums is focused on the absence or prevalence of mental illness, with the second focused on mental health, and both contributing to what has been termed an assets-based approach to intervention (see Foot, 2012). Particularly, an assets-based approach might clarify that the absence of either mental health or mental illness does not imply the presence of the other. Instead, emphasis is placed on augmenting skills and characteristics that contribute to health and well-being, developing skills that guard against poor mental health, and building social support resources that reinforce the aforementioned (Uphill, Sly, & Swain, 2016). Hence, this approach focuses on individual and community-based resources as parts of a holistic approach, drawing upon one or several of the following intervention strategies: “reframing current thinking towards assets-based ideas, mapping of assets, understanding how assets can be connected and used, and a co-production of outcomes by professionals and individuals, such as athletes” (Uphill et al., 2016, p. 3).

Elite athlete trends

The peak age for the risk of athletes’ onset of mental disorders overlaps with the peak competitive years for elite athletes due to the intense mental and physical demands they experience (Hughes & Leavey, 2012; Rice et al., 2016). Athletes exhibit various behaviours that indicate compromised mental health. Within university sport, male athletes are more likely to engage in atypically aggressive behaviour than non-athlete counterparts, with 24% of male athletes reporting engagement in a physical altercation within the past 12 months, compared to 12% of non-athlete males (NCAA Sport Science Institute, 2016). Drinking and drug use are also critical issues. Thirty-three per cent of female collegiate athletes reported consuming more than four alcoholic drinks in one sitting, 44% of collegiate male athletes reported consuming more than five, and 16% of collegiate male athletes reported consuming over 10 drinks in one sitting (NCAA, 2014). Further, 21% of male and 28% of female collegiate athletes had experienced depression to the point of impaired functioning in the previous 12 months. Finally, 31% of male athletes indicated feeling excessive anxiety, as did 48% of female athletes (NCAA Sport Science Institute, 2016).

The majority of studies examining mental health/illness have been conducted with college athletes. Fewer studies have been conducted on elite athletes though the prevalence of mental illness is equally alarming. For example, Hammond, Gialloreto, Kubas, and (Hap) Davis (2013) highlighted that depression in elite athletic populations has been underestimated. Sixty-eight per cent of a sample of Canadian international-level swimmers was classified as having major depression episodes before competition, while 34% met the same diagnostic criteria post-competition. Female athletes also experienced significantly more depression than male athletes, and high performing athletes were most susceptible to depression than lower level athletes. Among Australian and French elite athletes, the prevalence of mental disorders more broadly ranged from 17% to 45% (Gulliver, Griffiths, Mackinnon, Batterham, & Stanimirovic, 2015; Schaal et al., 2011). Similarly, within a sample of 1023 Dutch elite athletes, Gouttebauge et al. (2016a) found that 45% of current athletes reported symptoms of anxiety or depression, 17% reported two simultaneous symptoms of mental disorders, 14% reported three symptoms, and 6% reported four symptoms. Among retired athletes, 18% suffered from distress, 29% anxiety or depression, with 16% reporting two simultaneous symptoms, 11% three symptoms, and 6% four symptoms or more. Professional soccerers were also found to exhibit mental disorders in the form of substance abuse in 9% of cases and anxiety or depression in 38% of cases (Gouttebauge, Aoki, Ekstrand, Verhagen, & Kerkhoffs, 2015a; Gouttebauge, Frings-Dresen, & Sluiter,

2015b). These symptoms remained prevalent, post-career. When athletes from the Professional Rugby Union were surveyed, 25% exhibited signs of distress, 28% anxiety or depression, 29% sleep disturbances/disorders, and 24% adverse substance-use (Gouttebarga, Kerkhoffs, & Lambert, 2016b). These manifestations of being mentally unwell tend to be associated with life and sport stressors embedded in the sports career, associated with “severe injury, surgery, recent adverse life events, a higher level of career dissatisfaction or a lower level of social support” (Gouttebarga et al., 2016a, p. 2).

Athletes’ performance and mental health

Gardner and Moore (2006) developed the integrative model of athletic performance (IMAP) highlighting the three interactive phases in which athletes can attain and then maintain optimal performance states. The pre-performance phase involves internal and external demands and processes that promote readiness competitive behaviours. Individual dispositional characteristics such as numerous schemas set the stage for individuals to interpret and respond to external demands and environmental stimuli. The performance phase involves the interaction of cognitive, affective, physiological, and behavioural processes to produce the outcome. Based on Gardner and Moore’s stress-diathesis model, athletes might be sensitised to performance dysfunction due to the interaction of performance schemas, perceived skill deficits, ideographically relevant environmental events, and performance cues. For instance, athletes with a low frustration tolerance schema typically cannot or will not exercise sufficient self-control and frustration tolerance to achieve personal or team goals. Given that these athletes normally will have difficulty regulating their emotions towards themselves and teammates, athletic performance can be jeopardised and appropriate evidence-based psychological intervention may be needed (Gardner & Moore, 2006; Si & Lee, 2008). The post-performance phase involves responses to external consequences and internal processes associated with performance. During the post-performance phase, there are three athlete paths: (a) sustaining involvement, (b) re-engaging after a brief dysfunctional period, or (c) disengaging from the activity (Gardner & Moore, 2006). Below we overview overtraining, injury, and concussion research, as these are types of athletes’ physical and mental dysfunction relating to training and competition preparation.

Overtraining and injury

Although overtraining has been discussed at length, there remains a lack of studies on how it is related to mental health and athletic performance (Matos, Winsley, & Williams, 2011; Meeusen et al., 2006). Overtraining is the consequence of overly intense athletic preparation and it manifests in similar symptomology to depression, a clinical condition (Schwenk, 2000). However, it should be noted that overtraining is associated with a long-term decrement in performance, along with the physiological, hormonal, metabolic, and immunological changes that are similar to depression (Budgett, 1998), including sleep disturbances in 90% of cases (Koutedakis, Budgett, & Faulmann, 1990), decreases in appetite and libido, and increases in emotional anxiety and irritability (Budgett, 1994). Therefore, it is believed that overtraining should be viewed from a biopsychosocial approach and not a narrow physiological perspective (Schwenk, 2000). The examination and treatment of overtraining should be based on a holistic approach integrating training and non-training stressors (Matos et al., 2011). Adequate recovery is key during intensive over-loaded training (Kenttä & Hassmén, 1998). Although successful training involves periods of overload, excessive overload with inadequate recovery is to be avoided (Meeusen et al., 2006). A checklist of performance and psychological tests, hormone, biochemical, and immune markers should be used to diagnose this syndrome (Meeusen et al., 2006).

Injury has been recognised for several decades as a deterrent to athletes' training, competitions and psychological adjustment. Within the United States, 3.5 million sport participants are injured each year, causing disruption from sport participation (Stanford Children's Health, nd), with proportionately similar statistics found worldwide, such as in Great Britain (see NHS Digital, 2012) and Australia (see Australian Institute of Health and Welfare, 2014). The highest rate of injuries is associated with contact sports (Stanford Children's Health, nd) (American Sports Data, 2006). Relating to elite sport, 20 years ago, Leddy, Lambert, and Ogles (1994) found that in 343 male collegiate athletes, injured athlete exhibited high rates of depression and anxiety and low rates of self-esteem immediately post injury, though also two months later. Early on, several authors approached the topic of psychological adaptation to injury by focusing on grief response, drawing upon Kubler-Ross (1969). The stages used were (a) denial, (b) anger, (c) bargaining, (d) depression, and (e) acceptance (see Gordon, 1986; Pedersen, 1986). A remnant from these stages is that sport psychologists view athletes' responses to injury as setbacks or opportunities (see Rose & Jevne, 1993).

