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The effectiveness of Quality of Life Therapy (QOLT) on distress tolerance and cognitive emotion regulation in substance abusers

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Abstract

Introduction: The basis of many psychological disorders is rooted in quality of life. The purpose of the present study was to investigate the effectiveness of education based on improving quality of life on tolerance of distress and cognitive emotion regulation in substance abusers.

Materials and Methods: The statistical population of men over 20 years old referred to addiction treatment centers in Mashhad city, Iran in 2019. Fifty individuals were selected and randomly divided into experimental (n= 25) and control (n= 25) groups. The experimental group received 10 sessions of skills training based on quality of life and the control group did not receive any experimental test. The Cognitive Emotion Regulation Questionnaire (CERQ) and the Distress Tolerance Scale (DTS) questionnaires were completed by the participants in the pre-intervention, post-intervention and 3-month follow-up. Data were analyzed by repeated measure Covariance with SPSS software.

Results: There was a significant difference between the experimental and control groups regarding cognitive emotion regulation and distress tolerance after intervention ($P< 0.01$). Also, the mean scores of cognitive emotion regulation and distress tolerance were significantly different in the experimental group before, after the intervention and the follow-up phase ($P< 0.001$).

Conclusion: Based on the findings, it seems that training in skills based on improving quality of life on distress tolerance and cognitive emotion regulation is effective in substance abusers.

Keywords: Cognitive emotion regulation, Distress tolerance, Quality of life therapy, Substance abuse

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Introduction

Addiction as an intertwined psychological, social, and economic disorder has devastating effects on individuals and society (1,2). Substance abuse and addiction have devastating effects on the individual and society, including irrational anger, psychological imbalance, mood, neurological fluctuations, marital dissatisfaction, marital dissatisfaction, marital conflicts (3), abnormal sexual intercourse, and abnormal sexual relations (4). Anxiety, depression, and anxiety (5) pointed to the threat to personal and social health. Many treatment methods are used to prevent and improve the community's health, but a relatively high percentage of relapse after receiving treatment for substance use disorders and their dependence has raised concerns among the community. It should be borne in mind that a critical, transient, and transient period occurs for addicts undergoing treatment that require intensive care. Comprehensive health education programs, along with rigorous intervention programs, can reduce the risk of relapse, manage stressor outcomes, initiate coping behaviors, learn protective behaviors in individuals, and teach the art of living despite difficult conditions (6,7). According to research conducted in different areas of rehabilitation and pathology of relapse, addiction is the most important factor in helping people with substance use, life skills training, and quality of life. Learning life skills can effectively improve the quality of life and prevent the recurrence of substance abuse. Life skills will enable one to find effective ways of interacting with the environment (8). Life skills refer to a coherent and targeted set of individual and social abilities in the psychological and interpersonal dimensions that enable the individual to make informed decisions, communicate effectively, counteract adverse consequences, and promote self-efficacy. Become an individual and experience a healthy and productive life (9,10). Huntz, Gabboy, and Carroll have interpreted life skills as a design of a new and different way of life that can be felt and experienced in learning and practicing life (11). In general, it can be stated that most of the phenomena associated with social-psychological trauma in society include addiction, substance abuse, delinquency, depression, anxiety, lack of emotion management, interpersonal conflicts, loneliness, psychological distress, lack of tolerance, anxious behaviors, and behaviors are significantly correlated with deficits in awareness of life skills at the individual and interpersonal dimensions to build stable and cohesive social relationships (12). Knowledge of life skills can be learned in various aspects such as preventing unhealthy personal and interpersonal relationships, promoting self-esteem, increasing tolerance for distress, preventing drug use, anxiety and depression, improving quality of life, improving happiness, reducing delinquency, Improvement of psychological and physiological health, prevention of psychological problems and socially undesirable behaviors, increase of rehabilitation in effective substance abuse (13).

Quality of life as a result of learning life skills is a valid indicator and criterion for measuring and evaluating the outcomes of therapeutic interventions and psychotherapy services for the psychological trauma of the community (8,14).

There are various definitions of quality of life, but generally, they include meaningful individual beliefs, personal and interpersonal relationships, physical health, mental and social status as measured by individuals' subjective biological experiences (15). Researchers have considered many indicators to measure individuals' quality of life, with the individual taking or not taking the drug as the most important indicator of clinical evaluation of one's quality of life (16).

Khantzian, in self-treatment theory, one of the psychological theories of drug abuse, points out: People with substance abuse have little tolerance for negative emotions and can describe and interpret those emotions without relying on drugs. Therefore, they use the physiological and psychological properties of substances to achieve emotional stability. Thus, substance use is a means of moderating stressful emotions, and people turn to substance abuse and addiction due to impaired cognitive emotion regulation and low distress tolerance (17).

