Evidence-Based Interventions for the Treatment of Eating Disorders

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Eating disorders are serious clinical issues that can have severe physical and psychological ramifications. Although prevalence rates of anorexia nervosa and bulimia nervosa are low in the general population, it has been reported that prevalence rates are higher among individuals involved in the athletic milieu. Unfortunately, based on the demands of the sport environment, these individuals may be significantly less likely to seek treatment for these disorders, thus may experience dangerous short- and long-term consequences. Yet, even when such athletes do seek help, they often receive psychological treatments that have not been demonstrated to be efficacious among methodologically sound research studies. This article clarifies the current state of eating disorder treatment efficacy so that practitioners working with eating disordered athletic clientele can adopt more ethical and effective treatment practices.

Eating disorders present serious physical and psychological health concerns among members of the general population and numerous athletic subgroups and require specialized and targeted psychological interventions. The two most prevalent eating disorders are bulimia nervosa (BN) and anorexia nervosa (AN). While prevalence rates for these disorders are low within the general population, a comprehensive review of the literature by Swoap and Murphy (1995) indicated that eating disorders occur substantially more often in athletes. This study suggested that a significant percentage of athletes (both women and men) utilize pathogenic eating or weight loss behaviors. These behaviors are often sport specific, as sports such as gymnastics and wrestling appear to have higher prevalence rates of eating disorders than sports such as archery or soccer. Swoap and Murphy (1995) also suggest that apart from the same sociological and psychological issues related to disordered eating across the general population, issues such as evaluation criteria, sport-specific weight restrictions, peer comparison, peer and coach pressure, and athletic performance demands are additional factors related to the development of eating disorders and weight-related behaviors in athletes. In addition, characteristics of the sport culture can leave athletes more vulnerable to the development of
these disorders, make athletes less likely to view their behaviors as problematic (Sherman & Thompson, 2001), and reduce the likelihood that disordered athletes will seek (or accept) help for such problems (Petrie & Sherman, 2000). As a high percentage of eating disordered clients in the general population do not seek help on their own but instead enter treatment at the insistence of those close to them (Stein, Goodrick, Poston, & Foreyt, 2003), it can be hypothesized that eating disordered athletes will be even less likely to personally seek treatment due to sport requirements, pressures, and the constant comparison to other athletes.

Even when athletes are willing to seek or accept treatment for these dangerous psychiatric conditions, they are often treated according to models that have not been demonstrated to be effective among randomized controlled trials (RCTs) and frequently receive treatments that are based on the therapist’s preference or previous training and not on the cutting-edge empirical literature. Of course, it can be argued that many practitioners engage in non-evidence-based interventions because they are not aware of the efficacy data for common eating disorder treatments. Since this is never an acceptable reason for ineffective practice, the purpose of this paper is to briefly describe each disorder and then directly summarize the current state of the eating disorder treatment literature so that practitioners can no longer claim that they do not have access to or are unaware of the treatment efficacy data. While this paper cannot possibly address every possible treatment for these disorders, it emphasizes the most up-to-date evidence-based treatment options available based upon a synthesis of recent qualitative reviews.

**Bulimia Nervosa**

Within the general population, the prevalence of bulimia nervosa (BN) among young females is approximately 2-3%, and it is rarely diagnosed in males (American Psychiatric Association, APA, 2000; Hsu, 1990). It has been suggested, however, that the presence of this disorder among female athletes is higher than that of the general population, and it may possibly be more prevalent among male athletes involved in sports that impose weight restrictions. The disorder typically begins during later adolescence or early adulthood (APA, 2000; Fairburn et al., 1995; Hsu, 1990) and is often comorbid with other forms of psychopathology, including mood disorders, anxiety disorders, substance use disorders, and personality disorders. Unfortunately, BN most often follows a chronic and unremitting course unless effectively treated (Fairburn et al., 1995).