Thereafter, Wiese-Bjornstal, Smith, Shaffer, and Morrey (1998) presented injury as a process that begins pre-injury with the *a priori* stress responses athletes hold, through to the acute sport injury and the influences of associated personal (e.g. nature of injury, individual differences, and demographic information) and situational factors (e.g. sport, social, and environmental factors) on their cognitive appraisal (see also Wiese-Bjornstal, Smith, & LaMott, 1995). How this process is evaluated results in emotional and behavioural responses, contributing to athletes' recovery approaches and motivation to come back to training and competitions. For example, a Type A personality and high trait and state anxiety make one susceptible to injury compared to other personalities (Johnson & Ivarsson, 2011). Additionally, "negative mood states such as (e.g. anger) or overall mood disturbances (e.g. tension, depression) are also more likely to incur an injury or to sustain more severe injuries" (Podlog, 2016, p. 168; see also Appaneal & Habif, 2013). Furthermore, stressful events, such as estrangement, divorce, or tenuous employment, contribute to injury frequency and experience (Ivarsson, Johnson, & Podlog, 2013).

Athlete concussion has been a recent addition to injury literature. The reason for the growing attention of concussions is that the highest rate of death caused in sport is from brain injury (Stanford Children's Health, nd). According to the World Health Organization (2007), 6/1000 people will suffer a concussion in their lifetime, affecting the brain's mood centres, comprised of the hippocampus, amygdala, and prefrontal brain regions (Harmon et al., 2013). The highest rate of head injuries occurs in cycling, skateboarding, and skating (Stanford Children's Health, nd). However, the injury rates by discipline alter when shifting from recreational to competitive activities, where most incidents occur in "collision (rugby, American soccer, ice hockey), contact (soccer, basketball), combative (boxing, wrestling), and aerial sports (skiing, snowboarding, motor racing)" (Kontos & Elbin, 2016, p. 204).

The psychological impairments, spanning weeks-to-years post-concussion, include heightened anxiety, depression, or irritability occurrences in 17–46% of high school and university athletes (Harmon et al., 2013). Furthermore, high rates of depression and suicide have been paired with competitors in such sports as American soccer (Didehbani, Munro-Cullum, Mansinghani, Conover, & Hart, 2013; Guskiewicz et al., 2007), ice hockey (Williamson & Goodman, 2006), rugby (Boffano et al., 2011), and soccer (Boden, Kirkendall, & Garrett, 1998). The neurocognitive changes that can result within days post-concussion include decreases in attention and concentration, speed of cognitive processing, memory, verbal skills, blurred vision, loss of balance, and light sensitivity (Kontos & Elbin). Longer term sequelae from recurrent concussions include chronic encephalopathy (a neurodegenerative disease diagnosed after death with symptoms of executive dysfunction, memory impairment, depression, poor impulse control) and chronic neurocognitive impairment (prolonged symptoms evident in post-concussion syndrome; Harmon

et al., 2013). Though less is known about the former in contrast to the latter diagnosis, both have extended symptomatology.

Athletes' career development and mental health

Career research in sport psychology creates understandings of athletes' career developments based on holistic lifespan and ecological perspectives. Within *the holistic lifespan perspective*, an athlete is conceptualised as a whole person, athletes' development as multi-dimensional (athletic, psychological, psychosocial, academic-vocational, and financial), and the athletic career as a part of, and a contribution to, a life career (Stambulova & Wylleman, 2014; Wylleman, Reints, & De Knop, 2013). Within *the holistic ecological perspective*, the context of athletes' career development is conceptualised as containing athletic and non-athletic domains and also micro-, meso-, and macro-levels, including athletes' "close" environments and also factors related to the national culture and sport system (Henriksen, Stambulova, & Roessler, 2010). Both perspectives are involved in *career assistance* aimed at helping athletes with career transitions and life crises (Stambulova & Wylleman, 2014).

Career development is uneven and implies progressions, stagnations, and decays (Hendry & Kloep, 2002). The dominant direction of athletes' development depends on how effectively they make career decisions and cope with major transitions in sport and life. Career researchers and practitioners consider mental health as an important *resource* for athletes' career decisions (e.g. about timing of athletic retirement) and coping with various athletic and non-athletic transitions, whereas a lack of mental health is seen as a *barrier* to effective decision-making and transition coping (Samuel & Tenenbaum, 2011, 2013; Stambulova, 2000, 2003).

A career transition is a turning phase in athlete development that brings a set of demands (usually appraised as stressors) and requires relevant coping process in order to continue in athletic and parallel careers. Current taxonomies of athletes' transitions include: (a) athletic, non-athletic, and dual career transitions (i.e. simultaneous transitions in sport and education), and (b) normative (generally predictable, e.g. athletic retirement), quasi-normative (i.e. predictable but only for certain groups of athletes, e.g. cultural transitions for transnational athletes), and non-normative (hardly predictable, e.g. injury; Stambulova, 2016). The latter type is difficult to prepare for in advance, thus, more difficult to cope with.

Described in the athletic career transition model (Stambulova, 2003, 2009, 2016), a quintessence of the transition process is the need to cope with a set of transition demands using relevant coping strategies that take internal (person-related) and external (environment-related) resources and barriers into consideration. The transition outcomes and relevant pathways are shown to be dependent on the effectiveness of coping. The model predicts two transition outcomes: a successful transition or a crisis-transition. A successful transition is the outcome of effective coping, with a good fit between transition demands and the athlete's coping resources and strategies on the other. A crisis-transition is the outcome of ineffective coping, caused by lack of resources, excessive barriers, state and trait personality constructs, and/or ineffective coping strategies. A crisis-transition might have two secondary outcomes: a delayed successful transition in the case of effective intervention or an unsuccessful transition associated with premature dropout, or other negative consequences of the transition failure. Career transition interventions are aimed at crisis- prevention, crisis-coping, or negative-consequences-coping.

From the above description of a transition process, two major issues are relevant. First, is the delineation of a set of empirically identified crisis-transition symptoms, including decrease in self-esteem, lasting emotional discomfort, increased sensitivity to mistakes and failures, increased number of internal barriers (e.g. low self-efficacy), and disorientation in decision-making and behaviour (Stambulova, 2000, 2003). All these symptoms are subclinical (see Wolanin, Gross, &

Hong, 2015) and signal that the athlete would benefit from intervention. The second issue is the nature of a crisis-coping intervention and its consequences. When the intervention is provided in a timely and effective manner, the athlete can turn to a successful coping process and outcome. However, when the athlete does not receive professional help, the crisis might turn into negative consequences, including various forms of psychological dysfunction (e.g. depression, eating disorder, alcohol abuse, drug abuse, suicidal thoughts) that should be treated by appropriate clinical interventions (Stambulova, 2003, 2009). Therefore, practitioners should help athletes to avoid an unfavourable transition pathway by applying preventive interventions before or at the very beginning of the transition or crisis-coping interventions when/if crisis symptoms appear. One example is helping retiring athletes with career planning, identity development, and lifestyle management whilst in sport. Another example is helping retired athletes experiencing identity crisis to analyse resources and new life opportunities, strengthening and broadening their identity (Gardner & Moore, 2006; Lavalley, 2005; Stambulova & Wylleman, 2014; Wylleman & Reints, 2014).

Transition research is focused on specific demands for different transitions, related resources, barriers, and coping strategies. Researchers are debating about criteria that might help to evaluate transition outcomes. Performance, well-being, satisfaction with sport and other spheres of life, and basic needs satisfaction are on a list of what are presently being considered (see Franck, Stambulova, & Ivarsson, 2016). A recent trend is focused on the transition process and identifying its phase-like structure followed by describing each phase in regard of the athletes' perceived demands, resources, barriers, coping strategies, and outcomes. Studies of this kind embrace the athletic retirement transition (Reints, 2011), junior-to-senior transition (Franck et al., 2016), Olympic Games transition (Schinke, Stambulova, Trepanier, & Oghene, 2015; Stambulova, 2016; Wylleman, Reints, & Van Aken, 2012), injury transition (Ivarsson, Stambulova, & Johnson, 2016; Samuel et al., 2015), and cultural transition (Ryba, Stambulova, & Ronkainen, 2016). These studies can augment practice with transitional athletes, by reducing stress whilst situating practice within contextualised descriptions of each transition process.

