

## *Journal of Issues in* **Intercollegiate Athletics**

### **Is There a Need for Social Workers in Intercollegiate Athletics?**

#### **A Conceptual Study**

---

**Raymond Waller**  
**Christina Martin**  
**Samantha Morgan**  
*Troy University*

---

*Research regarding eating disorders among intercollegiate female athletes is well-documented. Since eating disorders have been categorized as potentially serious mental illnesses by the American Psychiatric Association (APA, 2013), professionals need to be knowledgeable and involved in the overall care of college athletes. However, those closest to the athlete such as athletic trainers and coaches often lack the knowledge to detect symptoms and/or ability to assist those afflicted with eating disorders. To make a difference, a health care professional, such as a clinically trained social worker, should be considered to assist with the well-being of athletes. This conceptual study explores the deficiencies of intercollegiate coaches as well as athletic trainers and advocates for the inclusion of qualified social workers as part of a multidisciplinary approach to help intercollegiate female athletes who suffer from eating disorders.*

*Keywords: sport, social work, eating disorder*

Eating disorders have gained significant amount of attention as a health risk, especially among females (Jie, Qiang, Yumei & Ting, 2013). Research has shown that eating disorders have been ranked within the top ten leading causes of disabilities in the United States (Striegel-Moore & Bulik, 2007; Whiteford et al., 2013), showing association with marked functional impairment (Tchanturia et al., 2013). Eating disorders are considered to be a disturbed behavior or attitude that alters the consumption of food in individuals (Magallares, Jauregui-Lobera, Gamiz-Jimenez & Santed, 2014). While a person may practice eating patterns that while far from optimal do not warrant clinical intervention-marked modifications of eating attitudes and behaviors, body image dissatisfaction, and psychosocial pressures can lead to a diagnosed eating disorder (Keel & Forney, 2013; Milligan & Pritchard, 2006). These actions can also be characterized as troubled eating, which includes excessive dieting, bingeing, or purging (Keel & Forney, 2013; Milligan & Pritchard, 2006).

The most commonly known disorders are anorexia nervosa and bulimia nervosa (Magallares et al., 2014). Eating disorders not otherwise specified (EDNOS) is a blanket *DSM-V* diagnosis for people with substantial characteristics of eating disorders who do not meet the conditions for anorexia nervosa (AN) or bulimia nervosa (BN). As such, when eating disorders are referred to in this article, they will relate to either AN or BN.

### *Anorexia Nervosa*

Anorexia nervosa is a serious psychiatric illness characterized by an inability to maintain an adequate, healthy body weight. The lifetime risk of anorexia nervosa (AN) in women is estimated to be 0.3% to 1%, with a greater number of people having bulimia nervosa (BN) (Magallares et al., 2014). An eating disorder such as (AN) is a severe psychiatric disorder with substantial morbidity and the highest mortality of all mental disorders. In fact, research has revealed that approximately 20% of those who die do so by suicide (Arcelus, Mitchell, Wales, & Nielsen, 2011). Indeed, women with AN had substantially increased rates of suicidality (greater than ten times) compared with the general population (Chesney, Goodwin, & Fazel, 2014). Importantly, Steinhausen (2006) showed that only 46% of patients fully recovered from AN, a third improved with only partial or residual features of the disorder, and 20% remained chronically ill for the long term. This information is significant as, more than ever before, collegiate female athletes have a higher risk of developing an eating disorder such as AN because of the high demands on athletes (McLester, Hardin, & Hoppe, 2014).

### *Bulimia Nervosa*

Bulimia nervosa is characterized by persistent occurrences of binge eating in combination with some form of potentially harmful compensatory behavior such as purging (Arcelus et al., 2011; Quick, Byrd-Bredenner, & Neumark-Sztainer, 2013). Symptoms of BN such as purging, misuse of laxatives, and excessive exercise may be difficult to detect, even by a trained professional (Quick et al., 2013). Among individuals with AN, it has been suggested that 20% to

50% will develop BN over time (Eckert, Halmi, Marchi, Grove, & Crosby, 1995; Uher & Rutter, 2012). Arcelus and colleagues (2011) revealed a weighted mortality rate of 2.22 per 1000 was found in studies pertaining exclusively to women. Interestingly, Arcelus and colleagues (2011) indicated that no male-only studies regarding mortality rate were found. Finally, Arcelus and colleagues' study revealed that the mortality rates for individuals with AN is high, and likewise are the mortality rates for those with BN. Thus, the seriousness of these eating disorders and the need for appropriate help cannot be underestimated.

## **Eating Disorders in Female Athletes**

Prior research has shown that female athletes are at risk of developing eating disorders (Martinsen & Sundgot-Borgen, 2013; Torstveit, Rosenving, & Sundgot-Borgen, 2008). Even though physical activity of athletics is known for promoting physical performance and health, it is increasingly evident that athletic participation can likewise engender risk (Hinton & Kubas, 2005; Martinsen & Sundgot-Borgen, 2013). Participation in athletics in and of itself does not predispose an individual to an eating disorder; rather, it is the particularities of sport teams and the athletic environment that have been associated with higher incidence of symptomatology.

Female athletes competing in lean and judged sports have a higher incidence of disordered eating compared to athletes in other sports. Of the ten million women who suffer from eating disorders, 157,000 compete on a National Collegiate Athletic Association (NCAA) athletic team in the United States (Fortes, Neves, Filgueiras, & Ferreira, 2013; Hinton & Kubas, 2005). It has been shown that a negative view of the body and body dissatisfaction can lead to undesirable psychosocial consequences, especially disordered eating, poor self-esteem, depression and anxiety (Hinton & Kubas, 2005). The relationship between athletic participation and eating problems among women raise a number of interesting issues relevant to sociocultural models of eating disorders. These eating disorders can convey substantial cost and harm to the athlete, their social and familial networks, and to society at large (Klump, Bulik, Kaye, Treasure & Tyson, 2009). Athletes afflicted with eating disorders can experience substantial decreases in athletic performance, numerous health consequences, and, in severe cases, death.

The purpose of this conceptual study is twofold. The first purpose is to analyze prior research that illustrates the training that athletic trainers and coaches receive within the realm of eating disorders that prepare them to work with female intercollegiate athletes. The second purpose is to depict how social work professionals may be integrated into an intercollegiate athletic department as an essential participant, along with athletic trainers and coaches, to providing a multidisciplinary approach in ameliorating and preventing eating disorders of female intercollegiate athletes.

To fulfill the purposes of the study, the primary psychosocial pressures that research has shown to contribute to eating disorders among female intercollegiate athletes will be introduced in the following part. The subsequent section will present research studies that have been conducted regarding the training of intercollegiate athletic trainers and coaches as possible eating disorder interventionists. Finally, the paper will exemplify reasons social work professionals, especially those on the faculty of universities, should be considered part of a multidisciplinary effort to assist intercollegiate female athletes with eating disorders.

## **Psychosocial Pressures Contributing to Eating Disorders**

Previous studies have indicated that eating disorders are complex and influenced by sociocultural, biological, psychological, behavioral, and environmental factors (Beals & Manore, 2002; Keel & Forney, 2013). More recently, Culbert, Racine, and Klump (2015) reported that the sociocultural idealization of thinness variables such as media exposure, pressures for thinness, thin-ideal internalization, and thinness expectancies achieved risk status for disordered eating symptoms or eating disorders. Additionally, Culbert and colleagues (2015) indicated that personality traits such as negative emotionality, perfectionism, and negative urgency also were perceived as risk status for eating disorders and/or disordered eating symptoms.

Moreover, there is compelling data that underscores psychosocial risk factors in developing eating disorders (Culbert, et al., 2015; Stice, 2002; Striegel-Moore & Bulik, 2007). While there are numerous factors that may contribute to eating disorders, psychosocial pressures have been considered an umbrella area (Beals & Manore, 2002; Keel & Forney, 2013). Psychosocial stressors that may serve as risks that an athlete may develop an eating disorder include: 1) drive for thinness and performance; 2) performance perfectionists; 3) social pressure on body shape; and 4) body image dissatisfaction (Beals & Manore, 2002; Culbert et al., 2015; Hinton & Kubas, 2005; Reel, Petrie, SooHoo, & Anderson, 2013).

