Analyzing the Influence of Initial Diagnosis on Interpersonal Problem Trajectories in Residential Treatment for Eating Disorders – A Review

Hemlata Dewangan [1], Neetish Kumar [1]

Abstract

Eating disorders (ED) involve abnormal eating habits driven by an unhealthy focus on food, weight, or appearance. While there are more residential treatment facilities for ED, little is known about what happens after patients leave. This review explores the success rates of residential therapy for all ages, genders, and types of eating disorders, aiming to identify links between specific interpersonal dimensions and the onset and maintenance of ED symptoms. Understanding how symptoms and dangers unfold across eating disorders is limited. Using structural equation modeling (SEM-ED), the research investigates teenage symptom trajectories, temporal precedence, risk variables, and population-attributable fractions in a community. This review study explores evidence for the interpersonal model of various ED diagnoses, revealing a unique interpersonal profile for individuals with eating disorders and highlighting specific interpersonal difficulties linked to worse treatment outcomes. The findings suggest a cyclical association between ED psychopathology and relationship issues through negative affect. Structural equation modeling-based result forecasting models prove highly reliable for ED expectations, which are split between those related to eating disorders and those associated with non-food-related psychological disorders.

Keywords: Eating Disorders, structural equation modeling, Interpersonal problem, Residential treatment.

Significance | A systematic review of post-residential treatment outcome for eating disorders

*Correspondence: Hemlata Dewangan, Department of Pharmacy, Kalinga University, Naya Raipur, Chhattisgarh, India.
Email: ku.hemlatadewangan@kalingauniversity.ac.in

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1. Introduction

Eating disorders (EDs) represent a significant global mental health concern, affecting approximately 2% of the population throughout their lifetime. Despite their prevalence, EDs often go unrecognized and untreated, leading to challenges in estimating their true occurrence. These disorders are characterized by ingrained thought patterns, resistance to change, perfectionism, and the co-occurrence of trauma symptoms, making treatment a formidable task.

Eating disorders (EDs) represent a complex set of mental health conditions marked by an inclination towards ego-syntony and a resilient resistance to therapeutic interventions (Attia, E., 2016; Todisco, P., 2021). The underrecognition and limited pursuit of emotional wellness treatment contribute to an overestimation of ED prevalence in the general population during epidemiological assessments. The challenges in treating EDs are compounded by entrenched beliefs, resistance to change, perfectionism, cautious personalities, and the co-occurrence of trauma symptoms (Herpertz-Dahlmann, B., 2021; Attia, E., 2022). Diagnostic unpredictability and the presence of invisible symptoms underscore the need for a focus on indications rather than rigid diagnoses in ED investigations (Simpson, C. C., 2021).

Author Affiliation:
[1] Department of Pharmacy, Kalinga University, Naya Raipur, Chhattisgarh, India.

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Despite the critical period for the onset and peak of eating disorders, there is limited understanding of the progression of comorbidities and associated risk factors. Dysfunctional social relationships are highlighted as significant contributors to the struggles of individuals with eating disorders (Baudinet, J., 2021; Fouladi, F., 2022). Various psychological treatments, including interpersonal psychoanalysis (IPT), group biodynamic-interpersonal psychotherapist (GPIP), and psychodynamic counseling, have been developed to address these challenges (Chen, J., 2021). A central tenet of interpersonally focused theories is understanding how one's relationship patterns impact personal well-being and that of others. Residential treatment centers, such as those described by Lin, J. A. (2021), play a role in aiding individuals with eating problems, although there is a notable research gap in this area.

As the landscape of hospitalization evolves, medical professionals increasingly explore out-of-hospital, residential settings for longer-term, intensive care as an alternative to clinic or private therapy (Scharff, A., 2021; Wang, S. B., 2021). Given the elevated mortality and morbidity rates associated with eating disorders, there is a pressing need to determine the relative importance of risk factors in their development (Atti, A. R., 2021). The lack of disorder-specific etiologies currently hinders research on risk factors, but it is evident that interpersonal connections play a significant role in the experiences of those with eating disorders (Mitchell, K. S., 2021; Ali, S. I., 2021).

