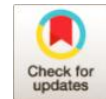


# The Effectiveness of Quality-of-Life–Based Skills Training on Early Maladaptive Schemas in Students with Obsessive–Compulsive Disorder



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## ABSTRACT

The present study aimed to investigate the effectiveness of quality-of-life–based skills training on early maladaptive schemas in students with obsessive–compulsive disorder (OCD). This research employed a quasi-experimental design using a pretest–posttest approach with a nonequivalent control group. The statistical sample consisted of 24 students with OCD who were selected through convenience sampling. Participants were assigned to two groups: an experimental group (12 participants) and a control group (12 participants). After administering the pretest, the experimental group received eight 90-minute training sessions, while the control group received no intervention. Data were collected using Young's Early Maladaptive Schema Questionnaire (2003). Data analysis was conducted using statistical methods including univariate and multivariate analysis of covariance (ANCOVA). The findings indicated that quality-of-life–based skills training significantly affected early maladaptive schemas in students with OCD. These findings highlight the important role of quality of life in improving early maladaptive schemas, which are considered among the strongest cognitive and emotional drivers of human behavior.

**Keywords:** Quality-of-life–based skills training, early maladaptive schemas, obsessive–compulsive disorder

## Introduction

Obsessive–compulsive disorder (OCD) is a chronic and debilitating anxiety disorder characterized by intrusive obsessive thoughts and repetitive compulsive behaviors that can seriously impair an individual's academic, occupational, and social functioning [1]. This disorder is not merely a collection of behavioral symptoms; at a deeper level, it is associated with persistent and distorted cognitive patterns.

Among the most significant of these patterns are early maladaptive schemas—deep, pervasive, and enduring cognitive structures that develop as a result of adverse developmental experiences and unmet basic psychological needs, influencing individuals' perceptions of themselves, others, and the world throughout their lives [2,3].

The university period, as one of the most sensitive transitional developmental stages, is consistently accompanied by numerous psychological stressors and challenges that create a context for the emergence of various mental disorders.

Among these, obsessive–compulsive disorder (OCD), as one of the most disabling anxiety disorders, has a considerable prevalence in university populations and significantly affects students' academic performance, social functioning, and quality of life [1]. Epidemiological studies in Iran indicate that symptoms of OCD are increasing among young people, particularly students and adolescents.

For instance, findings shows a high prevalence of OCD symptoms and substantial comorbidity with other psychological disorders [4]. Given the chronic and deteriorating course of this disorder, therapeutic interventions and quality-of-life enhancement skills are considered essential for this population in order to prevent severe psychosocial decline [5].



According to Young's theoretical model, early maladaptive schemas develop when universal core emotional needs—such as secure attachment, autonomy, freedom to express needs and healthy emotions, spontaneity, and realistic limits—are not adequately met [6]. These schemas manifest in the form of eighteen maladaptive patterns categorized into five broad domains: disconnection and rejection; impaired autonomy and performance; impaired limits; other-directedness; and over-vigilance and inhibition [5]. Once activated, these schemas contribute to ongoing psychological distress through cognitive distortions, self-defeating life patterns, and maladaptive coping styles [6].

Evidence also suggests that early maladaptive schemas play a significant role in the development and maintenance of OCD symptoms. In particular, schemas such as defectiveness/shame, vulnerability to harm or illness, unrelenting standards, and insufficient self-control may predispose individuals to doubt-related obsessions, inflated responsibility, and compulsive behaviors.

Research in this area has demonstrated significant associations between early maladaptive schemas and OCD, indicating that these schemas contribute to superficial cognitive processing and the persistence of the obsessive-compulsive cycle [7]. Furthermore, another study reported a significant relationship between early maladaptive schemas and rumination among university students [8], underscoring the importance of addressing underlying cognitive components in this population.

Early maladaptive schemas are deep and enduring cognitive-emotional patterns formed during early developmental years that function as dysfunctional filters in adult information processing [3]. Numerous studies conducted among university students have identified these underlying structures as strong predictors of various psychological problems, including maladaptive coping behaviors and depression [9,10]. In line with these findings reported a direct and significant association between early maladaptive schemas and increased rumination in students [8]. Similarly, Mokhber Dezfouli et al found that dysfunctional cognitions play a key mediating role between early maladaptive schemas and OCD symptoms [7]. This body of research emphasizes that targeting early maladaptive schemas through structured quality-of-life training and schema therapy plays a central role in reconstructing the cognitive structures of students with OCD [11].

