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Treatment Strategies for Eating Disorders in Collegiate Athletics

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1. Introduction

Eating disorders such as Anorexia Nervosa, Bulimia Nervosa, not otherwise specified eating disorders, and binge eating disorder are on the rise in collegiate athletes and aesthetic dancers (Greenleaf, Petrie, Carter, & Reel, 2009; Johnson, Powers, & Dick, 1999; Torres-McGehee et al., 2009; Torres-McGehee, Monsma, Gay, Minton, & Mady, In Press). Due to the nature of specific sports and pressures of sport participation, eating disorder symptoms and etiology in athletes are slightly different than their non-athletic counterparts. Therefore, it is critical that treatment for eating disorders is unique to athletes. Preferably, the treatment of the athlete should be multi-dimensional (e.g., psychosocial interventions, nutritional management, and pharmacological interventions when necessary).

Treatment of Anorexia Nervosa in the early 1900s was considered a biologically based disease resulting from hormonal insufficiencies; therefore, treatment focused on correcting hormonal imbalances such as pituitary extract, insulin, estrogen, thyroid extract, and corticosteroids (Brumberg, 1998; Parry-Jones, 1985). Incorporation of psychotherapy was integrated as part of treatment in the 1930s. Bulimia on the other hand was not defined as a specific eating disorder until the late 1970s (Russel, 1979); and treatment then was primarily centered around eliminating patient's hungry appetites by imposing strict diets and prescribing medicines that were supposed to warm the stomach creating a sensation of being full. Additionally, individuals who have clinical eating disorders, like Bulimia, characteristically have low mood and higher-than-average levels of depressive symptoms, and are at greater risk of clinical depression (Fairburn et al., 1999; Fisher et al., 1995; Palmer, 1998; Muscat & Long, 2008). It was theorized by Koenig and Wasserman (1995) that the high rates of co-morbidity found between eating disorders and depression may, in part, be caused by common features such as negative self-evaluation and general dissatisfaction with one's physical appearance (Muscat & Long, 2008). It is plausible that precursors to binge-eating which is the disordered eating behavior that can lead to Bulimia appear to be depression symptoms and low self-esteem. Therefore, psychologists integrate strategies to alleviate depressed mood that is often plagued with Bulimia Nervosa (Gleaves., 2000).

Current treatments focus on both the underlying psychopathologies and the obvious behaviors using protocols including: individual, family, and group psychotherapy; nutritional counseling; medications; exercise therapy, and experiential therapies (e.g., art, music, movement). This chapter will examine current treatment and prognosis strategies for comorbid conditions among collegiate athletes. The goal of this chapter is to provide

clinicians/professionals with a deeper understanding of current treatments strategies tailored to collegiate athletes. It should be emphasized that this approach is a team approach that integrates a multi-dimensional approach by the dietitian, physician, athletic trainer, psychologist, coach and other health professionals as needed.

2. Current treatments and prognosis

Eating disorders are serious mental health problems which require appropriate diagnosis and specialized treatment interventions. Eating disorders are essentially "cognitive disorders," in that they share a distinctive "core psychopathology," the over evaluation of shape and weight and their control that is cognitive in nature (Fairburn, 2008). The leading treatment for Bulimia Nervosa is cognitive-behavioral therapy in the general population. It is currently the most researched, best established treatment for Bulimia Nervosa (Wilson, Grilo, & Vitousek, 2007). Other treatments with promise are interpersonal therapy, dialectical behavioral therapy and behavioral weight loss therapy for treating bulimia. Interpersonal therapy is the only psychological treatment for Bulimia Nervosa that has demonstrated long-term outcomes that are comparable to those of cognitive-behavioral therapy (Wilson & Shafran, 2005).