Patients with eating disorders exhibit social problems, including overly warm and passive approaches to relationships, emphasizing the need for comprehensive research tools. Structural equation modeling (SEM) emerges as a valuable tool for examining causal and linear correlations in public health and behavioral sciences (Rienecke, R. D., 2021). SEM methods aid in evaluating causative connections and validating measuring models, providing insights into hidden elements and their indicators (Ioannidis, K., 2021; Christensen, K. A., 2021).

Furthermore, regarding systemic/narrative psychotherapies in groups, the study uncovers a relationship between interpersonal challenges and therapeutic outcomes. The findings suggest that being too chilly is associated with lower therapeutic results, while being more dominant is linked to improved outcomes (Ortiz, S. N., 2021; Romano, K. A., 2022).

Our review focuses on the intricate challenges of residential eating disorder treatment, emphasizing resource demands, financial aspects, and transparency. We also discuss the SEM-ED, exploring links between treatment variables and outcomes.

2. Literature Review

This review collectively advocate for a multifaceted, patient-centered, and tailored approach to treating eating disorders. The incorporation of diverse therapeutic modalities, consideration of individual needs, and ongoing support post-treatment are highlighted as essential components in addressing the challenges posed by eating disorders across various age groups.

In a study conducted by Heather Thompson-Brenner and colleagues (2021), the implementation of a transdiagnostic, evidence-based therapy (SST) in residential settings for individuals with eating disorders and comorbidities yielded positive effects. The findings indicated improvements in depressive disorder symptoms, enhanced emotional well-being, and a reduction in the severity of eating disorders, particularly among patients exhibiting early behavioral issues.

Riccardo Dalle Grave et al. (2021) adapted evidence-based enhanced cognitive-behavioral treatment (CBT-E) for adolescents, recognizing the similarity in symptoms across different age groups. Trials of CBT-E in both outpatient and inpatient settings for teenagers demonstrated promising outcomes.

Patrizia Todisco et al. (2021) advocated for a patient-centered approach to eating disorder treatment. They proposed a comprehensive interdisciplinary plan incorporating psychological therapy, emphasizing the need for individualized, tailored interventions based on each patient's specific needs and medical history. The authors argued that tailoring therapy to individual pathologies could be crucial in addressing the complexities of eating disorders.

Clinical trials recommended by Laurie L. Hornberger et al. (2021) focused on identifying and addressing eating disorders in young people and teens. The research outlined guidelines for conducting clinical assessments of patients with potential eating disorders, defining therapy options, and underscoring the importance of diverse representation in treatment approaches.

Adela Scharff et al. (2021) investigated the impact of co-occurring PTSD on outcomes in Unified Protocol-based, transdiagnostic residential therapy for eating disorders. The study revealed that patients with co-occurring PTSD showed accelerated improvement during residential treatment but experienced a higher rate of symptom recurrence post-discharge.

Julian Baudinet et al. (2021) conducted a comprehensive scoping review examining treatment approaches and outcomes for adolescents with eating problems. The review suggested that day programs represent a viable alternative to inpatient therapy, offering significant and enduring benefits.

3. Understanding and Addressing Eating Disorders

Eating disorders, serious mental conditions marked by disruptions in eating patterns, frequently originate from challenges in interpersonal relationships. The impact of social functioning and the formation of meaningful connections, referred to as "interpersonal problems," is considered pivotal in the development

and persistence of eating disorders. Extensive research indicates a correlation between particular relationship types, elevated interpersonal problems, and less favorable treatment results in individuals with eating disorders.

Irregularities in eating behaviors characterize a group of common and potentially harmful mental disorders known as eating disorders. The challenges in interpersonal relationships play a significant role in the development and persistence of these disorders. Social functioning issues and the establishment of meaningful relationships, collectively termed "interpersonal problems," are integral components. Numerous studies have associated specific relationship types and a broader range of interpersonal challenges with poorer outcomes in the treatment of eating disorders. Enhancing the effectiveness of treating eating disorders is anticipated through a deeper understanding of this connection, including the identification of interpersonal predictors. The Interpersonal theory posits that these factors are essential for successful social interaction.