### *Drive for Thinness and Performance*

Social pressure to adapt to the thin ideal has been perceived to play a decisive role in the development of eating disorders (Basow, Foran, & Bookwa, 2007). Culturally based gender differences in the idealization of thinness have been theorized to account for epidemiological patterns of eating disorders. Over a time of increasing idealization of thinness for women, an illness typified by self-starvation and an extreme fear of gaining weight became progressively widespread, particularly in young adult women (Garner, Garfinkel, Schwartz, & Thompson, 1980). In Western culture, the portrayal of thinness as tantamount to beauty and success is commonplace. Reischer and Koo (2004) wrote: "... our capacity for self-modification and adornment is a central and essential feature of our humanity, though the particular ways in which we alter our bodies are clearly a cultural phenomenon" (p. 297). If eating disorder incidence increased with increasing idealization of thinness, then cultural changes may be implicated in the etiology of eating disorders (Keel & Forney, 2013).

The drive for thinness and performance can be expressed as excessive concern with dieting, preoccupation with weight, or in the pursuit of being thin (Hinton & Kubas, 2005; Todd & Hong, 2015). Social pressures, such as direct comments on child's appearance or somatotype, as well as teasing from peers are recognized as factors that may lead to the onset of eating disorders (Littleton & Ollendick, 2003). Such pressure might, in turn, lead to a drive for thinness, preoccupation with weight and shape, adoption of extreme methods to lose weight, and, other serious eating problems. This may have been contributory in the case of Christy Henrich, a former gymnast of near-Olympic caliber died who at the age of 22 due to complications related to eating disorders (Pace, 1994). While sports and sports figures are often lauded by society, various pressures on the athlete may exist that are far from glamorous. In the illustration of Christy Henrich, an offhanded comment by a judge at a meet was interpreted to mean she was overweight (Wilstein, 1994). This comment is thought to be causal in influencing Henrich to compare herself to the thin Soviet and Romanian gymnasts; Henrich believed these gymnasts were, in fact, getting better scores due to their thinness (Wilstein, 1994).

### *Performance Perfectionists*

Perfectionism is often positively associated with eating disorder psychopathology (Farstad, McGeown, & von Ranson, 2016). While perfectionism and negative urgency – a tendency to respond impulsively to negative affective states (Dir, Karyadi, & Cyders, 2013) – may forecast the likelihood of manifesting eating disorder symptoms, the particular mechanisms and underlying biological factors are unclear (Boone, Soenens, & Luten, 2014). Perfectionists have been described as individuals who have set extremely high standards which are often accompanied by fear of failure and unreasonable concern with mistakes, often exacerbated by excessive criticism when self-assessing (Stoeber & Childs, 2010). While evidence demonstrates that perfectionism is broadly associated with various psychopathologies, it appears to be even more specific to those with eating disorders and is theorized to be a part of the phenomenology of these disorders (Cockell et al., 2002). Given the historical belief that those with AN and BN have personalities characterized by perfectionistic tendencies, there is an attempt in the field to empirically demonstrate perfectionism's specificity to these disorders as compared to other psychopathology conditions (Shanmugum & Davies, 2014).

Cockell and colleagues (2002) revealed levels of self-oriented and socially prescribed perfectionism are more than one standard deviation higher among individuals with AN than those with depression after controlling for depressive symptoms. These results suggest that, while dimensions of perfectionism do play a role in other psychopathology conditions, they may be more pronounced in patients with eating disorders. For example, having an eating disorder may increase perfectionistic tendencies in an individual, especially as these pertain to maintaining rigid and obsessive patterns surrounding weight control. In a study of 269 female university students, three dimensions of perfectionism, – self-oriented perfectionism, socially-prescribed perfectionism, and self-presentational forms of perfectionism, all contributed to predicting dietary restraint (McLaren, Gauvin, & White, 2001).

When comparing Division I collegiate athletes to recreational athletes, Hopkinson and Lock (2004) found that perfectionism, rather than the level of intensity at which one participates in their sport, was the most important factor in predicting disordered eating. The relationship between perfectionism and eating disorder symptoms in this case was linear, such that the more highly perfectionistic the individual, the more likely they were to exhibit disordered eating. Flett and Hewitt (2005) suggest that self-presentational forms of perfectionism may be directly relevant to athletes who oftentimes must perform in front of others. Those who exhibit this type of perfectionism are concerned about presenting an image of flawlessness, and this trait has been found among those with eating disorders as well (Hewitt et al., 2003).

### *Social Pressure on Body Shape*

The fourth factor is social pressure on body shape, which relates to whether athletes think their peers view their body differently than the way the athletes themselves perceive it (Hinton & Kubas, 2005). Female athletes not only face the typical social pressures to be thin, to which all women in Western culture are exposed but they are also immersed in a social context that focuses on their bodies' appearance and performance (Greenleaf, Petrie, Carter, & Reel, 2009). Perceptions about ideal body size are shaped from a variety of experiences and begin to develop

in childhood through adolescence, often persisting into adulthood (Duchin et al., 2013). Matussek, Wendt and Wiseman (2004) reported several studies among college-age samples that have repeatedly shown that between 72% and 85% of women experience some level of discomfort with the size and shape of their bodies.

While athletes may have an increased risk of maladaptive eating due to such influences, the impact appears to be differentially affected by the activity of choice. Certain judged sports like gymnastics or dance may place athletes at an even greater risk than refereed sports such as basketball or softball. In a refereed sport the athletes' body shape may not be on display as much as it is in other sports; subsequently, it may be easier to focus on each athlete's skill over body shape (Miller, 2016). Perceived pressure concerning appearance, from sources such as the media, family, and peers, leads to disordered eating through internalization of cultural ideals and body dissatisfaction (Pinto-Gouveia, Ferreria, & Duarte, 2015; Tiggeman, 2001). Social interactions with parents, peers, and others can lead to development of body dissatisfaction (Bowers, Miller, Martin, Wolfe, & Speed, 2013; Maddox, 2005). Approval and acceptance, though often based on standards of appearance, may become a goal as social connectedness and belonging appear to be particularly important in college (Bowers et al., 2013; Levitt, 2004).

### *Body Image – Athletes and Non-Athletes*

The National Eating Disorders Association (NEDA) (2008) acknowledged that body image, defined as the way people view themselves in their mind or in the mirror, can serve as a contributing factor to eating disorders. Over the years, studies have been done to examine objectified body consciousness, which is the inclination to view oneself as an object to be looked at and assessed by others, as a potential vulnerability for developing depression and disordered eating behaviors (Bowers et al., 2013; Lindberg, Hyde, & McKinley, 2006). Female athletes may manifest an exacerbated emphasis of maintaining a thin, “ideal” body type, which leads to the high rate of eating disorders among these groups (Bratland-Sanda & Sundgot-Borgen, 2013; Lindberg et al., 2006). Previous research has stated that women are more likely to diet and to refer to themselves as either fat or overweight (Lindberg et al., 2006; Wollenberg, Shriver, & Gates, 2015) than males, and they are typically dissatisfied with their physical appearance more often than men (Furnham, Badmin & Sneade, 2002).

Gaines and Burnett (2014) conducted a study examining differences in body image, eating behaviors, and social pressures in college-aged female athletes, focusing on the differences between athletes and non-athletes. The participants who were involved in the study reported participation in cross-country, track and field, basketball, volleyball, and softball. The researchers reported the participants to have low perceptions of body image and disordered eating behaviors, moderate perceptions of self-esteem, and moderately high perceptions of peer pressure (Gaines & Burnett, 2014).

Wollenberg and colleagues (2015) compared the prevalence of disordered eating between female intercollegiate athletes and non-athletes. The authors recruited from all women's athletic teams at a NCAA Division I university from soccer, cross-country, track and field, basketball, cheer/pom/dance, equestrian, tennis, golf and softball. The athletes were classified into two categories: 1) lean (endurance/esthetic sports-cross country running, cheerleading, pom, equestrian); and 2) non-lean (basketball, softball, soccer, tennis, golf, track). The researchers compared disordered eating between athletes in lean vs. non-lean sports. No significant differences were found between disordered eating and the type of sport.

## Potential Interventionists

Athletes are often reluctant to disclose or seek support for a mental health problem due to concerns over associated stigma, poor understanding of their condition, a lack of availability of services, or previous negative experiences of mental health support (Gulliver, Griffiths, & Christensen, 2012). Specifically, athletes have identified disclosing an eating disorder as a significant source of anxiety, due to concerns over being removed from their sport, and feelings of shame and distress over the impact of the disorder on their athletic identity (Papathomas & Lavallee, 2010). Athletes express concerns about seeking treatment for fear of being prevented from competing or being unable to return to their sport (Bowers et al., 2013; Sherman & Thompson, 2001).

Due to their daily interaction with athletes as well as their perceived level of authority, athletic trainers and coaches exert a great deal of influence over their athletes. Do athletic trainers and coaches possess the knowledge to identify the symptoms and causal stressors of eating disorders that may occur in the female athletes they train? If they do not, what other professionals may have the requisite knowledge to assist athletes afflicted with eating disorders such as AN or BN? Given the significance of social pressures on the development of eating disorders, the countervailing influence of coaches and athletic trainers is crucial; thus, the knowledge and beliefs concerning eating disorders of athletic trainers and coaches must be addressed.

