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The effectiveness training skills based on quality of life on hostility attribution and distress tolerance in students with Obsessive-compulsive disorder

Farnaz Abhar Zanjani[1]; *Hassan ToozadehJani[2]; Parisa Amani[3]

[1]*Assistant professor, Department of Psychology, Eqbal Institute of Higher Education, Mashhad, Iran.*
[2]*Associate professor, Department of Psychology, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran.*
[3]*M.Sc. in clinical psychology, Islamic Azad University, Branch of Birjand, Birjand, Iran.*

Abstract

Introduction: This study aimed to investigate the effectiveness of skills training based on improving quality of life on hostile documents and distress tolerance in obsessive-compulsive students.

Materials and Methods: The statistical population of this study included all students with obsessive-compulsive disorder who referred to the centers and specialized clinics of educational psychology services in May 2020 in Mashhad city, Iran. The statistical sample included 24 students selected by convenience sampling method and randomly assigned to experimental and control groups (12 students). All students fulfilled Arendz et al. (2003) Hostile Document Questionnaire and the Simmons and Gahr (2005) Distress Tolerance Questionnaire, and Madsley obsessive-compulsive questuionnaire (1977). The quality-of-life skills-based skills training was conducted for the experimental group in 8 ninety-minute sessions. At the end, both groups fulfilled the questionnaires. The data were analyzed using univariate and multivariate analysis of covariance and SPSS software (version 22).

Results: The skills training based on improving quality of life can improve distress tolerance and decrease hostile documents in the experimental group significantly compared to the control group. The ETA coefficient for the variables of hostile documents and disturbance tolerance is 0.480 and 0.463, respectively, so the effectiveness of the treatment was high in both variables and was slightly higher in the index of hostile documents than the disturbance tolerance variable.

Conclusion: Based on the findings, treatment based on improving the quality of life is effective on hostile documents and distress tolerance in students with obsessive-compulsive disorder.

Keywords: Depression, Prevalence, Patient Health Questionnaire, Young adults

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Introduction

Obsessive-Compulsive Disorder (OCD) is considered one of the most common and debilitating psychological disorders (1), so this disorder is one of the four most common psychiatric disorders and imposes huge costs on

***Corresponding Author:**
Department of Psychology, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran.
h.toozandehjani@ymail.com
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society annually (2). OCD is characterized by obsessions (unwanted thoughts, perceptions, or impulses that cause anxiety) and coercion (behaviors or mental actions that reduce obsessive-compulsive disorder). The main characteristic of obsessive-compulsive disorder is recurrent obsessive thoughts or compulsive actions (3). Obsessive thoughts are the same thoughts, ideas, or impulses that repeatedly and stereotypically enter the patient's mind (4). These obsessive thoughts are mainly about pollution, order, aggression, sexual and religious issues. Obsessive actions and rituals are stereotyped behaviors that the patient constantly repeats. The most common practical obsessions are checking to prevent catastrophes and clean up (5).

Today, obsessive-compulsive disorder is twice as common as previously thought, twice as common as schizophrenia and bipolar disorder (6). This disorder affects approximately two-thirds of patients in adolescence or early adulthood, and the effect of this disorder on a person's life and, in fact, in all aspects of a person's life (way of thinking, basis, and behavior) is significant (7).

Symptoms of anxiety often accompany the obsessive-compulsive disorder. In this disorder and recurrent depressive disorder, changes in anxiety symptoms usually occur as the severity of depression increases or decreases (8). Depression, anxiety, and attention bias are considered for the selective processing of information related to the threat of clinical phenomena in this disorder.

Anxiety and depression are increasing in prevalence every day, and the general public suffers from this disorder at some point in time. Some researchers believe that anxiety and depression are two separate structures, but another group believes that they are part of a general structure, negative excitability. There is a close relationship between obsessive-compulsive disorder symptoms, especially obsessive thoughts, and anxiety and depression. The disorder is seen equally in men and women. The onset of the disorder is usually in early adulthood and sometimes in childhood. Its course is variable and probably becomes chronic without major anxiety and depression (9).

Evidence suggests a high rate of comorbidity between obsessive-compulsive disorder and anxiety disorders (such as anxiety disorder). Distress tolerance is one of the common structures for research on the emotional disorder. As an important structure in development, distress tolerance has provided new insight into the onset and continuation of psychological trauma and prevention and treatment (10). Distress tolerance is defined as the inability to fully enclose an annoying and distressing emotional experience. It is defined as the capacity to experience and tolerate negative psychological states. Confusion may result from cognitive or physical processes, but it manifests as an emotional state that is often characterized by a desire to act to alleviate the emotional experience. Patients with the obsessive-compulsive disorder usually show little distress tolerance (11).