**Characteristics of Bulimia Nervosa**

Bulimia nervosa is characterized in the *DSM-IV-TR* by several clinical features (APA, 2000; Wilson & Pike, 2001), including the uncontrolled consumption of large amounts of food (binge eating); regular use of various methods to influence weight and shape, such as purging through vomiting or laxative use, strict dietary control, and compulsive, rigorous exercise; and obsessive self-evaluation of weight and body shape. The individual experiencing BN often engages in binge eating in response to a negative mood, and the binge and purge activities serve to immediately alleviate this negative affective state. The short-term reduction in negative mood is truly time limited, however, as the individual quickly engages in significant
self-criticism and experiences shame, lowered self-esteem, and guilt associated with such activities (APA, 2000).

Although BN is often thought to involve both bingeing and purging behaviors, there are actually two distinct subtypes of BN, and these subtypes are characterized by either the presence (see above) or absence of purging (APA, 2000; Stein et al., 2003). For those that do not engage in traditional purging activities but still wish to rid the body of the binge, compensatory strategies typically include excessive exercise or periods of significant dieting. When binge eating does not involve purging behaviors, the behaviors may also warrant a newer diagnostic classification called binge eating disorder (BED). While BED does involve binging behaviors, it has recently been considered to be part of a diagnostic grouping called eating disorders not otherwise specified (EDNOS; APA, 2000). Regardless of subtype, the majority of clients suffering from BN are within their normal weight range (Wilson & Pike, 2001).

**Are There Evidence-Based Treatments for Bulimia Nervosa?**

The empirical evidence to date suggests that the first-line treatment for bulimia nervosa is a manualized cognitive-behavioral (CBT) protocol that has had numerous randomized controlled studies demonstrating its efficacy (National Institute for Clinical Excellence, NICE, 2004; Wilson & Fairburn, 2002). In fact, the National Institute for Clinical Excellence guidelines recommend CBT as the treatment of choice for eating disorders such as BN.

With its focus on cognitive and behavioral processes related to attitudes about self-worth, ideal body shape, and perceptions of control, CBT reliably results in reduction of binge eating, compensatory purging behaviors, negative affective states, dietary restriction, and abnormal attitudes about weight and body shape, which constitute all of the specific features of BN. CBT for BN has a fairly low dropout rate and typically improves comorbid psychological problems such as low self-esteem and depression in addition to the reduction of the clinical features of BN. It is important to note that the best predictor of success in CBT for BN is early response, as improvement is most often noted within the first four treatment sessions (Wilson & Fairburn, 2002).

In addition, psychopharmacological interventions, most typically in the form of antidepressant medication such as tricyclics, monoamine oxidase inhibitors, and selective serotonin reuptake inhibitors (SSRIs) have been utilized as a treatment option for BN. From meta-analytic (Whittal, Agras, & Gould, 1999) and qualitative reviews of the literature (Wilson & Fairburn, 2007) several conclusions can be made about the psychopharmacological treatment of BN. First, while antidepressant drugs are more effective than (pill) placebo in reducing binging and purging, different types of antidepressant medications appear to be equally effective. Second, the dropout rate of patients completing a course of CBT is lower than with psychopharmacological treatments. Third, combining CBT and psychopharmacological treatments result in few if any consistent benefits to CBT alone, and result in more effective treatment than when using psychopharmacological treatments alone. Fourth, long term maintenance of treatment benefits is better with CBT than with medication. Fifth, CBT has clear predictors of treatment success (early response), while psychopharmacological treatment does not.
Interpersonal psychotherapy (IPT) has also gained some support for use with BN clientele. Originally developed by Klerman and colleagues (Klerman, Weissman, Rounsaville, & Chevron, 1984) for use with depressed clients, IPT is a specific short-term therapy that focuses on problematic relationship behaviors and circumstances (it should be stressed that IPT is a very specific form of therapy, and as such, a therapist who takes an “interpersonal” approach to helping clients is not thus engaging in IPT). When used for the treatment of BN, IPT actually spends little time focusing on the characteristics of the client’s eating disorder, which clearly differentiates IPT from the typical CBT protocol. While IPT has not garnered the same level of support for the treatment of BN as has CBT, it has demonstrated some efficacy in treating BN. The CBT protocol improves symptoms significantly faster than IPT, manifesting significantly greater treatment gains at the immediate conclusion of treatment. At one-year follow up, however, both CBT and IPT demonstrate similar treatment effects. This has led the NICE (2004) guidelines to suggest that “interpersonal psychotherapy should be considered as an alternative to CBT but patients should be informed that it takes 8-12 months to achieve results” (p. 14).

