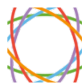
KMANPUB  Health Nexus Vol. 2 No. 2 (2024): 68-76

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Comparison of the Effectiveness of Schema Therapy and Life Therapy on Emotion Regulation and Attitudes Towards Eating in Women with Obesity

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ABSTRACT

Currently, obesity is considered a major health threat in developed countries. Various approaches have historically provided different solutions for individuals with obesity. The aim of the present study was to compare the effectiveness of schema therapy and Life Therapy on emotion regulation and eating attitudes in women with obesity. The present research was a quasi-experimental pre-test/post-test with a control group and follow-up period. The sample consisted of 45 women with obesity who sought treatment at the Omid Clinic of Ayatollah Rouhani Hospital. They were selected through purposive non-random sampling and randomly assigned into two experimental groups (schema therapy and Life Therapy) and one control group. The Cognitive Emotion Regulation Questionnaire (CERQ) by Garnefski et al. (2002) and the Eating Attitude Test (EAT) by Garner and Garfinkel (1979) were employed. Each experimental group underwent eight 90-minute sessions of either schema therapy or Life Therapy, while the control group received no intervention. Data analysis was performed using repeated measures analysis of variance. The findings indicated that both schema therapy and Life Therapy significantly affect emotion regulation and eating attitudes ($p < 0.05$). Moreover, Life Therapy was found to be more effective than schema therapy in improving emotion regulation and eating attitudes ($p < 0.05$). It can be concluded that both schema therapy and Life Therapy are effective in improving emotion regulation and attitudes towards eating in women with obesity, with Life Therapy being more effective. Thus, these approaches can be utilized alongside medical interventions and care in treatment centers.

Keywords: *Emotion regulation, Women with obesity, Life Therapy, Schema therapy, Attitude towards eating.*

1. Introduction

Currently, obesity is considered a major threat to mental health in developed countries (1). Obesity is a disease that significantly negatively impacts human health, and its prevalence has notably increased worldwide over the past two decades (2). Studies indicate that women are more prone to overweight and obesity compared to men (1). Among Iranians over 18 years old, the prevalence of obesity is 21.5%, with rates among women at 27.3% and men at 13.7% (3). Although obesity and overeating originate from various biological and non-biological factors, the role of psychological factors cannot be overlooked (4). It is said that when an individual concludes that eating improves mood, they turn to eating in response to negative emotions to regulate these negative moods (5). This means that the individual attempts to regulate their emotions through excessive eating. Emotion is a process through which individuals control their emotions and how they experience or express these emotions (6), and emotion regulation is defined as controlling what emotion we have, where and for how long we experience it, and how we express it (7).

One of the significant issues in eating disorders is the attitude towards eating, which includes beliefs, thoughts, feelings, behaviors, and relationships with food (1). Researchers believe that individuals' attitudes towards food and their eating behaviors can lead to an excessive and abnormal accumulation of fat and obesity, or conversely, lead to extreme thinness by avoiding food (8). The attitude towards eating involves beliefs, thoughts, feelings, and behavior related to food, which can affect individuals' food choices and health status (9). Indeed, behaviors and attitudes related to unhealthy eating are among the factors that have impacted their well-being and are considered among the most common, severe, and debilitating syndromes of mental health (10, 11).

Historically, various psychological and psychotherapeutic approaches have offered different strategies for changing thoughts, behaviors, and emotions, ultimately aiming to enhance the quality of human life. Among the approaches that have received relatively acceptable and extensive empirical support in these areas, third-wave behavioral therapies such as schema therapy can be mentioned. It is said that childhood experiences and schemas play a significant role in the development of obesity disorders (1). Schema therapy or schema-based therapy is an innovative and integrative treatment developed by Young and colleagues based on traditional cognitive-behavioral therapies and concepts. This therapeutic method includes components from various approaches, including cognitive-behavioral theories, attachment theory, object relations theory, structuralism, and psychoanalysis (12). Research has shown that schema therapy is effective in emotion regulation (12) and attitudes towards eating (1) in populations suffering from obesity (13).

