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Cognitive-Behavioural Therapy for Individuals with Bulimia Nervosa and a Co-Occurring Substance Use Disorder

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Abstract

A significant percentage of individuals with bulimia nervosa (BN) also can be diagnosed with a co-occurring substance use disorder (SUD). Although studies have addressed the frequency of overlap between the disorders, etiology and shared personality traits, limited research is available about the treatment of these comorbid patients. Adapting cognitive-behaviour therapy (CBT) to serve as an integrated treatment for patients with both BN and a SUD is a viable option, as studies of CBT suggest that this form of treatment is efficacious for both disorders independently. The shared strategies in CBT for BN and SUDs facilitate the development of a combined treatment for individuals with both disorders with the addition of modules designed to address some common features of these disorders, such as motivation, difficulty with interpersonal relationships, reward sensitivity and impulsivity. Future research should begin to evaluate the efficacy of an integrated CBT in treating individuals with BN and a SUD.

Keywords

cognitive behavioural therapy; eating disorders; bulimia nervosa; substance use disorders

Introduction

Bulimia nervosa (BN) is a serious psychiatric disorder characterized by recurrent episodes of binge eating and purging. A significant percentage of treatment-seeking individuals with BN are also diagnosed with a co-morbid disorder, with approximately 20 to 80% classified with a lifetime major depressive disorder, and 41 to 75% reporting a lifetime anxiety disorder (Godart et al., 2007; Godart, Flament, Perdereau, & Jeammet, 2002). Rates of the co-occurrence of BN and substance use disorders (SUDs) range between 3 and 50% (Bulik, Sullivan, & Slof, 2004b), with a median prevalence of 22.9% (Holderness, Brooks-Gunn, & Warren, 1994). A recent nationally representative population-based study (Hudson, Hiripi, Pope, & Kessler, 2007) observed similar rates of individuals with BN also classified with a lifetime SUD (alcohol abuse or dependence = 33.7%, alcohol dependence = 22.7%, illicit drug abuse or dependence = 26.0%, illicit drug dependence = 15.0%, any SUD = 36.8%). Among individuals with eating disorders, patients with BN or anorexia nervosa binge-purge subtype (AN-B/P) report a higher prevalence of alcohol or drug problems (Braun, Sunday, & Halmi, 1994; Bulik et al., 2004b; Herzog, Keller, Sacks, Yeh, & Lavori, 1992; Wiederman & Pryor, 1996), with approximately 45% of patients consuming regular alcohol (mean of 12 drinks/week; Bulik et al., 1992), and 34.8% of patients with BN using alcohol

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weekly (Wiederman & Pryor, 1996). Given the substantial proportion of individuals meeting diagnostic criteria for both disorders within the larger population of patients with BN, understanding the clinical characteristics of individuals with both BN and a SUD, and the possible adaptations needed for successfully treating comorbid patients is vital for practitioners working with patients with eating disorders.

Individuals diagnosed with BN and SUDs share common clinical characteristics, including: (1) reports of 'craving' and 'loss of control,' and preoccupation with the substance of choice; (2) repeated attempts to stop binge eating and purging or using substances; (3) both disorders impair physical and social functioning and (4) both disorders involve denial and secrecy (Wilson, 1991). However, while these disorders share features, these aforementioned commonalities are only superficial (Wilson & Latner, 2002). Even though the two disorders often co-occur, it has been suggested that eating disorders and substance abuse are conditions with unique etiologies that mutually influence each other (Keel et al., 2004). The genetic and familial influences on BN have been shown to be independent of those influences on alcohol use disorders (Kendler, Walters, Neale, Kessler, Heath, & Eaves, 1995; Redgrave, Coughlin, Heinberg, & Guarda, 2007), and elevated rates of alcohol and drug dependence are not observed among the relatives of individuals with BN without a SUD (Lilenfeld et al., 1998). As the presence of bulimic symptoms does not appear to increase an individual's risk for the development of substance use, the disorders may have distinct etiologies, but could share common risk factors (Stice, Burton, & Shaw, 2004) or familial environments (Kendler et al., 1995).

