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Initial Outcomes of the Reintegrative Protocol for Binge Eating Disorder Treatment

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ABSTRACT

Experiencing one or more traumatic events may heighten the risk of developing binge eating and Binge Eating Disorder (BED). BED stands as the most prevalent eating disorder in the United States, affecting approximately 2%-4% of individuals annually. Given its widespread occurrence and the significant impact it imposes on affected individuals, effective treatment strategies for BED are imperative. Currently, there exists no specific research examining the innovative reintegrative protocol in a clinical setting as a treatment approach for BED. This small-scale, multiple-baseline pilot study aimed to investigate the feasibility and effectiveness of the reintegrative protocol in addressing BED by addressing traumatic memories associated with binge eating behaviors. The findings suggest that the reintegrative protocol holds promise as a method for regulating emotions and treating BED. While the implementation of the protocol proved feasible, outcomes varied among the 6 diverse participants, highlighting the need for further investigation.

Keywords: Binge Eating Disorder; Affect Dysregulation; Reintegrative Protocol.

INTRODUCTION

The hallmark of Binge Eating Disorder (BED) is characterized by a sense of loss of control while consuming large quantities of food within a confined timeframe [1]. This disorder affects approximately 4% of women and 2% of men globally [2,3]. Research and clinical observations have underscored the correlation between early and prolonged exposure to trauma and the increased likelihood of developing BED [4,5]. Moreover, studies indicate a high prevalence of comorbid psychiatric disorders, including mood, anxiety, or substance use disorders, among individuals with BED [6-8].

Negative affect stands as a primary catalyst for BED [4], fostering a cyclical relationship where negative emotions trigger binge eating, and binge eating temporarily alleviates negative affect [9]. Therapeutic approaches aimed at regulating negative affect and modifying behaviors, such as cognitive behavioral therapy and interpersonal therapy, are commonly employed in BED treatment [10]. Nonetheless, effective BED treatment necessitates identifying underlying core issues or experiences that initially precipitated the development of the disorder, which many patients may not recognize.

The reintegrative protocol emerges as a novel tool designed to probe a patient's emotional responses to events, unearthing potential traumatic memories contributing to their emotional reactions [11]. Given its focus on assessing fundamental factors contributing to affective dysregulation, this study aims to investigate the impact of the reintegrative protocol on binge eating behaviors and its potential therapeutic utility in BED treatment. Given the exploratory nature of this inquiry, a small-scale pilot study was chosen to initiate this investigation.

MATERIALS AND METHODS

A staggered-start multiple baseline comparison study design was implemented to evaluate self-reported eating behavior using the Binge Eating Scale (BES-16) and distress levels using the Outcome Questionnaire 45.2 (OQ-45). To discern between the effects of psychotherapy and the treatment protocol, and to better isolate the effects attributable to the treatment protocol itself, two participants initiated the treatment protocol in session 3, two in session 4, and two in session 5. Gender balance was maintained across sessions. Each participant underwent a total of 12 sessions. Both assessments were administered to each participant before any treatment, after each general psychotherapy session, and after each session, once the reintegrative protocol was introduced. The therapist conducting the sessions remained blind to the results throughout the data collection process. The treatment plan received approval from the Institutional Review Board at Fresno Pacific University.

Participants

Six participants (3 males and 3 females) from diverse backgrounds (see Table 1) were enrolled in this outpatient psychotherapy study. Subjects were recruited sequentially, with the first three males and first three females who provided consent being included in the study. Participants' well-being and binge eating behavior were assessed using the OQ-45 and BES-16, respectively [12-16]. Individuals were screened based on self-identification as seeking services for binge eating behavior and meeting DSM-5 diagnostic criteria for BED. Informed consent was obtained from all participants.

Procedure

Identification of Binge Eating Scenario: Clients identify the primary scenario of their binge eating behavior, including the ideal food and context, and immerse themselves in the positive feelings associated with this experience.

Shift in Perspective: Clients switch to a third-person viewpoint, focusing on their own eyes during the most pleasurable moment of their binge eating. They mindfully perceive the deepest emotions associated with this moment.