### *Coaches*

Coaches have an important role in identifying disordered eating behaviors and attitudes among their athletes (Selby & Reel, 2011), which may be critical in early and effective intervention of a clinical eating disorder (Martinsen, Sherman, Thompson, & Sundgot-Borgen, 2015). However, research has attempted to quantify coaches' knowledge of the early signs of disordered eating in recognition of their role in the early identification of eating problems in athletes (Plateau, McDermott, Arcelus, & Meyer, 2014; Sherman, Thompson, Dehass, & Wilfert, 2005; Turk, Prentice, Chappell, & Shields, 1999). Most experienced coaches working in high risk sports appreciate the impact of disordered eating on health and performance, although one in five still report having never identified an athlete with an eating problem (Sherman et al., 2005). Moreover, coaches lack confidence in their knowledge of the early warning signs (Plateau et al., 2014; Rousselet et al., 2016; Turk et al., 1999). Specifically, previous research has suggested that coaches experience significant difficulties with identifying the symptoms of disordered eating among athletes, often due to the hidden nature of the disorder and the tendency of athletes to deny the issue (Nowicka, Eli, Ng, Apitzsch, & Sundgot-Borgen, 2013; Sherman et al., 2005).

Coaches have also been connected to issues relating to the development of eating disorders and disordered eating behaviors (Papathomas & Lavallee, 2012; Stirling & Kerr, 2009). For example, athletes have reported that their coaches asked or required them to lose weight (Kerr, Berman, & De Souza, 2006; Reel et al., 2013). These types of requests or demands can subsequently trigger disordered eating behaviors (Reel et al., 2013; Sundgot-Borgen, 1994). Additionally, it has been revealed that coaches hold negative attitudes as well as poor foundational knowledge about obesity. Subsequently, coaches may make decisions about the

need for weight control on the basis of appearance as opposed to using objective measures (Carrigan, Petrie, & Anderson, 2015; Harris, 2000).

Coaching style may confer additional risk. For example, performance-centered rather than person-centered coaching has also been associated with an increased vulnerability to disordered eating behavior (Biesecker & Martz, 1999; Bowers et al., 2013; [Coelho](#), Gomes, Rebiero, & Soares, 2014; Miller, 2016). It is not surprisingly, then, that studies have indicated that the coach can be a vector of significant risk for the development of eating disorders and disordered eating because of their constant pressure to keep body weight low or as a result of their coaching style (Scoffier, Mañano, & d'Arripe-Longueville, 2010).

Heffner, Ogles, Gold, Marsden, and Johnson (2003) surveyed 303 coaches from NCAA Division I, II, and III as well as NAIA Divisions I and II in regards to eating attitudes and behaviors among their athletes. The results revealed that Division I coaches endorsed the perception that “the recent concern about eating disorders has been exaggerated” (Heffner et al., 2003, p. 215). Ironically, they also reported a higher incidence of eating disorder symptoms in their athletes. Results showed that although coaches were aware of their athletes’ struggle with eating and weight issues, they still took part in some form of weight management.

Denison (2007) reported that a majority of the coaches adopted a primarily disciplinary approach rather than health promoting approach to coaching, endorsing practices such as body monitoring, characterizing athletes with disordered eating as untrustworthy and deferring intervention due to difficulties in identifying eating problems with athletes themselves. The majority of coaches perceived their role to be primarily focused on physical training and to improvement of athletic performance, with limited recognition of and communication about the psychological wellbeing of athletes. Plateau and colleagues (2014) reported that coaches monitored weight despite the possible impact of these strategies on athletes such as increased thresholds for concern over weight loss presuming this would causally improve performance, and not taking action when an eating problem was suspected for fear of exacerbating the situation. These contradictions could potentially be due to the importance that coaches placed on weight for performance and the coaches’ own bias of the “ideal” female athlete body.

Beliefs about the link between weight and performance have little empirical support, yet are manifested significantly within sports environments as “taken-for-granted truths” about the female athlete (Busanich & McGannon, 2010). Coaches have consistently perceived that a lower body weight will result in better athletic performances (Bowers et al., 2013; Harris, 2000; Rockwell, Nickols-Richardson, & Thye, 2001). That coaches may have unrealistic expectations about weight and body image and communicate these to athletes convey significant pressure to the athletes to conform to certain weight or image driven standards (Petrie & Sherman, 2007). It is likely that coach attitudes towards weight are communicated to the athletes under their purview; indeed the perceived strictness of a coach with regards to weight has been demonstrated to significantly predict drive for thinness scores on the Eating Disorders Inventory (Engel et al., 2003). Athletes are likely to decipher, and potentially adopt even subtle, unvoiced coach beliefs about the link between weight and performance (Engel et al., 2003; Szedlak, Smith, Day, & Greenlees, 2015).

While they should play an essential role in the early identification of eating disorders, Sherman and colleagues (2005) reported that most coaches could not recognize athletes suffering with eating disorders. In fact, more than 25% of the coaches investigated by Sherman and colleagues (2005) first gained knowledge of an eating disorder in their athletes after they discontinued coaching them. Ultimately, when the demands and stress involved with a coaching



position combine with inadequate knowledge and education about eating disorders, coaches may become more likely to direct careless and detrimental comments about weight to their athletes, misinformation about weight control, and endorse or mandate inappropriate actions that may endanger the health and well-being of their athletes (Bonci et al., 2008). Studies have indicated that coaches did not coach or did not know if they had coached an athlete with an eating disorder (Martinsen et al., 2014), despite having coached for an average of 11-20 years, some of which involved coaching athletes in weight-sensitive sports. Given the relatively high prevalence of eating disorders in adolescent elite athletes, it seems unlikely that coaches have not had an athlete with an eating disorder (Martinsen et al., 2014). It is more likely that they have coached athletes with eating disorders but failed to identify their disorders. Interestingly, Turk et al., (1999) found that, although coaches may feel confident about managing or preventing eating disorders, they may give incorrect information due to inadequate knowledge.

### *Athletic Trainers*

If athletic performance is maintained or improved, a perception of good health by coaches and athletic trainers may exist. Early identification of potential eating problems is difficult (Thompson & Sherman, 2010). In fact, previous research has suggested there is increasing support for the association between the identified 'good athlete' traits and eating psychopathology (Goodwin, Arcelus, Geach, & Meyer, 2014; Shanmugam, Jowett, & Meyer, 2012). Though coaches can play an important role in identifying symptomatic athletes, they do this much less frequently than another potential interventionist, athletic trainers (Sherman et al., 2005). Leone, Sedory, and Gray (2004) stated that body image and eating disorder identification and management among athletes should be a primary job role for the athletic trainer. As a result, athletic trainers often have responsibility for making the very difficult decisions regarding whether a symptomatic athlete will be allowed to train and compete (Sherman et al., 2005).

Jarriel (2011) indicated that slightly more than 42% of college athletic trainers could effectively support a female with an eating disorder without outside assistance. Additionally, while nearly 45% perceived that they could not identify an eating disorder, more than 59% felt comfortable talking to female athletes about these issues. Beals (2003) reported that 26% of athletic trainers and team physicians surveyed perceived that their eating disorder screening process was successful in their program.

Thompson, Yingling, Boardley, and Rocks (2007) reviewed perceptions and knowledge of collegiate athletic trainers regarding disordered eating. The findings indicated that most of the respondents reported disordered eating to be an issue in the structured sport setting. The athletic trainers also indicated that more knowledge in identification and intervention of disordered eating was needed. Findings from Vaughan, King, and Cottrell (2004), who reported that 91% of athletic trainers had dealt with an eating disorder, though 73% did not believe that they could identify an athlete with an eating disorder. Moreover, 68% did not feel confident in managing or asking athletes if they had an eating disorder, and compellingly, only 34% of the respondents perceived that if an athlete received appropriate help, it would decrease the chances that the athlete would continue having an eating disorder. These findings notwithstanding, the study revealed that 93% of athletic trainers perceived that greater attention is needed to assist in preventing eating disorders among college female athletes. Yet disturbingly, Vaughan and colleagues (2004) revealed that universities did not offer any training or education to athletic trainers regarding eating disorders.

These studies imply that intercollegiate athletes are not immune to the risk of poor psychosocial outcomes as exemplified by the prevalence of eating disorders. In fact, Davoren and Hwang (2014) indicated that intercollegiate athletes might have increased risk of poor mental health due to the pressures associated with commercialized intercollegiate sports. The findings of the aforementioned research would suggest that intra-institutional partnerships of potential interventionists, through a multidisciplinary approach, would be able to address the mental health needs of the college athlete.