Several studies have highlighted adverse effects as a contributing factor in various eating disorders, including those related to interpersonal difficulties. This study employed ecological momentary assessment in individuals with anorexia nervosa (AN) and found that higher daily negative affect assessments were linked to an increased risk of future food restriction. Participants reporting a lack of control over eating, vomiting, or weighing behavior also experienced elevated negative affect. Those with eating disorders (ED) expressed more adverse effects on binge-eating days, revealing a strong association between depressed mood and emotional eating. Patients with bulimia nervosa (BN) exhibited heightened emotions and awareness before a binge, indicating that negative emotions play a crucial role in sustaining specific eating disorder symptoms.

Figure 1 illustrates, in accordance with the interpersonal framework for eating disorders, that unpleasant emotions arising from inappropriate relationships and a deficiency in social skills are fundamental factors contributing to the manifestation of symptoms in eating disorders (ED) and psychosis. Ongoing research is shedding light on the intricate connections between interpersonal pressures, negative emotions, and binge eating. Individuals with bulimia nervosa (BN) often experience a detrimental cycle wherein unfavorable social interactions, mood disturbances, and negative self-concepts precede binge episodes, subsequently exacerbating after the binging episodes.

In a cohort of women seeking treatment for eating disorders (ED), adverse effects were found to partially elucidate the association between eating disorders and the psychopathology of ED. Similarly, a mediation effect of negative affect was observed in the relationship between interpersonal stress and the pathophysiology of ED in studies involving community populations of women experiencing overeating events. Furthermore, reflections of young individuals and teenagers facing a loss of control over food choices also exhibited a mediation impact of negative affect on the association between interpersonal stress and ED pathophysiology.

Despite a consensus among clients experiencing various eating disorders that interpersonal issues and adverse impacts are closely linked, empirical research examining the repercussions of negative implications and interpersonal challenges on eating disorder psychopathology remains limited. The specific dynamics of how these concepts manifest across different types of eating disorders remain unclear. To address this, patients with the condition were categorized into "purely restricted" and "binge-purge" groups for this study, recognizing the distinct affective processes and interpersonal dynamics underlying these two forms of the disorder.

A treatment mechanism refers to an individual's internal process that helps alleviate symptoms related to treatment. In Cognitive-Behavioral Therapy for Eating Disorders (CBT-E), it is theorized that modifying mood intolerance, a specific target of therapy, leads to a reduction in binge eating, a clinical symptom. If focusing on this proposed process does not effectively address binge eating and purging symptoms, alternative approaches with a more targeted influence on treatment processes may be considered.

Dietary restriction, or the cognitive control of eating, is recommended due to an excessive emphasis on weight, body shape, or eating habits. Those who strictly limit their diet adhere to rigid nutritional guidelines. Constraint theory, which outlines ways in which restricting one's diet sustains binge eating, provides a basis for this approach. Firstly, attempting to control one's eating cognitively may lead to episodes of uncontrolled eating, especially during heightened emotional states. Secondly, it is suggested that physiological factors related to hunger may overpower cognitive control, resulting in unintentional overeating. Thirdly, breaking strict dietary guidelines may trigger the abstinence violation effect, causing individuals to view eating as a significant loss of control, subsequently justifying continued overeating.

The over-evaluation of weight and shape, dietary constraints, and binge eating are interconnected and have been associated with Bulimia Nervosa (BN). This theory has received confirmation from two cross-sectional studies that utilized structural equation modeling in clinical samples of individuals with BN.

Individuals experiencing clinical perfectionism tend to set unrealistically high standards in various aspects of their lives. When individuals persist in pursuing rigid standards despite significant negative consequences, it reflects maladaptive behavior. Two mechanisms explain how clinical perfectionism contributes to sustaining eating disorders. Firstly, perfectionist standards related to weight and body shape magnify the harmful impacts of an excessive focus on these factors. Secondly, striving for

perfection in food management worsens the unintended consequences of restricting food intake.

The SEM-ED paradigm posits the existence of "core low self-esteem," an inherent and unwavering perception of one's insignificance. In Bulimia Nervosa (BN), self-worth processes involve an excessive emphasis on evaluating weight and body shape (referred to as over-evaluation of weight and body). Individuals with BN are more susceptible to having poor self-esteem as they utilize these superficial measures of value for self-assessment, particularly when combined with unrealistic ideals of thinness and physical attractiveness. The over-evaluation mechanism in the expanded theory differs from the "core" type of poor self-esteem characterized by persistent and unconditional thoughts about one's value.