Potential shared features underlying eating and SUDs can be identified through the study of patients with BN with and without a co-occurring SUD. Women with both disorders share some behavioural traits that may predispose them to the development of both disorders, including increased impulsivity (e.g. Wonderlich, Connolly, & Stice, 2004). Patients with comorbid eating and SUDs are more likely to be diagnosed with borderline personality disorder in comparison to individuals without a comorbid disorder (Bulik et al., 2004a; Grilo, Becker, Levy, Walker, Edell, & McGlashan, 1995; Sansone, Fine, & Nunn, 1994; Wiseman, Sunday, Halligan, Korn, Brown, & Halmi, 1999) and to report a history of suicide attempts, promiscuity and reckless driving (Sansone et al., 1994), or other impulsive behaviours (Lacey, 1993). Lacey (1993) coined the term 'multi-impulsive bulimia' (MIB) to describe patients presenting with impulsive behaviours in addition to binge eating and vomiting. Fichter, Quadflieg, and Rief (1994) operationalized MIB as three of the following six symptoms: suicide attempts, severe aggression, shop lifting, alcohol abuse, drug abuse or sexual promiscuity. Research addressing MIB is limited, but the available data suggest that patients with BN differ from patients with MIB on impulsive behaviours but not on the severity of eating disorder symptoms. However, it is not clear whether the distinction of MIB is helpful in predicting the course of the disorder or treatment outcome. In addition, Welch and Fairburn (1996) argued that MIB is a problematic distinction, as it classifies patients with impulsive behaviours as a single group, when in fact the behaviours of self-harm, alcohol misuse and drug misuse may all have different relationships to BN, which would make MIB too heterogeneous to be considered a disorder of impulse control.

The topic of impulsivity in patients with BN has been the focus of a few recent studies. The relationship between serotonin (5-HT) functioning and impulsive behaviours has been investigated among women with BN, and 5-HT activity appears to have an inverse correlation with impulsivity or hostility (e.g. Steiger, Koerner, Engelberg, Israël, Ng-Yin Kin, & Young, 2001a; Steiger et al., 2001b; Steiger, Israel, Gauvin, Ying Kin, & Young, 2003). However, Wonderlich et al. (2005) did not find an association between impulsivity and the transcriptional control region of the serotonin transporter gene (5-HTTLPR) suggesting that additional studies are needed to better understand the role of 5-HT in the

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development and maintenance of impulsive behaviours among eating disordered women. For instance, impulsivity may result from a number of different neuroendocrine disturbances related to both symptoms (e.g. starvation) as well as genetic influences (Steiger & Bruce, 2007). Thus, existing studies indicate that impulsivity may be an important trait among women with BN, and impulsivity and 5-HT functioning are important areas for research among both individuals with BN who also abuse substances, and patients with BN more generally.

Although research in the area of BN and SUDs has generated data on the frequency of co-occurrence between the disorders, etiology and shared personality traits, little is known about concurrently treating the symptoms of both disorders. Co-occurrence between these disorders is problematic, as SUDs are associated with the highest mortality risks of all mental disorders (Harris & Barraclough, 1998), and patients with BN risk serious medical complications (e.g. electrolyte disturbances; Birmingham & Beumont, 2004). Therefore, the development and evaluation of effective treatments tailored to individuals experiencing eating and SUDs is particularly important.

Treatment of individuals with bulimia nervosa

Both psychological and pharmacological treatments have been shown to be effective in treating BN (National Institute for Clinical Excellence, 2004). Cognitive behaviour therapy (CBT) (Fairburn, 2008; Fairburn, Marcus, & Wilson, 1993) has been the most intensively researched and currently is the first treatment of choice (Wilson & Shafran, 2005). However, although effective treatments have been identified for BN, the majority of randomized controlled trials evaluating psychological or pharmacological therapies have included only a subset of the larger population of BN patients.

Whereas individuals with BN and a comorbid anxiety or depressive disorder or a personality disorder are routinely included in controlled psychotherapy treatment trials of CBT, except in cases of significant suicidality, individuals with BN and current substance abuse or dependence are often excluded (Mitchell, Specker, & Edmonson, 1997; e.g. Agras, Schneider, Arnow, Raeburn, & Telch, 1989; Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000; Fairburn, Kirk, O'Connor, & Cooper, 1986; Kirkley, Schneider, Agras, & Bachman, 1985; Leitenberg, Rosen, Gross, Nudelman, & Vara, 1988; **see** Table 1) with few exceptions (Fairburn, Jones, Peveler, O'Connor, & Hope, 1991; Freeman, Barry, Dunkeld-Turnbull, & Henderson, 1988). As illustrated by Table 1, even the studies conducted in the United Kingdom that did include individuals regularly using alcohol or drugs, the proportion of these individuals was small (all less than 10%), which does not reflect the extant data on the prevalence of SUDs among the larger population of individuals with BN. Thus, despite a substantial percentage of patients experiencing problems with both substances and eating (e.g. Holderness et al., 1994), few recommendations can be derived from the existing literature for these individuals, and it is unclear whether the empirically supported psychological and pharmacological interventions for BN generalize to patients with both SUDs and BN.