Of course, other forms of therapy are frequently utilized with BN clients as well, but other therapies have not been demonstrated to be efficacious with this disorder. While psychological interventions such as psychoanalysis, psychodynamic therapy, and family therapy are frequently utilized, the continuing lack of data from randomized controlled trials does not support their use as treatment strategies for BN at this time.

To summarize the treatment data for BN, at this time CBT is the clear treatment of choice to remediate this clinical concern. CBT has been at least as effective as any other treatment to which it has been compared, appears to work faster than other forms of psychological treatment (i.e., IPT), has a lower drop out rate and demonstrates better treatment maintenance over time than medication, and impacts the specific clinical features of BN as well as the general psychopathology often associated with BN (i.e., anxiety and depression).

### Anorexia Nervosa

The prevalence rate for anorexia nervosa (AN) is 0.5-1% in females and AN is rarely reported in males within the general population (males account for 10% of cases; Wilson & Fairburn, 2007; Wilson & Pike, 2001). While these prevalence rates seem much lower than those for BN, it has been suggested that the diagnostic criteria for AN are too strict and as such, exclude many individuals who are clearly suffering from this serious clinical problem. Of course, as the sport milieu places great importance on body strength, shape, and level of fitness, it is very possible that prevalence rates for athletes are higher than the general population, especially among female and male athletes involved in weight-focused sports.

Anorexia nervosa typically develops during adolescence, with the usual onset occurring around age 17 (Wilson & Pike, 2001). Although it is possible for AN to occur for one acute episode, this does not represent the typical clinical picture. Rather, AN is considered to be a more chronic disorder with a fluctuating lifetime pattern (APA, 2000). In fact, as much as 10% of the clinical population with AN
dies from either complications of the disorder or suicide (Wilson & Fairburn, 2007). As such, it is imperative that clinical sport psychologists adequately assess for this dangerous disorder and if untrained to treat the disorder, should refer such athletes to an appropriately trained psychologist or psychiatrist. In addition, since the prognosis is far better for those whose AN has an earlier onset and shorter duration, and is far worse for those whose disorder runs a longer course and includes significant weight loss, binging, and purging (which can occur in AN cases), it is critical to watch for signs of the disorder and immediately address emerging issue as they appear (Wilson & Fairburn, 2007).

Characteristics of Anorexia Nervosa

Anorexia nervosa is characterized by a variety of strict clinical features (APA, 2000). The client willfully maintains an abnormally low body weight, defined as at least 15% below expected levels. In postmenarchal females, there is the presence of amenorrhea, which is the absence of three consecutive menstrual cycles. AN is also characterized by a significant disturbance in body shape and weight perception and by an intense fear of gaining weight. Typically, the individual completely denies the seriousness of the low weight, irrationally describes and perceives shape and weight, and places undue importance and centrality on weight and shape. Compulsive behaviors (not considered symptoms of OCD) are also common among individuals with AN, such as frequently weighing oneself, looking in mirrors, and taking body measurements (APA, 2000). In contrast to those with BN, individuals diagnosed with AN are usually substantially underweight, tend to be resistant to treatment, and are at risk of death from the disorder.

Are There Evidence-Based Treatments for Anorexia Nervosa?