In recent years, psychological interventions focused on improving quality of life have received increasing attention as innovative and effective approaches. Quality-of-life skills training, based on Frisch's model, attempts to integrate cognitive therapy with positive psychology by focusing on values, personal standards, attitudes, life circumstances, and overall life satisfaction,

aiming to correct dysfunctional subjective evaluations [5,12]. By strengthening cognitive reappraisal, increasing acceptance, and enhancing satisfaction across life domains, this approach may reduce the activation of early maladaptive schemas. Given that schemas operate at a deep and enduring level, interventions capable of modifying individuals' evaluations of themselves and their lives are of particular theoretical and practical importance.

Although several studies have confirmed the effectiveness of quality-of-life training on variables such as hope and self-efficacy in different populations [13, 14, 15], there is still insufficient evidence regarding its impact on early maladaptive schemas among university students with OCD.

Therefore, considering the decisive role of schemas in maintaining the disorder and the potential of quality-of-life-based interventions to modify cognitive and emotional patterns, the central research question of the present study is whether quality-of-life skills training can reduce early maladaptive schemas in university students with OCD.

## Methods

The present study employed a quasi-experimental design using a pretest-posttest control group format. The statistical population consisted of all university students diagnosed with obsessive-compulsive disorder (OCD) in the city of Mashhad during the 2021–2022 academic year. The study sample included 24 eligible students who were selected through convenience sampling. After obtaining the necessary approvals and an official letter of introduction from the university, the researcher referred to psychological service centers and private clinics across Mashhad. Following the identification of students diagnosed with OCD and verification of the inclusion criteria, participants were randomly assigned to either the experimental group ( $n = 12$ ) or the control group ( $n = 12$ ).

### Inclusion Criteria

A formal diagnosis of OCD by a qualified mental health professional, current enrollment as a university student, Provision of informed consent to participate in the training sessions.

### Instruments

#### Young Schema Questionnaire (YSQ-SF)

Early maladaptive schemas were assessed using the 75-item short form of the Young Schema Questionnaire (YSQ-SF). This instrument evaluates 15 early maladaptive schemas across five major domains. Responses are rated on a 6-point Likert scale. The psychometric properties of the Persian version of the questionnaire have been confirmed in several Iranian studies. Internal consistency reliability, as measured by Cronbach's alpha, has been reported to exceed 0.90 for the total scale.

## Procedure

After sample selection and administration of the pretest to both groups, the Quality of Life (QOL) skills training protocol based on Frisch's approach was implemented for the experimental group [5]. The intervention consisted of eight 90-minute group sessions conducted weekly at a psychological clinic.

During this period, the control group received no intervention and remained on a waiting list. Upon completion of the training sessions, the posttest was administered again to both groups.

## Intervention Protocol Summary

### Session 1: Introduction and Structuring

Core Focus & Objectives: Establishing therapeutic rapport, outlining group boundaries, and defining program objectives. Introducing basic concepts of quality of life, satisfaction, and happiness. Discussing the role of rumination and maladaptive schemas in OCD manifestations. Providing initial feedback.

### Session 2: Conceptualization of Therapy

Core Focus & Objectives: Professionally defining Quality of Life Therapy (QLT) and introducing the 16 distinct dimensions of life quality. Mapping and analyzing the "Tree of Life" to isolate problem areas for participants. Summarizing core themes and assigning homework.

### Session 3: Introduction of the CASIO Model (Part1)

Core Focus & Objectives: Reviewing homework. Explaining the CASIO framework as the five pillars of satisfaction. Focusing on Strategy 1: Circumstances. Teaching methods to modify or adapt to objective life conditions to enhance quality of life.

### Session 4: Introduction of the CASIO Model (Part2)

Core Focus & Objectives: Reviewing homework and navigating roadblocks. Deliberating on Strategy 2: Attitude. Training participants to restructure interpretations of events to counter cognitive biases and early maladaptive schemas.

### Session 5: Completion of the CASIO Model

Core Focus & Objectives: Reviewing homework. Reviewing the final three strategies: Standards, Importance (Priorities), and Other Fields (Overall Satisfaction) to recalibrate personal metrics and optimize overall life satisfaction.

### Session 6: Integration with Clinical Variables

Core Focus & Objectives: Presenting foundational pillars of quality of life. Demonstrating the practical application of these pillars in regulating and diminishing rumination, as well as mitigating distress driven by early maladaptive schemas during anxiety-inducing states.

### Session 7: Focus on Interpersonal Relationships

Core Focus & Objectives: Reviewing homework assignments. Conducting an in-depth clinical discussion on social and emotional relationships. Teaching the application of the five CASIO strategies to cultivate interpersonal interactions and reduce obsessive symptoms.

## Session 8: Synthesis and Generalization

Core Focus & Objectives: Comprehensive synthesis of preceding sessions. Delivering final summaries. Instruction on generalizing the CASIO matrix across all future life challenges. Posttest administration and closing remarks.