## **Multidisciplinary Approach**

Eating disorders signify a significant public health concern because they are often comorbid with other psychopathology conditions and functional impairment, are frequently under-recognized and under-treated (Hudson, Hiripi, Pope, & Kessler, 2007). Eating disorders have been shown to be significant mental illnesses, which are related with mortality rates (Smink, van Hoeken, & Hoek, 2012). Generally, eating disorders have been linked to some of the most consequential medical and psychosocial outcomes among mental illness conditions (Klump et al., 2009) including a panacea of concerns such as brain atrophy (Drevelengas, Chourmouzi, Pitsavas, Charitandi, & Boulogianni, 2001), suicidality (Pompili, Mancinelli, Girardi, Accorrà, Ruberto, & Tatarelli, 2003), and, as previously mentioned regarding Christy Henrich, death. Of the feeding and eating disorders currently described as diagnostic entities in the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (APA, 2013), AN and BN have begun to be understood as factors of significant concern within scholastic athletics. This necessitates participation of professionals who are knowledgeable and involved in the overall care of college athletes (McLester et al., 2014) involved as active participants of multidisciplinary teams engaged in support of athletes.

It has been suggested that multidisciplinary teams be primarily comprised of athletic trainers and coaches. However, as has been previously discussed, these individuals have been shown to be underprepared to the task of assisting athletes with eating disorders, hardly an insult since the assessment, diagnosis, and treatment of psychopathology conditions is beyond the scope of their academic training. It is apparent that the problem of eating disorders among female athletes is truly a multidisciplinary one incorporating both mental health and medical expertise as part of the treatment team. Sherman and Thompson (2001) advocated for a multidisciplinary approach to prevention and treatment of eating disorders in athletes. Such an approach is certainly not a new concept in eating disorder literature, but the degree to which it is practiced with athletes in an institutional setting and the effectiveness with which it has been utilized has not received much attention, nor is it widely implemented.

Multidisciplinary collaboration refers to the parallel practice of professionals from different disciplines on a common project (D'Amour, Ferrad-Videla, Rodriguez, & Beaulieu, 2005). Professionals involved in multidisciplinary approaches may be characterized by regular communication and coordination between themselves and the affected party (D'Amour et al., 2005). A multidisciplinary team will draw on the expertise of many professionals. State-of-the-art treatment can be delivered best with state-of-the-art coverage, which would necessitate treatment of athletes with eating disorders from a multidisciplinary approach that would optimize clinical outcomes while maintaining fiduciary functionality.

A multidisciplinary approach builds on the unique expertise and perspectives of professionals representing multiple disciplines to address the multilayered needs of those

afflicted with eating disorders through numerous activities such as outreach, prevention, early intervention, and treatment activities. From an intuitive and academic standpoint, a multidisciplinary approach to behavioral and psychosocial intervention makes a great deal of sense. Empirically, a multidisciplinary approach does not guarantee success, but multidisciplinary teams that function together integrating broad expertise to complex problems are strongly supported (Mitchell et al., 2017). Working as part of a team provides its members the opportunity to cooperatively follow common goals, combine selective expertise, initiate discussions and solutions to difficult problems, and offers multiple professional lifelines when dealing with arduous challenges (Catlett & Halper, 1992). By means of simple illustration, without the expertise of multiple disciplines, how might it be determined whether an athlete's eating disorder symptoms are due to a psychiatric condition instead of a digestive condition? Clearly, an issue as complex as the nutritional requirements and eating behaviors of athletes with disordered eating and inappropriate weight control attempts are best accomplished by a multidisciplinary approach. However, a missing component of an effective multidisciplinary team is the presence of mental health practitioners. The next sections will illustrate the preparations, both academic and practitioner based, that social workers undergo to become an important member of an eating disorder multidisciplinary approach.

## **Social Work Profession**

The foundational principal of the social work profession is to promote human and community well-being (Council on Social Work Education, CSWE, 2017). This community would include everyone but provides particular attention to any person or group who is vulnerable, suffering, or in need, which could certainly include the college athlete population. According to Gill (2008), "The guiding principles and training that characterize social work make it an appropriate profession for college athletics and athlete development" (p. 86). However, the integration of social work professionals into collegiate athletics may have some challenges. First, athletic administrators and athletes may not value the contribution potential of a social work professional. A second challenge, potentially exacerbated by the first, would be the perception that the social worker is an "outsider". To make the transition into intercollegiate athletics, the social work profession must show how it may assist the needs of intercollegiate athletes in meaningful, practical, and compelling ways (Moore, 2015).

In order to inform athletic administrators of the value that social work practitioners might bring to their athletes and to obviate any perception of social workers as outsiders, the athletic community must be apprised of what professional social work involves. Social work is one of three core mental health professions, along with psychiatry and psychology. Social work is one of the fastest growing career fields in the United States, with practitioners trained to restore or augment the functional capacity of individuals, groups, and families and to provide psychosocial services and advocacy in overcoming a variety of complex challenges including addiction, discrimination, poverty, physical illness, and mental illness conditions (NASW, 2016). Clinical social work, a specialty practice area within the profession, involves assessment and diagnosis - as well as primary, secondary, and tertiary prevention and treatment of psychosocial and behavioral challenges.

Accredited higher education programs in social work must include course training leading to competence in mandatory content areas. Although programs have the latitude to add competency areas for specialized practice topics, and a mandatory field learning requirement of

400 hours for baccalaureate students and 900 hours for graduate students is identified as the “signature pedagogy” (CSWE, 2015, p. 12). Because of the centrality of field education in the social work curriculum, training programs have an ongoing challenge in identifying field placement options that provide high quality learning opportunities in which students can acquire contemporary best practice skills while receiving appropriate supervision, all within a setting commensurate with social work professional ethics and practice parameters.

## **Social Work Field Training Partnerships**

One strategy that has gained increasing prominence in addressing the need for high quality field education placement opportunities is in the development of partnerships between schools of social work and community agencies offering social work services. For example, one of the more customary incentives for developing such partnerships is the offering of improved services to a given underserved population (Begun, Berger, Otto-Salaj, & Rose, 2010). This strategy is not devoid of challenges. For example, it remains unclear what conditions and characteristics are necessary and sufficient for the establishment of such partnerships to be effective (Wilson, 2014).

Barriers notwithstanding, establishing field education partnerships promises significant advantages to practitioner training efforts and the field at large including expansion of prospects for practice to advance the knowledge base and the augmented integration and incorporation of empirically supported, evidence based practices into the practice arena (Bledsoe-Mansori et al., 2013). This latter point is one of understated significance. An ongoing challenge facing professions of psychosocial intervention involves redressing the lag between empirical findings and their widespread implementation in policy and in practice settings (Foa, Gillihan, & Bryant, 2013; Ledonowsky, Ecker, Seifert, Schwarz, & Cook, 2012).

### **Intra-Institutional Partnerships: Serving Students, Informing Practice**

We propose these and additional benefits are possible by means of intra-institutional partnerships. Specifically, we propose that schools of social work partner with collegiate athletic departments in order to address the vulnerabilities recognized now as being a risk of athletic participation as a means of serving the student body and as a mechanism of teaching, modeling, and disseminating evidence based practices. Within the context of eating disorders, social work students, under the supervision of social work faculty, could intervene to obviate risk

The unflappable, nonjudgmental health care professional, armed with a plan for recovery, can make a real difference to clients (Sim et al., 2010). The National Association of Social Workers (NASW, 2016) reported that 60% of mental health professionals are clinically trained social workers, compared to 10% being psychiatrists, 23% psychologists, and 5% psychiatric nurses. Further, the NASW (2016) stated:

Social workers see people within their environment—as part of a family, an employee in an organization, or a community member. Because of this, their mental health work is multi-faceted, combining psychological, social and practical elements. They have special skills in assessing, treating, and preventing psychological, behavioral, emotional, social and environmental problems affecting individuals negatively. (para. 11)

According to a 1998 report from the Substance Abuse and Mental Health Services Administration, there were approximately 35,000 psychiatrists, 73,000 psychologists, and 192,000 social workers in the United States employed in mental health (Alfonso & Olarte, 2011; Insel, 2004). Not all of these mental health professionals practice psychotherapy. However, there is evidence that a large number of adults receive psychotherapy from psychiatrists, psychologists, or social workers. A national probability sample of approximately 35,000 individuals in 14,000 households found that 3.2% of the adult population and 3.6% reported receiving psychotherapy annually, mostly from these providers (Insel, 2004). While social work faculty do not consider their mandate as training in psychotherapy, a national survey revealed that they provided psychotherapy to 0.5% of the adult population annually (Insel, 2004; Murray et al., 2013).

