Integrating EMDR With Enhanced Cognitive Behavioral Therapy in the Treatment of Bulimia Nervosa: A Single Case Study

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Eating disorders (EDs) are complex and treatment-resistant problems. Despite evidence-based methods like enhanced cognitive behavioral therapy (CBT-E), the number of clients who do not respond positively to treatment is also remarkable. Eye movement desensitization and reprocessing (EMDR) therapy has been adapted for EDs. As far as it is known, no case study has been reported in which EMDR was integrated with CBT-E in the treatment of EDs. This study provides a detailed description of the treatment of a participant with bulimia nervosa (BN) who received 20 sessions of CBT-E followed by five sessions of EMDR with a focus on body image. Presenting symptoms were measured on the Eating Attitudes Test-26, Eating Disorder Examination Questionnaire, Eating Disorder Belief Questionnaire, Bulimia Nervosa Stages of Change Questionnaire, and Body Satisfaction Scale. Results showed that the client had important improvements in terms of symptoms (binge-eating, restricting, and preoccupation with weight, shape, and eating) as well as motivation, body satisfaction, and social relations. This single case study provides preliminary evidence for the possible effectiveness of CBT-E plus EMDR in the treatment of BN. It also indicates that EMDR can make unique positive contributions to treatment. In this context, the use of EMDR as an integrative method appeared to increase the effectiveness of treatment results.

Keywords: eating disorders; enhanced cognitive behavioral therapy; eye movement desensitization and reprocessing (EMDR) therapy; bulimia nervosa; body image

Eating disorders (EDs) affect an important proportion of young women and can have a severe impact on health. Without effective treatment, these problems might easily become chronic and even turn into life-threatening conditions. On the other hand, treatments are usually long and costly, and complete remission may not be possible for a significant number of clients. Thus, understanding the etiological factors and attempts to increase treatment efficacy have been a challenge in the ED research.

Overview of EDs

Eating disorders are characterized by excessive preoccupation of body shape, eating, weight, disordered eating, and compensatory behaviors. DSM-5 (American Psychiatric Association, 2013) categorizes eating disorders as anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder, and addresses feeding disorders of pica, purging, and avoidant/restricted food intake. These disorders, in which genetic, neurobiological, psychological, and sociocultural factors are involved in the etiology, are often accompanied by various medical and psychiatric problems.

Trauma history and early negative experiences are common in clients with EDs. Attachment problems, various traumatic experiences (neglect, abuse, loss, being bullied), and stressful life events (migration, academic stress, conflict in close relationships), play an important role in the etiology and course of the disease in connection with the neurobiological system (Mitchell et al., 2012; Monteleone et al., 2018). This situation also manifests itself with frequent comorbid posttraumatic stress disorder (PTSD)

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(Keski-Rahkonen & Mustelin, 2016). Therefore, it is assumed that a trauma perspective and working with emotional aspects of negative schemas can make a meaningful contribution to treatment.

Eating disorders can be also conceptualized as affect management problems that originated from early attachment relationships (Tasca, 2019). Moreover, dissociation in EDs can be considered as a way of coping with the traumatic experiences. Thus, symptoms are understood as a coping mechanism or a state change that also maintain the problem by providing "a sense of control" to the patients (Forester, 2009; Lidov, 2009; McGee, 2009). For such cases, trauma-focused treatment, such as eye movement desensitization and reprocessing (EMDR) therapy, may be an appropriate stand-alone treatment or might easily be integrated into other ED treatment.

Treatment of EDs

Treatment of EDs require a multidimensional modality with psychotherapy at the center. Family-based approach in the treatment of AN is reported as an evidence-based method in adolescent participants (Watson & Bulik, 2013). Family-based treatment (FBT), also referred as Maudsley approach, is a behaviorally oriented treatment that includes various psychotherapy techniques. Family-based treatment conceptualizes a patient with AN as embedded in the family and it focuses on parents as a treatment resource (Lock & Grange, 2015). It hypothesizes that AN controls the client and that she/he needs significant support for weight restoration. Another key aspect of FBT is that it externalizes the illness, so that parents can take significant actions against the illness, not against their child. Neither the family nor the adolescent is blamed for AN, hence the goal is to achieve behavioral change instead of dwelling on the causes. The desired outcome of the therapy is to reach a normal body weight first, and then transitioning control of eating back to the adolescent in the second phase. In the last phase of treatment, other developmental issues, improving the adolescent's autonomy, and peer relations are addressed to create a healthy adolescent–parent relationship.