Treatment for co-occurring bulimia nervosa and substance use disorders

Research addressing the treatment of both disorders is needed, as these conditions can be long-term, chronically-relapsing and potentially life-threatening (Vastag, 2001). One recent study by O'Malley et al., (2007) examined the treatment of alcohol dependent women with eating disorder features (a score of 70 or more on the Bulimia Test-Revised; BULIT-R, Thelen, Farmer, Wonderlich, & Smith, 1991). Significant decreases in attitudinal features (e.g. shape and weight concerns) on the Eating Disorder Examination (Fairburn & Cooper, 1993) and objective bulimic episodes were observed over the 12 weeks of treatment. As the

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treatment used in this study targeted alcohol dependence, and not symptoms of both disorders (O'Malley et al., 2007), it is not possible to extrapolate the findings to a combined treatment of dually diagnosed patients. However, this study suggests that these disorders may share common maintaining mechanisms, as successfully treating one disorder (alcohol dependence) reduced, but did not completely eliminate, the eating disorder.

Without data on the treatment of individuals with BN and a current SUD, most suggestions about the clinical management of these patients are based on experiences outside of research studies. Experts have indicated that CBT, as delivered for BN without modifications for substance use, is not the treatment of choice for individuals with substance use because these patients may be less likely to fully engage in the treatment of bulimic symptoms (Wilson, Fairburn, & Agras, 1997). Further, patients using substances may not respond to standard treatments, the outcomes for BN could be negatively impacted by SUDs (Bulik, Sullivan, Joyce, Carter, & McIntosh, 1998), and adaptations to treatment may be necessary to address issues with substance abuse (National Institute for Clinical Excellence, 2004).

Some clinicians have argued that patients with BN and co-occurring substance dependence should first receive treatment for alcohol or drugs. Treatment could involve participation in a 12-step approach, followed by eating disorder treatment (Sansone & Sansone, 2007), unless the 'eating disorder symptoms have the potential to derail the substance abuse treatment,' (p. 182) and then treatment integration is preferable (Sansone & Dennis, 1996). The recommendation for sequenced treatment is complicated by data suggesting that patients with both disorders report being refused treatment for either the eating or SUD because of the presence of the other problem (Dunn, Geller, Neighbors, Brown, Williams, & Jones, 2007). Thus, comorbid patients may be prevented from receiving an initial course of psychotherapy for a SUD while ongoing eating disorder symptoms are also present. Sequenced treatment also requires substantial time and resources, and if bulimic symptoms are not addressed, patients are at risk for medical complications associated with BN (Birmingham & Beumont, 2004), and ongoing distress or impairment associated with their eating disorder. Thus, the alternative of an integrated treatment for BN and SUDs should also be considered.

An integrated treatment for bulimia nervosa and substance use disorders: rationale

Adapting CBT as an integrated treatment is a viable option for individuals with both BN and a SUD (Grilo, Sinha, & O'Malley, 2002; Wilson & Latner, 2002). The available data suggest CBT is efficacious for the treatment of BN (e.g. Agras et al., 2000) and SUDs (Carroll & Onken, 2005; Finney, Noyes, Coutts, & Moos, 1998). However, cognitive-behavioural treatments for BN and SUDs developed independently, without any attempts to address comorbidity (Sinha & O'Malley, 2000), similar to the approach of other 'disorder-focussed' research using CBT (Harvey, Watkins, Mansell, & Shafran, 2004). Although CBT is an empirically supported treatment for BN and SUDs, it is unclear whether the effectiveness of CBT would be maintained when integrating treatment across disorders.