The absence of an association between mood intolerance and binge eating and purging may be due to methodological flaws in evaluating this factor. Interestingly, the second trial revealed a link between mood intolerance and increased binge eating. However, neither study found a correlation between individuals with Bulimia Nervosa (BN) who were perfectionists and those practicing strict dieting.

Cross-sectional studies highlight the significance of mood intolerance, poor self-esteem, and interpersonal issues as crucial therapeutic strategies in BN. Clients are supported in a non-directive manner to recognize and manage interpersonal issues, with a specific emphasis on the social environment where the eating disorder originated. Understanding that therapeutic pathways evolve throughout treatment, it's essential to assess if treatment adjustments are accountable for these changes and if additional therapeutic changes are beneficial. The contribution of each subsequent residential therapy module to positive client outcomes has not been empirically tested, but evaluating the strong connection between central low self-esteem and interpersonal issue modules and changes in SEM-ED's therapy processes provides valuable insights.

Patients' experiences with eating disorders vary from short episodes to recurrent and distinct disorders, often accompanied by a range of co-occurring conditions. Despite this complexity, all services aim for recovery and an improved quality of life. The concept of recovery aids individuals and their loved ones in returning to fulfilling careers and social lives, recommitting to pivotal roles in their communities, and fostering healthy perspectives on food and body image. While a single service model may not be specified, the overarching concepts outlined in Figure 2 should guide the design and implementation of service delivery.

The pervasive impact of an eating disorder on physical, emotional, social, and professional well-being underscores the urgent need for prompt treatment to prevent additional suffering and disabilities. It's crucial to note that having a clinically significant diagnosis of an eating problem is not a prerequisite for receiving treatment.

Transitions between therapeutic settings, such as moving from inpatient to outpatient care, transitioning from public to confidential services, or shifting from child and adolescent to adult services, can disrupt care and potentially worsen the consumer's health. Coordinating eating disorder services to minimize or eliminate these interruptions is vital for delivering high-quality care. Exploring options and seeking professional supervision when necessary is essential.

Physicians, at times, deviate from evidence-based guidelines due to concerns about causing temporary discomfort to their patients. Deviations may involve more frequent sessions, the use of adjunct therapies, involving family and significant others in the treatment process, day- or inpatient care, or multi-family therapy. Regardless of age or type, many therapies for eating disorders heavily involve the patient's network of friends and family members, with their consent.

Family therapy for child and adolescent anorexia nervosa exemplifies a treatment where family participation is crucial. Those close to individuals with eating problems should receive training to enhance their skills and confidence in managing the situation. Recognizing that each patient is unique, treatment should be individualized, matching the intensity to their clinical presentation, and allowing flexibility to adjust the level of care as needed. Clinicians must approach treatment with a combination of firmness and compassion.

When delivering services, it is imperative to consider the specific needs of Indigenous people, individuals from cultural and linguistic minorities, as well as various factors such as body size, age, sexual orientation, and gender. Clinicians should adopt a recovery- and quality-of-life-focused approach that remains flexible to accommodate each patient's evolving decision-making abilities and requirements throughout their condition.

All interventions involve some form of education and psychoeducation. Given the prevalence of misinformation surrounding 'healthy' eating, weight, and the medical effects of disordered eating, it is crucial for individuals with eating disorders and their supportive loved ones to maintain open lines of communication and access accurate information.

Patient education and psychoeducation should incorporate evidence-based treatment measures, including an early emphasis on restoring nutritional health. Recognizing that many major medical and mental health issues coexist in individuals with eating disorders, clinicians must facilitate connections with other specialized professionals such as psychiatrists, psychologists, nutritionists, counselors, occupational specialists, nursing staff, and eating disorder-trained supportive peer workers. Active.