Cognitive behavioral therapies (CBTs) are accepted as the "gold standard" for BN and binge-eating disorder (American Psychiatric Association [APA], 2006; NICE, 2017). The CBT model assumes that ED symptoms arise from certain dysfunctional cognitions about weight, shape, and eating, thus compensatory behaviors are conceptualized as a coping strategy (Fairburn, 2008). Unrealistic expectations about weight and body shape, dysfunctional beliefs that self-worth will only increase when these expectations are met, and the effect of food on weight are the three core beliefs that play an important role in the etiology and maintenance of ED symptoms. Thus, the desired outcome of treatment is to change this cognitive system, with the assumption that this will eventually result in symptom reduction. Psychoeducation is widely used during therapy. Behavioral methods like regular eating, self-monitoring, and in-session weighing are used to target weight gain in AN and for the binging-purging cycle in BN in the first phase. Cognitive methods that focus on dysfunctional beliefs about weight, shape, and eating are mostly used in the second phase. In the last phase, a combination of cognitive and behavioral methods is used to focus on maintaining the gains of treatment and managing relapse.

Although CBT offers structured intervention protocols, it is not effective in a significant proportion of participants with EDs (Keski-Rahkonen & Mustelin, 2016). It is also known that therapists avoid using effective CBT methods such as exposure, but turn to alternative techniques, such as mindfulness, acceptance commitment, and schema therapy (Mulkens et al., 2018). Although CBT protocols provide an evidence-based way to clinicians, they nevertheless have significant limited effects on body image problems that are the core of the EDs (Bruch, 1962), as well as problems with emotional regulation and negative schemas resulting from traumatic experiences (Atwood & Friedman, 2020; Vanderlinden, 2008).

Enhanced CBT

Cognitive behavioral therapy is the psychological treatment of choice for EDs in a number of national clinical guidelines, including the UK National Institute for Health and Care Excellence (2017), the APA (2006), and the Royal Australian and New Zealand College of Psychiatrists (Hay et al., 2014). The enhanced CBT (CBT-E) model was developed with a "trans diagnostic" perspective (Fairburn et al., 2003), which views all EDs as having a common mechanism. This hypothesized mechanism is the excessive importance given to food, weight, and body. In this approach, besides standard CBT applications, perfectionism, low self-respect, difficulty in emotion regulation, and interpersonal problems are also focused on the treatment as maintainers (Fairburn, 2008). CBT-E has individual, group, face-to-face, or online applications for all ED groups.

While standard CBT provides three treatment phases, CBT-E provides four phases, with short (20

sessions) and long (40 sessions) treatment protocols. The aim in CBT-E is understanding the maintaining mechanism of the eating problem, developing alternative behaviors to symptoms, and creating a change in the ED mindset.

The first phase of the treatment takes seven sessions on average; the aim is to understand the eating problem and establish regular eating (three main meals and two snacks) and to ensure therapeutic alliance. Regular eating prevents episodes in participants with binging and assists weight gain in participants with low weight. Clients are requested to record their eating as self-monitoring. This practice also acts as a kind of exposure and it can be challenging at first. The second phase of the treatment lasts two sessions on average and reviews the factors preventing the change. In the third phase, which lasts eight sessions on average, the focus is on mechanisms that sustain the problem, such as concerns about eating and body image. Problem-solving training, increasing tolerance to uncertainty, cognitive restructuring, body acceptance, interpersonal relationships, obsessive controlling of the body, emotion regulation, and ED mindset can be studied. The final phase includes three sessions, two weeks apart, and the focus is on maintaining change, preventing relapse, and problems that may arise in the future.

Enhanced CBT produces results as effective as standard CBT (Fairburn et al., 2015; Zipfel et al., 2014), and rapid and significant changes in symptoms when compared to psychoanalytic psychotherapy (Poulsen et al., 2014), interpersonal psychotherapy (Fairburn et al., 2015), and FBT (Le Grange et al., 2020). Pre–post treatment symptom improvements are also observed for third-wave therapies (Schema Therapy, Dialectical Behavioral Therapies, Acceptance and Commitment Therapy, Mindfulness-based Interventions, and Compassion-focused therapy), yet none of them meet the criteria of an empirically supported treatment for EDs when compared with CBT (Linardon et al., 2017). These results indicate CBT-E as a frontline treatment option for the whole spectrum of EDs. However, several studies identified limitations and tested other effective options. For example, Integrative-Cognitive Affective therapy that targets emotions and self-oriented cognitions was found to be as effective as CBT-E in symptom reduction and overall improvement (Wonderlich et al., 2014). Additionally, dropout rate is a problem in CBT-E. Less than two-thirds of participants complete treatment and remission is not achieved for a significant proportion of them (Dalle Grave et al., 2021). Furthermore, the need for other integrative methods with CBT-E (especially with a focus on body image) was also highlighted (Spielmans et al., 2013). With respect to the efficacy, it is understood that further studies are also needed for better treatment outcomes and understanding the specificity of CBT-E (De Jong et al., 2018).