Shared strategies in CBT for BN and SUDs (e.g. self-monitoring, identifying high-risk situations, skills to manage loss of control; Sinha & O'Malley, 2000) and common maintaining mechanisms (Harvey et al., 2004; see below) suggest the utility of a combined treatment for individuals with both disorders. The integration of two empirically supported CBT interventions represents a natural progression to address the full range of comorbidity experienced by patients with BN. Although there are no controlled studies of the efficacy of sequenced treatment versus integrated treatment for the co-occurrence of BN and SUDs, data on patient preferences supports the idea of combining treatment for both disorders, with Dunn et al. (2007) reporting a significant percentage of patients with a concurrent eating and SUD (84%) expressing a preference for an integrated treatment, as they believed the two

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disorders to be related. Thus, an integrated treatment may be the most consistent with patient preferences. In addition, integrated treatment would: (1) increase efficiency (e.g. requiring less time from mental health professionals), cost-effectiveness and the speed of treatment dissemination (Harvey et al., 2004), (2) avoid inconsistencies between therapies (e.g. abstinence violation effect versus cognitive-behavioural views of relapse) and (3) reduce logistical issues that may contribute to patient drop-out (e.g. time needed for concurrent or sequenced treatment, finding more than one therapist, etc.).

Relatively little empirical support exists for therapy integration. Further, integrating treatments increases procedural complexity, may dilute potent elements of the independent CBT interventions, and introduces the possibility of redundancy and procedural or conceptual incompatibility (Wilson & Schlam, 2004). For example, Craske, Farchione, Allen, Barrios, Stoyanova, and Rose (2007) found greater improvements in primary symptoms and comorbid conditions among patients with panic disorder/agoraphobia from CBT targeting panic disorder and agoraphobia only, in comparison to a CBT that also addressed comorbidities. Despite the potential difficulties with integration, focussing on shared clinical features between BN and SUDs (Harvey et al., 2004) and common treatment elements throughout treatment should produce only minimal increases in procedural complexity (see below). We believe that the available theoretical data supports the use of a combined treatment, but empirical data are needed to evaluate this hypothesis.

Focus on common maintaining mechanisms

The available studies of individuals with BN and SUDs, and data from the eating disorder and substance abuse fields independently, suggest some common clinical features that should be addressed in an integrated treatment. The ‘transdiagnostic’ framework described by Fairburn, Cooper, and Shafran, (2003) for eating disorders and others more broadly (Harvey et al., 2004) serve as examples for how shared characteristics could be targeted in a treatment for eating and SUDs. Fairburn et al. (2003) emphasized commonalities across eating disorder diagnoses, and also present the option of tailoring treatment to an individual patient, such as by adding treatment modules to target other maintaining mechanisms (Wilson, 1996). This transdiagnostic CBT incorporates modules for problems including interpersonal functioning, core low self-esteem, mood intolerance or clinical perfectionism, that may maintain bulimic behaviours (Fairburn et al., 2003). In treating individuals with BN and SUDs, we propose modules addressing motivation, interpersonal relationships, reward sensitivity and impulsive behaviours as potential targets for treatment; however, other characteristics (e.g. low self-esteem, depressed mood) may also serve to maintain substance use and binge eating and purging behaviours, and should be evaluated in future research.

Motivation to change

The need to enhance motivation and resolve ambivalence is a well-known clinical concern among patients initiating treatment for both eating disorders (e.g. Vitousek, Watson, & Wilson, 1998, Treasure & Schmidt, 2008) and substance abuse (e.g. Miller & Rollnick, 2002). Motivation is an essential element of a psychological treatment like CBT where treatment adherence is necessary to succeed in reducing bulimic and substance use behaviours. Strong empirical support exists for the use of MI in the treatment of alcohol and marijuana-dependent patients, but the data for the utility of MI among illicit drug users is more variable (e.g. Carroll & Onken, 2005; Hettema, Steele, & Miller, 2005). A few studies of patients with BN have evaluated with use of MI in combination with cognitive-behavioural self-help (Dunn, Neighbors, & Larimer, 2006; Schmidt et al., 2006), or CBT (Treasure et al., 1999). The results of these studies are mixed, with the two self-help studies demonstrating positive effects of a motivational enhancement therapy session on abstinence

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from binge eating and personalized feedback on dietary restraint and self-induced vomiting, respectively (Dunn et al., 2006; Schmidt et al., 2006). Conversely, Treasure, Katzman, Schmidt, Troop, Todd, and DeSilva, (1999) found that four sessions of motivational enhancement therapy did not enhance outcome. The data from the substance abuse literature, and the positive results of two studies in BN (Dunn et al., 2006; Schmidt et al., 2006), support an integrated treatment approach for BN and SUDs employing strategies from CBT, MI and motivational enhancement treatment (MET; Miller & Rollnick, 2002; e.g. personalized feedback) to address ambivalence (Grilo et al., 2002).