Social work programs, juxtaposed with the mental health fields of psychology and psychiatry, may provide compelling and unique opportunities to develop multidisciplinary approaches with collegiate athletic programs in the psychosocial wellbeing of students. There are currently 788 accredited social work programs in the United States (CSWE, 2017), 392 accredited psychology programs (APA, 2016), and 209 accredited psychiatry programs (Accreditation Council for Graduate Medical Education, 2016). These data underscore a noteworthy and pragmatic advantage of social work being the partner of choice with college athletic programs in cultivating a cultural norm throughout higher education of the mental wellbeing of student participants – access. There are far more social work programs than psychology or psychiatry programs, dramatically increasing the likelihood of the coexistence of a mental health training program and a student athletic program at a given institution. A logical question proceeding from this might be ‘why’?

Undoubtedly, a significant portion of the answer lies in the training and credentialing requirements required to enter a field of professional mental health practice. Succinctly, psychiatrists are physicians who have earned either a doctor of medicine or doctor of osteopathic medicine and have done a mental health residency, most states require a psychologist to have an earned doctoral degree, and clinical social workers must earn a Master of Social Work (MSW) (American Psychological Association Division of Clinical Psychology, n.d.). Most states allow licensed professionals in these fields to bill insurance companies for providing therapy and other psychosocial services (e.g. National Council for Behavioral Health).

Uniquely among the endeavors described above, the standard practitioner's degree required to do professional psychotherapy in social work is a Masters rather than a doctoral degree. Indeed, the entry level educational requirement of entering professional social work is the baccalaureate of social work (BSW), with many states offering provisions for licensure at the BSW level (Cox, Tice, & Long, 2015). Each of the mental health disciplines described is built upon a body of knowledge which identifies evidence-based practices involving the use of certain treatment techniques for specific clinical issues, though the vagaries and complexities of human behavior render it unlikely that a comprehensive body of scientific evidence for either-or any-subject will be completed in the foreseeable future.

While much work has been done and informs the efficacy and effectiveness of interventions within each academic area, little research has weighted the relative effectiveness of these three fields compared with one another. A consumer – or student – or coach, if aware of the educational and credentialing mandates of training in these three disciplines, may still have little more than the flaccid guidance of assumption in knowing to whom to turn in order to receive the highest quality psychosocial interventions. Fortunately, one of the most influential psychological

scholars of our time has investigated that question and reported that she is in good hands with whichever choice was made – the therapeutic effectiveness of each discipline is similar (Seligman, 1995).

### *Emerging Issues Relevant to Multidisciplinary Intervention*

While the need for increased athlete support in identifying and treating eating disorders is compelling, it is neither inclusive nor complete, and as social and cultural variables change, other opportunities to address student needs will emerge. Briefly consider the following example of college athletes who are transgender individuals. According to the NCAA (2011),

“Transgender” describes an individual whose gender identity (one’s internal psychological identification as a boy/man or girl/woman) does not match the person’s sex at birth. For example, a male-to-female (MTF) transgender person is someone who was born with a male body, but who identifies as a girl or a woman. (p. 3)

A study by Hepp and Milos (2002) implied that transgender persons may be at increased risk of body dissatisfaction, thus predisposing them to disordered eating. However, other studies have found inconsistent results between transgender individuals and eating disorders. While studies have indicated that the number of transgender athletes is small, the numbers are growing (Skinner-Thompson & Turner, 2014). Since the minority collegiate athletics programs, administrators, or coaches have been well- prepared to attend to a transgender student’s interest in participating in athletics, much less providing assistance to those with eating disorders, the need for interprofessional teamwork with professionals in social work is imperative.

## **Conclusion**

Historically, participation in collegiate athletics has been presumed to be associated with the conveyance of resilience, and this presumption is correct, though far from universal. It is now understood that, for some, participation conveys risk of negative psychosocial outcomes. One clear and alarming example is that of eating disorders, the presence of which are not only counterproductive to optimal performance but are also a significant health menace. While winning in collegiate athletics is important, it is not the *sine qua non* of the collegiate experience, which includes the education and development of the athlete. Fortunately, and with cognizance of the fiscal challenges resonating throughout and beyond higher education, universities have tremendous resource pools from which to draw.

According to Thompson and Sherman (1999), athletes are a subgroup of women who have increased risk of eating disorders because they not only experience general societal pressures regarding thinness, but sport-specific ones as well. Female athletes experience all the same sociocultural pressures that are present for non-athletes placing them at risk for body image issues and eating pathologies. In addition, as athletes, these women also experience unique, sport-related pressures that may independently or in combination increase their risk of developing disordered eating and body image issues (Smith & Petrie, 2008).

The importance of interprofessional teamwork and collaboration in the delivery of health-care services is well recognized (San Martin-Rodriguez, Beaulieu, D’Amour, & Ferrada-Videla, 2005). Such multidisciplinary efforts should utilize the resource pool available within the

university setting, and could reasonably include athletic trainers, coaches and social workers. Thus, it is imperative that inter-professional, multi-disciplinary relationships be cultivated within intercollegiate athletic departments.

As identified earlier, previous research has indicated that the management of athletes with disordered eating and inappropriate weight control behaviors is best achieved by a multidisciplinary approach. Such a team has often drawn on the expertise of professionals close to the athlete, namely their coaches and athletic trainers. Yet, as research has revealed, people in these professions have certain informational deficits that prevent them from adequately assisting the athlete with eating disorders. A multidisciplinary approach is certainly not a new concept in eating disorder literature, but the degree to which it is practiced with athletes in an institutional setting must be taken into consideration.

The complexity of developing a multidisciplinary approach may preclude an easy grasp of the entirety of interprofessional collaboration and present challenges for those involved (Crocker, Trede, & Higgs, 2012). However, the process of unpacking a multidisciplinary concept can be beneficial when considering a multi-faceted construct such as eating disorders and organizing it into important components (Flaspohler, Duffy, Wandersman, Stillman, & Maras, 2008). Distinctly conveying the components of multidisciplinary collaboration and providing a conceptual framework is essential. A partnership between athletic and social work training programs has the prospect of being reciprocally beneficial to all students. Such an association stands to provide psychosocial support to athletes while offering the opportunity of a skills-focused field education experience under high quality supervision to students. An additional benefit is the opportunity for interdisciplinary applied research, opportunities that can be scarce, though, so much is yet to be known. Social work degree programs are available on more university campuses than are doctoral degree programs in psychology or medicine with a comparable rate of effectiveness.

There are innumerable additional indications of the value of the partnership between college athletics and social work in higher education such as the ease and opportunity of the robustly substantiated technique of peer tutoring space (Backer, Keer, & Valcke, 2015). The expansion to higher education of the philosophy, goals, and strategies built upon the foundation developed in K – 12 education associated with mental health promotion in schools (Miller, 2016; Waller, 2012; Waller, 2016) is an area of inquiry that is unexplored but that has momentous potential. A scrupulous exploration is beyond the purview of this discussion, the goal of which was to propose the contributions to student development, functioning, and health that might be achieved on behalf of a vulnerable student population through a collaborative partnership between social work training programs in collegiate athletic training programs. The development and well-being of students is and should always be within the purview of higher education.