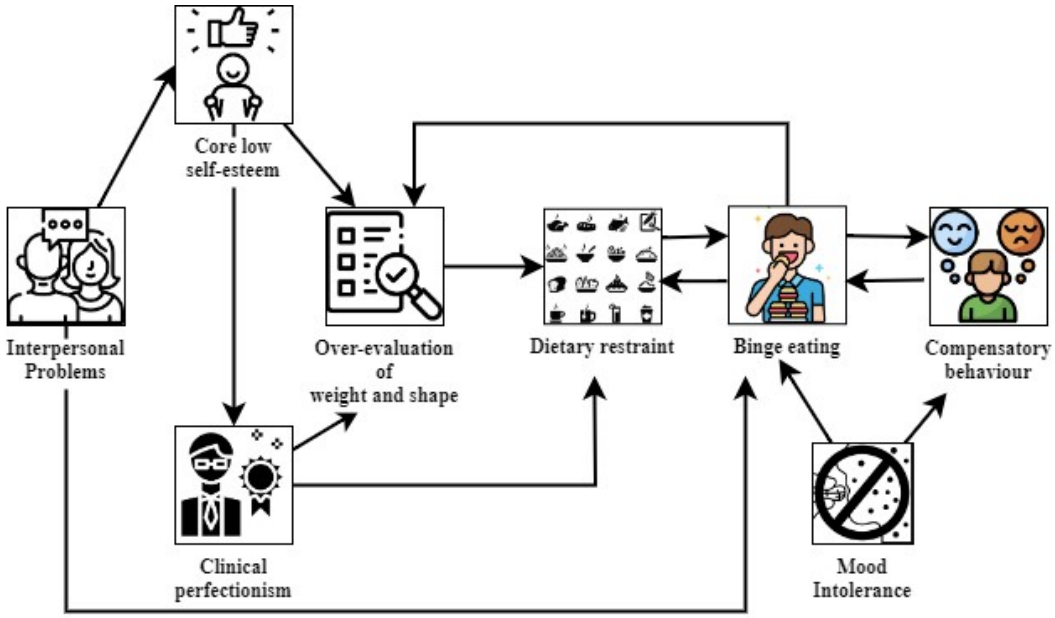

Figure 1. Interpersonal effects on patients with ED

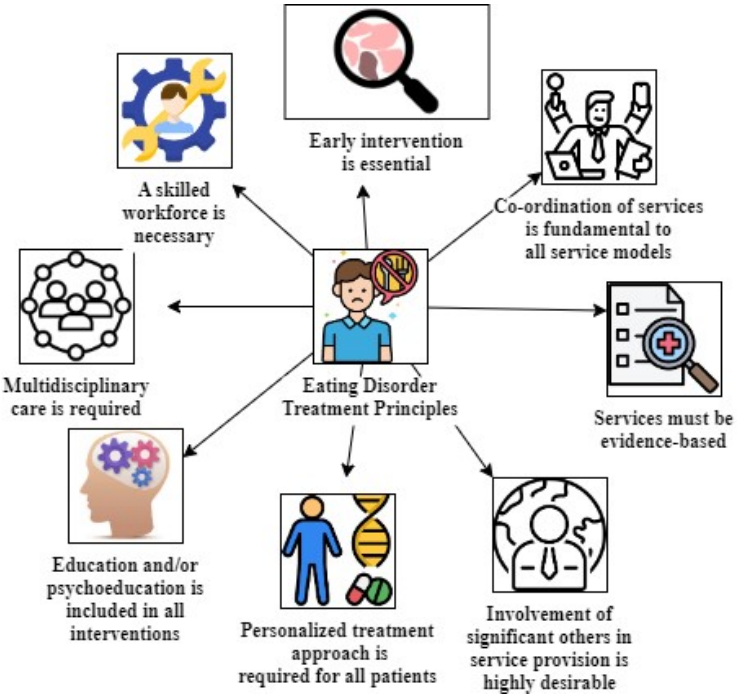

Figure 2. Treatment principles for inpatients of ED

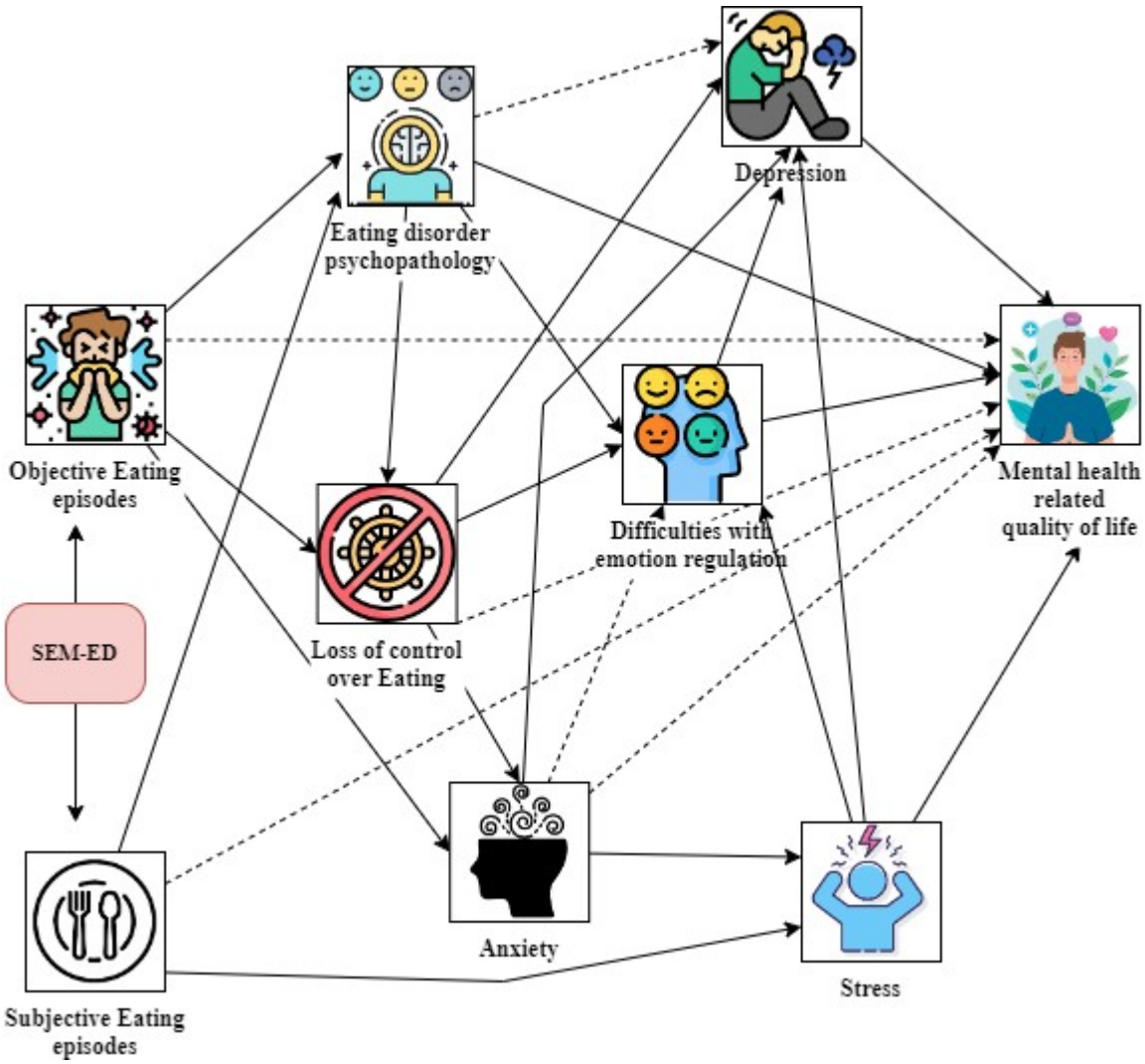

Figure 3. SEM-ED-based residential treatment outcomes

physician involvement through regular medical monitoring is essential.

Clinicians treating eating disorders should possess familiarity with and the ability to refer patients to specialized private clinics and hospitals. The personnel involved should demonstrate high competence. Clinical experience with eating disorders has been associated with improved patient outcomes. Notably, technical outpatient eating disorder organizations have been linked to superior diagnosis and advocacy, faster rehabilitation, lower costs, reduced likelihood of inpatient admission, and higher patient satisfaction in treating adolescents and children with bulimia nervosa. However, it's important to acknowledge that inexperienced therapists may achieve similar results under the guidance of an experienced therapist.