On the other hand, distress intolerance is defined as a person's tendency to react negatively to ambiguous events and situations, regardless of the likelihood of the event or its consequences (12). Chaos may be the product of physical and cognitive processes, but it is represented as an emotional state that is often characterized by a desire to take action to get rid of that emotional experience. The term is conceptualized as meta-emotional and considered an adjective, not an emotional state (13).

On the other hand, there is much evidence that obsessive-compulsive individuals show cognitive deficits. In other words, one of the cognitive characteristics of these people is rumination, which includes excessive emotional cognitions that lead to the continuation and exacerbation of the symptoms of this disorder (14). Ruminants are defined as recurrent thoughts that revolve around a common theme. These thoughts enter the consciousness involuntarily, diverting attention from current issues and goals, and are often hostile (15).

Some theorists believe that the role of hostile cognitive attributional biases of aggression is particularly important in the occurrence of aggression. Also, the cognitive mechanisms of aggression have been frequently studied, and hostile documentation has been identified as an important cognitive factor in the development of aggression.

Aggression is one of the most complex emotions in response to situational stimuli. It causes physiological changes such as high blood

pressure, heart rate and adrenaline levels, and various physical and mental problems that can affect clinical functioning. Although aggressive behavior can be identified based on behavioral and facial expressions, there are different types of aggression such as reactive, active, hostile, instrumental, internal, and external (16).

According to scientific studies, therapeutic interventions for obsessive-compulsive disorder are performed in several major ways; medical therapy, behavioral therapy, cognitive therapy, and cognitive-behavioral therapies in addition to medical therapy. One of the therapies that have been used in recent years is a psychotherapy based on improving the quality of life (17). This treatment was proposed by Michael Frisch. He combines the two perspectives of positive psychology and cognitive therapy. In this new therapeutic approach, issues related to positive emotions and feelings, life satisfaction, and happiness are directly considered-applying holistic cognitive therapy about emotions and creating satisfaction with the purpose of life of this psychotherapy. Quality of life-based therapy consists of an approach that increases happiness and is also an interventionist approach in positive psychology.

In quality of life theory, emotions and judgments related to satisfaction are adaptive and provide constant feedback for individual goals. While positive and pleasant emotions are obtained from understanding and recognizing that a person has reached his/her needs, goals, and aspirations and has realized them. Negative emotions show obstacles or stagnation in realizing valuable areas of life. This theory offers five ways or patterns for life satisfaction as a blueprint for quality of life and positive psychological interventions called quality-based education and treatment (18). Given the lack of Iranian research on the effects of this treatment, this study aimed to evaluate the effectiveness of quality of life on hostile documents and distress tolerance in students with obsessive-compulsive disorder.

Materials and Methods

The statistical population of this clinical trial, which was approved by Islamic Azad University of Neishabour in Khorasan Razavi province, included all students with obsessive-compulsive disorder who were referred to specialized centers and clinics of educational psychology services in Mashhad city, Iran in Mar-April 2020. Usually, the number of group therapy members is selected between 8 and 12 people who have a good quality group therapy (19).

A psychotherapist diagnosed obsessive-compulsive disorder in the participants. In the next stage, group members were selected through the convenient sampling method and they were randomly divided into experimental and control groups (n=12). Inclusion criteria included diagnosis of obsessive-compulsive disorder, willingness to participate in research, aged 15 to 20 years, not having other psychological disorders and taking psychiatric medication at the same time as the research project. The exclusion criteria included absenteeism for more than two sessions, non-cooperation during training sessions, suffering from other clinical disorders axis 1 and 2, and use of psychotropic drugs and psychiatric medications.

Also, ethical considerations such as explaining about the purpose of the study, confidentiality of information, written consent, non-disclosure of information to other group members and non-meeting outside the group therapy, random assignment of group participants, the right to leave the study was discussed whenever they wished, and also, at the end of the research period, eight skills training sessions based on the quality of life improvement approach were conducted for the control group through weekly assignments and regular exercises.