EMDR Therapy

EMDR therapy is a trauma-focused approach that is recommended by many professional organizations (APA, 2006) as an effective approach in the treatment of PTSD. EMDR therapy was developed by F. Shapiro, who stated that it contains elements of many therapy methods such as psychodynamic, cognitive, and behavioral therapies (F. Shapiro, 2001). Therefore, it can be easily integrated with other therapy practices (Kiessling, 2005). EMDR contains many positive elements, such as building resources, strengthening positive cognitions (PCs), and preparing the client for success in future situations. These aspects may contribute to improving the individual's functionality.

EMDR therapy is an eight-phase treatment. The first two phases address history taking, treatment conceptualization, and preparation. Phases 3–7 focus on processing past distressing experiences, current triggers, and future anticipations. The processing starts with identifying the components for the session's target, including image, negative self-referencing cognition, preferred PC, emotions, and body sensations. The validity of the PC is evaluated using the Validity of Cognition (VOC) scale, (1 = completely false, 7 = completely true). The current level of disturbance is evaluated using the Subjective Units of Disturbance (SUD) scale (0 = no disturbance, 10 = highest disturbance). During phases 4, 5, and 6, the client focuses on the memory while engaging in eye movements (or other bilateral stimulation), and the memory is desensitized (SUD = 0 or 1), the PC is strengthened (VOC = 7), and any residual somatic disturbance is resolved. As each memory is processed, the client may recall other aspects of the incident, and related information. Positive information is integrated with the memory and the memory is transformed, losing its evocative negative characteristics. Phase 8 evaluates the client's progress at the beginning of each session. As treatment progresses, symptoms usually remit, and the client's functionality improves.

EMDR treatment is based on the adaptive information processing model (Shapiro, 2001). This theory assumes that the human neurobiological system processes information in a manner that promotes adaptive resolution. Thus, a person who experiences a traumatic event will generally work through the

experience inherently. Yet, some critical experiences can overwhelm the system and stay unprocessed, like frozen memories. Therefore, the traumatized person is stuck between past and present as the unresolved event is experienced as if it is reoccurring now. The eight-phase process of EMDR re-enables the normal information processing and integration.

EMDR in the Treatment of EDs

EMDR therapy can be used in the treatment of EDs in various ways. EMDR processing may target not only the predisposing trauma, but also the trauma that was generated by the disorder itself (Scholom, 2009). It may target different aspects of the EDs, for example, by combining the standard EMDR trauma protocol with a focus on negative body image (Dziegielewski & Wolfe, 2000) or self-perception (Bloomgarden & Calogero, 2008). Targets can also include any of the common themes that underline ED symptoms, such as control, powerlessness, shame, vulnerability, worthlessness, dependency, competency, self, and body (McGee, 2009). Some specific protocols have also been developed for EDs (Shapiro, 2009; Seubert & Virdi, 2018; Zaccagnino, 2016). Zaccagnino (2016) emphasizes starting from the client's early attachment history, determining the traumatic experiences, focusing on developing resources, and working in depth on the negative cognitions (NCs). Seubert and Virdi (2018) view EDs as part of the dissociation spectrum and their approach incorporates ego state work and/or other strategies to address EDs. This view is also helpful, since clients sometimes experience binge-eating episodes as a form of dissociation in which they do not remember how it started or ended, or how much they ate; they may even state that they were not their "usual self."

Effectiveness of EMDR Therapy for EDs. Although the use of EMDR in the treatment of EDs is not recent, mostly, case reports stand out in the literature (Dziegielewski & Wolfe, 2000; Halvgaard, 2015). A limited number of studies have shown that EMDR may be effective, either alone or as an integrative method with standard therapy, in the treatment of different subtypes of EDs (Bloomgarden & Calogero, 2008; Zaccagnino et al., 2017a). Results indicate positive improvements on body image but also highlight the need for further studies. Recently, two case reports presented the successful use of EMDR alone or in conjunction with CBT for psychogenic vomiting (Gündoğmuş et al., 2019) and avoidant/restricted eating (Yaşar et al., 2019). However, in these two cases, although treatment successfully addressed the feeding problems which occurred after the traumatic experience, the thin idealization and body image problems, which are typical in EDs, were not part of the symptom presentation. As far as it is known, there is no case report that presented CBT-E with the integration of EMDR in ED treatment.

Method

Purpose of Study

This study aimed to contribute to this field by investigating the effectiveness of EMDR integration to CBT-E in the BN treatment in terms of binge-eating, compensatory behaviors (restrictive eating), concerns about eating, weight, and shape, motivation, body satisfaction, and social-relational problems.

Participant

The participant was a 22-year-old female senior college student. Her presentation met the DSM-5 diagnosis of BN at the beginning of treatment, she also had a history of AN. For the publication of this case report, the permission of the participant was obtained, and all the necessary ethical considerations were taken.

Assessment

Psychometric assessment was conducted by a clinical psychologist in training at pre-treatment, the end of the treatment, and 1-year follow-up. The following measures were used.