## References

- Accreditation Council for Graduate Medical Education. (2016). *Psychiatry programs academic year 2016-2017 United States*. Retrieved from <https://apps.acgme.org/ads/Public/Reports/ReportRun?ReportId=1&CurrentYear=2016&SpecialtyId=86&IncludePreAccreditation=false>.
- Alfonso, C. A., & Olarte, S. W. (2011). Contemporary practice patterns of dynamic psychiatrists—survey results. *Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry, 39*(1), 7-26.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders 5<sup>th</sup> edition: DSM-5*. Washington, DC: American Psychiatric Publishing.
- American Psychological Association. (2016). Search for accredited programs. Retrieved from [http://apps.apa.org/accredsearch/?\\_ga=1.218632153.1984757465.1478746681](http://apps.apa.org/accredsearch/?_ga=1.218632153.1984757465.1478746681).
- American Psychological Association Division of Clinical Psychology. (n.d.). *What is the difference between psychologists, psychiatrists, and social workers?* Retrieved from <http://www.div12.org/sites/default/files/DifferencesBetweenDisciplines.pdf>.
- Arcelus, J., Mitchell, A. J., Wales, J., & Nielsen, S. (2011). Mortality rates in patients with anorexia nervosa and other eating disorders: A meta-analysis of 36 studies. *Archives of General Psychiatry, 68*(7), 724-731.
- Backer, L. D., Keer, H. V., & Valcke, M. (2015). Promoting university students' metacognitive regulation through peer learning: The potential of reciprocal peer tutoring. *Higher Education, 70*(3), 469-486.
- Basow, S. A., Foran, K. A., & Bookwala, J. (2007). Body objectification, social pressure, and disordered eating behavior in college women: The role of sorority membership. *Psychology of Women Quarterly, 31*, 394-400.
- Beals, K. A. (2003). Eating disorder and menstrual dysfunction screening, education, and treatment programs. *Physician and Sports Medicine, 31*, 33-38.
- Beals, K. A., & Manore, M. M. (2002). Disorders of the female athlete triad among collegiate athletes. *International Journal of Sport Nutrition and Exercise Metabolism, 12*, 281-293.
- Begun, A. L., Berger, L. K., Otto-Salaj, L. L., & Rose, S. J. (2010). Developing effective social work university-community research collaborations. *Social Work, 55*(1), 54-62.
- Biesecker, A. C., & Martz, D. M. (1999). Impact of coaching style on vulnerability for eating disorders: An analog study. *Eating Disorders, 7*(3), 235-244.
- Bledsoe-Mansori, S. E., Bellamy, J. L., Wike, T., Grady, M., Dinatta, E., Killian-Ferrell, C., & Rosenburg, K. (2013). Agency-university partnerships for evidence-based practice: A national survey of schools of social work. *Social Work Research, 37*(3), 179-193.
- Bonci, C. M., Bonci, L. J., Granger, L. R., Johnson, C. L., Malina, R. M., Milne, L. W., Ryan, R.A., & Vanderbunt, E.M. (2008). National athletic trainers 'position statement: Preventing, detecting and managing disordered eating in athletes. *Journal of Athletic Training, 43*(1), 80-108.
- Boone, L., Soenens, B., & Luyten, P. (2014). When or why does perfectionism translate into eating disorder pathology? A longitudinal examination of the moderating and mediating role of body dissatisfaction. *Journal of Abnormal Psychology, 123*, 412-418.



- Bowers, A. G., Miller, J. J., Martin, C. L. L., Wolfe, B., & Speed, N. (2013). "I feel pressure:" Exploring the phenomenon of body image formation in collegiate female athletes within the context of social comparison theory. *Journal of Coaching Education, 6*(2), 2-26.
- Bratland-Sanda, S., & Sundgot-Borgen, J. (2013). Eating disorders in athletes: Overview of prevalence, risk factors and recommendations for prevention and treatment. *European Journal of Sport Science, 13*(5), 499-508.
- Busanich, R., & McGannon, K. R. (2010). Deconstructing disordered eating: A feminist psychological approach to the body, food and exercise relationship in female athletes. *Quest, 62*, 385-405.
- Carrigan, K. W., Petrie, T. A., & Anderson, C. M. (2015). To weigh or not to weigh? Relation to disordered eating attitudes and behaviors among female collegiate athletes. *Journal of Sport and Exercise Psychology, 37*(6), 659-665.
- Chesney, E., Goodwin, G. M., & Fazel, S. (2014). Risks of all-cause and suicide mortality in mental disorders: A meta-review. *World Psychiatry, 13*, 153-160.
- Cockell, S. J., Hewitt, P. L., Seal, B., Sherry, S., Goldner, E. M., Flett, G. L., & Remick, R. A. (2002). Trait and self-presentational dimensions of perfectionism among women with anorexia nervosa. *Cognitive Therapy and Research, 26*(6), 745-758.
- Coelho, G. M., Gomes, A. I., Ribeiro, B. G., & Soares, E. (2014). Prevention of eating disorders in female athletes. *Open Access Journal of Sports Medicine, 5*, 105–113.
- Council on Social Work Education. (2015). *Educational policy and accreditation standards for Baccalaureate and Master's Social Work Programs*. Retrieved from <https://www.cswe.org/Accreditation>.
- Council on Social Work Education. (2017). *Accredited programs*. Retrieved from <https://www.cswe.org/Accreditation/Directory-of-Accredited-Programs.aspx>.
- Cox, L. E., Tice, C. J., & Long, D. D. (2015). *Introduction to social work: An advocacy based profession*. Thousand Oaks, CA: Sage.
- Crocker, A., Tede, F., & Higgs, J. (2012). Collaboration: What is it like? – Phenomenological interpretation of the experience of collaborating within rehabilitation teams. *Journal of Interprofessional Care, 26*, 13-20.
- Culbert, K. M., Racine, S. E., & Klump, K. L. (2015). Research review: What we have learned about the causes of eating disorders - A synthesis of sociocultural, psychological, and biological research. *Journal of Child Psychology and Psychiatry, 56*(11), 1141-1164.
- D'Amour, D., Ferrada-Videla, M., Rodriguez, L., & Beaulieu, M. D. (2005). The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks. *Journal of Interprofessional Care, 19*, 116–131.
- Davoren, A. K., & Hwang, S. (2014). Mind, body, and sport: Depression and anxiety prevalence in student-athletes. Retrieved from <http://www.ncaa.org/health-and-safety/sport-science-institute/mind-body-and-sport-depression-and-anxiety-prevalence-student-athletes>.
- Denison, J. (2007). Social theory for coaches: A Foucauldian reading of one athlete's poor performance. *International Journal of Sports Science & Coaching, 2*(4), 369-383.
- Dir, A. L., Karyadi, K., & Cyders, M. A. (2013). The uniqueness of negative urgency as a common risk factor for self-harm behaviors, alcohol consumption, and eating problems. *Addictive Behaviors, 38*(5), 2158-2162.
- Drevelengas, A., Chourmouzi, D., Pitsavas, G., Charitandi, A., & Boulogianni, G (2001). Reversible brain atrophy and subcortical high signal on MRI in a patient with anorexia nervosa. *Neuroradiology, 43*(10), 838–40. doi:10.1007/s002340100589.

- Duchin, O., Mora-Plazas, M., Marin, C., Mendes de Leon, C., Lee, J. M., Baylin, A., & Villamor, E. (2013). BMI and sociodemographic correlates of body image perception and attitudes in school-aged children. *Public Health Nutrition, 17*(10), 2216–2225.
- Engel, S. G., Johnson, C., Powers, P. S., Crosby, R. D., Wonderlich, S. A., Wittrock, D. A., & Mitchell, J. E. (2003). Predictors of disordered eating in a sample of elite Division I college athletes. *Eating Behaviors, 4*(4), 333-343.
- Farstad, S. M., McGeown, L., & von Ranson, K. M. (2016). Eating disorders and personality, 2004-2016: A systematic review and meta-analysis. *Clinical Psychology Review, 46*, 91-105.
- Flaspohler, P., Duffy, J., Wandersman, A., Stillman, L., & Maras, M. A. (2008). Unpacking prevention capacity: An intersection of research-to-practice models and community-centered models. *American Journal of Community Psychology, 41*(3-4), 182-196.
- Flett, G. L., & Hewitt, P. L. (2005). The perils of perfectionism in sports and exercise. *Current Directions in Psychological Science, 14*(1), 14-18.
- Foa, E. B., Gillihan, S. J., & Bryant, R. A. (2013). Challenges and successes in dissemination of evidence-based treatments for traumatic stress: Lessons learned from prolonged exposure therapy for PTSD. *Psychological Science in the Public Interest, 14*(2), 65-111.
- Fortes, L. S., Neves, C. M., Filgueiras, J. F., & Ferreira, M. E. C. (2013). Body dissatisfaction, psychological commitment to exercise and eating behavior in young athletes from aesthetic sports. *Revista Brasileira de Cineantropometria e Desempenho Humano, 15*(6), 695-704
- Furnham, A., Badmin, N., & Sneade, I. (2002). Body image dissatisfaction: Gender differences in eating attitudes, self-esteem, and reasons for exercise. *The Journal of Psychology, 136*(6), 581-596.
- Gaines, S. A., & Burnett, T. B. S. (2014). Perceptions of eating behaviors, body image, and social pressures in female Division II college athletes and non-athletes. *Journal of Sport Behavior, 37*(4), 351.
- Garner, D. M., Garfinkel, P. E., Schwartz, D., & Thompson, M. (1980). Cultural expectations of thinness in women. *Psychological Reports, 47*(2), 483-491.
- Gill, E. L. (2008). Mental health in college athletics: It's time for social work to get in the game. *Social Work, 53*(1), 85-88.
- Goodwin, H., Arcelus, J., Geach, N., & Meyer, C. (2014). Perfectionism and eating psychopathology among dancers: The role of high standards and self-criticism. *European Eating Disorders Review, 22*(5), 346-351.
- Greenleaf, C., Petrie, T. A., Carter, J., & Reel, J. J. (2009). Female collegiate athletes: Prevalence of eating disorders and disordered eating behaviors. *Journal of American College Health, 57*(5), 489-495.
- Gulliver, A., Griffiths, K. M., Christensen, H. (2012). Barriers and facilitators to mental health help-seeking for young elite athletes: A qualitative study. *BMC Psychiatry, 12*(1), 157-170.
- Harris, M. B. (2000). Weight concern, body image and abnormal eating in college tennis players and their coaches. *International Journal of Sport Nutrition and Exercise Metabolism, 10*(1), 1-15.
- Heffner, J. L., Ogles, B. M., Gold, E., Marsden, K., & Johnson, M. (2003). Nutrition and eating in female college athletes: A survey of coaches. *Eating Disorders, 11*, 209-220.