Cognitive emotion regulation- that is, when faced with managing or managing emotions or emotions with stressful or threatening events- creates internal cohesion to overcome external conditions or situations and minimizes the effects of threatening emotions (18). Cognitive

emotion disorder is defined as inappropriate, abnormal, and maladaptive ways of responding to emotions and emotions or lacking or inadequate cognitive status consisting of inappropriate and inappropriate cognitive responsiveness, difficulty in controlling behavior, and difficulty in controlling behavior - Ethics. This is a desirable function of emotions as data and information (19).

There are many mental disorders and syndromes that are rooted in and caused by cognitive impairment. Some of these are: 1- Tobacco use, 2- Pain, 3- Nutrition disorders, 4- Non-integration, 5- Drug abuse and addiction. Several studies have shown that the difficulty and inability of cognitive emotion regulation are associated with a wide range of substance use disorders and high-risk behaviors designed to be strategies for reducing and moderating negative emotions (20). Distress tolerance is one of the most commonly used constructs in the study of affective disorder and affective disorder (21). Distress Tolerance - The self-reported ability to perceive in person the tolerance and experiences of negative affective and emotional states (22) or as a behavioral ability to persist in targeted behaviors when perceived and experienced as emotional distress or physiological distress (21). Distress tolerance is another influential factor in assessing and preparing individuals for substance use disorder (23). Often, a person with less distress in coping and strategic endeavors tries to reduce the stress caused by negative emotions and emotions that are trapped in a behavioral disorder and to reduce some of the self-destructive emotional behaviors such as substance use and emotional distress (24).

Daughters et al. indicated that low-stress tolerance increases delinquent behaviors, risk of alcohol abuse, and internalizing disorder syndrome in adolescents (25). The research of Pottera et al., The disorder mediated by tolerance in PTSD symptoms and the use of marijuana as a coping strategy, has shown great intensity (26). Forouzanfar et al. showed that people with anxiety disorder tend to relieve alcoholism and psychological distress (27). Azizi et al. showed that there is a relationship between cognitive emotion regulation disorder and low distress tolerance and smoking dependency (24). Research by Najafi et al. has also shown that emotional activity, impaired cognitive impairment, and distress tolerance are essential factors in using drugs (28).

To treat people with substance use disorders caused by repeated and abnormal drug use, medications or alcohol, etc., is often associated with a great deal of distress, lack of coordination in cognitive regulation and emotions, and problems in personal and occupational social contexts. Therefore, they use different therapeutic approaches. Known and effective approaches to treating people with substance use include traditional cognitive behavioral therapy, couple therapy, family therapy, motivational interviewing, behavioral therapy based on event management, and drug therapy (29). In addition, recent pains underlying cognitive-behavioral approaches, such as mindfulness-based relapse prevention, dialectical therapy, active therapy, are used to treat and improve substance use disorders. A significant and valuable difference between traditional cognitive-behavioral and contextual-cognitive-behavioral approaches is the emphasis on acceptance and mindfulness to moderate the effect of intrinsic desires and motivations on behavioral patterns of substance use (such as context change and functioning, thus craving, distress, and thoughts of less consumption) (30-32).

QOLT is one of the strategies for preventing drug addiction and quitting addiction in people with substance use disorders. This training aims to create a model for life satisfaction and the psychological well-being of substance abusers. In this therapeutic-educational model, there are sixteen essential areas in people's lives with substance use disorders that are assessed and measured based on the Casio Model (33).

Given the increasing trend of people with substance use and relapse in addiction treatment in the community as well as the importance of paying attention to the complex phenomenon of addiction as a "century-old disaster", the need for more profound, multi-faceted interventions is felt, so considering the need and need for treatment centers Addiction to Effective Treatment Plans for Substance Abusers This study was conducted to investigate the effect of quality-of-life skills training on promoting distress tolerance and cognitive emotion regulation in substance abusers.

Materials and Methods

The statistical sample consisted of 50 people selected through voluntary recall and voluntary sampling and randomly divided into two experiments (25 people) and control (25 people). The experimental group received ten skill training sessions based on the quality of life, and the control group did not receive any experimental tests.