Recollection of Similar Emotions: Clients recall instances when they have felt similar emotions before. These memories are referred to as "target memories" and are addressed during this phase of the protocol.

Subject ID	Gender	Age	Ethnicity	Marital status	Highest education level
A1	M	57	White	Never married	Graduate or professional school
A2	M	55	White	Never married	Graduate or professional school
A3	M	55	Hispanic	Never married	Graduate or professional school
A4	F	35	Black	Married	Some college
A5	F	20	Hispanic	Never married	Some college
A6	F	44	White	Never married	Graduate or professional school

Table 1: Demographic information for all subjects.

Trauma Reprocessing: The reintegrative protocol allows for the use of any evidence-based trauma resolution method to reprocess target memories. In this pilot study, the Flash Technique, a variation of Eye Movement Desensitization and Reprocessing (EMDR), was employed. The Flash Technique has been shown to quickly resolve traumatic memories without overwhelming the client emotionally.

Reassessment of Binge Eating Experience: After trauma reprocessing, clients revisit their original binge eating behavior and reassess the peak binge eating experience. This process is repeated in each session over 12 weeks.

Statistical Analysis

A minimal amount of missing data (0.35% for BES-16 and 0.37% for OQ-45 across 4 subjects) was observed. Given the small percentage and the use of total scores as the outcome variable, missing data was imputed using the last observation carried forward.

The treatment visit was coded as (1) if treatment was present and (0) if not. Change scores between the last baseline visit and the final treatment visit were calculated and analyzed to identify significant changes. Change scores were also used as the outcome variable in a linear regression, with subjects grouped by the visit when the protocol was implemented (protocol start visit) as the predictor.

RESULTS

After 12 weeks of treatment with the reintegrative protocol, all subjects demonstrated a reduction in their

binge eating behavior, with five out of six subjects showing an improvement in overall well-being (Table 2).

	Binge 16		OQ-45	
Protocol start	Mean change (std dev)	Min, Max	Mean change (Std Dev)	Max, Min
Visit 3	-16 (12.73)	-25, -7	-31 (36.77)	-57, -5
Visit 4	-11 (4.24)	-14, -8	1.5 (20.51)	-13, 16
Visit 5	-22.5 (12.02)	-31, -14	-9.5 (0.71)	-10, -9

Table 2: Mean Raw Change in BES-16 and OQ-45 scores from last baseline visit to last treatment visit (Visit 12 for all subjects).

After the treatment period, changes in BES-16 scores varied across individual subjects, ranging from a reduction of -7 to -31 points (Table 2). OQ-45 scores decreased for five out of six participants, with reductions ranging from -5 to -57 (Table 2). However, one participant exhibited an increase in their OQ-45 score by the end of the treatment period. A week-by-week downward trend in both BES-16 and OQ-45 scores was observed across all participants, indicating a congruent decrease in both binges eating behavior and distress levels during the treatment period (Figure 1).