Developmental stages and life transitions are important in determining timing for the onset of eating disorders (Mussell, Binford, & Fulkerson, 2000). Eating disorders are more likely to develop when individuals are having difficulty adjusting and adapting to developmental challenges (Smolak & Levine, 1996). Bulimia has a high relapse rate; it is also recognized as an unstable eating disorder that can acquire additional disordered eating behaviors over time. Additionally, Bulimia has a slightly later age of onset than anorexia, typically in late adolescence or early adulthood (Fairburn, 2008). The transition to college may be a particularly threatening time for some individuals and serve as a catalyst for eating pathology (Smith & Petrie, 2008). For instance, dieting at the beginning of the freshman year may be the best predictor of bulimic behavior at the end of the first year of college (Krahn, Kurth, Bohn, Olson, Gomberg, & Drewnowski, 1995). Age is considered as a factor in treatment effectiveness rather than just symptom duration. Current treatments have been utilized with populations in accordance with the identified affected groups; however they are being evaluated for use with special populations, such as ethnic minority groups, athletes, and males all which have been underrepresented in the prevalence data. Collegiate student athletes are a subset of the athlete population that possesses unique characteristics particularly related to Bulimia.

2.1 Treatment strategies with collegiate student athletes

With regard to the treatment of eating disorders, adolescents seem to benefit the most from cognitive-behavioral therapy, conjoint family therapy (specifically for anorexia), and interpersonal therapy. In treating Bulimia, it is important to consider the onset of disordered eating symptoms, the duration of the symptoms, and the age of the client. All of these factors are problematic for identifying disordered eating symptoms for collegiate student athletes. Moore and colleagues (2007) established that it is clear from the empirical literature that for Bulimia Nervosa, there are treatments that are efficacious and those that have no empirical foundation for their use with this disorder. Thus, the practitioner should be utilizing empirically supported interventions specifically useful with the athletic population. Considering the uniqueness of the sport environment, collegiate student athletes present with unique challenges regarding treatment for Bulimia Nervosa. In addition to the same

sociological and psychological issues related to disordered eating in the general population, athletes experience issues such as evaluation criteria, sport-specific weight restrictions, peer comparison, peer and coach pressure, and athletic performance demands (Moore et al., 2007). Also due to sport pressures, athletes are probably less likely to personally seek treatment for Bulimia Nervosa. If athletes are slow to seek treatment, that extends the potential success of intervention applied for treatment.

The collegiate student athlete experiences life transitional issues similar to other college students, such as independence, responsibility, coping strategies, and building new relationships. In addition to these experiences, collegiate student athletes have transitional issues related to their sport, such as adjusting to a new team structure (i.e., coaches, teammates, trainers, etc.), balancing sport and academics, and the pressures of being a student-athlete (i.e., peers, expectations, media). The practitioner needs to be thoroughly knowledgeable about the complexities of eating disorders in athletes, for example, knowing the physical warning signs, general psychosocial functioning, emotion regulation, parental and coaching pressures, weight restrictions for competition, perceptions about body size and shape, perceived environmental control, self-worth, and any other factors that may place an athlete at risk for developing an eating disorder (Moore et al., 2007). Thus, interventions developed for athletes need to address general and sport-specific factors regarding the presence of Bulimia and disordered eating behaviors (Smith & Petrie, 2008).

2.2 Cognitive behavioral theory

The cognitive-behavioral theory for treatment of eating disorders such as Bulimia Nervosa, stresses that central to the maintenance of Bulimia is clients' dysfunctional scheme for self-evaluation. This self-evaluation is largely or even exclusively, in terms of their shape and weight and their ability to control them (Fairburn & Cooper, 2010). Cognitive behavioral theory can also be used to identify dysfunctional thought patterns (e.g., "I am a bad person") that trigger eating disordered behaviors (Stien et al., 2001), and reestablishing those thought patterns to reduce behaviors. This dysfunction is observed throughout all facets of their life, including dietary intake and restraint, perceived body image, and methods related to weight control. If the dysfunctional scheme is central to the maintenance of bulimic symptoms and is considered the core psychopathology, this criterion is especially problematic when working with collegiate student athletes. Collegiate student athletes with Bulimia Nervosa or disordered eating symptoms potentially experience the dysfunctional scheme for self-evaluation significantly differently from their nonathlete peers. They tend to internalize the pressures of their sport and physical appearance and it is not clear that their self-evaluation regarding their athletic potential as related to their physical appearance is always considered dysfunctional.

