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Review Article

Emotion Regulation and Eating Disorders: Rethinking Therapeutic Options

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Abstract

Eating Disorders (EDs) are a group of mental disorders that are quite distinct and difficult to treat. It has been calculated that around ¼ - ⅓ of the patients do not respond to first line psychotherapeutic treatments such as cognitive behavioural therapy. Emotion regulation seems to play an important reinforcing role both for the starvation and bulimic behaviours that characterise EDs. The main objective of the short review is to present the results from studies on the relation between ED and emotion regulation as well as the efficacy of treatments that are more focused on emotion regulation than cognitive reconstruction.

Keywords: *Eating Disorders; Emotion Regulation; Anorexia Nervosa; Bulimia Nervosa; Binge Eating Disorder*

Abbreviations

AN: Anorexia Nervosa; BN: Bulimia Nervosa; BED: Binge Eating Disorder; CBT: Cognitive Behavioral Therapy; DBT: Dialectical Behavioral Therapy; ED: Eating Disorders

Introduction

Eating Disorders (EDs) are a group of mental disorders that are quite distinct and difficult to treat, as they manifest through a number of unique characteristics [1]:

A number of patients suffering from anorexia nervosa (AN) lack insight and express delusional beliefs about their body image [2].

The diagnosis of ED often does not remain stable over the years. It is not uncommon to observe a patient suffering from AN during adolescence, bulimia nervosa (BN) or other specified feeding and eating disorders during early adulthood, and binge eating disorder (BED) during middle age. This has led a number of researchers to suggest a "transdiagnostic" approach to ED classification and treatment [3,4].

The first line of treatment for EDs is psychotherapy [5]. However, when treating patients whose symptomatology is highly reinforced (either by the environment's reaction to ED or by the individual's observation of the ED effect on his/her mental state), then psychotherapy's effectiveness is substantially reduced. Moreover, a considerable number of patients, especially those suffering from AN, drop out of therapy for a variety of reasons [6].

The course of EDs may be protracted; in many cases, patients need several years to recover. Moreover, a substantial number of patients do not recover fully or even partially and run the risk of developing a chronic disorder [7,8].

The primary behaviours observed in EDs are related to energy intake and expenditure and vary from intense restriction of eating and compulsive exercise to consuming large amounts of food without any form of compensation. Notably, patients with EDs, regardless of symptom presentation and specific ED behaviours, tend to report that these behaviours are linked to difficulties with emotion regulation. Fear of losing control and gaining weight may drive extreme dieting, while emotional suffering (boredom, sadness, anxiety, anger) may contribute to bingeing and purging [9].

The main objective of the short review is to present the results from studies on the relation between ED and emotion regulation as well as the efficacy of treatments that are more focused on emotion regulation than cognitive reconstruction especially for ED patients that do not respond to conventional psychotherapy.

The effectiveness of cognitive behavioral therapy for eating disorders

Cognitive Behavioral Therapy (CBT) is currently regarded as a first line treatment for ED and the first choice for adult patients suffering from BN and BED [5]. Therapist led CBT has shown superior efficacy to other forms of treatment for BN and BED and similar for AN [10]. The most well studied model of CBT for ED is CBT-E (enhanced) which is based on Fairburn's transdiagnostic theory of the maintenance of EDs, in which it is assumed that most of the mechanisms involved in the persistence of EDs are common to all three EDs, rather than being specific to each diagnostic group separately [11].

Although CBT for ED is a highly effective treatment in research conditions, a recent meta-analysis of non-randomised trials showed that only 41.2% of treatment completers achieved abstinence at post treatment [12]. Furthermore, there is some evidence that patients that are considered recovered based on abstinence from binging or purging behaviours may still exhibit cognitive and emotional difficulties related to ED [13]. Drop-out from CBT has been associated with less education, higher novelty-seeking, and previous CBT experience [14].

Since CBT-E focuses more on modifying behaviours and thoughts and less on emotion regulation, other forms of treatment targeting emotion dysregulation as an ED maintaining factor could be of benefit, especially for those patients that do not improve with CBT or do not engage in the treatment. It should be noted that a substantial number of ED patients also exhibit other behaviours that are related to difficulties in regulating emotions such as substance abuse and non suicidal self injuries that is difficult to treat with standard manualized CBT-E [15]. Third wave behavioural therapies (Dialectical Behaviour Therapy (DBT), Acceptance and Commitment Therapy, schema therapy, mindfulness-based interventions, and compassion-focused therapy), have been researched as an alternative option for the treatment of EDs patients [16]. Until now although some of these therapies has shown positive results for the treatment of EDs, none of them has proven efficacy superior to CBT or specificity for particular ED subgroup [16]. It should be noted that most randomised controlled trials do not include participants suffering from complex ED an area where third wave therapies could contribute vastly. One of the studied third wave treatments that could help individuals with emotional dysregulation and has been used to treat ED patients is Dialectical Behaviour Therapy (DBT).