Eating Attitudes Test-26 (Ergüney-Okumus & Sertel-Berk, 2020; Garner et al., 1982) is a widely used self-report questionnaire to assess disordered eating attitudes and behaviors. Score range is between 0 and 69, higher scores mean a great disturbance in eating attitudes. The Turkish version of the scale shows good internal consistency (Cronbach's alpha = .84).

Eating Disorder Examination Questionnaire (Fairbur & Beglin, 2008; Yücel et al., 2011) is a 28-item self-report questionnaire that was adapted from Eating Disorders Examination Interview, which was used to measure the severity of ED symptoms in this study. It includes five subscales: restraint of food intake, binge-eating, eating concerns, shape concerns, and weight concerns. Sub-scale scores can be summed to a total score. The item score ranges from 0 to 6, where higher scores imply more severe levels of ED symptoms. The internal consistency (Cronbach's alpha) of the Turkish version ranges between .63 and .93.

Eating Disorder Belief Questionnaire (Cooper et al., 1997; Karaköse, 2012) assesses assumptions and core beliefs in four domains: negative self-beliefs; weight and shape as a means for acceptance by others; weight and shape as a means for self-acceptance; and control over eating. This 32-item scale shows good internal consistency (Cronbach's alpha scores range between .86 and .93). The scale is a helpful tool for developing a cognitive formulation and a useful outcome measure for cognitive interventions in patients with ED. Items are rated on a scale from 0 to 100 where higher scores mean a great dysfunction in core beliefs.

Bulimia Nervosa Stages of Change Questionnaire (Ergüney-Okumuş et al., 2018; Martinez et al., 2007) is a 20-item self-report questionnaire that assesses level of motivation to change for ED symptoms. For each symptom, the participant indicates her/his level of motivation based on the stages-of-change model (Prochaska et al., 2015). Scores for each item range between 1 and 5. Item scores are summed to yield a total score of overall readiness to change. Higher scores indicate a higher motivation to change and mean scores indicate the motivational level as <1.5 = precontemplation, 1.5–2.4 = contemplation, 2.5–3.4 = preparation, 3.5–4.4 = action, and >4.5 = maintenance. It demonstrated good internal consistency (Cronbach's alpha = .89).

Body Satisfaction Scale (Berscheid et al., 1987; Gökdoğan, 1988) is a 25-item scale that assesses body satisfaction. The item score ranges from 1 to 5 in which higher scores signify higher levels of body satisfaction. It is reported to have good psychometric features.

Treatment

Treatment was provided at a private counseling center. The participant received the CBT-E standard 20-sessions approach, followed by five sessions of EMDR therapy (stabilization, resource installation, reprocessing of traumatic experiences, future template), and three follow-up sessions. All sessions lasted 50 minutes on average, and the entire treatment process took almost a year. Eye movements were used as bilateral stimulation (BLS).

The therapist, the author of this report, is a clinical-health psychologist (PhD) specializing in EDs, trained in CBT and CBT-E, and an EMDR-Europe accredited practitioner who has been using CBT and EMDR more than 10 years in her practice. To increase treatment fidelity, sessions were video recorded (with the permission of the participant) and supervised by an EMDR consultant clinical psychologist (PhD).

Presentation

The participant, a 22-year-old female senior college student, was referred to psychotherapy by her psychiatrist, who also prescribed a low dose of Prozac (50 mg/day). The participant reported binge-eating episodes almost every day for the last 3–4 months and was also dieting and skipping meals. In clinical evaluation, her presentation met DSM-5 diagnosis of BN with mental preoccupation, body dissatisfaction, and the resulting loss of function (APA, 2013). She also had depressive symptoms, stress-triggered skin picking behavior, teeth grinding at night, and a diagnosis of irritable bowel syndrome. The participant defined the reason for applying to treatment as *"I have a voice that does not believe in myself, I want to be able to control this situation (binge-eating episodes)."* During the psychological evaluation process, it was observed that the ED symptoms started 3 years previously, there was a period of AN (BMI: 13.6) in the past, and then the situation evolved to BN with weight gain. At the beginning of the treatment, the BMI of the participant was 20.3.

Client History

The participant's father was a retired soldier, her mother was a housewife, and the participant had an older sister. She stated that from early childhood, she played a balancing role between her mother and sister, feeling a sense of responsibility for their relationship. She described her mother as having perfectionist characteristics and her father as emotionally distant. The participant reported that in childhood she had had a healthy diet with no weight problems. She said her weight increased from 48 kg to 53 kg when she left her family town and started living in a student dormitory. During this period, she experienced depressive symptoms, along with adaptation problems and stress in peer relationships. As a result of feeling anxious about her weight, she started an extremely restricted diet and her weight decreased to 35 kg and amenorrhea was also observed for about a year. She stated that losing weight made her feel "good and successful," but the criticisms that "you are very thin, you should gain weight" from the environment forced her to change her restricting behaviors. She tried to hide her thinness by wearing oversize clothes when she visited her family; she was also exercising in addition to dieting.