Another essential feature of Bulimia Nervosa is binge eating episodes. The cognitive-behavioral theory proposes that binge eating is largely a product of the clients' distinctive form of dietary restraint, which then maintains the core psychopathology by intensifying concerns about their ability to control their eating and weight (Cooper & Fairburn, 2010). Athletes are trained to pay attention to their dietary intake particularly as it relates to the interaction of their physique and athletic performance. It is inherently expected that athletes exhibit some form of dietary restraint which can inadvertently lead to the disordered eating cycle of dietary slips and binges. Purging and compensatory behaviors could be viewed as shortcuts to those slips and binges. However, they do not realize that vomiting, for example, only retrieves part of what has been eaten and that laxative misuse has little or no effect on

energy absorption (Fairburn, 1995). Athletes often have the impression that their weight control and maintenance should have immediate effects. Binge eating could be especially problematic as the athlete may try to utilize extreme measures to control their weight when it is necessary to maintain appropriate caloric intake due to their level of energy expenditure. In addition, weight loss may interfere with athletes' ability to train and compete, decreasing their performances rather than producing the desired or expected effects of improvement (Smith & Petrie, 2008).

Cooper and Fairburn (2010) outline that cognitive-behavioral theory of the maintenance of Bulimia Nervosa has clear implications for treatment due to attempts to change binge eating and purging behaviors. Treatment must address dietary habits, self-evaluation of weight, and external events that may be influencing disordered eating behaviors. Athletes could benefit from the systematic nature of cognitive-behavioral treatment. Interventions for athletes, however, should consider the influence of the sport context when challenging the thoughts maintaining the disordered eating patterns.

2.3 Empirically supported treatments

2.3.1 Cognitive-behavioral therapy (CBT) and enhanced cognitive-behavioral therapy (CBT-E)

Cognitive-behavioral therapy was originally developed by Aaron T. Beck and colleagues and has become one of the most influential and well-validated models of psychotherapy available (Pike, Carter, & Olmsted, 2010). It has demonstrated efficacy for a broad range of psychiatric disorders, including depression, anxiety disorders, and substance abuse (Wilson, Grilo, & Vitousek, 2007). Cognitive behavioral therapy is also well-recognized as an empirically supported treatment for eating disorders. With regards to Bulimia, specifically it has shown effectiveness in reducing symptomatic behaviors, such as binge eating and purging episodes.

The foundation of cognitive-behavioral therapy maintains that symptoms of a psychiatric condition, such as an eating disorder are preserved by the interaction between cognitive and behavioral disturbances. In therapy, an individual is challenged about distorted beliefs, and subsequent behaviors that correspond to the maintenance of the beliefs. The goal is to modify the behaviors and ultimately change the beliefs to be more adaptive. Enhanced cognitive-behavioral therapy (CBT-E) is the latest version of the leading empirically supported treatment for eating disorders (Fairburn, 2008). It is treatment specifically for eating disorders, and it is equally suitable for males and females. It is individualized, and is generally time-limited. CBT-E focuses on working with the individual to the point where the primary maintaining mechanism, their "core psychopathology," has been disrupted and continued improvements are being experienced (Fairburn, 2008). It is understood that overcoming an eating problem is difficult but worthwhile and that treatment should be given priority (Fairburn, 2008). The core of CBT-E that differs from CBT is that the most powerful way of achieving cognitive change is by helping individuals change the way that they behave and then analyzing the effects and implications of those changes (Fairburn, 2008). Individuals are encouraged to observe themselves enacting their formulations live, and to become intrigued by the effects, and implications, of trying different ways of behaving (Fairburn, 2008).

2.3.2 Interpersonal psychotherapy (IPT)

Interpersonal psychotherapy is a brief and focused psychotherapy intervention that addresses the interpersonal issues in mental health disorders highlighting that one's psychological maladjustment is due to responses to the social environment. It has most

widely been used for depression; however, IPT has garnered some empirical support as a treatment modality for Bulimia. IPT takes longer for symptom relief; however, it should be considered an alternative to cognitive-behavioral therapy. IPT is designed to improve interpersonal functioning and self-esteem, reduce negative affect, and in turn, decrease eating disorder symptoms (Tanofsky-Kraff & Wilfley, 2010).