Emotion regulation and eating disorders

In 1998 Gross provided a broad definition of emotion regulation as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" [17]. With respect to EDs, the last decade of research has facilitated a deeper understanding of the importance of emotion regulation for the development and maintenance of pathological eating behaviour [9,18]. Individuals suffering from EDs report higher levels of emotion intensity, lower acceptance of emotions, and less emotional awareness and clarity than healthy controls [19]. In individuals with AN, emotion regulation ability has been related to attentional biases to faces in general and more specifically to angry over neutral faces, as well as reduced emotion recognition ability [19].

With regard to regulation strategies, reappraisal, problem-solving, and acceptance are generally conceptualized as adaptive, while suppression, avoidance, and rumination are considered as maladaptive strategies [20]. Individuals with AN tend to avoid both negative and positive emotional states [21]. In BN and BED, patients strive to suppress intense negative emotions thus leading to elevated urge to consume large amounts of food as a way to attenuate the intense emotions or to distract from them by focusing on the negative results of the bulimic episode [22]. Research on differences in the use of emotion regulation strategies across ED diagnoses is currently mixed.

There are studies that have not found any differences in emotion regulation ability between different EDs [18] while others have reported difference between the two types of AN and BN and possibly fewer difficulties in BED [23,24]. Women suffering from both types of AN seemed to strongly suppress emotion while women suffering from AN binge/purge type showed higher reappraisal scores than the rest of the ED types [24]. In addition, AN binge/purge type reported more impulse control difficulties than AN restrictive type and BED [25]. Moreover, the use of emotion regulation strategies across the ED spectrum has been related to general psychopathology and especially anxiety and depression [24,25].

The latest results from research on emotion regulation in EDs and gender differences have not shown any difference between males and female patients. However, emotional regulation was related to different personality traits in women than in men with ED [25]. Higher novelty seeking, higher cooperativeness, lower reward dependence, and lower self-directedness were related to higher emotion regulation difficulties in women whereas lower persistence was associated with emotion regulation difficulties in men suffering from ED. Interestingly, the use of maladaptive strategies to achieve emotion regulation is improved after treatment especially in BN [26].

Dialectical behaviour therapy and emotion regulation in eating disorders

DBT is an intervention originally developed for individuals with borderline personality disorder [27]. Over the years, DBT has been applied successfully to a variety of mental disorders characterised by emotional and behaviour dyregulation [28]. In fact, it is more and more recognised that DBT is an effective treatment for the regulation of emotions, irrespective of the diagnosis of a mental disorder [29,30]. DBT applies a number of skills and strategies that balance change with acceptance thus guiding the individual to find the synthesis between opposite emotions, thoughts and urges. As the individual learns to observe and describe his/her emotions as well as use the skills to label, validate their role in life, regulate and tolerate them the ability to use more adaptive strategies increases and the maladaptive behaviours decrease. Concerning ED, DBT has been adapted in order to adjust to the unique characteristics of ED that have been described in the introduction. There is a growing body of research that indicates that DBT is an effective treatment option for this population, including those who have co-occurring personality disorders [31].

For AN characterized by emotion over-control radically open DBT proposes that rather than trying to be 'emotionally regulated' through starvation and social isolation, long-term psychological well-being is achieved by increasing social connectedness [32]. Radically open DBT tries to train AN patients to become more open-minded and increase flexible social-signaling in order to establish long-term intimate bonds with others [32,33].

For BN and BED DBT has been adapted to target more specifically emotion regulation though bulimic consumption of food [34]. The manual-based intervention focuses on group skills training on mindfulness, emotion regulation and distress tolerance [34]. The particular DBT adaptation has been found effective for the treatment of BN and BED in various trials [35].

Conclusion

During the last decade there is accumulating evidence from neuroimaging studies and clinical research that emotion regulation plays an integral part in EDs pathophysiology. Although the number of well designed randomised controlled studies on novel therapies that focus on emotion regulation for the treatment of EDs is still small the first results are quite promising and need to be expanded. Furthermore, the existence of an EDs subgroup that could probably benefit most from a treatment based on emotion regulation skills should also be researched.

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