Another effective approach in relation to obesity is Life Therapy. Lifestyle-based therapy or Life Therapy is a cognitive-behavioral approach that includes mindfulness, acceptance, and flexibility focusing on enhancing well-being and quality of life but differs from traditional cognitive-behavioral approaches as it focuses on creating positive feelings rather than reducing negative ones (14). The goal is to help individuals gain the necessary insight into life's challenges and requirements, emphasizing issues such as passion, creativity, desire to live, goal-oriented behaviors, and healthy and long life. The philosophy is to assist the client in designing a life based on values; during treatment, the therapist asks the client questions about the concept of life, purpose, and its meaning and values (15). Research has shown that Life Therapy is effective in various populations, especially concerning emotion regulation (13, 14, 16, 17). The goal of schema therapy is to identify and change negative patterns and beliefs, while Life Therapy focuses on improving the overall quality of life. Comparing these two can help identify the mechanism that is more effective in regulating emotions and attitudes towards eating. Given the above, the current study was conducted with the aim of comparing the effectiveness of schema therapy and Life Therapy on emotion regulation and attitudes towards eating in women with obesity.

2. Methods and Materials

2.1. Study Design and Participants

The design of the current study was a quasi-experimental pretest-posttest with a control group and a follow-up period. The research population consisted of women with obesity who attended the Omid Clinic at Ayatollah Rouhani Hospital, reported to number 250 individuals. The sample

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size for this study was calculated using GPower version 3.1, resulting in a required sample of 45 participants who were selected via purposive non-random sampling and randomly assigned into three groups (each group containing 15 participants) comprising two experimental groups (schema therapy and Life Therapy) and one control group.

2.2. Measures

2.2.1. Cognitive Emotion Regulation

This self-report tool consists of 36 items developed by Garnefski et al. (2002) and is used to identify cognitive coping strategies individuals use after experiencing negative events or situations. The Cognitive Emotion Regulation Questionnaire evaluates nine cognitive strategies: self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, perspective taking, catastrophic thinking, and blaming others. Garnefski et al. (2001) established the validity of the questionnaire through correlations with depression and anxiety scores from the General Health Questionnaire, respectively at 0.53 and 0.48, and reported a Cronbach's alpha reliability for the entire test at 0.93. Yousefi (2007) reported a reliability of 0.81 (18). The Cronbach's alpha reported in the current study was 0.744.

2.2.2. Eating Attitude

The final version of this self-report tool was introduced by Garner and colleagues (1982) with 26 items, featuring three subscales: dieting, bulimia, and oral control. It is rated on a Likert scale (always = 3, most of the time = 2, and often = 1) with the remaining options (sometimes, rarely, never) scored as zero. Garner et al. (1982) confirmed the psychometric properties of the questionnaire, and in Iran, Pourghasem Gargari et al. (2010) reported its reliability with a Cronbach's alpha of 0.80 and its validity at 0.76 (11). The Cronbach's alpha in the current study was 0.815.

2.3. Intervention

2.3.1. Schema Therapy

This involved a schema therapy protocol conducted over 10 sessions of 90 minutes each (1, 19).

Session 1:

The first session focuses on establishing a therapeutic relationship with the clients. The therapist introduces the importance and goals of schema therapy and formulates the client's issues within the framework of schema therapy. This session is critical for building trust and setting a foundation for future work.

Session 2:

In the second session, the therapist and client examine evidence that supports or refutes the presence of schemas based on current and past life experiences. Discussion revolves around identifying healthy versus unhealthy schemas, helping the client to recognize patterns that influence their behavior and emotions.

Session 3:

This session introduces cognitive techniques such as testing the validity of schemas and redefining evidence that supports existing schemas. The benefits and drawbacks of different coping styles are evaluated, helping the client to understand how their reactions to situations can be modified for better outcomes.

Session 4:

The focus is on reinforcing the concept of a 'healthy self.' Unmet emotional needs are identified, and strategies for expression are taught. Techniques for establishing healthy communication and engaging in imaginary dialogues are also practiced, enhancing interpersonal skills.

Session 5:

Clients are taught experiential techniques such as mental imagery for problematic situations and facing the most troubling of these. This session aims to equip clients with skills to manage and confront challenges effectively through visualization and exposure.

Session 6:

This session covers therapeutic relationship skills, emphasizing how to establish relationships with significant people in one's life and how to enact various roles effectively. The aim is to improve the client's social interactions and their understanding of relational dynamics.

Session 7:

Practicing healthy behaviors and learning new behavioral patterns are the primary focuses. The pros and cons of healthy versus unhealthy behaviors are discussed, along with strategies to overcome barriers to changing these behaviors.

Session 8:

The final session involves a review of all the techniques learned throughout the therapy sessions. This recapitulation helps to reinforce learning and ensure that clients are prepared to apply new skills in their everyday lives.