Holistic ecological career research focuses on successful and less successful talent/career development environments that might contain external resources and barriers for athletes in transitions. Several case studies conducted in Scandinavian cultural contexts have led to the identification of shared features in environments that facilitate athletes' talent development and the junior-to-senior transition. These features include supportive relationships, proximal role models, support of sporting goals by the wider environment, support for the development of psychosocial skills, and focus on long-term development. All of the aforementioned are especially relevant to young athletes, helping them to make a successful transition and also to the maintenance of health and well-being. This line of research recently expanded to embrace high performance and dual career environments (Poczwardowski, Diehl, O'Neil, Cote, & Haberl, 2014) and opened a new line in applied work that optimises career development environments. The aforementioned developments in the career topic were recently crystallised in *the cultural praxis of athletes' careers* paradigm (Stambulova & Ryba, 2014), encouraging professionals to blend theory, research, practice, and athletes' living contexts to facilitate long-term, healthy and successful careers in sport and life.

Culture, identity, and mental health

Cultural sport psychology (CSP) has gained traction since the International Society of Sport Psychology Position Stand on Culturally Competent Research and Practice in Sport and Exercise Psychology (Ryba, Stambulova, Si, & Schinke, 2013). The aforementioned authors discussed how a culturally safe sport psychology enables a healthier athlete training and competition environment. The antithesis of athlete centrality was discussed at length, whereby silencing

athletes' idiosyncratic identities was revealed as unhealthy and disempowering. More recently, Schinke and McGannon (2015) considered athletes' multifaceted social locations. Athletes transport their uniqueness into training and competition, including their gender, sexual orientation, race, ethnicity, nationality, education, and socio-economic status (Gill & Kamphoff, 2010). With certain social locations centralised or discouraged, the training environment can become a mitigating factor to distress (Krane, 2015).

When cultural minority elite athletes have been elicited regarding their psychosocial adjustment, identity, and also its subversion, link with mental health. Canadian Aboriginal elite athletes have identified the struggles associated with relocation to unfamiliar cultural communities (Schinke et al., 2006). Among their challenges is a lack of cultural understanding by coaches and teammates, little opportunity to centralise their cultural identity in training environments, and overt and covert racism (Blodgett & Schinke, 2015; Campbell & Sonn, 2009). These athletes enter into unfamiliar cultural communities with hope, but quickly exhibit alienation or marginalisation, and self-imposed retirement, symptoms indicative of depression.

Scholars and practitioners focused on immigrant athletes have extended understandings of settlement challenges from indigenous athletes to multinational athletes (see Schinke & McGannon, 2014 for a review). Though the communities and country of origin differ from the indigenous, the tensions and uncertainties associated with psychological adjustment and cultural transition are similar. These stressors layer onto general stressors, as athletes negotiate a culturally saturated athletic identity (Ryba & Wright, 2005). Schinke, Blodgett, McGannon, and Ge (2016) examined the narratives of 24 elite amateur immigrant athletes. They found that when experiences were storied, the athletes presented the highs and lows in their cultural transitions, and how acculturation is tumultuous. Consequently, in professional baseball (Kontos, 2009) and soccer (Brandao & Vieira, 2013), many aspiring transnational athletes return to their country of origin, opting out of athletic careers. Conversely, Battochio et al. (2013) found a few major organisationally engineered acculturation strategies useful in relation to immigrant athletes. The strategies these teams utilise include offering native dishes in club houses during training and competition days, pairing new settlers with established immigrant athletes, preferably from the same home country, and centralising several languages within team contexts. The threads connecting immigrant and indigenous athletes to mental health include a need for effective social support in and away from training, beyond resilience skills to overcome cultural misunderstanding and adjustment (Moore, 2016).

CSP knowledge intersecting with mental health also extends to athlete sexual orientation. Krane, Waldron, Kauer, and Semerjian (2010) spoke of queering sport psychology in order to centralise the needs of Lesbian, Gay, Bisexual, Trans and Queer athletes. Recently, former National Football League player sat on a diversity panel at the Association for Applied Sport Psychology (AASP) Conference. The year was 2014, and the athlete revealed the challenges associated with a silencing of his gay identity. He recounted a fear of being noticed as gay and feminine in his movement during specific plays. A "queering" (see Krane & Waldron, 2000) of our domain permits sport psychologists to privilege homosexuality rather than centralising only heterosexuality. Through queering, the intent is "to challenge sporting norms and inspire participants to re-envision sport more openly" (Krane et al. (2010, p. 155). Furthermore, traditional binaries factor into how elite athletes are (mis)treated on and off the field, based on sex and gender, and associated physicality (Krane, 2015). Krane noted that "when people cross into oppositional territory – when it is difficult to identify one's sex or gender, of when a male is too feminine or female too male – dissonance occurs" (p. 47). The tension and uncertainty on the part of each athlete to this point is presented as in the head. However, dissonance is reinforced by the binaries used by teammates, fans, and media (Dworkin & Wachs, 1998). Athletes are marginalised when asked to reveal a partial athletic identity. What is revealed about these identities relates to "overcoming," not flourishing in an athletic career.

Mental health-related interventions

Opening a discourse on mental health among athletes has a number of marked implications. Conceptualising mental health using a continuum-based approach allows for the appreciation of psychological and behavioural nuances, which practitioners and other care providers need to recognise and meet the mental health concerns of athletic clientele (see Raglin, 2001). Additionally, de-stigmatising and spurring conversations about mental health with both coaches and athletes, promotes the prevention and effective treatment of the maladaptive processes that hinder athletes' well-being in their performance, personal, and interpersonal domains (Gulliver et al., 2012a). Further, focusing on mental health in sport culture and in sports at the sub-cultural level can facilitate help-seeking behaviours (Schinke & McGannon, 2015). Clinical and medical researchers have determined that several factors are involved in whether an athlete seeks out care for psychological issues (Gulliver et al., 2015). Psychological factors (e.g. how one deals with stress, family history, fear of results, personality variables); cultural factors (e.g. spiritual/religious beliefs, stigma, role of care providers, beliefs about illness); gender differences; socio-economic factors (e.g. cost, availability of care, transportation, accessibility); religious factors apart from cultural factors (e.g. fate); misinformation about mental health and associated treatments (e.g. faulty anecdotal accounts, previous poor experience, internet, news reports); and other lifestyle factors (e.g. no free time, strict travel requirements; family obligations) culminate in whether an individual is willing to seek out care (Brannon, Feist, & Updegraff, 2014).

Many sport psychology interventions can be framed as contributing to, or maintaining athletes' mental health and preventing psychological dysfunction and disorder. Although there are many protective factors to buffer against stress in relation to mental health, mindfulness-based interventions have been at the forefront of intervention since Gardner and Moore's seminal mindfulness-based work began in 2001 (Gardner & Moore, 2004; Moore & Gardner, 2001). Since that time, sport practitioners and researchers have focused on mindfulness and resilience as two key components associated with well-being. Mindfulness has been demonstrated to facilitate general well-being and to enhance elite performance (Gardner & Moore, 2007, 2012) and to serve as a protective factor to stress and stress-related psychological issues, such as athlete burnout (Gustafsson, Davis, Skoog, Kenttä, & Haberl, 2015). Further, mindfulness-based interventions have been shown to remediate clinical and subclinical psychological concerns (Gross et al., 2016). Creswell and Lindsay (2014) proposed a biological mindfulness stress buffering account to explain how mindfulness training affects health via the sympathetic–adrenal–medullary and hypothalamic–pituitary–adrenal axes. Additionally, a multi-level biopsychosocial model and a lifespan trajectory approach are needed to understand, develop, and protect mental health (Davydov, Stewart, Ritchie, & Chaudieu, 2010).