With the bulimic client, interpersonal psychotherapy seeks to help them identify and modify current interpersonal problems that are hypothesized to be maintaining the eating disorder (Wilson, Grilo, & Vitousek, 2007). Interpersonal theory identifies relationships and social roles as critical components of psychological adjustment and well-being. In the case of Bulimia, interpersonal theory suggests that it occurs in the social and interpersonal context, and that the onset, response to treatment, and outcomes are influenced by the interpersonal relationship between the client and significant others (Tanofsky-Kraff & Wilfley, 2010).

Collegiate student-athletes have a unique context which inadvertently supports Bulimia symptomatology, body image issues, ideal vs. real sport weight, peer comparisons, and coach/judges' evaluations. Interactions with coaches, teammates, parents, and other athletic personnel (e.g., athletic trainers) could be the focus of the IPT in addressing the influence of the social environment on the bulimic symptoms.

2.3.3 Dialectical behavior therapy (DBT)

Dialectical behavior therapy was originally developed by Marsha Linehan to treat borderline personality disorder or the "difficult-to-treat clients". It is based on a dialectical worldview that stresses the fundamental interrelatedness or wholeness of reality and connects the immediate to the larger contexts of behavior (Safer, Telch, & Chen, 2009). It is based in cognitive-behavioral therapy with an emphasis on emotion regulation. The primary dialectical strategy is to focus on what is the balance between acceptance and change (Safer, Telch, & Chen, 2009). Implementing validation and problem-solving strategies allows the individual to be challenged and supported regarding their current situational context. DBT has shown promising results with eating disorders, particularly Bulimia and binge eating disorder. Learning to control one's emotions could directly impact the incidence of binges and the loss of control experienced during the binge episode.

Biosocial theory is the underlying theoretical construct for dialectical behavior therapy. It emphasizes affect regulation, highlighting that when applied to eating disorders, intense affect is a frequent precursor to binge eating, which may provide a means, albeit maladaptive, of regulating emotions (Chen & Safer, 2010). When considering the collegiate student athlete, it is conceivable that disordered eating behaviors may become negatively reinforced (i.e., as escape behaviors) or result in secondary emotions such as shame or guilt, which then may signal further disordered eating behaviors (Chen & Safer, 2010). Biosocial theory postulates that an invalidating environment and an emotionally vulnerable individual may inadvertently provide intermittent reinforcement of emotional escalation over time (Chen & Safer, 2010). For collegiate athletes an invalidating environment could include weight-related teasing or over concern with weight by peers, coaches, and family (Chen & Safer, 2010). DBT is useful with comorbid disorders such as, depression symptomatology, particularly suicidal ideation, and borderline personality disorder.

2.3.4 Medication management

Eating disorders at times should involve psychotropic medication (e.g., medications used to treat psychological disorders such as antidepressants) and monitoring by a psychiatrist or physician with specialized experience. It is critical to understand that these medications should

be used to treat symptoms of eating disorders (e.g., depression or anxiety), rather than solely treating the eating disorder alone. Previous research supports that antidepressants promoted a decrease in bulimic patients' preoccupation with food and weight; and a decrease in a patients' binging and vomiting episodes (Hudson, Pope, & Carter, 1999).

With collegiate athletes, the psychiatrist would have to keep in mind the sport context and types of psychotropic medications and the associated side effects in addition to the constraints of the drug testing policies and procedures in athletics. It is important to be aware of the side effects of antidepressants. The most common may cause diaphoresis (i.e., excessive sweating), gastrointestinal distress, nausea, drowsiness, and dizziness (Lacy et al., 2002), all of which may decrease or limit an athlete's performance. If an athlete reports any of these symptoms, the medication dosage may have to be altered or daily routine depending on the symptoms. For example, if an athlete is becoming drowsy, the timing of the medication should be changed. It is recommended that the athlete takes two smaller doses per day or takes the medication at night before bed and then gradually increase dosage if necessary (Joy et al., 1997; Zetin & Tate 1999). Another recommendation would be to increase fluid intake if the athletes has increased sweating. Alternative medications should also be considered. Lithium carbonate (a mood stabilizer) and clonidine (an appetite stimulant) have also been used to treat patients with Bulimia Nervosa (Hudson, Pope, & Carter, 1999; Kaye, 1999).