Research instruments

A) Hostile Documents Questionnaire: It was developed by Arendt et al. (2003) and consisted of 20 questions, scored on a 5-point Likert scale (strongly agree to disagree strongly). Some questions in this questionnaire are scored in reverse. To evaluate the validity of this questionnaire, Arendtz et al. used heuristic and confirmatory factor analysis and the results showed that all 20 questions of this questionnaire have a significant factor load on an underlying factor. In order to evaluate the reliability of the questionnaire, Arendtz et al. used the test-retest method, which showed a positive and significant correlation (0.79) between the two stages of the test. Alpha coefficients for these scales were 0.87,

0.88, 0.94, and 0.70 and for the whole scale were 0.90, respectively. Alavi et al. also showed high internal consistency for the whole scale (0.71) and moderate validity (0.77) for the tolerance subscale, 0.55 for the absorption subscale, 0.73 for the evaluation subscale, and 0.58 0 reported for adjustment subscale. Cronbach's alpha of this scale is 0.90, and the retest validity coefficient for the whole scale is 0.87, and for the subscales of tolerance, absorption, evaluation, and adjustment, respectively, 0.90, 0.69, 0.83, and 0.72 reported (20).

B) Distress Tolerance Scale: This self-assessment scale was developed by Simmons and Gaher (2005) and had 15 questions and four subscales of tolerance, absorption, evaluation, and adjustment, which are graded on a five-point scale (1) strongly agree to (5) strongly disagree. The alpha coefficients for these scales were 0.72, 0.82, 0.78, and 0.70, respectively, and for the whole scale were 0.82 (21).

An Iranian study showed high internal consistency for the whole scale (0.71) and moderate validity (0.54) for the tolerance subscale, 0.42 for the absorption subscale, 0.56 for the evaluation subscale, and 0.58 0 reported for adjustment subscale. Cronbach's alpha of this scale is 0.67, and the retest validity coefficient for the whole scale is 0.81 and for the subscales of tolerance, absorption, evaluation, and adjustment, were reported 0.90, 0.69, 0.83, and 0.72, respectively (22).

Intervention plan based on the instructions of Frisch et al. (18):

Session 1: Communicating and introducing members to get to know each other, express group rules, goals and introduce the course of treatment, get commitment from participants to attend meetings, introduce quality-based treatment, life satisfaction, happiness, pre-test, feedback

Session 2: Review of the discussion of the previous session, definition of quality-based therapy, familiarizing members with the technique of appreciation, achievements and talents, tree of life and discovering the problematic cases of members, a discussion summary, providing feedback. Session 3: Review the discussion of the previous session, introduce the five roots, start with one of the dimensions, familiarize living conditions as the first strategy and its application in the dimensions of quality of life, and identify areas of stress

Session 4: A review of the discussion of the previous session, the introduction of attitude as a second strategy and its application in the dimensions of quality of life, practicing communication skills

Session 5: Review the discussion of the previous session, introduce standards, priorities, change satisfaction as the third, fourth, and fifth strategies to increase life satisfaction, teach the principles of quality of life, and use strategies to change attitudes to help people solve problems

Session 6: Review the discussion of the previous session, discuss the principles of quality of life, present the principles and explain the application of this to increase satisfaction, using principles related to attitudes, plans, and actions that increase the individual's satisfaction with home, neighborhood and community is effective.

Session 7: A review of the discussion of the previous session, a discussion in the field of relationships, and the application of important principles in the field of relationships, implement a leisure plan or current leisure habit

Session 8: A summary of the contents of the previous sessions, summarizing and teaching the generalization of the five roots in different living conditions and the application of principles in different aspects of life, stress management and problem-solving for problems that weaken healthy habits or help maintain and develop unhealthy habits

Data analyzed through inferential statistical indicators (one-way and multivariate analysis of covariance) and SPSS software version 23.

Results

Table 1 presents the descriptive characteristics of the participants.

In Table 2, the effectiveness of treatment based on improving the quality of life on the variables of hostile documents and disturbance tolerance in students with obsessive-compulsive disorder were shown in pre-test and post-test.

As seen in Table 2, all variables had significant changes in the experimental group but in the control group there were not any significant differences between pre-test and post-test stages. Table 3 presents the analysis of variables.