Many authors emphasise the importance of monitoring athletes' mental states and mental health status. Several instruments were developed for this purpose. The 40-item abbreviated Profile of Mood States (POMS) can be used to monitor the subclinical level of mental health of athletes in terms of tension, anger, fatigue, vigour, depression, and confusion. Alternatively, researchers and practitioners can choose the 24-item Brunel Mood Scale (BRUMS), developed by Terry, Lane, and Fogarty (2003), which is translated and validated into several languages (e.g. Lan, Lane, Roy, & Hanin, 2012; Zhang, Si, Chung, Du, & Terry, 2014). Given that mood changes and affective states exhibited a dose–response relationship, the efficient self-reported measures of mood, such as the POMS and BRUMS, can be used to monitor athletes' training loads, especially under intensive or prolonged physical training (Main & Grove, 2009; Raglin & Wilson, 2000). Also, it is important to monitor the positive facets of athletes' wellness and adaptive responses to training and competition to maintain and promote mental health (Gastin, Meyer, & Robinson, 2013). These daily or weekly athlete responses can serve as useful feedback

with regard to the rigorous demands of training, competition, and life (Gastin et al., 2013). For example, fatigue in high-performance sport can be monitored using self-report questionnaires (Taylor, Chapman, Cronin, Newton, & Gill, 2012). Additionally, Main and Grove (2009) developed a multi-component assessment model for monitoring athletes' training distress comprised of six factors: depressed mood, perceived vigour, physical symptoms, sleep disturbance, perceived stress, and general fatigue. However, researchers need to incorporate these instruments into busy training schedules.

The sport culture supports athletes' superior toughness, such as fighting for success through the pain. Therefore, the heightened stigma of not showing weakness may impede athletes seeking support until their subclinical mental health concerns become clinical disorders (Schwenk, 2000; Watson, 2005). Schwenk (2000) raised three issues in terms of the dramatic difference between general and athletic population in approach to labelling, diagnosing, and treating similar mental illness. First, athletes might have a lower prevalence of mental illness than the general population due to the beneficial and protective effect of exercise on mental illness. Second, athletes might be under-diagnosed and under-treated for mental illness as compared with non-athletes, particularly relating to the mental problems associated with overtraining and athletic performance. Third, the conceptualisations and approaches to athletes' mental illness are fraught with stigmatisation and denial of physical and psychological disease, leading to inaccurate and unhelpful athlete care.

Given the unique self-identity of elite athletes, stigma is viewed as a barrier to help-seeking (Gulliver et al., 2012a). On the other hand, mental health help seeking is essential in reducing the prevalence of illness via education and intervention (Gulliver et al., 2012b). Hence, it has been suggested that interventions should be focused on increasing mental health literacy, improving relationships with health providers, and reducing stigma (Gulliver et al., 2012a). Moreover, a mental health literacy training programme delivered to senior and junior players, parents and coaches of junior sport clubs revealed significant improvement in mental disorder knowledge, positive attitudes towards people with mental disorders, and increased confidence to help people in need (Bapat, Jorm, & Lawrence, 2009). Support providers should then focus on evidence-based intervention programmes that raise awareness, decrease stigma, and increase help-seeking behaviours for clinical and subclinical mental health issues.

Postulates

- (1) Alarming statistics on athletes' mental health status, demonstrating high rates of depression, injury, overtraining, and various forms of unhealthy behaviours (e.g. disordered eating, drinking, doping use), calls for the action of sport psychology researchers and practitioners. Through this Position Stand, the International Society of Sport Psychology wishes to attract the attention of sport psychologists as well as sport participants and stakeholders to key areas of psychological research and practice relevant to prevention of, and dealing with, athletes' mental health challenges.
- (2) Contemporary definitions of mental health emphasise it as: (a) a genuine aspect of health contributing to effective human functioning, and (b) closely interrelated with physical and social well-being. Departing from the dichotomised view of mental health as opposed to mental illness, the contemporary mental health continuum model identifies several conventional markers between active mental illness on the one side, and good mental health and peak performance states on the other. There is also the asserts-based approach to intervention that takes into account two continuums; these are from absence to prevalence of mental illness and from mental wellness to mental strength and high-performance capacity. Although mental illnesses and their treatment

are important to discuss, this paper is mostly focused on subclinical mental health issues associated with athletes' performances, career developments, and cultural identities.

- (3) Athletes' mental health is seen as a necessary basis for efficient practice and competition performances within performance psychology. The IMAP outlines its three interactive phases (pre-, during-, and after- performance) with specific demands and relevant cognitive, affective, physiological, and behavioural processes. Via the quest to attain and/or maintain optimal performance states, athletes' dysfunctional schemas (e.g. low self-control or frustration tolerance) can become risk factors towards poor performance and a dysfunctional after-competition state. Therefore, identifying individual risk factors and treating them can become a basis for interventions, optimising performance in competitions, and more importantly, broader holistic development.
- (4) Athletic performance issues embrace not only competitions, but also all the training/preparation and recovery routines. Researchers paid attention to various forms of athletes' ill-being, such as overtraining, injury, concussion, depression, as relevant to performance detriments in training, and correspondingly in competitions. These issues are considered from a broader biopsychosocial perspective in current research and seen as outcomes of competition overload, inefficient training, under-recovery, and poor balance in athletes' life, but also as reasons for further performance decline and athletic dropout. A common denominator for these forms of mental ill-being lies in stressors experienced by athletes and athletes' stress-appraisals. Therefore, a basic approach in preventing overtraining, injuries, and concussions should involve awareness/mindfulness training and stress management with special attention to athletes in highly stressful and risky sports.
- (5) Athlete career researchers emphasise the holistic lifespan and ecological perspectives in understanding athletes' development, transitions, and crises. Contemporary careers are so intense that athletes are almost always in one or even several simultaneous athletic and non-athletic transitions. Mental health is seen as a resource for a successful career, whereas mental ill-being is regarded as a barrier for athletes' transition coping and often a reason for premature athletic dropout. Within a transition process, ineffective coping might lead to a crisis-transition outcome with subclinical symptoms (sadness, anxiety, decrease in self-esteem, etc.), and if the crisis is unresolved the subclinical symptoms might become clinical symptoms such as depression, drug abuse, eating disorders, or other diagnoses requiring more serious – long-term treatment. Therefore, a crisis-preventive perspective is important in the transition interventions helping athletes to increase awareness of transition demands and develop necessary resources and coping strategies.
- (6) Researchers have recently devoted attention to career development contexts and the environments athletes belong to. Talent development (youth sport) environments should emphasise athletes' long-term development and the learning of psychosocial skills, whereas high-performance environments are expected to focus more on performance issues and lifestyle management. Regardless of athletes' ages and athletic levels, an autonomy supportive climate in training groups is seen as a key factor for satisfying athletes' basic psychological needs and maintaining their mental health. Embedded in the cultural praxis of athletes' careers paradigm, projects that blend athletes' living contexts with theory, research, and practice are encouraged.
- (7) Contemporary sport is characterised by cultural diversity and elevated cross-national/cultural migration of athletes and coaches. A combination of these two tendencies contributes to complex and multifaceted structures of sport participants' cultural identities including their race, ethnicity, nationality, gender, sexual orientation, education, and

sport. Centralising some of these identities and marginalising others in athletes' environments, prevents these people from expressing their uniqueness and can lead to identity crisis. Minority and migrant athletes have additional sources of stress; dealing with them can drain their mental health resources. Social support in the form of mutual interest in cultures and relevant identities of one another complemented by joint cultural practices can reduce unnecessary stress and tension in groups and teams, whilst promoting the athlete as a person.