3. Disordered eating and eating disorders and comorbidity

Disordered eating is often paired with other mental health disorders, some of the disorders that have comorbidity include mood disorders, anxiety disorders, substance use disorders and personality disorders. It is often believed that athletes do not experience psychological difficulties the same as the general population; however, more recent evidence is supporting a different prevalence in athletes. The sport context is pressure-filled with constant evaluation from those who can impact an athlete's opportunity to perform. In addition, lack of skills to effectively cope with the pressure make collegiate athletes at risk.

3.1 Mood disorders

Depression is a mental health disorder, in which the person experiences mood disturbance, appetite changes, sleep changes, anhedonia, and a lack of energy. Collegiate athletes experience depression at similar rates to the nonathlete population. They are particularly vulnerable for their experience of depression being overlooked or even misdiagnosed. Symptoms of depression may present differently, and inconsistently, and the athlete may or may not continue to perform well. The presence of depression may be subtle, if clear to others at all. An awareness of the possibility that an individual could be depressed is important for appropriately intervening. Depression is frequently comorbid with Bulimia Nervosa and can guide a student athlete down a spiraling and potentially destructive path. A collegiate athlete with Bulimia Nervosa and depression may also engage in excessive exercise as a form of weight control or to alter their shape, but some also use it to modulate their mood (Fairburn, 2008). Excessive exercising is a form of noncompensatory purging; however, for collegiate athletes, it increases the risk of injury and other physical ailments due to lack of consistent caloric intake and compensatory purging (e.g., self-induced vomiting, laxative misuse). Depression is also hallmarked by thoughts of hopelessness, worthlessness, and helplessness, and when paired with the obsessiveness and lack of control with Bulimia could be a deadly combination.

3.3.1 Suicide

One of the key symptoms of a major depressive episode is the presence of suicidal ideation. When one is considering suicide, it is the person's perception of a sense of helplessness and/or worthlessness. The decision to commit suicide is an act of desperation and highlights the individual's inability to see other options or less disastrous consequences. Collegiate athletes as a group are formulating their identity, self-image, and self-worth throughout their undergraduate career. They may be particularly susceptible to criticisms from numerous sources about their performance as well as their physical appearance. The loss of control during binge eating, the guilt and other emotions present, and concerns about image all suggest that suicidal ideation for athletes should be monitored more effectively. Hospitalization is clinically indicated if the eating disorder has comorbidity with depression and suicidal ideation. Close supervision is prudent upon discharge.

3.3.2 Anxiety disorders

Anxiety disorders are related to how a person perceives threat in their environment and the way in which they cope with their emotions. They are the class of disorders that are characterized by worry, apprehension, and fearfulness, and are exhibited by physical manifestations, such as muscle tremors, nausea, or heart palpitations (American Psychiatric Association, 2000). In athletes, the presence of an anxiety disorder could hurt performance, and if the anxiety disorder is comorbid with an eating disorder, a complicated diagnostic picture as well as intervention plan is the result. When comorbid with Bulimia Nervosa, anxiety disorders seem to magnify and intensify the experience of the disordered eating behaviors. Anxiety features tend to be more characteristic of individuals who have high levels of dietary restraint (Fairburn, 2008). People with eating disorders set multiple demanding, and highly specific, dietary rules designed to limit the amount that they eat, and as a result of these rules their eating becomes restricted in nature and inflexible (Fairburn, 2008). They adjust their lives around their preoccupation with food and the presence of an anxiety disorder further exacerbates the impairment that develops. Concentration is affected and socializing with friends and family are problematic, the individual worries about the pressure to eat in the presence of others.

The anxiety disorders frequently seen in the collegiate student athlete population include:

1. Generalized Anxiety Disorder (persistent and excessive anxiety and worry)
2. Obsessive-Compulsive Disorder (people have obsessions or compulsions that are severe enough to be time consuming or cause marked distress (American Psychiatric Association, 2000).
3. Panic Disorder (recurrent unexpected panic attacks)
4. Phobias (such as social phobia which can include performance anxiety)

As with mood disorders, anxiety disorders often implicate similar cognitive errors to those structuring eating disorders (Steiger & Israel, 2010). For example, a collegiate athlete with Bulimia Nervosa can experience general worry and anxiety regarding food intake and weight gain, obsessive preoccupations with body shape, compulsive reactions (such as the need to compensate after eating), or phobic elements (such as fear of weight gain; Steiger & Israel, 2010). Interventions need to categorize the symptoms of Bulimia Nervosa as well as the existence of an anxiety disorder, then applying strategies to control the persistence of cognitive errors.