Problems with interpersonal relationships

Deficits in interpersonal functioning are included by Fairburn et al. (2003) as a target for treatment in their expanded CBT for eating disorders, specifically through the use of techniques from interpersonal psychotherapy. In an integrated treatment for dually diagnosed patients, the increased focus on relationships could be approached from a CBT perspective to allow for consistency across interventions and reduce the likelihood that a therapist employs a series of 'techniques' without adhering to an overall theoretical framework. Assertiveness and social skills training, forms of behaviour therapy, help to decrease interpersonal conflicts and deficits (Loro, 1984) and could be utilized with patients for whom interpersonal problems contribute to the maintenance of bulimic behaviours as a source of stress (Wilson, 1996), or trigger substance use.

Reward sensitivity

In the treatment of alcohol dependence, cue exposure can be employed to reduce patients' sensitivity to cues often encountered in the context of consuming alcohol (e.g. sight and smell of an alcoholic beverage, environments, moods or situations). Cue exposure for the treatment of alcohol dependence involves the presentation of cues that usually signal drinking, such as an empty beer bottle, while the patient employs a coping skill (Monti, Kadden, Rohsenow, Cooney, & Abrams, 2002). Although the data suggest that cue exposure produces decreases in craving and drinking behaviour (e.g. Loeber, Croissant, Heinz, Mann, & Flor, 2006), this form of intervention can be difficult to utilize in an outpatient context due to concerns about patients drinking after leaving a session. However, cue exposure can lead to increased self-efficacy for patients with alcohol dependence to prevent relapse in the context of high risk situations (Loeber et al., 2006).

In the treatment of BN, cue exposure was first used because of the similarities between BN and substance use, with some promising results in a small pilot study (Jansen, Broekmate, & Heymans, 1992). More recently, Martinez-Mallén et al. (2007) applied these techniques to adolescents who had failed a course of CBT for BN and concurrent psychopharmacology. Twelve cue exposure sessions were provided, which involved the identification of usual foods consumed during binge episodes and subsequent contact with the food (e.g. touching, handling, smelling, looking, etc.). Significant reductions were observed in binge eating episodes post-treatment, and improvements were maintained at 6-month follow-up (Martinez-Mallén et al., 2007). Thus, these cue exposure strategies could be used in an integrated CBT treatment for individuals who can identify particular cues for alcohol use that can be utilized in session (e.g. negative mood states), or for patients who report depersonalization while binge eating to increase mindfulness.

Impulsive behaviours and borderline personality disorder characteristics

As aforementioned, impulsive behaviours and characteristics of borderline personality disorder, including emotion regulation, are commonly observed in patients presenting with BN and SUD and have the potential to interfere with the cessation of alcohol or drug use and binge eating and purging. In addition, studies of patients with co-occurring BN and SUD

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indicate that comorbid patients are more likely to be diagnosed with borderline personality disorder (Grilo et al., 1995; Sansone et al., 1994), to report a history of suicide attempts, promiscuity and reckless driving (Sansone et al., 1994), or other impulsive behaviours (Lacey, 1993). These patients are likely to also report additional comorbidities that will require significant safeguards in the research protocol (e.g. weekly evaluations of self-harming thoughts and behaviours and suicidal ideation, well-defined emergency procedures, etc.).

Dialectical behaviour therapy (DBT) is an efficacious treatment for individuals with borderline personality disorder (Lynch, Trost, Salsman, & Linehan, 2007); however, in providing an integrated CBT treatment for BN and SUDs, as highlighted by Wilson (1996), it is too complex to add a full course of DBT to CBT. The principal dialectic of acceptance and change in DBT and the DBT strategies of emotion regulation, including understanding and labelling emotions, distress tolerance, reducing emotional vulnerability and decreasing emotional suffering, are particularly relevant for comorbid BN and SUD patients. Behaviours such as substance use or binge eating can be used as a means of alleviating painful emotions (Linehan, 1993), and DBT skills could be used to target these patterns. Similarly, Fairburn et al. (2003) address 'mood intolerance,' or problems in coping with emotional states such as anger, anxiety or depression, or even excitement through behaviours such as self-harm, substance use or binge eating and purging. The pairing of intense mood states and coping through unhealthy means are therefore targeted in the expanded version of CBT for BN (Fairburn et al., 2003).