In Figure 3, we have shown the associations between eating disorder (ED) symptoms and interpersonal issues, overall mental well-being, and psychological quality of life in adolescents. The general psychological state of the study's participants showed a negative correlation with the presence of eating disorder behaviors and instability. This was evidenced by direct correlations, including (1) objective binge eating and anxiety, (2) subjective binge eating and emotional stress, (3) loss of control over eating and anxiety/depression, and (4) eating-disorder psychopathology and mental quality of life. Additionally, it reveals a clear correlation between the pathophysiology of eating disorders and impaired emotion regulation, specifically a lack of control over eating. The mental health-related quality of life and emotional strain were directly linked to the presence of depression, and psychological stress was also directly associated with impaired emotional control.

4. Insights from Structural Equation Modeling (SEM)

The landscape of residential treatment facilities for Anorexia Nervosa (AN) and Bulimia Nervosa (BN) has expanded in recent years, raising concerns about the quality and efficacy of such therapies, often employed for financial reasons. The field of eating disorder residential therapy is still evolving, diverse, and largely unregulated, lacking universal standards for gauging program success.

Structural Equation Modeling (SEM) serves as a valuable tool, comprising measurement and structural models. The SEM model focuses on three constructs—Emotional Eating Scale (EES), Body Appreciation (BA), and Body Type Concern (BSC)—as predictors (exogenous variables). The evaluation involves computing variable ratings in the first stage, drawing strength from the assessment of the structural model.

Enhancements in Symptomatic Rate of Progression

The research reveals that 18% of individuals treated at higher levels of ED specialist care in residential settings attribute their ED onset to anti-obesity messages. Figure 4 illustrates comparable symptom progression during the initial stages of treatment, with those attributing ED to anti-obesity information experiencing higher improvement in presenting symptoms.

Correlation of Interpersonal Problems with ED Treatment

In comorbid cases, the study suggests that treating depression precedes ED treatment. Participants experiencing reduced depressive symptoms in one session tended to show a decline in ED symptoms in the subsequent session. Therapy addressing interpersonal issues proved beneficial for both depression and ED symptoms, emphasizing the importance of understanding and managing interpersonal difficulties.

Impact of the Proposed Model

Figure 6 demonstrates that the combined factors improve the model's predictive ability for future outcomes. The SEM method exhibits promising statistical features, enhancing the model's construct validity. The study highlights the reliability of SEM in evaluating the model's construct validity, with evidence supporting the differentiation between various eating behaviors and uncorrelated variables.

This review contributes valuable insights into the complexities of residential treatment for eating disorders, emphasizing the need for standardized measurement and the potential benefits of addressing interpersonal issues in conjunction with other therapeutic approaches.

5. Conclusion

In conclusion, individuals grappling with eating disorders often contend with profound interpersonal challenges, mood fluctuations, a fundamental lack of self-worth, and idealized medical perceptions in addition to the core psychopathology of their eating disorder. This underscores the potential benefits of treatment models that comprehensively address both fundamental and auxiliary maintenance strategies, potentially leading to improved outcomes. The primary objective of this study was to rigorously test and cross-validate a model of maintenance factors, specifically examining the stability of interpersonal connections during intensive residential therapy. It is crucial to interpret the research results considering the methodological strengths and limitations. Structural equation modeling served as a valuable tool for initially assessing a model encompassing variables likely to sustain eating disorder symptoms in individuals undergoing tertiary care. The study explored treatment outcomes across a diverse group of women during residential therapy, examining various indicators of patient health and psychopathology. Notably, the investigation delved into the unexplored mediator of treatment outcomes in inpatient care for eating disorders. The findings highlight the variability among individuals and underscore the importance of a nuanced understanding of interpersonal domains,

contributing to the ongoing development of interpersonal theories and enhancing the efficacy of Interpersonal Psychotherapy within this population. The results align with the notion that therapeutic alliance is influenced by interpersonal dynamics at different treatment stages for bulimia nervosa. Building on recent advancements in the integration of cognitive rehabilitation and flexibility in eating disorder therapy, future research could explore the effectiveness of tailoring treatment approaches for individuals with heightened interpersonal rigidity.

Author Contributions

H.D. reviewd, conceptualized the post-residential outcomes for eating disorders, emphasizing interpersonal dimensions. N.K. reviewed and conceptualized the structural equation modeling (SEM-ED).

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Competing financial interests

The authors have no conflict of interest.

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