3.3.3 Personality disorders

Personality disorders are difficult to identify in individuals with eating disorders because many features of personality disorders are directly affected by the presence of the eating disorder (Fairburn, 2008). Borderline personality disorder, for example, is a personality disorder that is marked by erratic or odd behaviors. Borderline personality disorder has a higher prevalence rate in females, and is considered to be marked by emotional difficulties, instability in relationships, fear of abandonment, and unpredictable emotional reactions. Specific psychopathological tendencies may accentuate specific components of eating disturbances – impulsivity driving high-frequency purging, compulsivity accentuating relentless dieting and pursuit of thinness, narcissism fueling overinvestments in achieving bodily (and other forms of) perfection (Steiger & Israel, 2010).

Personality disorder diagnoses are commonly given to individuals with eating disorders, thus when considering collegiate student athletes, two traits in particular—perfectionism and low self-esteem are evident, however, both are typically present before the eating disorder began (Fairburn, 2008). Additionally, it may be speculated that individuals who are perfectionist, independent, persistent, achievement oriented, and tolerant of pain and discomfort and who have high self-expectations yet low self-esteem are more susceptible to the development of disordered eating (Garfinkel, Garner, & Goldbloom, 1987). These personality traits have been shown to be the key to success in sports, which may help clarify the increased risk of eating disorders among athletes (Garner, Rosen, & Barry, 1998).

4. Future directions

There is increased interest in upgrading classic psychotherapeutic interventions with the fast-paced technological era. Interventions for eating disorders have been identified as a potential area that can be enhanced by utilizing technology as additional tools. Research is beginning to focus on studying the impact and effectiveness of using technology for adjuncts to treatment. Advances in treatment include the use of the internet, email, text messaging, and social networking sites.

5. Internet and treatment (e-mail, text messaging, social networking sites)

Technology has advanced and has allowed for therapeutic interventions to be monitored and tracked at increasing rates. The use of email, text and instant messaging, and social networking sites are changing the way that individuals can communicate with their psychologist, update progress on homework assignments, and receive helpful information between office visits. The internet is reportedly easy to use, readily accessible, convenient, and efficient (Bauer, Golkaramnay, & Kordy, 2005; Robinson & Serfaty, 2003); and is considered an alternative to face-to-face treatment with a therapist. Such use of technology has been shown to be effective particularly with weight loss strategies, self-esteem enhancement, and challenges to cognitive distortions (Nakagawa et al., 2010, Osgood-Hynes et al., 1998; Newman, Consoli, & Taylor, 1999). With CBT-E, for example, ongoing self-monitoring and the successful completion of homework tasks are of fundamental importance, thus use of technology can assist in the therapeutic process.

Using the internet as a component to treatment can offer additional support as well as encouragement for successfully completing treatment protocols. Previous research has investigated e-mail therapy in Bulimia Nervosa patients, and found that e-mail therapy

helped to engage individuals in treatment who would otherwise have been unlikely to ask for help through more traditional therapy (Robinson & Serfaty, 2003). It is common that most cases of Bulimia Nervosa in the community are unknown to their general practitioners (van Hoeken, Lucas, & Hoek, 1998) and receive no treatment (Fairburn et al., 1996).

It is known that many ethical and practical questions have been asked in relation to the delivery of this therapy; however it is not recommended for all patients. This type of therapy may work for those that may not have access for a specialist in the eating disorder field or for patients who wish to receive individual therapy in a more anonymous setting. This new method of treatment delivery may have many advantages over the face-to-face methods; such advantages are related to increasing empowerment, accountability, affordability, convenience and privacy (Fingeld, 1999). Additionally, there are some benefits for the clinician as well. Robinson and Serfaty (2003) stated that E-therapy is a strategy that can be used to identify therapist competence by providing a method to monitor general competency and adherence to a specific therapeutic model.