DBT has been adapted for the treatment BN (Safer, Telch, & Agras, 2001), with patients receiving individual psychotherapy sessions targeting emotion regulation skills as described by Linehan (1993). The DBT model for BN conceptualizes binge eating and purging as a means of controlling emotions, and emotion dysregulation is therefore considered to be primary problem with ongoing bulimic behaviours. Thus, a precedent exists for the use of these skills in individual therapy to reduce binge eating and purging. Similar to the data on motivational interviewing and cue exposure, research has also supported the utility of DBT for the treatment of eating disorders and SUDs. One small study identified beneficial effects of DBT on bulimic symptoms (Safer et al., 2001), and investigations of a manual for patients with comorbid borderline personality disorder and SUDs (Linehan & Dimeff, 1997) have also found promising results (Linehan, Schmidt, Dimeff, Craft, Kanter, & Comtois, 1999; Linehan et al., 2002).

A practical description of the integrated treatment

A combined CBT for BN and SUDs using the elements described above should be applied flexibly but therapy integration can increase procedural complexity in delivering treatments. Thus, this section offers a brief outline of how this treatment might be applied. Alcohol or drug abuse must be the first target of treatment, as without control over drinking or drug use, addressing the eating disorder will be difficult or impossible (Wilson & Latner, 2002). The first session should focus on motivation (e.g. motivational interviewing, CBT techniques) and personalized feedback regarding substance use to increase readiness for change and engagement with CBT. Thereafter, as motivation is dynamic, strategies for addressing ambivalence should be applied as needed (Wilson & Schlam, 2004). Initially, self-monitoring records should include drinking and/or drug use and bulimic behaviours, to allow for the assessment of overlapping antecedents for substance use and bulimic behaviours. In addition, patients learn skills common to substance use, binge eating and purging and shared maintaining factors (e.g. alternative activities, problem solving). After approximately the first month of treatment, as drinking and drug use decrease, bulimic behaviours become a greater focus of treatment. Self-monitoring records are adapted to

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assess other aspects of eating behaviour, and specific behavioural strategies for reducing binge eating and purging are introduced (e.g. regular eating).

After the first ten to twelve sessions focussed on behavioural strategies for substance use and bulimic behaviours, a review of progress to date and a clinical assessment of the common maintaining mechanisms should occur, similar to that described by Fairburn (2008). Subsequently, the therapist develops an extended treatment formulation and identifies no more than two additional domains to target in treatment (e.g. reward sensitivity and interpersonal problems). During the next ten to twelve sessions, half of the session is allotted for addressing ongoing substance use or bulimic behaviours, and half for a modular treatment (e.g. Fairburn, 2008) focussed on the common mechanisms (e.g. interpersonal issues, reward sensitivity activities and distress tolerance). The last two sessions should consist of constructing a maintenance and relapse prevention plan for both BN and substance use.

Differences between BN and SUD

Although the shared clinical features and overlap of CBT for BN and SUDs suggest important commonalities in the presentation and treatment of these disorders, one feature in particular does not overlap between the BN and SUD diagnoses. The desire for consuming alcohol or drugs is a defining characteristic of alcohol and drug dependence, but individuals with BN show the opposite behaviour by attempting to avoid specific foods and rigidly control caloric intake (Fairburn, 1995). Therefore, as suggested by Fairburn (1995), patients with comorbid eating and SUDs will need to simultaneously increase control over drinking and decrease rigid control over eating with treatment for BN. These goals should be explicitly discussed with patients at the beginning of treatment to highlight the contrast between the reasons for abstinence from alcohol and drugs (e.g. controlled drinking is difficult to maintain for individuals with problem use) and reducing dietary restraint (e.g. significant dietary restraint is likely to maintain binge eating behaviours).