Table 1. The descriptive characteristics of the participants

Variable	Experimental group N (%)	Control group N (%)	Sig.
Gender Female Male	 6 (50) 6 (50)	 7 (58.3) 5 (41.7)	0.99
Marital status Married Single Divorced	 6 (50) 5 (41.7) 1 (8.3)	 5 (41.7) 5 (41.7) 2 (16.6)	0.98
Education Intermediate degree to diplomas Diplomas Higher education	6 (50) 3 (25) 3 (25)	6 (50) 3 (25) 3 (25)	0.99
Age (Year)	18.02 (±4.26)	17.50 (±6.40)	0.11

Table 2. The descriptive statistics of the variables in students with obsessive-compulsive disorder

Variable	Experimental group				Control group			
	Pre-test	Post-test	F	P	Pre-test	Post-test	F	P
Tolerating emotional distress	10.75 ± 2.16	30.08 ± 2.39	40.84	0.00	11.64 ± 2.16	10.75 ± 3.16	1.02	0.80
Negative emotions	6.41 ± 2.23	2.22 ± 2.71	8.08	0.03	7.09 ± 2.23	8.41 ± 2.23	2.44	0.10
Mental assessment of distress	17.41 ± 1.58	11.50 ± 1.13	51.40	0.00	18.83 ± 1.58	16.61 ± 1.58	4.88	0.10
Trying to relieve distress	9.91 ± 1.96	7.66 ± 4.06	86.77	0.00	9.99 ± 1.96	9.91 ± 1.99	3.90	0.10
Distress tolerance	44.33 ± 2.04	125.25 ± 1.90	1.72	0.09	33.33 ± 2.04	38.83 ± 2.04	1.90	0.30
Hostile documents	59.83 ± 1.13	33.33 ± 1.01	5.06	0.04	58.85 ± 1.13	59.83 ± 1.13	2.89	0.30

P< 0.05

Table 3. Multivariate analysis of the variables

Variable	Partial η2	df	F	MS	SS	P
Tolerating emotional distress	0.68	1	40.84	108.44	216.88	0.00
Negative emotions	0.16	1	3.74	30.19	60.39	0.03
Mental assessment of distress	0.72	1	51.04	130.85	261.71	0.00
Trying to relieve distress	0.82	1	86.77	576.32	1152.64	0.00
Distress tolerance	0.80	1	11.72	33.73	33.73	0.09
Hostile documents	0.50	1	0.05	80.80	90.90	0.04

P< 0.05

The above findings show that the level of significance of hostile documents and distress tolerance in the experimental group. The effectiveness of treatment in both variables is significant and the effectiveness was slightly higher in the hostile documents than the disturbance tolerance. The ETA coefficient for the variables of hostile documents and disturbance tolerance is 0.480 and 0.463, respectively, so the effectiveness of the treatment was high in both variables and was slightly higher in the index of hostile documents than the disturbance tolerance variable.

Discussion

The present study was conducted to evaluate the effectiveness of treatment based on improving the quality of life on hostile documents and distress tolerance in students with obsessive-compulsive disorder. The overall results of multivariate analysis of covariance in the present study indicated that therapy based on improving the

quality of life was effective on hostile documents and distress tolerance in students with obsessive-compulsive disorder.

McFall and Wollersheim point out that obsessive-compulsive disorder results from a lack of confidence in one's ability to tolerate the uncertainty and anxiety associated with obsessive thoughts. Their study investigated intolerance of uncertainty among divorced and non-divorced women as a predictor of depression, anxiety, and stress. The causal-comparative type and the statistical population of the study consisted of all divorced women and non-divorced women. One hundred seventy divorced women were selected by convenience sampling method and were matched with 170 non-divorced women in terms of age and education. Data were collected using Depression, Anxiety, Stress Questionnaires, and Uncertainty Intolerance Scale. The data analysis showed that there is a significant difference between divorced and non-divorced women in terms of depression, anxiety, stress, uncertainty intolerance. Also, among the subscales of uncertainty intolerance, the uncertainty of stress and the negativity of unexpected events and avoidance are significant predictors of depression and anxiety among women. According to the research findings, reducing intolerance of uncertainty can reduce depression, anxiety, and stress levels. Therefore, treatment based on reducing intolerance and increasing ambiguity tolerance skills are essential before starting treatment for emotional and anxiety disorders in divorced women (23).

The cognitive models of Dodge and Press (1990) believe that hostile cognitive attributional biases are particularly important in the occurrence of negative emotional dimensions, symptoms of obsessive-compulsive disorder, and anxiety symptoms. Also, the cognitive mechanisms of anxiety have been frequently studied, and hostile attribution has been identified as an essential cognitive factor in their development.

An important cognitive factor in the bias of hostile documents is the individual's tendency to behave in social situations hostilely, without any other behavior and its consequences. As a result, hostile documents play a role in the development of mood and obsessive-compulsive symptoms, and on the other hand, the bias of hostile documents is one of the most important depressing and anxious reactions (24).