Social networking sites (e.g., Facebook) are starting to be utilized for clients to interact with fellow treatment members, clinicians, and to access resources. These sites have tremendous potential to further aid the therapeutic process over time. As a best practice and to maintain appropriate ethical standards for clinicians, these new forms of therapeutic strategies (i.e., E-therapy, text messaging) are best utilized in conjunction with traditional therapeutic approaches. Specific strategies to ensure confidentiality are essential, such as encryption software on the clinician's computer, password protections on mobile devices, and address books privacy protected.

6. Clinical practice research

In conducting clinical practice research more work is needed to evaluate the effectiveness of interventions such as cognitive-behavioral therapy, interpersonal therapy, and dialectical behavior therapy with the athletic population. It is imperative that the research designs for studying effectiveness of interventions involve control groups, comparative trials, sequencing of treatment applications, randomization, and significant sample sizes to give sufficient statistical power. Clinical practice research needs to have clear, precise procedures for interventions being evaluated. The focus on clinical practice research should be on developing promising treatment approaches. The emphasis should be on symptom presentation and specific populations (ethnic minority groups, athletes, etc.). Other issues such as levels of care (e.g., inpatient, outpatient) also need to be evaluated in terms of effectiveness.

7. Summary

Collegiate student athletes who have Bulimia Nervosa are a specialized population who need particular consideration for treatment interventions. The sport environment is influential on the presence, development, and maintenance of disordered eating symptoms. Clinicians treating collegiate student athletes with Bulimia Nervosa should be knowledgeable about the sport culture and its overarching influence on their experience with the eating disorder. Empirically supported treatments for Bulimia Nervosa include cognitive-behavioral therapy specifically enhanced cognitive-behavioral therapy, interpersonal therapy, and dialectical behavior therapy. All of these treatments have promise for the collegiate student-athlete population; however, more rigorous clinical practice research needs to be done as well as

investigating the impact of comorbid disorders on treatment outcomes. Medication management has been effective in treating Bulimia Nervosa as well as addressing any comorbid disorders. A multidisciplinary team approach is essential for intervening with collegiate student-athletes, including a psychologist, dietitian, athletic trainer, coach and physician. Lastly, technological advances, such as the Internet, emails, text messaging and social networking sites are being utilized to assist in the therapeutic process for people with Bulimia Nervosa, and holds potential as useful strategies for collegiate student athletes.

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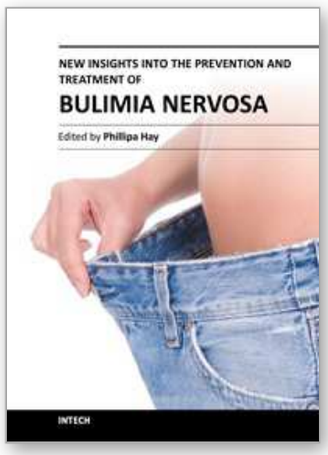

New Insights into the Prevention and Treatment of Bulimia Nervosa
Edited by Prof. Phillipa Hay

ISBN 978-953-307-767-3
Hard cover, 190 pages
Publisher InTech
Published online 03, October, 2011
Published in print edition October, 2011

Bulimia nervosa and eating disorders are common cause of distress and health related burden for young women and men. Despite major advances over the past three decades many patients come late to treatment and find that the therapy is incompletely addressed to the complex psychopathology and co-morbidities of the illness. The present book brings timely and contemporary understandings of bulimia nervosa to aid in current thinking regarding prevention and treatment. It will be read by therapists interested in enhancing their current approaches and those interested in earlier and more effective prevention and closing the gap between illness onset and accessing treatment. They will find practical guidance but also new ideas and ways of thinking about bulimia nervosa and the illness experience in this book.

How to reference
In order to correctly reference this scholarly work, feel free to copy and paste the following:

Kendra Ogletree-Cusaac and Toni M. Torres-McGehee (2011). Treatment Strategies for Eating Disorders in Collegiate Athletics, New Insights into the Prevention and Treatment of Bulimia Nervosa, Prof. Phillipa Hay (Ed.), ISBN: 978-953-307-767-3, InTech, Available from: http://www.intechopen.com/books/new-insights-into-the-prevention-and-treatment-of-bulimia-nervosa/treatment-strategies-for-eating-disorders-in-collegiate-athletics

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