After her sister moved out from her family house, she felt that her family's attention turned to her. When her family realized the situation and supported her to gain weight, she increased to 42 kg and binge eating started in this period. Her binges included only healthy foods at the beginning, but junk foods (which were constituted as avoided foods) were also added after a while. She used exercise and restricted dieting as compensatory behaviors during this period. As she gained weight, comments from the environment as "you have gained weight" increased and it triggered the eating episodes. Four months before treatment, she experienced a loss of a loved one that resulted an increase of depressive symptoms.

Assessment and Case Formulation

The case formulation was made in the light of the information obtained during the psychological evaluation process. An obsessive-compulsive disorder (OCD) history in the family (older sister) and stressful life events during childhood were presumed as predisposing; weight gain in the beginning of college, dormitory life, and the comments from the environment about weight were the triggers; finally, close relationships and academic stress were maintainers. As shown in Table 1, at pretreatment, high levels of symptom severity, nonfunctional core belief scores related to EDs, and body dissatisfaction were evident with a low level of treatment motivation.

Course of CBT-E Treatment

After the clinical evaluation, the 4-stage, 20-session short module of CBT-E for BN (Fairburn, 2008) was initiated. The participant's treatment goals were determined: these were reducing the binge-eating episodes and developing positive attitudes toward the body. The stage components included in the first stage are developing psychotherapeutic alliance, providing psychoeducation, self-monitoring, and achieving regular eating to prevent binge-eating episodes. Second stage was basically an overview process about the maintaining factors of symptoms and barriers to change. The third stage focused on the mechanisms that sustain the EDs, especially the concerns about eating

TABLE 1. Evaluation Results of the Participant Before Treatment, After Treatment, and at One-Year Follow-Up

Scale	Before Treatment	After Treatment	One- Year Follow- Up
EAT-26 (Eating Attitudes Test Short Form-26)	35	1	1
EDEQ-Total	4.3	0.6	0
EDEQ-Binge-Eating	50	6	0
EDEQ-Restraint	4	0	0
EDEQ-Eating Concerns	3.8	0.8	0
EDEQ-Shape Concerns	4.6	0.9	0
EDEQ-Weight Concerns	4.6	0.6	0
EDBQ-Total	27.5	10	3.8
EDBQ- Control Over Eating	21.67	1.7	0
EDBQ-Weight and Shape as a means to Self-acceptance	73.33	36.7	20
EDBQ-Weight and Shape as a means to Acceptance by Others	22	0	0
EDBQ-Negative Self-Beliefs	9	0	0
Bulimia Nervosa Stages of Change Questionnaire	44/2.2	96/4.8	100/5
Body Satisfaction Scale	3.84	4.64	4.25
BMI	20.3	19.9	19.3
Weight	53	51	49.5
Ideal Weight	45	48	49

and the body. Several techniques were used, such as problem-solving training and cognitive restructuring to work on the body acceptance, interpersonal relationships, obsessive control of body, emotion regulation, and ED mindset. The focus in the last stage was on maintenance of change and prevention of relapse.

CBT-E Stage 1 (Sessions 1-7). In CBT-E stage 1, the focus is on introducing CBT-E, psychoeducation, addressing concerns about weight, and working toward increased understanding the client's EDs and stabilizing their eating pattern (Fairburn, 2008). In the first stage, in addition to learning about self-monitoring and regular eating, the participant learned to use relaxation exercises to manage difficulties in emotion regulation (especially stress, anxiety, and loneliness) which were identified as triggers of binge-eating episodes. Psychoeducation identified other symptom triggers, such as interpersonal relationships, eating in social settings, control, and avoidance behaviors towards the body, but these were addressed in depth in the later phases of treatment. Special attention was given to the cognitions triggered by binge-eating episodes, such as *"I'm dirty," "I'm back at step one again," "everything I eat turns into fat," "I can't control anything," "I'll gain even more weight and I'll be ugly."* It was emphasized that these episodes have a natural course in EDs and that it was important to understand the triggers. Physical activities were planned to address her depressive symptoms. She was avoidant for in-session weighing in the beginning of treatment, thus it was postponed until she was ready. In the fifth session, when she was first weighed at 56 kg, she experienced intense stress and anxiety with thoughts such as, *"I can't stand this, how can I accept myself at this weight, how do I go out in public."* Relaxation and breathing practices were offered for stabilization and anxiety management. In addition, response prevention techniques were used when she experienced an intense desire to lose weight, by having her look at her old anorexic photographs. Lastly, we worked on developing alternative strategies for situations that trigger symptoms (such as crowded social environments with available alcohol and desserts, going out with friends). At the end of stage 1, she was able to share her eating problems with her closest friends, her binge episodes decreased to a nonclinical level in terms of amount and frequency (two to three times a week), regular eating was established, she was able to buy and wear new plus-size clothes for the first time and realized that she felt more comfortable about her body in the social environment.