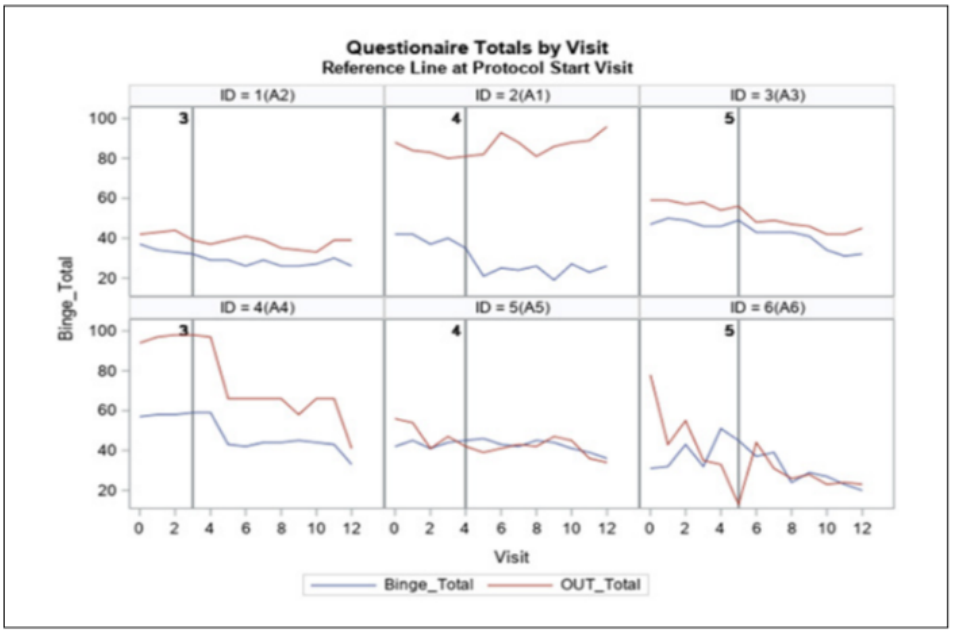

Figure 1: Week by week change in BES-16 and OQ-45 scores over the course of the 12 study visits.

After 12 weeks of treatment with the reintegrative protocol, five out of six subjects show concurrent reductions in both binge eating behavior and distress scores. In one subject, although binge eating behavior decreased, OQ-45 distress scores remained high. Binge_ Total=BES-16 score at time of measurement; OUT_Total=OQ-45 score at time of measurement.

Figure 1 illustrates the week-by-week change in BES-16 and OQ-45 scores over the 12 study visits. Following 12 weeks of treatment with the reintegrative protocol, five out of six subjects demonstrated concurrent reductions in both binges eating behavior and distress scores. However, one subject exhibited decreased binge eating behavior while distress scores remained high.

The change score for BES-16 was significantly different from 0 ($t_{1,5}$=-4.22522, p=0.0083), indicating a meaningful reduction in binge eating behavior. Conversely, the change score for OQ-45 was not significant ($t_{1,5}$=-1.33004, p=0.2409). When the change score for BES-16 was utilized in a linear regression, protocol start was not statistically significant, suggesting that the timing of protocol implementation did not significantly affect the decrease in BES-16 scores (Table 3). This finding may be attributed to the small number of subjects enrolled in the study.

DISCUSSION AND CONCLUSION

The study aimed to assess the effectiveness of the reintegrative protocol, a novel treatment approach for affect regulation, in patients with binge eating disorder (BED). The results suggest that the reintegrative protocol shows promise in reducing binge eating behavior and improving overall wellbeing, indicating its potential as a treatment tool for BED. However, further research with larger sample sizes is necessary to confirm its efficacy.

All participants exhibited reduced Binge Eating Scale (BES-16) scores after 12 weeks of treatment, with most showing decreased Outcome Questionnaire 45.2 (OQ-45) scores as well, suggesting an improvement in wellbeing. Comparable reductions in binge eating episodes have been reported with cognitive behavioral therapy, a commonly used treatment for BED. Notably, one participant (participant A1) experienced persistently high OQ-45 scores throughout the study, possibly due to ongoing stressors related to the COVID-19 pandemic. This highlights the importance of considering ongoing trauma and stressors in treatment planning.

Traumatic memories reported by participants often centered on childhood experiences of lack of support and failed relationships, underscoring the importance of addressing underlying traumas in BED treatment. However, the study's limitations, including a small sample size and reliance on the BES-16 as the primary outcome measure, warrant caution in interpreting the results. Future research should employ more sensitive measurement tools and include a diverse participant pool to better assess treatment outcomes.

While the multiple-baseline design attempted to isolate the effects of the reintegrative protocol, the study's resolution and sample size may have limited the ability to precisely attribute treatment effects. Nonetheless, the accelerated treatment results observed in this pilot study suggest that the reintegrative protocol may contribute to positive treatment outcomes for some individuals with BED, particularly those dealing with past traumas. Further investigation is needed to identify the characteristics of patients who would benefit most from this treatment approach.

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