The empirical evidence for treating anorexia nervosa is more complex and far less clear than the evidence for treating bulimia nervosa. In fact, it is difficult to provide a clear set of evidence-based clinical recommendations to the practitioner (Fairburn, 2005; NICE, 2004) because little research is actually conducted on this population. Based on the lack of research on treatment options, very little agreement exists on how AN should be treated. In fact, among the various treatment options (inpatient treatment, day patient treatment, and outpatient treatment), there is still very little agreement within each setting on basic treatment goals and procedures. To discuss the data available related to each setting, (a) we currently have no data on the efficacy of inpatient treatment for AN, but we do know that “there is no evidence from RCTs that drug treatment significantly enhances weight regain in the hospital” (Wilson & Fairburn, 2007, p. 590); (b) we currently have no empirical data on the efficacy of day patient treatment and are unable to even clarify typical goals and procedures for day patient treatment of AN (although these may hypothetically include dietary counseling and behavioral reeducation); (c) outpatient treatment seems to be the most common intervention setting, although inpatient treatment usually occurs before and/or after outpatient efforts.

To discuss the data on actual treatment approaches (as opposed to settings), there is currently very little information on the efficacy of psychopharmacological interventions, but we do have some data on psychological treatment approaches.
In a small study, Kaye and colleagues (2001) found that in an inpatient setting, fluoxetine (Prozac) improved outcome; however, a large RCT did not demonstrate that fluoxetine provided benefits beyond placebo or when compared to CBT (Walsh et al., 2005). In contrast to psychopharmacological options, family-based treatment (FBT) has often been regarded as a viable psychological intervention for AN. FBT includes parent-directed re-feeding of the client, support for the parents, and support for the client in becoming increasingly autonomous and has been the only psychological treatment carefully studied among AN adolescents (Eisler & Dare, 2000; Wilson & Fairburn, 2007). While often assumed to be efficacious, however, the results of the three studies comparing FBT to other intervention options have been seriously questioned on methodological grounds.

Since research on BN treatments have vast outweighed research on AN treatments, and since we currently have very little direction for treating AN, theorists have recently suggested that given its success in treating BN, and given the fundamental similarities in psychopathological processes between AN and BN, CBT may be viable for treating AN (Russell, Szmukler, Dare, & Eisler, 1987; Wilson & Fairburn, 2007). While this is an open empirical question in need of further investigation, researchers must embark upon a number of new research agendas in order to address this dangerous disorder.

An additional point to consider is that due to the weight pressures, physical exertion, and self-other evaluation found in the sport environment, interventions for AN may need to be slightly modified for competitive athletes. For example, Sherman and Thompson (2001) have suggested that athletes with AN should be required to cease all involvement in sport-related activities until they no longer meet full diagnostic criteria for AN. This would include abstinence from training, exercise, competition, and practice so that the athlete learns to focus on his or her health over athletic participation. For those meeting criteria for eating disorders other than AN (i.e., BN), Sherman and Thompson suggest that participation in organized athletics is acceptable only if the athlete is engaged in treatment, is not suffering from medical complications, participates in athletics due to personal choice, does not engage in excessive exercise, and if the athlete’s eating disorder is not solely related to sport participation.

**Conclusion**

Regardless of type, eating disorders such as anorexia nervosa and bulimia nervosa are serious disorders that require careful attention and specialized treatment. As the clinical sport psychologist frequently works with athletes whose body and physical appearance are critical (or perceived as critical) to their overall success, the practitioner must be thoroughly knowledgeable about these complex disorders, knowing 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 a host of additional factors placing the athlete at risk for developing an eating disorder.

Of course, knowing warning signs, characteristics, sport-specific demands, and self-perceptions of body image and self-worth are meaningless unless practitioners incorporate this knowledge into a targeted, specialized, and empirically informed treatment approach. 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. For anorexia nervosa, on the other hand, we cannot state that any interventions have been demonstrated to be efficacious at this time, due a dearth of empirical outcome research. It is therefore critical that researchers allocate additional attention to this debilitating clinical concern.

It is the responsibility of the psychologist working with athletes to know the eating disorder treatment literature, know the limits to his or her training and experience, and utilize the most effective psychological treatments available. When these responsibilities are met, it is likely that eating disordered athletes will be on the road to sustainable physical and psychological recovery.

References