- (8) Sport psychology practitioners, situated within a broader interdisciplinary integrated support team (as opposed to in isolation), should keep in mind mental health when conducting any athlete interventions. For prevention purposes, subclinical symptoms and levels of distress should be recognised as situated in time, analysed for their sources, and only then, engaged with. Therefore, monitoring stress and recovery, physical and mental well-being through observations or specially designed instruments is a basis for noticing negative symptoms in time and initiating relevant changes in athletes' practices, competitions, and lifestyles. Currently, mindfulness-based interventions and resilience training are at the forefront to increase athletes' resistance to stress, improve stress-coping related to sport and life, bolster general well-being, reduce subclinical and clinical conditions, and optimise performance efforts.
- (9) Athlete and coach education aimed at increasing their mental health literacy is paramount to removing existing barriers, such as stigmatisation in athletes, to expeditiously help when mild subclinical issues are experienced before these issues become mental illness. However, athletes' self-perceptions as superior can serve as an internal barrier to seeking mental health treatment, especially in elite sport. Therefore, elite sport governing bodies are encouraged to recognise the need of mental health literacy and provide relevant educational resources.
- (10) Based on the analysis of mental health research and practice, the International Society of Sport Psychology sets the following challenges for sport psychology researchers and practitioners: (a) to further develop existing lines of research on various forms of athletes' mental ill-being, including data on prevalence of mental illness, their sources, and forms of prevention and treatment; (b) to apply a holistic view on athletes' development and their environment to be aware of all range of their current and potential distressors and risk factors; (c) to consider short-term and long-term consequences of mental health problems and interventions for athletes and their environments; (d) to contribute to the development of autonomy supportive and culturally safe athletic environments at all sport levels; (e) to work on increasing cultural competences of athletes and staff to destigmatise minority and migrant athletes, and facilitate sharing between cultures; (f) to work systematically on increasing athletes' and coaches' mental health literacy, and destigmatising mental health interventions; and (g) to reflect on one's own research and practice in regard of how the studies and applied work are mental health informed. The International Society of Sport Psychology sends this message in a hope that sport psychology researchers and practitioners will be inspired to increase their contribution to athletes' long-lasting, successful, and healthy careers in sport and life.

Acknowledgements

The authors wish to thank Dr Paul Wylleman for his engaging feedback on this position stand. We appreciate his insights, and the extensive detail provided in relation to our thinking.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Natalia B. Stambulova  <http://orcid.org/0000-0001-6198-0784>

References

- American Sports Data Inc. (2006). *A comprehensive study of sports injuries in the United States*. Retrieved November 16, 2016 from http://www.familiesafield.org/pdf/injury_page.pdf
- Appaneal, R. N., & Habif, S. (2013). Psychological antecedents to sport injury. In M. Ravinen-Barrow & N. Walker (Eds.), *The psychology of sport injury and rehabilitation* (pp. 117–132). London: Routledge.
- Australian Institute of Health and Welfare. (2014). *Injury research and statistics series #92: Australian sports injuries hospitalizations 2011-2012*. Retrieved November 15, 2016 from <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129549097>
- Bapat, S., Jorm, A., & Lawrence, K. (2009). Evaluation of a mental health literacy training program for junior sporting clubs. *Australasian Psychiatry*, *17*, 475–479. doi:10.1080/10398560902964586
- Battochio, R. C., Schinke, R. J., McGannon, K. R., Tenenbaum, G., Yukelson, D., & Crowder, T. (2013). Understanding immigrated professional athletes' support networks during post-relocation adaptation through media data. *International Journal of Sport and Exercise Psychology*, *11*, 101–116. doi:10.1080/1612197X.2013.785093
- Blodgett, A. T., & Schinke, R. J. (2015). “When you’re coming from the reserve you’re not supposed to make it”: Stories of aboriginal athletes pursuing sport and academic careers in “mainstream” cultural contexts. *Psychology of Sport and Exercise*, *21*, 115–124. doi:10.1016/j.psychsport.2015.03.001
- Boden, B. P., Kirkendall, D. T., & Garrett, W. E. (1998). Concussion incidence in elite college soccer players. *American Journal of Sports Medicine*, *26*, 238–241.
- Boffano, P., Boffano, M., Gallezio, C., Roccia, F., Cignetti, R., & Piana, R. (2011). Rugby players' awareness of concussion. *Journal of Craniofacial Surgery*, *22*, 2053–2056. doi:10.1097/SCS.0b013e318231988d
- Brandao, M. R. F., & Vieira, L. F. (2013). Athletes' careers in Brazil: Research and application in the land of Ginga. In N. Stambulova & T. V. Ryba (Eds.), *Athletes careers across cultures* (pp. 43–52). London: Routledge.
- Brannon, L., Feist, J., & Updegraff, J. A. (2014). *Health psychology: An introduction to behavior and health* (8th ed.). Belmont, CA: Wadsworth.
- Budgett, R. (1994). Abc of sports medicine The overtraining syndrome. *British Medical Journal*, *309*, 465–4468. doi:10.1136/bmj.309.6952.465
- Budgett, R. (1998). Fatigue and underperformance in athletes: The overtraining syndrome. *British Journal of Sports Medicine*, *32*, 107–110. doi:10.1136/bjism.32.2.107
- Campbell, E. E., & Sonn, C. C. (2009). *Transitioning into the AFL: Indigenous football players' perspectives*. *Athletic Insight*, *11*. Retrieved from <http://www.athleticinsight.com/Vol11Iss3/Feature.htm>
- Castonguay, L. G., & Oltmanns, T. F. (Eds.). (2013). *Psychopathology: From science to clinical practice*. New York, NY: Guilford Press.
- Creswell, J. D., & Lindsay, E. K. (2014). How does mindfulness training affect health? A mindfulness stress buffering account. *Current Directions in Psychological Science*, *23*, 401–407. doi:10.1177/0963721414547415
- Davydov, D. M., Stewart, R., Ritchie, K., & Chaudieu, I. (2010). Resilience and mental health. *Clinical Psychology Review*, *30*, 479–495. doi:10.1016/j.cpr.2010.03.003
- Didehban, N., Munro-Cullum, C. M., Mansinghani, S., Conover, H., & Hart, J. (2013). Depressive symptoms and concussions in aging retired NFL players. *Archives of Clinical Neuropsychology*, *28*, 418–424. doi:10.1093/arclin/act028
- Dworkin, S. L., & Wachs, F. L. (1998). “Disciplining the body”: HIV-positive Male athletes, media surveillance, and the policing of sexuality. *Sociology of Sport Journal*, *15*, 1–20. doi:10.1123/ssj.15.1.1
- Foot, J. (2012). *What makes us healthy: The asset approach in practice: Evidence, action, and evaluation*. Retrieved from <http://www.janefoot.co.uk/downloads/files/healthy20FINAL20FINAL.pdf>
- Franck, A., Stambulova, N., & Ivarsson, A. (2016). Swedish athletes' adjustment patterns in the junior-to-senior transition. *International Journal of Sport and Exercise Psychology*, 1–17. Retrieved from <http://dx.doi.org/10.1080/1612197X.2016.1256339>