CBT-E Stage 2 (Sessions 8–9). In CBT-E stage 2, the focus is on confirming treatment conceptualization and planning for stage 3. The participant's ED maintaining cognitions were identified. These included *"I will never be able to overcome this disorder," "it repeats even if it passes," "I will never lose weight, I will always stay like this," "I am ugly, nobody likes me."* These thoughts were connected with beliefs of *"worthlessness and despair"* and in turn maintained the symptoms with cognitions like *"I have to control," "I have to be strong," "I have to be successful."* She stated that *"I am eating to fill my distress and emptiness."* During this process, it was determined that the desire to lose weight was increased in situations such as seeing a thin person, dressing, spending time in front of the mirror in the morning, looking at her old photos, and checking her legs and cheeks.

CBT-E Stage 3 (Sessions 10–17). The third stage is the deeper part in the CBT-E therapy, focusing on body image, self-esteem, self-assessment over weight-body, emotion regulation, and working on maintaining cognitions (*"self-punishment," "choosing the easy way," "I don't have a partner—nobody likes me"*). Other covered topics were perfectionism, failure themes, problem-solving training, and social media influence. The participant endorsed a cognitive distortion that *"I can only find real happiness if I lose weight."* In this stage, her ED mindset (Fairburn, 2008) was emphasized. The CBT-E pie charts technique was used to study the importance given to weight and body shape in self-assessment. When there was an increase in binge-eating episodes with stress, the participant compensated by vomiting once with the feeling of guilt. When her weight increased to 58 kg, she again had ruminative cognitions such as *"this will never pass, I will never be able to cope with it."* The relationship between feelings, eating, and behaviors were emphasized as she usually stated that *"how I feel depends on what I eat."* At the end of this stage, she expressed her situation as *"I can be liked this way too, weight is just one of the parts in my life."* By the end of stage 3, the list of avoided foods was empty. Binge-eating episodes were completely eliminated. The participant, who had avoided a haircut since *"short hair only fits thin people"* got her hair cut short and she was able calm herself against the messages of *"you have gained weight"* from other people. There was an increase in self-care (she stated she had not taken care of herself before because she previously thought it was not worth it). Her psychiatrist no longer prescribed Prozac due to these developments. In addition, the complaint of skin picking was

ended, a decrease in IBS and sore jaw was reported. She started a romantic relationship which was previously never been considered possible by herself due to shape and weight concerns.

CBT-E Stage 4 (Sessions 18–20). The fourth stage of treatment focuses on sustaining change and preventing relapse. Her concerns of *"whether I will maintain these developments"* was addressed with predicting triggers and developing alternatives. Although she stated that she was more at peace with her body, she also stated that sometimes she has thoughts like *"I still cannot fully love my body," "I do not feel beautiful," "I wish I could be in a thin body when I wake up," "it hurts to live in this body."* Even though she provides rational alternatives to these thoughts, there was no permanent change in the feeling of dissatisfaction with her body. Also, avoidance of weighing and body-control behaviors continue with a decrease in frequency. These issues were specifically addressed with a CBT-E frame.

At the end of the CBT-E treatment, a positive body image was still not fully established. Moreover, helplessness, control, guilt, and failure were still significant themes in her ED story. As a result, it was recommended to continue treatment with EMDR therapy.

Course of EMDR Treatment

The goals for the EMDR work were to address body image and themes of helplessness, control, guilt, and failure. EMDR assumes that clinical symptoms arise from maladaptively stored memories, and that these memories will be resolved by reprocessing and integrating them into the adaptive memory network (Shapiro, 2001).

EMDR Phases 1 and 2 (Session 21). EMDR's first phase focuses on history taking and treatment conceptualization, identifying specific target memories/memory networks. Given the participant's history and presenting issues, sequential targeting was planned, with targets related to the "control" theme. This theme, which is also significant in Zaccagnino's (2016) EMDR protocol for AN, is common in ED presentations. However, Zaccagnino's protocol was not used for this participant, because her symptoms at this time no longer fell within the scope of AN or BN. It was planned to use the standard EMDR protocol for traumatic memories.

EMDR's second phase prepares the client for EMDR therapy. The participant was informed about EMDR and reminded of stabilization techniques she had previously learned in CBT-E. This preparation session included the safe place exercise, container, and the resource development and installation (Kiessling, 2005; Korn & Leeds, 2002). Since she stated that she would be going out of the city the next week and she would have difficulty in controlling eating and coping with concerns about her body, the goal was to increase resilience by reinforcing positive experiences.

EMDR Phases 3–7 (Session 22). This session focused on processing the initial "touchstone" memory related to the participant's fear of gaining weight and her need for control. Her ED story was related to her balancing role in the family when her mother and sister fight, and her sister blames her. At these times she felt despair, thinking that she could control everything and that it was all her fault. The earliest memory in this memory network was identified using the Affect Bridge and Floatback technique (Parnell, 1999; Shapiro, 2001). It was the target memory used in this first EMDR processing session.