Other considerations when treating individuals with bulimia nervosa and a substance use disorder

Mental health professionals providing treatment to patients with a co-occurring BN and SUD should be mindful of clinical concerns that are likely to arise in working with dually diagnosed patients. As aforementioned, a significant proportion of individuals with these disorders also meet criteria for borderline personality disorder, and safeguards for self-harming behaviours and suicidality should be developed and the patient educated about safety procedures from the very beginning of treatment. Patients with these disorders are also at risk for developing medical complications, such as hypokalemia from self-induced vomiting (Birmingham & Beumont, 2004), and may need an inpatient detoxification from alcohol or drugs prior to the initiation of any outpatient treatment. In addition, medical monitoring, tests for alcohol or drug use (e.g. breathalyser, urine screens), and discussions about risk (e.g. self-harm, driving while intoxicated, etc.) should continue throughout treatment for patients with BN and SUDs, either with the primary outpatient provider or another clinician.

Alternative treatments

Pharmacological treatments might also be considered for individuals with co-occurring BN and SUDs, either as an adjunct to CBT or after psychological treatment fails. Medications with efficacy for BN or substance use are possible options, including fluoxetine or acamprosate. Naltrexone has been evaluated for BN (e.g. Jonas & Gold, 1986–1987–1988; Mitchell et al., 1989), and alcohol and opioid dependence (for reviews, see Johansson, Berglund, & Lindgren, 2006 and Pettinati et al., 2006); however, naltrexone was not more

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effective than placebo for individuals with eating disorders and substance use (O'Malley et al., 2007). Additional research to investigate the neurobiology underlying the disorders, including brain imaging and 5-HT studies, is needed in order to identify biological features common to both BN and SUDs that could be targeted with medications.

Conclusion

An integrated form of CBT appears to be a viable option for individuals with both BN and SUDs, with adaptations to the standard cognitive-behavioural therapies to address commonalities across the disorders. The description of an expanded version of CBT for BN (Fairburn, 2008) suggests a means by which to address shared characteristics through modules that allow for flexibility in the individualization of the treatment. In the population of patients with BN and SUDs, as previously described, motivation, interpersonal relationships, reward sensitivity and impulsive behaviours may be of particular relevance. However, as relatively little research is available on the overlap of BN and SUDs, especially with regard to treatment, future studies should evaluate additional common features to target in treatment, and the efficacy of a treatment adapted to address salient features observed among individuals with this particular dual diagnosis.

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Table 1

Exclusion criteria for controlled psychotherapy trials of cognitive behaviour therapy for bulimia nervosa

Study	Exclusion criteria	Reported % current comorbid axis I/ II psychopathology
Kirkley et al., 1985	**Abuse of laxatives, alcohol, or drugs** Psychosis Suicidality Involving in ongoing theft	Not provided
Fairburn et al., 1986	Co-existing major psychiatric disorder other than a depressive, anxiety or obsessional state **Current physical dependence on alcohol or drugs** Need for hospitalization, either because of the risk of suicide or poor physical health Concurrent treatment Unable to be available for the entire treatment and 12 month follow-up period	Not provided
Agras et al., 1989	Age below 18 years or above 65 years Concurrent treatment Concurrent DSM-IIIR diagnosis of anorexia nervosa, schizophrenia, unipolar or bipolar affective disorder, **drug abuse or alcoholism** Medical disorders such as significant hepatic disease, renal disease or major cardiac disease, pregnancy or abnormal serum potassium	Not provided
Freeman et al., 1988 *	Age below 18 years Fewer than three binge episodes in the preceding month History of psychotic illness	7% (n = 8) had a history of self-harm, 3.6% (n = 4) used illegal drugs regularly and 6.3% (n = 7) drank more than 20 units of alcohol a week.
Leitenberg et al., 1988	Age below 18 years or above 45 years Weight outside of 80–120% of normal weight Vomiting fewer than 3 times per week Abuse of laxatives **Alcoholism**, psychosis or serious suicide risk Concurrent treatment	Not provided
Fairburn et al., 1991 *	Failure to meet an operational version of the DSM-III R criteria for bulimia nervosa Body mass index less than 17	28% (n = 21) had previous psychiatric treatment 9% (n = 7) drank more than 20 units of alcohol per week, and 5% (n = 4) regularly used illegal drugs
Agras et al., 2000	Physical or psychiatric disorder necessitating hospitalization **Current drug/alcohol dependence** Low body weight (body mass index <17.5) Pregnancy/physical conditions known to influence eating or weight Other current treatment	22% (n = 48) current major depression 37% (n = 81) any personality disorder

The bold text highlights any alcohol or substance specific exclusion criteria for the studies.

* Indicates studies that included individuals with substance use or dependence.