- Gardner, F. L., & Moore, Z. E. (2004). A mindfulness-acceptance-commitment-based approach to athletic performance enhancement: Theoretical considerations. *Behavior Therapy*, 35(4), 707–723.
- Gardner, F. L., & Moore, Z. E. (2006). *Clinical sport psychology*. Champaign, IL: Human Kinetics.
- Gardner, F. L., & Moore, Z. E. (2007). *The psychology of enhancing human performance: The mindfulness-acceptance-commitment (MAC) approach*. New York, NY: Springer.
- Gardner, F. L., & Moore, Z. E. (2012). Mindfulness and acceptance models in sport psychology: A decade of basic and applied scientific advancements. *Canadian Psychology*, 53(4), 309–318. doi:10.1037/a0030220
- Gastin, P. B., Meyer, D., & Robinson, D. (2013). Perceptions of wellness to monitor adaptive responses to training and competition in elite Australian football. *The Journal of Strength & Conditioning Research*, 27, 2518–2526. doi:10.1519/JSC.0b013e31827fd600
- Gill, D. P., & Kamphoff, C. S. (2010). Sport psychology and representation. In T. V. Ryba, R. J. Schinke, & G. Tenenbaum (Eds.), *Cultural turn in sport psychology* (pp. 53–74). Morgantown, WV: Fitness Information Technology.
- Gordon, S. (1986). Sport psychology and the injured athlete: A cognitive-behavioral approach to injury response and injury rehabilitation. *Sport Science Periodical on Research on Research and Technology in Sport*, 3, 1–10.
- Gouttebauge, V., Aoki, H., Ekstrand, J., Verhagen, E., & Kerkhoffs, G. (2015a). Are severe musculoskeletal injuries associated with symptoms of common mental disorders among male European professional footballers? *Knee Surgery, Sport Traumatology, Arthroscopy*, 1–9. doi:10.1007/s00167-015-2729-y
- Gouttebauge, V., Frings-Dresen, M. H. W., & Sluiter, J. K. (2015b). Mental and psychosocial health among current and former professional footballers. *Occupational Medicine*, 65, 190–196. doi:10.1093/occmed/kqu202
- Gouttebauge, V., Jonkers, R., Moen, M., Verhagen, E., Wylleman, P., & Kerkhoffs, G. (2016a). The prevalence and risk indicators of symptoms of common mental disorders among current and former Dutch elite athletes. *Journal of Sports Sciences*, 1–9. Advanced online publication: <http://dx.doi.org/10.1080/02640414.2016.1258485>
- Gouttebauge, V., Kerkhoffs, G., & Lambert, M. (2016b). Prevalence and determinants of symptoms of common mental disorders in retired Professional Rugby Union players. *European Journal of Sport Science*, 16, 595–602. doi:10.1080/174611391.2015.1086819
- Gross, M., Moore, Z. E., Gardner, F. L., Wolanin, A. T., Pess, R., & Marks, D. R. (online first, November 2016). An empirical examination comparing the mindfulness-acceptance-commitment approach and psychological skills training for the mental health and sport performance of female student athletes. *International Journal of Sport and Exercise Psychology*.
- Guignon, C. (2015, December 15). *Evaluation, orientation, and follow up of high level athletes in clinical sport psychology*. Paper presented at the international symposium of National Olympic Committee and National Sport Federation. Paris, France.
- Gulliver, A., Griffiths, K. M., & Christensen, H. (2012a). Barriers and facilitators to mental health help-seeking for young elite athletes: A qualitative study. *BMC Psychiatry*, 12, S35. doi:10.1186/1471-244X-12-157
- Gulliver, A., Griffiths, K. M., Christensen, H., Mackinnon, A., Calear, A. L., Parsons, A., ... Stanimirovic, R. (2012b). Internet-based interventions to promote mental health help-seeking in elite athletes: An exploratory randomized controlled trial. *Journal of Medical Internet Research*, 14, e69. doi:10.2196/jmir.1864
- Gulliver, A., Griffiths, K. M., Mackinnon, A., Batterham, P. J., & Stanimirovic, R. (2015). The mental health of Australian elite athletes. *Journal of Science and Medicine in Sport*, 18, 255–261. <http://dx.doi.org/10.1016/j.jsams.2014.04.006>
- Guskiewicz, K. M., Marshall, S. J., Bailes, J., Mccrea, M., Harding, H. P., Mathews, A., ... Cantu, R. C. (2007). Recurrent concussion and risk of depression in retired professional football players. *Medicine & Science in Sports and Exercise*, 39, 903–909. doi:10.1249/mss.0b013e3180383da5
- Gustafsson, H., Davis, P., Skoog, T., Kenttä, G., & Haberl, P. (2015). Mindfulness and its relationship with perceived stress, affect, and burnout in elite junior athletes. *Journal of Clinical Sport Psychology*, 9, 263–281. doi:10.1123/jcsp.2014-0051
- Hammond, T., Gialloreti, C., Kubas, H., & (Hap) Davis IV, H. (2013). The prevalence of failure-based depression among elite athletes. *Clinical Journal of Sport Medicine*, 23, 273–277. doi:10.1097/JSM.0b013e318287b870
- Harmon, K. G., Drezner, J. A., Gammons, M., Guskiewicz, K. M., Halstead, M., Herring, S. A., ... Roberts, W. O. (2013). American Medical Society for Sports Medicine position statement: concussion in sport. *British Journal of Sports Medicine*, 47(1), 15–26. doi:10.1136/bjsports-2012-091941