When she was 6 years old, her mother wrote a recipe on the back of her sister's meeting paper that was sent from school, a violent fight broke out between her sister and her mother, and the participant tried to separate them. The image was sister's yelling at mother, the NC was "I'm desperate," the PC was "I did my best," the VOC score was 5, Emotions were unhappiness, despair; the SUD score was 7; and body location was legs and back. In this session, after the first memory was desensitized, memories of other fighting scenes were elicited and addressed (fights between sister and mother, and fights between her and her sister). At the end of the session, the results were SUD was 0 and VOC was 7.

EMDR Phases 3–7 (Session 23). In the third EMDR session, the most disturbing memory related to body dissatisfaction and belief in control was addressed. It was a memory of looking in the mirror and criticizing herself for her weight gain period, during her first year of college. Image: seeing herself in the mirror, NC: "I'm incompetent because I cannot control my weight," PC: "this is not my incompetency, I can overcome it." VOC: 3, emotions; anger and regret, SUD: 7, body location; abdomen. After an average of 20 minutes of desensitization SUD was 0 and VOC was 7.

EMDR Phases 3–7 (Session 24). In the fourth EMDR session, a recent experience and current trigger were addressed. She had weighed herself after a long time and realized that she gained weight, then she ate a chocolate bar with intense unhappiness. Image:

seeing the number 58 on the scale, NC: "it is my fault, I cannot lose weight," PC: "I can overcome this process," VOC: 5, emotions: sadness, despair, unhappiness, SUD: 6, body location: abdomen and hip. At the end of the session, SUD was 0 and VOC was 7.

EMDR Phases 3–7 (Session 25). The fifth EMDR session was after a 2-week break. Current triggers were discussed. No weight and body-related behaviors were reported. BLS was used to strengthen memories of the challenging situations in which she has coped well. A future template including comments about eating and body, an exam she would soon take were processed, using different scenarios.

Follow-Up. At the end of the treatment, the evaluation results of the participant showed a significant positive change as seen in Table 1. Thus, the treatment was terminated with planning three follow-ups for 3 months, 6 months, and 1 year. In the follow-up sessions, it was observed that there was no symptom recurrence, and the gains of treatment were continued. In addition, the measurements presented in Table 1 were consistent with clinical observation.

Results

Results show a decrease in eating symptomatology and overall improvements in different areas of the client's life. As can be seen in Table 1, the participant showed a decrease in disordered eating attitudes, binge-eating, restrictive eating, preoccupation about eating, weight, and shape. Furthermore, scores about dysfunctional core beliefs associated with control over eating, negative self-beliefs, weight, and shape as a means to self-acceptance and acceptance by others were also lowered. Whereas treatment motivation significantly increased, she moved three stages according to Bulimia Nervosa Stages of Change Questionnaire from contemplation to maintenance at the end of the treatment. Body satisfaction scores increased as well as her ideal weight. Additional social and behavioral changes were evident in terms of academic success, romantic relations, interpersonal style, and self-care. In the meantime, she was accepted to a master program that she desired and started a romantic relationship. These changes were maintained during the follow-ups.

Discussion

In the presented case, symptom reduction primarily occurred as a result of 20 sessions of CBT-E, and the participant benefited from the treatment. However, despite the fact that the problems related to body image had been solved "rationally" as the participant put it, the feeling of intense body dissatisfaction and the traumatic experiences related to the "responsibility," "guilt," and "control" themes were still evident. EMDR therapy was therefore integrated into the treatment process. At the end of treatment, in addition to the clinical observation, it can be seen from psychometric assessments in Table 1 that the participant was in complete remission. The participant experienced meaningful change across a number of domains. Binge-eating episodes, compensative dieting, and preoccupation with eating, weight, and shape were no longer a problem for the client. She was able to eat and drink in social gatherings without feeling guilty. She stated, *"I ate a piece of birthday cake late at night at a party without any concern, I just enjoyed it, which never seemed possible before. Last week I also had pizza with my friends, and I did not feel guilty, just having fun, not counting the calories or how much exercise will be needed in order the burn those calories."* The participant also highlighted improvements in her anxiety, stress, and depressive mood, which contributed to positive changes in her cognitive function, in terms of attention, focus, problem-solving, and time management skills. She was more at ease in expressing herself in her interpersonal relationships, seeking social support when needed. Improvements in self-esteem and self-efficacy were also observed. Furthermore, starting a romantic relationship was an important change for her, since she had previously thought she was not good enough in terms of looks or worthy of someone's attention. She declared that she feels happy and optimistic. Overall, these positive changes were satisfactory for the client and the clinical problems were no longer evident. The fact that she maintains therapy gains during the 1-year follow-up period can be considered as a possible evidence that the treatment caused permanent change.