- Hepp, U., & Milos, G. (2002). Gender identity disorder and eating disorders. *International Journal of Eating Disorders*, 32, 473-478.
- Hewitt, P. L., Flett, G. L., Sherry, S. B., Habke, M., Parkin, M., Lam, R. W., ... & Stein, M. B. (2003). The interpersonal expression of perfection: perfectionistic self-presentation and psychological distress. *Journal of Personality and Social Psychology*, 84(6), 1303.
- Hinton, P. S., & Kubas, K. L. (2005). Psychosocial correlates of disordered eating in female collegiate athletes: Validation of the ATHLETE questionnaire. *Journal of American College Health*, 54(3), 149-156.
- Hopkinson, R. A., & Lock, J. (2004). Athletics, perfectionism, and disordered eating. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, 9(2), 99-106.
- Hudson, J. I., Hiripi, E., Pope, H. G., & Kessler, R. C. (2007). The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological Psychiatry*, 61(3), 348-358.
- Insel, T. R. (2004). *Science to service: Mental health care after the decade of the brain*. Paper presented at the 8th Annual Meeting of the Society for Social Work and Research New Orleans, LA.
- Jarriel, A. J. (2011). *Eating disorders and body image: Triangulating academic preparation, coaches and athletic trainers' beliefs, and female high school athletes' experiences*. (Unpublished doctoral dissertation). University of Georgia, Athens, GA.
- Jie, Q., Qiang, H., Yumei, W., Ting, L., Mudan, W., Zhiquan, R., & Dehua, Y. (2013). Prevalence of eating disorders in the general population: A systematic review. *Shanghai Archives of Psychiatry*, 25(4), 212-223.
- Keel, P. K., & Forney, K. J. (2013). Psychosocial risk factors for eating disorders. *International Journal of Eating Disorders*, 46(5), 433-439.
- Kerr, G., Berman, E., & De Souza, M. J. (2006). Disordered eating in women's gymnastics: Perspectives of athletes, coaches, parents, and judges. *Journal of Applied Sport Psychology*, 18, 28-43.
- Klump, K. L., Bulik, C. M., Kaye, W. H., Treasure, J., & Tyson, E. (2009). Academy for eating disorders position paper: Eating disorders are serious mental illnesses. *International Journal of Eating Disorders*, 42(2), 97-103
- Ledonowsky, S., Ecker, U. K. H., Seifert, C. M., Schwarz, N., & Cook, J. (2012). Misinformation and its correction: Continued influence and successful debiasing. *Psychological Science in the Public Interest*, 13(3), 106-131.
- Leone, J. E., Sedory, E. J., & Gray, K. A. (2005). Recognition and treatment of muscle dysmorphia and related body image disorders. *Journal of Athletic Training*, 40(4), 352-359.
- Levitt, D. H. (2004). Drive for thinness and fear of fat among college women: Implications for practice and assessment. *Journal of College Counseling*, 7, 109-117.
- Lindberg, S. M., Hyde, J. S., & McKinley, N. M. (2006). A measure of objectified body consciousness for preadolescent and adolescent youth. *Psychology of Women Quarterly*, 30(1), 65-76.
- Littleton, H. L., & Ollendick, T. (2003). Negative body image and disordered eating behavior in children and adolescents: What places youth at risk and how can these problems be prevented? *Clinical Child and Family Psychology Review*, 6(1), 51-66.
- Magallares, A., Jauregui-Lobera, I., Gamiz-Jimenez, N., & Santed, M. (2014). Subjective well-being in a sample of women with eating disorders. *Psychological Record*, 64(4), 769-776.

- Martinsen, M., Bahr, R., Borresen, R., Holme, I., Pensgaard, A. M., & Sundgot-Borgen J. (2014). Preventing eating disorders among young elite athletes: A randomized controlled trial. *Medicine & Science in Sports & Exercise*, 46(3), 435-447.
- Martinsen, M., Sherman, R. T., Thompson, R. A., & Sundgot-Borgen J. (2015). Coaches' knowledge and management of eating disorders: A randomized controlled trial. *Medicine & Science in Sports & Exercise*, 47(5), 1070-1078.
- Martinsen, M., & Sundgot-Borgen, J. (2013). Higher prevalence of eating disorders among adolescent elite athletes than controls. *Medicine & Science in Sports & Exercise*, 45(6), 1188-1197.
- Matusek, J. A., Wendt S. J., & Wiseman C. V. (2004). Dissonance thin-ideal and didactic healthy behavior eating disorder prevention programs: Results from a controlled trial. *International Journal of Eating Disorders*, 36, 376-388.
- McLaren, L., Gauvin, L., & White, D. (2001). The role of perfectionism and excessive commitment to exercise in explaining dietary restraint: Replication and extension. *International Journal of Eating Disorders*, 29(3), 307-313.
- McLester, C. N., Hardin, R., & Hoppe, S. (2014). Susceptibility to eating disorders among collegiate female student-athletes. *Journal of Athletic Training*, 49(3), 406-410.
- Miller, J. J. (2016). Student athletics: Opportunity, challenge, and the byzantine construct 'body image'. In Raymond Waller (Ed.) *Mental health promotion in schools volume II: Special topics, special challenges*. Sharjah, UAE: Bentham Science Publishers.
- Milligan, B., & Pritchard, M. (2006). The relationship between gender, type of sport, body dissatisfaction, self esteem and disordered eating behaviors in division I athletes. *Athletic Insight*, 8(1), 32-46.
- Mitchell, R., Boyle, B., O'Brien, R., Malik, A., Tian, K., Parker, V., Giles, M., Joyce, P., & Chiang, V. (2017). Balancing cognitive diversity and mutual understanding in multidisciplinary teams. *Health Care Management Review*, 42(1), 42-52.
- Moore, M. A. (2015). *Taking a timeout to ensure well-being: Social work involvement in college sports*. Retrieved from Proquest Digital Dissertations. (3701062).
- Murray, C. J., Abraham, J., Ali, M. K., Alvarado, M., Atkinson, C., Baddour, L. M., ... & Bolliger, I. (2013). The state of US health, 1990-2010: Burden of diseases, injuries, and risk factors. *JAMA*, 310(6), 591-606.
- National Association of Social Workers. (2016). *Mental health*. Retrieved from <https://www.socialworkers.org/pressroom/features/issue/mental.asp>.
- National Association of Social Workers. (2016). *Social work profession*. Retrieved from <https://www.socialworkers.org/pressroom/features/general/profession.asp>.
- National Collegiate Athletic Association. (2011). *NCAA inclusion of transgender student-athletes*. Retrieved from [https://www.ncaa.org/sites/default/files/Transgender\\_Handbook\\_2011\\_Final.pdf](https://www.ncaa.org/sites/default/files/Transgender_Handbook_2011_Final.pdf).
- National Eating Disorder Association. (2008). *Information and resources*. Retrieved from [www.nationaleatingdisorders.org](http://www.nationaleatingdisorders.org).
- Nowicka, P., Eli, K., Ng, J., Apitzsch, E., & Sundgot-Borgen, J. (2013). Moving from knowledge to action: A qualitative study of elite coaches' capacity for early intervention in cases of eating disorders. *International Journal of Sports Science and Coaching*, 8(2), 343-355.