## Ethical Considerations and Data Analysis

To comply with ethical mandates, participants were guaranteed complete data confidentiality. Following the study's completion, an accelerated version of the training program was conducted for the control group. Collected data were analyzed using descriptive statistics (means and standard deviations). To evaluate the research hypotheses and assess the efficacy of the intervention while controlling for pretest effects, a multivariate analysis of covariance (MANCOVA) was executed. All analyses were processed using SPSS Version 22, with statistical significance set at 0.05 alpha.

## Results

Demographic indices showed that 8 participants held an associate degree and were undergraduate students, 12 held a bachelor's degree and were pursuing their master's degree, and 4 held a master's degree and were active doctoral students.

The highest age frequency was observed within the 25–35 age range ( $n = 10, 41.66\%$ ). Additionally, 8 participants ( $33.33\%$ ) fell under the age of 25, while 6 participants ( $25\%$ ) were over 35 years old. Other descriptive statistics shows in Table 1.

**Table 1.** Descriptive Statistics of Research Variables

Variables / Components	Phase	Exp Group		Control Group	
		Mean	SD	Mean	SD
Ruminative Style	Pretest	23.41	3.704	24.08	7.267
	Posttest	18.08	4.273	24.16	7.120
Distracting Style	Pretest	17.83	4.302	18.16	4.529
	Posttest	13.00	3.219	17.67	2.964
Rumination (Total Score)	Pretest	41.25	5.690	42.25	11.828
	Posttest	31.08	7.316	41.83	8.408

The researcher hypothesized that improvement in students with obsessive-compulsive disorder (OCD) following quality-of-life skills training would be reflected in a reduction of early maladaptive schemas.

To test this hypothesis, pretest scores were treated as a covariate, and a multivariate analysis of covariance (MANCOVA) was conducted. The results of the covariance analysis for the variable of early maladaptive schemas are presented in the table below.

Based on Table 2, results indicate that the significance level for the covariate (pretest scores) was 0.001, which is less than the alpha level of 0.05 ( $p = 0.001 < 0.05$ ). This finding demonstrates that the covariate (pretest scores) was significantly related to the dependent variable (posttest scores). Therefore, the use of covariance analysis was statistically appropriate and valid.

Furthermore, the significance levels corresponding to the experimental and control groups in the domains of early maladaptive schemas, specifically disconnection and rejection, impaired autonomy and performance, and over-vigilance and inhibition, were all below 0.05 ( $p < 0.05$ ). Given the statistical significance observed in the

covariance analysis, the second sub-hypothesis of the study, stating that “quality-of-life skills training has a significant effect on early maladaptive schemas in students with obsessive–compulsive disorder”, is supported at the 95% confidence level.

**Table 2.** Summary of Univariate Analysis of Covariance for Maladaptive schemas

Source	Subscale / Domain	Sum of Squares	df	Mean Square	F	Sig.	Eta
Constant	Disconnection and Rejection	786.221	1	786.221	13.473	0.002	0.442
Constant	Impaired Autonomy and Performance	0.184	1	0.184	0.018	0.895	0.001
Constant	Impaired Limits	26.384	1	26.384	0.528	0.477	0.030
Constant	Other-Directedness	76.971	1	76.971	2.607	0.125	0.133
Constant	Over vigilance and Inhibition	31.357	1	31.357	3.983	0.062	0.190
Pre-test scores	Disconnection and Rejection	174.072	1	174.072	10.575	0.005	0.383
Pre-test scores	Impaired Autonomy and Performance	365.780	1	365.780	35.694	0.001	0.677
Pre-test scores	Impaired Limits	74.530	1	74.530	9.468	0.007	0.358
Pre-test scores	Other-Directedness	118.772	1	118.772	4.023	0.041	0.191
Pre-test scores	Over vigilance and Inhibition	306.254	1	306.254	38.904	0.001	0.696
Group	Disconnection and Rejection	278.887	1	278.887	16.942	0.001	0.499
Group	Impaired Autonomy and Performance	232.583	1	232.583	22.696	0.001	0.572
Group	Impaired Limits	46.164	1	46.164	0.923	0.350	0.052
Group	Other-Directedness	9.279	1	9.279	0.314	0.582	0.018
Group	Over vigilance and Inhibition	253.692	1	253.692	32.227	0.001	0.655
Error	Disconnection and Rejection	279.841	17	16.461			
Error	Impaired Autonomy and Performance	174.210	17	10.248			
Error	Impaired Limits	849.985	17	49.999			
Error	Other-Directedness	501.924	17	29.525			
Error	Over vigilance and Inhibition	133.824	17	7.872			

**Discussion**

The aim of the present study was to examine the effectiveness of quality-of-life–based skills training on rumination and early maladaptive schemas in students with obsessive–compulsive disorder (OCD). The present study was a quasi-experimental research design using a pretest–posttest format with a nonequivalent control group.