The contribution of the EMDR experience to the process was named as "sweeping of residues" by the participant. In this course of treatment, the complete standard protocol of EMDR was provided, including stabilization, resource installation and development, future template, and trauma protocol. EMDR was viewed as adding unique contributions for working on traumatic experiences and preventing relapse. Relapse prevention included desensitizing triggers with trauma work and the future template, which processed possible future triggers such as comments from people about her weight and eating, and her balancing role in the family. Thus, different scenarios were scripted and then processed with BLS.

CBT and EMDR Conceptualizations

CBT treatment focuses on behaviors and cognitions, seeking to help the client increase awareness of these and to modify them. In the CBT-E model, the hypothesized mechanism is the excessive importance given to food, weight, and body, and it addresses a broad range of problems understood to maintain EDs, including perfectionism, low self-respect, difficulty in emotion regulation, and interpersonal problems. Unlike CBT, EMDR does not seek to change thoughts, emotions, sensations, or behaviors. Instead, presenting problems are viewed as the result of unprocessed memories and treatment focuses on memory processing (Shapiro, 2001).

Traumatic Conceptualization of EDs

Although CBT-E is an effective evidence-based approach in ED treatment, complete remission has only been achieved in half of the cases, and premature ending of treatment stands out as an important problem (Byrne et al., 2011; Frostad et al., 2018). Childhood trauma is one of the prominent predictors of high drop-out rate in this population (Anaya et al., 2020). Trauma, adverse childhood experiences, and attachment problems with caregivers are common in ED participants, and Zaccagnino et al. (2017b) argue that this reflects the necessity of a traumatic approach for ED treatment. The ED symptoms that are often observed as disordered eating behaviors can be conceptualized as a way to deal with negative and overwhelming emotions that arise from traumatic experiences. However, structured treatment protocols for EDs often ignore this. Moreover, trauma-focused treatment approach is not common among clinicians working with EDs (Trottier et al., 2016). In this context, it is recommended to evaluate EDs from a trauma perspective and integrate necessary practices in treatment (Brewerton, 2019; Seubert & Virdi, 2018).

When the working mechanisms of CBT and EMDR are compared in ED treatment, CBT ensures a decrease in behavioral symptoms, while EMDR aims to change negative affect, cognitions, and bodily sensations by focusing on attachment with caregivers and processing traumatic experiences (Zaccagnino, 2016). Some therapists (Seubert & Lightstone, 2009) consider it important to work with ego states (Watkins & Watkins, 1997) and "parts" in internal family system therapy (Schwartz, 1995) in the EMDR treatment of EDs. In the CBT-E approach, the ED mindset is said to include different aspects of self, thus providing a way to understand ED symptoms (Fairburn, 2008). Awareness and treatment of "parts" can be a common ground for both CBT-E and EMDR. Thus, the treatment rationale of CBT-E can also be easily integrated with EMDR. In this respect, EMDR contributes to ED treatment not only by resolving distressing memories, but also by working on problems related to body image and emotion regulation. Furthermore, it has been suggested that the enhancement of effective problem-solving and coping strategies with EMDR treatment may result in positive changes in the hypothalamic-pituitary-adrenal axis (HPA) system (Cooke & Grand, 2009).

An advantage of providing CBT-E before EMDR therapy is that it provides adequate history taking, grounding, and stabilization before beginning EMDR work on traumatic memories. This is in accordance with the recommendations of ED therapists such as McGee (2009), who cautioned about possible retraumatization with insufficient stabilization. CBT-E also provides successful experiences, expanding positive adaptive memory networks, which is very useful during EMDR processing of traumatic memories.

Limitations of the Study

The most important limitation of this study is that it was conducted with a single participant, requiring a careful approach in terms of generalizing the results. Another limitation was that the participant was using low-dose antidepressants at the beginning of the treatment, and psychometric measurements were not taken when the CBT-E was completed. Thus, these factors present limitations in terms of evaluating the effectiveness of different approaches in the treatment process. Unlike some patients with BN, this participant complied with treatment, and completed the 20-session CBT-E program. Results may not generalize to all patients with BN.

Conclusion and Recommendations

Although the use of EMDR in ED treatment is criticized as an "unsupported technique" (Mulkens et al., 2018), it cannot be denied that it is a promising approach in terms of its positive contribution to treatment (Balbo et al., 2017). However, it is obvious that there is a need for randomized controlled studies conducted with large samples that will provide evidence for the use of EMDR in the EDs. Eventually, as Vanderlinden (2008) stated, "all roads lead to Rome" in the treatment process. However, which route will be preferred, and when, is mostly up to the clinical

decision. In this context, the needs of the participant, the severity of the symptoms, the therapeutic relationship, and the characteristics of the clinician as their knowledge, practice, and trauma perspective play a substantial role in clinical decisions. This study provides preliminary evidence for the successful integration of EMDR therapy with CBT-E in the treatment of BN, with results maintained for the participant at 1-year follow-up.

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