- Hendry, L. B., & Kloep, M. (2002). *Lifespan development. Resources, challenges and risks*. Oxford: Thomson Learning.
- Henriksen, K., Stambulova, N., & Roessler, K. K. (2010). Holistic approach to athletic talent development environments: A successful sailing milieu. *Psychology of Sport and Exercise, 11*, 212–222. doi:10.1016/j.psychsport.2009.10.005
- Hughes, L., & Leavey, G. (2012). Setting the bar: Athletes and vulnerability to mental illness. *The British Journal of Psychiatry, 200*, 95–96. doi:10.1192/bjp.bp.111.095976
- Ivarsson, A., Johnson, U., & Podlog, L. (2013). Psychological predictors of injury occurrence: A prospective investigation of professional Swedish soccer players. *Journal of Sport Rehabilitation, 22*, 19–26.
- Ivarsson, A., Stambulova, N., & Johnson, U. (2016). Injury as a career transition: Experiences of a Swedish elite handball player. *International Journal of Sport and Exercise Psychology*, 1–17. Advanced on-line publication. doi:10.1080/1612197X.2016.1242149
- Johnson, U., & Ivarsson, A. (2011). Psychological factors of sport injuries among junior soccer players. *Journal of Sport Science & Medicine, 9*, 347–352.
- Kenttä, G., & Hassmén, P. (1998). Overtraining and recovery. *Sports Medicine, 26*, 1–16. doi:10.2165/00007256-199826010-00001
- Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*, 207–222. doi:10.2307/3090197
- Kontos, A. P. (2009). Multicultural sport psychology in the United States. In R. J. Schinke & S. J. Hanrahan (Eds.), *Cultural sport psychology* (pp. 103–116). Champaign, IL: Human Kinetics.
- Kontos, A. P., & Elbin, R. J. (2016). Sport-related concussion. In R. J. Schinke, K. McGannon, & B. Smith (Eds.), *The Routledge international handbook of sport psychology* (pp. 204–215). New York, NY: Routledge.
- Koutedakis, Y., Budgett, R., & Faulmann, L. (1990). Rest in underperforming elite competitors. *British Journal of Sports Medicine, 24*, 248–252. doi:10.1136/bjism.24.4.248
- Krane, V. (2015). Gender non-conformity, sex variation, and sport. In R. J. Schinke & K. R. McGannon (Eds.), *The psychology of sub-culture in sport and physical activity* (pp. 47–62). London: Routledge.
- Krane, V., & Waldron, J. (2000). The Gay games: Creating our own culture. In K. Schaffer & S. Smith (Eds.), *The Olympics at the millennium: Power, politics, and the Olympic Games* (pp. 147–164). Piscataway, NJ: Rutgers University.
- Krane, V., Waldron, J., Kauer, K. J., & Semerjian, T. Z. (2010). Queering sport psychology. In T. V. Ryba, R. J. Schinke, & G. Tenenbaum (Eds.), *Cultural turn in sport psychology* (pp. 153–180). Morgantown, WV: Fitness Information Technology.
- Kubler-Ross, E. (1969). *On death and dying*. London: Macmillan.
- Lan, M. F., Lane, A. M., Roy, J., & Hanin, N. A. (2012). Validity of the Brunel Mood Scale for use with Malaysian athletes. *Journal of Sports Science and Medicine, 11*, 131–135.
- Lardon, M. T., & Fitzgerald, M. W. (2013). Performance enhancement and the sports psychiatrist. In D. Baron, C. Reardon, & S. Baron (Eds.), *Clinical sports psychiatry: An international perspective* (pp. 132–146). Chichester: Wiley-Blackwell.
- Lavallee, D. (2005). The effect of a life development intervention on sports career transition adjustment. *The Sport Psychologist, 19*, 193–202.
- Leddy, M. H., Lambert, M. J., & Ogles, B. M. (1994). Psychological consequences of athletic injury among high-level competitors. *Research Quarterly for Exercise & Sport, 65*, 347–354. Retrieved from <http://dx.doi.org/10.1080/02701367.1994.10607639>
- Main, L., & Grove, J. R. (2009). A multi-component assessment model for monitoring training distress among athletes. *European Journal of Sport Science, 9*, 195–202. doi:10.1080/17461390902818260
- Markser, V. Z. (2011). Sport psychiatry and psychotherapy. Mental strains and disorders in professional sports. Challenge and answer to societal changes. *European Archives of Psychiatry and Clinical Neuroscience, 261*, 182–185. doi:10.1007/s00406-011-0239-x
- Matos, N. F., Winsley, R. J., & Williams, C. A. (2011). Prevalence of nonfunctional overreaching / overtraining in young English athletes. *Medicine & Science in Sports & Exercise, 43*, 1287–1294. doi:10.1249/MSS.0b013e318207f87b
- Meeusen, R., Duclos, M., Gleeson, M., Rietjens, G., Steinacker, J., & Urhausen, A. (2006). Prevention, diagnosis and treatment of the overtraining syndrome: ECSS position statement 'task force'. *European Journal of Sport Science, 6*, 1–14. doi:10.1080/17461390600617717
- Moore, Z. E. (2012). Performers in distress: Counseling issues. In S. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 527–544). New York, NY: Oxford.

- Moore, Z. E. (2016). Working with transnational professional athletes. In R. Schinke & D. Hackfort (Eds.), *The Routledge companion of professional sports and performance psychology* (pp. 51–62). New York, NY: Routledge/Taylor & Francis.
- Moore, Z., & Gardner, F. (2001, October). *Taking applied sport psychology from research to practice: Integrating empirically supported interventions into a self-regulatory model of athletic performance*. Symposium presented at the annual conference of the Association for the Advancement of Applied Sport Psychology, Orlando, Florida.
- Moore, Z. E., & Gardner, F. L. (2011). Clinical sport psychology. In T. Morris & P. C. Terry (Eds.), *The new sport and exercise psychology companion* (pp. 381–401). Morgantown, WV: Fitness Information Technology.
- Murphy, S. M. (Ed.). (2012). *The Oxford handbook of sport and performance psychology*. Oxford: Oxford University Press.
- NCAA (Author). (2014). *NCAA student-athlete substance use study: Executive summary August 2014*. Retrieved November 13, 2016, from <http://www.ncaa.org/about/resources/research/ncaa-student-athlete-substance-use-study-executive-summary-august-2014>
- NCAA Sport Science Institute. (2016). *Mental health landscape in sport*. Retrieved July 19, 2016, from <https://www.nata.org/sites/default/files/mentalhealthlandscape.pdf>
- NHS Digital. (2012, June 13). *Rise in sport injury cases treated in A&E*. Retrieved November 16, 2016, from <http://content.digital.nhs.uk/article/2087/Rise-in-sport-injury-cases-treated-in-AE>
- Pedersen, P. (1986). The grief response and injury: A special challenge for athletes and athletic trainers. *Athletic Training*, 21, 1–10.
- Peluso, M., & deAndrade, L. H. (2005). Physical activity and mental health: The association between exercise and mood. *Clinics*, 60, 61–70.
- Poczwardowski, A., Diehl, B., O'Neil, A., Cote, T., & Haberl, P. (2014). Successful transitions to the Olympic Training Center, Colorado Springs: A mixed-method exploration with six resident-athletes. *Journal of Applied Sport Psychology*, 26(1), 33–51. Retrieved from <http://dx.doi.org/10.1080/10413200.2013.773950>
- Podlog, L. (2016). Sport injury. In R. J. Schinke, K. McGannon, & B. Smith (Eds.), *The Routledge international handbook of sport psychology* (pp. 167–175). New York, NY: Routledge.
- Raglin, J. S. (2001). Psychological factors in sport performance: The mental health model revisited. *Sports Medicine*, 31, 875–890. doi:10.2165/00007256-200131120-00004
- Raglin, J. S., & Wilson, G. S. (2000). Overtraining in athletes. In Y. L. Hanin (Ed.), *Emotions in sport* (pp. 191–207). Champaign, IL: Human Kinetics.
- Reints, A. (2011). *Validation of the holistic athletic career model and the identification of variables related to athletic retirement (Doctoral thesis)*. Vrije University Brussels, Belgium.
- Rice, S. M., Purcell, R., De Silva, S., Mawren, D., McGorry, P. D., & Parker, A. G. (2016). The mental health of elite athletes: A narrative systematic review. *Sports Medicine*, 46, 1333–1353. Advanced on-line publication. doi:10.1007/s40279-016-0492-2
- Rose, J., & Jevne, R. F. I. (1993). Psychological processes associated with athletic injuries. *The Sport Psychologist*, 7, 309–328.
- Ryba, T. V., Stambulova, N. B., & Ronkainen, N. J. (2016). The work of cultural transition: An emerging model. *Frontiers in Psychology*, 7, 283. doi:10.3389/fpsyg.2016.00427
- Ryba, T. V., Stambulova, N. B., Si, G., & Schinke, R. J. (2013). ISSP position stand: Culturally competent research and practice in sport and exercise psychology. *International Journal of Sport and Exercise Psychology*, 11(2), 123–142. doi:10.1080/1612197X.2013.779812
- Ryba, T. V., & Wright, H. K. (2005). From mental game to cultural praxis: A cultural studies model's implications for the future of sport psychology. *Quest*, 57, 192–212. <http://dx.doi.org/10.1080/00336297.2005.10491853>
- Samuel, R. D., & Tenenbaum, G. (2011). The role of change in athletes' careers: A scheme of change for sport psychology practice. *The Sport Psychologist*, 25, 233–252.
- Samuel, R. D., & Tenenbaum, G. (2013). Athletes' decision making in career change-events. *The Sport Psychologist*, 27, 78–82.
- Samuel, R. D., Tenenbaum, G., Mangel, E., Virshupski, R., Chen, T., & Badir, A. (2015). Athletes' experiences of severe injuries as a career-change event. *Journal of Sport Psychology in Action*, 6, 99–120. Retrieved from <http://dx.doi.org/10.1080/21520704.2015.1012249>
- Schaal, K., Tafflet, M., Nassif, H., Thibault, V., Pichard, C., Alcotte, M., ... Toussaint, J. F. (2011). Psychological balance in high level athletes: Gender-based differences and sport-specific Patterns. *PLoS One*, 6, e19007. doi:10.1371/journal.pone.0019007