- Pace, E. (1994, July 28). Christy Henrich, 22, gymnast who suffered from anorexia. *The New York Times*. Retrieved from <http://www.nytimes.com/1994/07/28/obituaries/christy-henrich-22-gymnast-who-suffered-from-anorexia.html>.
- Papathomas, A., & Lavalley, D. (2010). Athlete experiences of disordered eating in sport. *Qualitative Research in Sport, Exercise and Health, 2*, 354-370
- Papathomas, A., & Lavalley, D. (2012). Narrative constructions of anorexia and abuse: An athlete's search for meaning in trauma. *Journal of Loss and Trauma, 17*(4), 293-318.
- Petrie, T., & Sherman, R. (2007). Counseling athletes with eating disorders: A case study. *Handbook of Sports Psychology, 3*, 121-137.
- Pinto-Gouveia, J., Ferreira, C., & Duarte, C. (2014). Thinness in the pursuit for social safeness: An integrative model of social rank mentality to explain eating psychopathology. *Clinical Psychology & Psychotherapy, 21*(2), 154-165.
- Plateau, C. R., McDermott, H. J., Arcelus, J., & Meyer, C. (2014). Identifying and preventing disordered eating among athletes: Perceptions of track and field coaches. *Psychology of Sport & Exercise, 15*(6), 721-728.
- Pompili, M., Mancinelli, I., Girardi, P., Accorrà, D., Ruberto, A., & Tatarelli, R (2003). Suicide and attempted suicide in anorexia nervosa and bulimia nervosa. *Annali dell'Istituto Superiore di Sanità, 39*(2), 275–81.
- Quick, V. M., Byrd-Bredbenner, C., & Neumark-Sztainer, D. (2013). Chronic illness and disordered eating: A discussion of the literature. *Advances in Nutrition: An International Review Journal, 4*(3), 277-286.
- Reel, J. J., Petrie, T. A., SooHoo, S., & Anderson, C. M. (2013). Weight pressures in sport: Examining the factor structure and incremental validity of the weight pressures in sport—Females. *Eating Behaviors, 14*(2), 137-144.
- Reischer, E., & Koo, K. S. (2004). The body beautiful: Symbolism and agency in the social world. *Annual Review of Anthropology, 33*, 297-317.
- Rockwell, M. S., Nickols-Richardson, S. M., & Thye, F. W. (2001). Nutrition knowledge, opinions and practices at athletic trainers at a Division I university. *International Journal of Sport Nutrition and Exercise Metabolism, 11*, 174-185.
- Rousselet, M., Guérineau, B., Paruit, M. C., Guinot, M., Lise, S., Destrube, B., ... & Mora, C. (2016). Disordered eating in French high-level athletes: Association with type of sport, doping behavior, and psychological features. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity, 1-8*. doi:10.1007/s40519-016-0342-0
- San Martín-Rodríguez, L., Beaulieu, M. D., D'Amour, D., & Ferrada-Videla, M. (2005). The determinants of successful collaboration: A review of theoretical and empirical studies. *Journal of Interprofessional Care, 19*(1), 132-147.
- Scoffier, S., Maïano, C., & d'Arripe-Longueville, F. (2010). The effects of social relationships and acceptance on disturbed eating attitudes in elite adolescent female athletes: The mediating role of physical self-perceptions. *International Journal of Eating Disorders, 43*(1), 65-71.
- Selby, C., & Reel, J. J. (2011). A coach's guide to identifying and helping athletes with eating disorders. *Journal of Sport Psychology in Action, 2*(2), 100-112.
- Seligman, M. E. P. (1995). The effectiveness of psychotherapy: The Consumer Reports study. *American Psychologist, 50*(12), 965-974.
- Shanmugam, V., Jowett, S., & Meyer, C. (2012). Eating psychopathology amongst athletes: Links to current attachment styles. *Eating Behaviors, 13*(1), 5-12.

- Sherman, R. T., DeHass, D., Thompson, R. T., & Wilfert, M. (2005). NCAA coaches survey: The role of the coach in identifying and managing athletes with disordered eating. *Eating Disorders: The Journal of Treatment and Prevention*, 13, 447-466.
- Sherman, R. T., & Thompson, R. (2001). Athletes and disordered eating: Four major issues for the professional psychologist. *Professional Psychology: Research and Practice*, 32(1), 27-33.
- Sim, L. A., McAlpine, D. E., Grothe, K. B., Himes, S. M., Cockerill, R. G., & Clark, M. M. (2010). Identification and treatment of eating disorders in the primary care setting. *Mayo Clinic Proceedings*, 85(8), 746-751
- Skinner-Thompson, S., & Turner, I. M. (2014). Title IX's protection for transgender student athletes. *Wisconsin Journal of Law, Gender, and Society*, 28, 271-300.
- Smink, F. R. E., van Hoeken, D., & Hoek, H.W. (2012). Epidemiology of eating disorders: Incidence, prevalence and mortality rates. *Current Psychiatry Reports*, 14(4), 406-414.
- Smith, A., & Petrie, T. (2008). Reducing the risk of disordered eating among female athletes: A test of alternative interventions. *Journal Applied Sport Psychology*, 20, 392-407.
- Stirling, A., & Kerr, G. (2009). Abused athletes' perceptions of the coach-athlete relationship. *Sport in Society*, 12(2), 227-239.
- Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review. *Psychological Bulletin*, 128(5), 825-848.
- Stoeber, J., & Childs, J. H. (2010). The assessment of self-oriented and socially prescribed perfectionism: Subscales make a difference. *Journal of Personality Assessment*, 92(6), 577-585. doi:10.1080/00223891.2010.513306.
- Striegel-Moore, R. H., & Bulik, C. M. (2007). Risk factors for eating disorders. *American Psychologist*, 62(3), 181-198.
- Szedlak, C., Smith, M. J., Day, M. C., & Greenlees, I. A. (2015). Effective behaviours of strength and conditioning coaches as perceived by athletes. *International Journal of Sports Science & Coaching*, 10(5), 967-984.
- Tchanturia, K., Hambrook, D., Curtis, H., Jones, T., Lounes, N., Fenn, K., Keyes, A., Stevenson, L., & Davies, H. (2013). Work and social adjustment in patients with anorexia nervosa. *Comprehensive Psychiatry*, 54, 41-45.
- Thompson, R. A., & Sherman, R. T. (1999). Athletes, athletic performance, and eating disorders: Healthier alternatives. *Journal of Social Issues*, 55(2), 317-337.
- Thompson, R. A., & Sherman, R. T. (2010). *Eating disorders in sport*. New York, NY: Routledge.
- Thompson, A., Yingling, F., Boardley, D., & Rocks, J. (2007). Collegiate athletic trainers' knowledge and perceptions of disordered eating behaviors in athletes. *Psychological Reports*, 101(3), 1173-1178.
- Torstveit, M. K., Rosenvinge, J. H., & Sundgot-Borgen, J. (2008). Prevalence of eating disorders and the predictive power of risk models in female elite athletes: A controlled study. *Scandinavian Journal of Medicine & Science in Sports*, 18(1), 108-118.
- Todd, J., & Hong, C. (2015). Features of objectified body consciousness and sociocultural perspectives as risk factors for disordered eating among late-adolescent women and men. *Journal of Counseling Psychology*, 62(4), 741-752.
- Turk, J. C., Prentice, W. E., Chappell, S., & Shields, E. W. (1999). Collegiate coaches' knowledge of eating disorders. *Journal of Athletic Training*, 34(1), 19-24.

- Uher, R., & Rutter, M. (2012). Classification of feeding and eating disorders: Review of evidence and proposals for ICD-11. *World Psychiatry, 11*(2), 80-92.
- Vaughan, J. L., King, K. A., & Cottrell, R. R. (2004). Collegiate athletic trainers' confidence in helping female athletes with eating disorders. *Journal of Athletic Training, 39*(1), 71-76.
- Waller, R. J. (2012). *Mental health promotion in schools volume I: Foundations*. Sharjah, UAE: Bentham Science Publishers.
- Waller, R. J. (2016). *Mental health promotion in schools volume II: Special topics, special challenges*. Sharjah, UAE: Bentham Science Publishers.
- Whiteford, H. A., Degenhardt, L., Rehm, J., Baxter, A. J., Ferrari, A. J., Erskine, H. E., Charlson, F. J., Norman, R. E., Flaxman, A.D., Johns, N., Burstein, R. Murray, C. J. L., & Vos, T. (2013). Global burden of disease attributable to mental and substance use disorders: Findings from the Global Burden of Disease Study 2010. *The Lancet, 382*(9904), 1575-1586.
- Wilson, G. (2014). Building partnerships in social work education: Towards achieving collaborative advantage for employers and universities. *Journal of Social Work, 14*(1), 3-22.
- Wilstein, S. (1994). Beasts' of anorexia nervosa, bulimia ravaged gymnast's body: Health: Christy Henrich was 22 and weighed less than 60 pounds when she died. Her family hopes her story will save others. *L.A. Times*. Retrieved from [http://articles.latimes.com/1994-08-21/news/mn-29434\\_1\\_christy-henrich](http://articles.latimes.com/1994-08-21/news/mn-29434_1_christy-henrich).
- Wollenberg, G., Shriver, L. H., & Gates, G. E. (2015). Comparison of disordered eating symptoms and emotion regulation difficulties between female college athletes and non-athletes. *Eating Behaviors, 18*, 1-6.