2.3.2. Life Therapy

This therapy implemented in 8 sessions of 90 minutes each (15).

Session 1:

The initial session establishes the therapeutic relationship and familiarizes the participants with the study's theme and objectives. A pretest is conducted to set a baseline for measuring progress throughout the therapy.

Session 2:

This session discusses concepts related to psychology and life psychology, providing viewpoints on life and human existence. It aims to broaden the client's understanding of how psychological principles relate to everyday life.

Session 3:

Clients are assisted in identifying their life goals and priorities. This session helps to clarify what is important in the clients' lives, facilitating a more directed and purposeful approach to achieving personal objectives.

Session 4:

The concept of zest for life and its role in mental health is explained. Understanding enthusiasm for life can enhance clients' motivation and overall well-being.

Session 5:

Hope is discussed as an essential spark of life. This session explores the role of hope in driving personal growth and overcoming challenges, emphasizing its importance in sustaining effort and resilience.

Session 6:

Life management concepts and the life wheel are introduced. This session helps clients to organize different areas of their lives and understand how to balance and manage various aspects effectively.

Session 7:

Concepts related to life satisfaction and positive thinking are presented, along with strategies for creating a positive space in one's life. This includes cultivating an environment that promotes psychological well-being and positive interactions.

Session 8:

The final session summarizes the topics covered and administers a post-test. This session evaluates the progress made throughout the therapy and reinforces the knowledge and skills imparted to the clients.

2.4. Data Analysis

The hypotheses were analyzed using repeated measures analysis of variance via SPSS software version 26.

3. Findings and Results

The schema therapy group had an average age of 37.8 with a standard deviation of 3.51, the Life Therapy group had an average age of 38.9 with a standard deviation of 3.46, and the control group had an average age of 38.3 with a standard deviation of 3.9. Participant ages ranged from 28 to 40. Also, given a significance level greater than 0.05, there was no significant difference between the three groups, indicating age homogeneity among them.

Table 1

Comparison of Mean and Standard Deviation of Cognitive Emotion Regulation Among Three Groups at Three Times: Before Intervention, After Intervention, and Follow-up

Variable	Group	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD	Follow-up Mean	Follow-up SD
Cognitive Emotion Regulation	Schema Therapy	73.8	5.64	85.6	5.19	86.4	5.06
	Life Therapy	73.0	5.18	88.8	5.15	87.8	5.15
	Control Group	72.2	4.91	74.4	4.18	74.1	4.48
Attitude Towards Eating	Schema Therapy	42.6	5.55	33.9	4.92	34.2	4.79
	Life Therapy	41.1	5.23	31.1	4.62	32.0	4.47
	Control Group	41.2	3.51	41.0	3.46	41.1	3.62

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Table 1 shows the means of cognitive emotion regulation among the three groups—schema therapy, Life Therapy, and the control group. As observed, there is no significant difference in cognitive emotion regulation and attitudes toward eating among the three groups in the pre-test; however, post-intervention, the experimental groups show a significant difference compared to the control group, and this difference is also observable at the follow-up stage. Shapiro-Wilk's test results were not significant, concluding that the distribution of the dependent variable scores is normal. The results of Levene's test indicated that the F values for emotion regulation (F = 0.9) and attitudes towards eating (F = 0.38) were not significant, supporting the homogeneity of variance hypothesis between groups. The sphericity assumption for emotion regulation (W = 0.068 Mauchly's) and attitudes towards eating (W = 0.069 Mauchly's) was not met, thus, Greenhouse-Geisser corrected values were used for degrees of freedom in the analysis of variance. Greenhouse-Geisser epsilon for emotion regulation was 0.518 and for attitudes towards eating was 0.521. All tests for Pillai's trace, Wilks' lambda, Hotelling's trace, and largest root were significant at the 0.001 level (P < 0.01), indicating a significant difference in cognitive emotion regulation and attitudes towards eating based on group, assessment time, and the interaction of group and assessment time, concluding that there is a significant difference between the effectiveness of schema therapy and Life Therapy on cognitive emotion regulation and attitudes towards eating in women with obesity.

For a precise investigation of the differences and testing of subsidiary hypotheses, univariate analyses were also conducted, the results of which are shown in Table 2.