- Schinke, R. J., Blodgett, A. T., McGannon, K. R., & Ge, Y. (2016). Finding one's footing on foreign soil: A composite vignette of elite athlete acculturation. *Psychology of Sport and Exercise*, 25, 36–43. doi:10.1016/j.psychsport.2016.04.001
- Schinke, R. J., & McGannon, K. R. (2014). The acculturation experiences of (and with) immigrant athletes. *International Journal of Sport and Exercise Psychology*, 12, 64–75. doi:10.1080/1612197X.2013.785093
- Schinke, R. J., & McGannon, K. R. (2015). Cultural sport psychology and intersecting identities: An introduction to the special section. *Psychology of Sport and Exercise*, 17, 45–47. doi:10.1016/j.psychsport.2014.10.010
- Schinke, R. J., Michel, G., Gauthier, A. P., Pickard, P., Danielson, R., Peltier, D., ... & Peltier, M. (2006). The adaptation to the mainstream in elite sport: A Canadian aboriginal perspective. *The Sport Psychologist*, 20(4), 435–448. doi:10.1123/tsp.20.4.435
- Schinke, R. J., Stambulova, N., Trepanier, D., & Oghene, O. (2015). Psychological support for the Canadian Olympic boxing team in meta-transitions through the National Team Program. *International Journal of Sport and Exercise Psychology*, 13, 74–89. doi:10.1080/1612197X.2014.959982
- Schwenk, T. L. (2000). The stigmatisation and denial of mental illness in athletes. *British Journal of Sports Medicine*, 34, 4–5. doi:10.1136/bjism.34.1.4
- Si, G., & Lee, H. C. (2008). Is it so hard to change? The case of a Hong Kong Olympic silver medallist. *International Journal of Sport and Exercise Psychology*, 6, 319–330. doi:10.1080/1612197X.2008.9671876
- Stambulova, N., Alfermann, D., Statler, T., & Côté, J. (2009). ISSP position stand: Career development and transitions of athletes. *International Journal of Sport & Exercise Psychology*, 7, 395–412. <http://dx.doi.org/10.1080/1612197X.2009.9671916>
- Stambulova, N. B. (2000). Athlete's crises: A developmental perspective. *International Journal of Sport Psychology*, 31, 584–601.
- Stambulova, N. B. (2003). Symptoms of a crisis transition: A grounded theory study. In M. Hassmén (Ed.), *Sipf yearbook 2003* (pp. 97–109). Örebro: Örebro University Press.
- Stambulova, N. B. (2009). Talent development in sport: A career transition perspective. In E. Tsung-Min Hung, R. Lidor, & D. Hackfort (Eds.), *Psychology of sport excellence* (pp. 63–74). Morgantown, WV: Fitness Information Technology.
- Stambulova, N. B. (2016). Athletes' transitions in sport and life: Positioning new research trends within existing system of athlete career knowledge. In R. J. Schinke, K. McGannon, & B. Smith (Eds.), *The Routledge international handbook of sport psychology* (pp. 519–535). New York, NY: Routledge.
- Stambulova, N. B., & Ryba, T. V. (2014). A critical review of career research and assistance through the cultural lens: Towards cultural praxis of athletes' careers. *International Review of Sport and Exercise Psychology*, 7, 1–17. <http://dx.doi.org/10.1080/1750984X.2013.851727>
- Stambulova, N. B., & Wylleman, P. (2014). Athletes' career development and transitions. In A. Papaioannou & D. Hackfort (Eds.), *Routledge companion to sport and exercise psychology* (pp. 605–621). London: Routledge.
- Stanford Children's Health. (nd). *Sport injury statistics*. Retrieved November 14, 2016, from <http://www.stanfordchildrens.org/en/topic/default?id=sports-injury-statistics-90-P02787>
- Taylor, K., Chapman, D., Cronin, J., Newton, M., & Gill, N. (2012). Fatigue monitoring in high performance sport: A survey of current trends. *Journal of Australian Strength and Conditioning*, 20, 12–23.
- Terry, P. C., Lane, A. M., & Fogarty, G. J. (2003). Construct validity of the profile of mood states – adolescents for use with adults. *Psychology of Sport & Exercise*, 4, 125–139. doi:10.1016/S1469-0292(01)00035-8
- United States Department of Health and Human Services. (1999). *Mental health: A report of the surgeon general*. Tockville, MD: US Department of Health and Human Services, National Institute of Health & National Institute of Mental Health.
- Uphill, M., Sly, D., & Swain, J. (2016). From mental health to mental wealth in athletes: Looking back and moving forward. *Frontiers in Psychology*, 7(6), 259. doi:10.3389/fpsyg.2016.00935
- Watson, J. (2005). College student athletes' attitudes toward help-seeking behavior and expectations of counseling services. *Journal of College Student Development*, 46, 442–449.
- Wiese-Bjornstal, D. M., Smith, A. M., & LaMott, E. E. (1995). A model of psychological response to athletic injury and rehabilitation. *Athletic Training: Sports Health Care Perspectives*, 1(1), 17–30.
- Wiese-Bjornstal, D. M., Smith, A. M., Shaffer, S. M., & Morrey, M. A. (1998). An integrated model of response to sport injury: Psychological and sociological dynamics. *Journal of Applied Sport Psychology*, 10, 46–69. <http://dx.doi.org/10.1080/10413209808406377>

- Williamson, I. J., & Goodman, D. (2006). Converging evidence for the under-reporting of concussions in youth ice hockey * commentary. *British Journal of Sports Medicine*, *40*, 128–132. doi:10.1136/bjism.2005.021832
- Wolanin, A., Gross, M., & Hong, E. (2015). Depression in athletes: Prevalence and risk factors. *Current Sports Medicine Reports*, *14*, 56–60. doi:10.1249/JSR.0000000000000123
- World Health Organization. (2007). *Neurological disorders: Public health challenges*. Geneva: Author. Retrieved November 1, 2016, from http://www.who.int/mental_health/neurology/neurodiso/en/
- World Health Organization . (2016). Retrieved July 19, 2016, from <http://www.who.int/about/definition/en/print.html>
- Wylleman, P. (2015, December 18). *The role of clinical psychologists and psychiatrists in elite sport*. Paper presented to the High Performance Team of Team Netherlands, Amsterdam, Holland.
- Wylleman, P., & Reints, A. (2014). Career assistance programs. In R. C. Eklund & G. Tenenbaum (Eds.), *Encyclopedia of sport and exercise psychology* (pp. 105–108). Thousand Oaks, CA: Sage.
- Wylleman, P., Reints, A., & De Knop, P. (2013). A developmental and holistic perspective on athletic career development. In P. Sotiariadou & V. De Bosscher (Eds.), *Managing high performance sport* (pp. 159–182). New York, NY: Routledge.
- Wylleman, P., Reints, A., & Van Aken, S. (2012). Athletes' perceptions of multilevel changes related to competing at the 2008 Beijing Olympic Games. *Psychology of Sport and Exercise*, *13*, 687–692. doi:10.1016/j.psychsport.2012.04.005
- Wylleman, P., Rosier, N., & De Knop, P. (2015). Transitional challenges and elite athletes' mental health. In J. Baker, P. Safai, & J. Frasset Thomas (Eds.), *Health and elite sport: Is high performance sport a healthy pursuit?* (pp. 99–116). London: Routledge.
- Zhang, C. Q., Si, G., Chung, P. K., Du, M., & Terry, P. C. (2014). Psychometric properties of the Brunel Mood Scale in Chinese adolescents and adults. *Journal of Sports Sciences*, *32*, 1465–1476. doi:10.1080/02640414.2014.898184