The statistical sample of the study consisted of 24 students who were selected through convenience sampling. They were assigned to two groups: an experimental group and a control group (12 participants in the experimental group and 12 participants in the control group).

After administering the pretest, the educational intervention was implemented for the experimental group in eight sessions of approximately 90 minutes each, while the control group received no intervention. Data were collected using the Ruminative Responses Scale developed by Nolen-Hoeksema and Morrow [16] and the Young Early Maladaptive Schema Questionnaire [3]. For data analysis, statistical methods including univariate and multivariate analysis of covariance (ANCOVA and MANCOVA) were employed. The findings indicated that quality-of-life–based skills training had a significant effect on rumination and early maladaptive schemas among students with obsessive–compulsive disorder.

The researcher’s hypothesis suggested that quality-of-life improvement training would be effective in reducing early maladaptive schemas in students with obsessive–compulsive disorder. Based on the findings, it can be inferred that quality-of-life–based skills training significantly affects early maladaptive schemas in students with OCD. These findings are consistent with the many other studies [17-20].

According to the theoretical perspectives of Young [3] and Ellis [21], individuals with obsessive–compulsive disorder often possess early maladaptive schemas characterized by deep and pervasive cognitive patterns that have not developed in a healthy manner.

As a result, such individuals often experience difficulties in their relationships with themselves and others and demonstrate significant psychological dysfunction.

These individuals may exhibit instability, mistrust, and perceptions of mistreatment, which may ultimately lead to social isolation and difficulties in establishing interpersonal relationships. Consequently, early maladaptive schemas tend to be more prevalent in these individuals compared with the general population.

Individuals with schemas related to social isolation and emotional deprivation often experience feelings of loneliness and perceive that they have not received sufficient affection, intimacy, or attention from others.

This finding may be explained by the fact that individuals with obsessive tendencies frequently experience high levels of depression and loneliness.

Previous studies have also confirmed the mediating role of the satisfaction of basic psychological needs, which play a crucial role in the development of maladaptive schemas, in the emergence of depression and loneliness. One of the key characteristics of the mistrust/abuse schema is suspicion toward others. Individuals with this schema tend to distance themselves from others and are reluctant to establish close relationships. Furthermore, individuals with OCD often experience little enjoyment in life and engage in repetitive behaviors that disrupt their concentration and memory processes. As a result, they may gradually lose self-confidence, and early maladaptive schemas become more prominent in their cognitive structure.

Therefore, quality-of-life training, as one of the approaches within positive psychology, supports the reduction of early maladaptive schemas and the enhancement of overall life quality by emphasizing life satisfaction. The theory of quality of life is based on the assumption that emotional and affective components of happiness largely arise from cognitive judgments about life satisfaction. In other words, happiness and psychological well-being are derived from individuals' evaluations of whether their needs, goals, and standards regarding work, activities, and life circumstances are adequately fulfilled. Accordingly, the results of the present study can be interpreted within this theoretical framework.

### Conclusion

The present study aimed to examine the effectiveness of quality-of-life-based skills training on rumination and early maladaptive schemas among students with obsessive-compulsive disorder (OCD). The findings indicated that this intervention significantly reduced rumination and several domains of early maladaptive schemas, particularly disconnection and rejection, impaired autonomy and performance, and over vigilance and inhibition.

These results suggest that training programs focused on improving quality of life can play an important role in modifying maladaptive cognitive patterns and enhancing psychological functioning in individuals with OCD. By emphasizing life satisfaction, personal goals, and adaptive cognitive evaluation of life circumstances, quality-of-life-based training may help individuals develop healthier coping strategies and reduce dysfunctional cognitive processes associated with obsessive-compulsive symptoms. Therefore, integrating quality-of-life interventions into psychological support programs for students with OCD may contribute to improving their mental health and overall well-being.

Several limitations should be considered when interpreting the results of this study. First, the sample size was relatively small and limited to 24 participants, which may restrict the generalizability of the findings. Second, participants were selected through convenience sampling from psychological clinics in Mashhad, which

may introduce sampling bias and limit the applicability of the results to other populations. Third, the study relied on self-report questionnaires, which may be influenced by response biases such as social desirability or inaccurate self-perception. Finally, the study did not include a long-term follow-up assessment; therefore, the durability of the intervention's effects over time remains unclear.

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