Table 2

Results of Mixed ANOVA to Examine the Effect of Group and Assessment Time on Dependent Variables

Source	Dependent Variable	Sum of Squares	df	Mean Square	F	Sig.	Effect Size
Within-Subjects							
Assessment Time	Cognitive Emotion Regulation	3466.4	1.03	3348.1	160.5	0.001	0.741
	Attitude Towards Eating	1718.2	1.03	1664.2	209.5	0.001	0.789
Assessment Time * Group	Cognitive Emotion Regulation	1317.8	3.10	424.2	20.3	0.001	0.522
	Attitude Towards Eating	557.1	3.09	179.8	22.6	0.001	0.548
Error	Cognitive Emotion Regulation	1208.9	57.9	20.8			
	Attitude Towards Eating	459.2	57.8	7.94			
Between-Subjects							
Group	Cognitive Emotion Regulation	2181.5	3	727.1	6.33	0.001	0.253
	Attitude Towards Eating	981.6	3	327.2	4.39	0.008	0.191
Error	Cognitive Emotion Regulation	6426.08	56	114.7			
	Attitude Towards Eating	4166.6	56	74.4			

According to the reported results in Table 2, the main effect of assessment time on both dependent variables is significant. This means that the scores for cognitive emotion regulation and attitudes towards eating of all subjects, regardless of their group, are significantly different in the pre-test, post-test, and follow-up. For investigating the source of the difference, Bonferroni's post-hoc test was used, the results of which are presented in Table 5. Regarding the interaction of factors across stages and groups, the calculated F value for the effect of stages (pre-test, post-test, and follow-up) between the two groups, schema therapy and Life Therapy, is significant at the 0.05 level for both emotion regulation and attitudes towards eating (P < 0.05). The between-group factor F value calculated at the 0.05 level for both emotion regulation and attitudes towards eating is significant (P < 0.05). Therefore, there is a significant difference between the overall means of emotion regulation and attitudes towards eating in the two groups, schema therapy and Life Therapy, with Life Therapy having a greater impact on emotion regulation and attitudes towards eating.

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Table 3

Pairwise Comparison of Mean Scores Between Schema Therapy and Life Therapy Groups at Three Stages of the Study for Emotion Regulation and Attitude Towards Eating Variables

Variable	Research Phase	Group	Comparison Group	Mean Difference	Significance Level
Emotion Regulation	Pretest	Schema Therapy	Life Therapy	0.866	1
		Schema Therapy	Control	-0.333	1
		Life Therapy	Control	-1.2	1
	Posttest	Schema Therapy	Life Therapy	7.98	0.026
		Schema Therapy	Control	11.2	0.001
		Life Therapy	Control	18.1	0.001
	Follow-up	Schema Therapy	Life Therapy	6.86	0.046
		Schema Therapy	Control	12.3	0.001
		Life Therapy	Control	18.1	0.001
Attitude Towards Eating	Pretest	Schema Therapy	Life Therapy	1.53	1
		Schema Therapy	Control	1.4	1
		Life Therapy	Control	-0.133	1
	Posttest	Schema Therapy	Life Therapy	6.4	0.009
		Schema Therapy	Control	-7.06	0.003
		Life Therapy	Control	-13.4	0.001
	Follow-up	Schema Therapy	Life Therapy	5.66	0.028
		Schema Therapy	Control	-6.93	0.004
		Life Therapy	Control	-12.6	0.001

The results in Table 3 show that the differences in the post-test and follow-up stages between the schema therapy and Life Therapy groups are significant ($P < 0.05$), but in the pre-test stage, the difference between the schema therapy and Life Therapy groups is not significant ($P > 0.05$).

4. Discussion and Conclusion

The present study aimed to compare the effectiveness of schema therapy and Life Therapy on emotion regulation and attitudes toward eating in women with obesity. The results demonstrated a significant difference between the effectiveness of schema therapy and Life Therapy on cognitive emotion regulation and attitudes toward eating, with Life Therapy performing better than schema therapy in improving these aspects.