In a study, uncertainty intolerance was compared between depressed, obsessive-compulsive patients and the healthy group. One hundred fifty depressed patients (MDD) and 146 obsessive-compulsive patients (OCD) were selected by convenience sampling method among patients referred to psychiatric clinics. The research instruments included Beck Depression Inventory (BDI-II), Madsley Obsessive-Compulsive Inventory (MOCI), and Uncertainty Intolerance Questionnaire. There was a difference between the healthy group and obsessive-compulsive patients in the total score of uncertainty intolerance and all subscales. There was also a significant difference between depressed patients and the healthy group in total score and subscales and uncertainty about the future. Depressed patients, except for the subscale of uncertainty about the future, differed from the obsessive-compulsive disorder in all other subscales and overall score. In general, the results showed that intolerance of uncertainty is one of the characteristics of obsessive-compulsive patients, and also, some of its dimensions are associated with depression. People with hostile documentary tendencies are more likely to have aggressive and depressive behavioral patterns. On the other hand, hostile thoughts and documents, including revenge against the source of anxiety and critical review of the situation (distress tolerance), can also lead to obsessive-compulsive symptoms and depression and negative emotional dimensions such as negative thoughts and documents as anxiety. Quality-of-life training allows for changing negative and dysfunctional beliefs and thoughts, facilitating coping with anxious situations, and exposing the subject to a genuinely stressful living environment. Therefore, reducing anxiety symptoms and hostile attachments in these individuals can be justified (25).

According to Stiensmeier-Pelster and Heckhausen statements, people who use negative anxiety-negative styles more often have more hostile attributes and usually have a source of external control, have less social interaction and self-regulation, and ultimately experience more depressive and obsessive-compulsive symptoms.

Negative anxiety styles also lead to fewer positive experiences in people, increase stress, anxiety, and depression, and cause less efficiency and shorter life. Education-based on improving the quality of life is done by making cognitive-behavioral changes in five main areas (living conditions, attitudes, satisfaction criteria, values , and overall life satisfaction). According to these areas and based on cognitive-behavioral theory, anxiety symptoms and hostile attributes of people with obsessive-compulsive disorder and other behaviors have been learned. Therefore, the most important goal of education is to identify the important preconditions of these behaviors and teach people effective ways to master them. Also, these trainings emphasize the methods of self-control, negative mood management, anxiety, and anger control. Therefore, education based on improving the quality of life through several methods can effectively tolerate distress and hostile attitudes of people with obsessive-compulsive disorder (25).

Chiu's research compared the dimensions of social competence, quality of life, and emotional disturbance of students with test anxiety with insomnia and oversleeping. A statistical sample consisting of 180 low-sleep students and 180 high-sleep students was selected by the purposive sampling. The measuring instruments were Flanner et al.'s Social Competence Questionnaire, Allen Line Quality of Life Questionnaire, and Simmons Emotional Distress Tolerance Questionnaire. This study showed a significant difference between sleep-deprived and sleepy students in terms of social competence components, quality of life components, and emotional distress components.

Furthermore, with the approach of teaching skills based on the quality of life, people were taught that life is made up of different dimensions, and if they are dissatisfied with a dimension, they should pay attention to other dimensions.

Students with emotional distress and test anxiety learn through homework how to pay attention to the dimensions that have been neglected so far (26).

Rosenman's research aimed to compare the quality of life, intolerance of uncertainty, and parenting stress of mothers who have mentally retarded children with mothers with normal children. The statistical population included all mothers aged 25 to 35 years with children under 12 years old. One-hundred sixty were selected by the convenient sampling method.

Data were collected using the World Health Organization Quality of Life Questionnaire-Short Form, Uncertainty Intolerance Questionnaire, and Parenting Stress Questionnaire. The mean score of quality of life in mothers with normal children was higher than mothers with mentally retarded children. While, the mean scores of uncertainty intolerance and parenting stress in mothers with mentally retarded children were higher than mothers with normal children. The results also introduce corrective information to reduce hostile documents and increase distress tolerance (27).

The impossibility of random selection of subjects has been one of the practical limitations of this study. Also, it is recommended to examine and compare this treatment with other common therapeutic approaches to clarify the therapeutic effects of the above approach in more extensive studies with larger sample size.

Conclusion

Based on the findings, treatment based on improving the quality of life is effective on hostile documents and distress tolerance in students with obsessive-compulsive disorder.

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