The findings indicated that schema therapy is effective in regulating cognitive emotions and attitudes toward eating in women with obesity. These results are consistent with the findings of previous researchers (1, 12, 19-21). In explaining these findings, it can be argued that in the schema-based approach, negative and threatening interpretations of ambiguous situations, catastrophic interpretations of negative social events related to overeating, and self-focused attention are controlled and moderated through increased individual flexibility, cognitive detachment, cognitive restructuring, etc. This reduces bias and distortion in the information processing process, improves symptoms of the disorder (such as attitudes toward eating), and enhances the individual's ability to regulate cognitive emotions and mental health, subsequently enhancing their quality of life. Therefore, schema-based therapy encourages individuals to expose themselves to real-life social situations (overeating) and repetitive cognitive restructuring of their dysfunctional thoughts, which reduces cognitive avoidance and fear of negative evaluation. Cognitive schema therapy targets core beliefs for change. Individuals undergoing schema therapy test hypotheses about their schemas using cognitive techniques (20). Schema therapy, by focusing on individuals' cognitions, negative mood, and negative thinking, induces changes in existing experiences, creates a new perspective and a novel way of viewing cognitive experiences, and reduces maladaptive emotional behaviors (21). Essentially, schema-based therapy disrupts the cycle of negative internal experiences such as depression and anxiety expected from a future unoccurred event or ruminating on a past event, thereby reducing overeating behaviors and enhancing their ability to improve attitudes toward eating (19).

In explaining the effectiveness of Life Therapy on cognitive emotion regulation and attitudes toward eating in

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women with obesity, which aligns with the results of prior researchers (14, 15, 17), it can be argued that the therapist in the Life Therapy approach strives not just to help the client not waste time, but to perceive every moment of life as an opportunity for living, being, flourishing, and achieving perfection. The therapist helps the client clearly define various areas of their life and pursue goals and objectives in all designed areas. In this therapeutic approach, the therapist assists the client in effectively and adaptively dealing with life's challenges. Emphasizing a broad and open attitude toward life is important. When emphasis is placed on life as a whole and its overall meaning, it can provide new insights into the components of life. The goal of Life Therapy is to create a broad concept of life and the areas of the client's life. By fostering a comprehensive understanding of life and its necessities in the client, they are better able to resolve issues, problems, and challenges (15); the counselor and psychologist in this approach are those who can help the client make fundamental changes in their perception of life and its values. The therapist plays an important role in creating positive beliefs and hope in the client. They can instill such a belief in the client that change is possible, that they can alter the shape and content of their life, and strive daily for improvement by reviewing life memories and the client's experiences, which can aid in creating a realistic understanding of life. In other words, reconstructing life through changing attitudes is a major goal in the therapeutic process (22). Therefore, the effectiveness of Life Therapy in improving cognitive emotion regulation and attitudes toward eating in women with obesity is justified.

In explaining why Life Therapy is more effective than schema therapy, aligning with the results of prior researchers (17), it can be said that concepts such as motivation, interest, inclination, desire, satisfaction, attachment, love, passion, and well-being are important issues in life. Most clients and patients do not have an appropriate and correct understanding of the concept of life and life itself. The primary goal of counseling and psychotherapy is to create excitement for living (23). During the therapeutic process, various topics are discussed. Topics such as good life versus bad life, correct lifestyle versus incorrect lifestyle, a life based on commitment and responsibility versus a life devoid of commitment and responsibility, having a plan and map in life versus not having a plan and map in life, and other positive aspects of the client and their human characteristics are emphasized, and the client's psychological muscle is strengthened. The style, manner, and art of living are emphasized in psychological sessions (24).

Given the aforementioned findings, it can be concluded that both schema therapy and Life Therapy are effective in improving emotion regulation and attitudes toward eating in women with obesity, with Life Therapy being more effective. Limitations of the current study include reliance on questionnaires for data collection, lack of overall control of the sample individuals between the pretest, posttest, and follow-up, as well as issues and limitations in coordinating the timing of group members for participation in the intervention. Future research is suggested to enhance research outcomes by considering intervening variables such as the impact of subcultures and socio-economic conditions, using other data collection methods such as interviews and observations, and sampling from other age groups, genders, and social and community environments.

Authors' Contributions

A.M.A. conceptualized the study, developed the research protocol, and supervised the implementation of the therapeutic interventions. R.H., the corresponding author, was chiefly responsible for statistical analysis, interpretation of the data, and drafting of the manuscript. S.H. contributed to the data collection process, managed the administrative and logistic support for the therapy sessions, and assisted in the preparation of the initial draft. All authors have reviewed and approved the final manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

The study placed a high emphasis on ethical considerations. Informed consent obtained from all participants, ensuring they are fully aware of the nature of the study and their role in it. Confidentiality strictly maintained, with data anonymized to protect individual privacy. The study adhered to the ethical guidelines for research with human subjects as outlined in the Declaration of Helsinki.

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