A semi-experimental study with pre-test and post-test with the control group was performed to evaluate the effectiveness of QOLT training in increasing stress tolerance and cognitive emotion regulation. This study was performed on 75 men over 20 who were referred to addiction treatment centers in Mashhad. The statistical sample size was performed using Karajsi and Morgan tables, and randomly and randomly, 50 people were selected as the statistical sample of the study and were randomly divided into two experimental groups (25 people) and a control group (25 people). The experimental treatment group received QOLT intervention, and the control group did not receive any intervention. The research sampling method was performed randomly, purposefully, and arbitrarily due to the limited number of clients during the research and the lack of long-term cooperation between addiction treatment centers and researchers. The Research Committee of Hekmat Razavi Higher Education Research Institute in Mashhad conducted this clinical trial study. Inclusion criteria included substance use more than 20 years, diagnosis of substance addiction for a year before the study, lack of concomitant psychotherapy, failure to use psychiatric drugs, access to medical and educational sessions. The exclusion criteria included possible physical problems, inability to continue research, dissatisfaction with continuing to participate in research, the need for pharmacological treatments.

Before conducting the research, the proposal to conduct this research for three months was evaluated in the research committee of Hekmat Razavi Higher Education Research Institute in Mashhad under the supervision of experts, and the type of intervention was examined and approved ethically. In this study, patients filled out a form of ethical consideration. Participants also filled out a form of conscious consent to participate in the study and learned that they could leave the study at any time.

Research instruments

A) Distress Tolerance Questionnaire: It is a self-report test to measure emotional distress and developed by Gahr and Simmons (2005). This questionnaire consists of 15 items and has 4 subscales: absorption (absorbed by negative emotions: questions 15,4, and 2), tolerance (emotional distress tolerance: questions 3,5, and 1), adjustment (effort adjusted to relieve disturbance: questions 14,13,8), Evaluation (subjective estimation of disturbance: questions 12,11,9,10,7, and 6). Alpha coefficients by Simmons and Gahr in the primary sample of this questionnaire for the subscales ranged from 0.70 to 0.82 (alpha coefficients for the subscales were 0.772, 0.382, 0.781, and 0.730, respectively) and for the whole scale calculated 0.82. It has been reported as well as having good criterion validity and convergence 0.35. The cut-off point of the distress tolerance scale score is less than 28. A score above this indicates a high degree of distress. Scoring is a 5-point Likert scale ranging from complete agreement to complete disagreement. This scale was carried out on 48 students of Mashhad Medical University and Ferdowsi University (17 males, 31 females) by Alavi, Modarres Gharavi, Amin Yazdi, and Salehi Fadardi in 2011, and Cronbach's alpha coefficient calculated its internal reliability. The results of this study showed high homogeneity reliability (0.71) (34). The reliability coefficient of the questionnaire was 0.882 using Cronbach's alpha coefficient of 45.

B) Cognitive Emotion Regulation Questionnaire (CERQ): It designed by Garnefsky and Carrage (35), this questionnaire is an 11-item Likert scale and measures cognitive emotion regulation strategies in response to life-threatening and stressful life events on a five-point scale ranging from one (never) to five (always) on a nine-point scale. It is as follows: self-blame; others blame; focus on thought/rumination. The minimum and maximum scores on each scale are 2 and 10, respectively, and the higher score indicates more individual use of that cognitive strategy. The psychometric properties of the Cognitive Emotion Regulation Questionnaire have been

confirmed in external studies. The results of factor analysis using the principal components method identified nine predicted factors. Test-retest reliability showed that cognitive coping strategies were relatively stable, and the internal consistency of the scales was confirmed by Cronbach's alpha coefficients of 0.80 (47). The Persian version of the Cognitive Emotion Regulation Questionnaire in Iran was validated by Besharat and Hassani (36,37). In the Evangelism study, the psychometric properties of this form, including internal consistency, test-retest reliability, content validity, convergent validity, and descriptive (discriminant) validity, have been reported. In addition, Besharat (37) reported Cronbach's alpha coefficients for the subscales of 0.67 to 0.89 in a preliminary study of psychometric properties of this questionnaire in a sample of the general population (197 females and 171 males). The validity coefficient of the questionnaire was 0.889 using Cronbach's alpha coefficient (45 items). After selecting the participants and dividing them into two groups randomly, the experimental group received ten treatment sessions focusing on each of the five sessions on one of the research variables. In addition, the experimental group received intervention based on the quality of life training (33).

The researcher predicted four stages:

1) The pre-test for measuring distress tolerance and cognitive emotion regulation.

2) The implementation phase of the intervention was QOLT, which was conducted in 10 sessions of 90 minutes in groups and once a week for the experimental group and lasted three months.

3) Measuring the two scales of the study was done by post-test immediately after the intervention.

4) Reappeared after three months by responding to the same scale. In the experimental group, 2 participants and the control group, one person refused to continue collaborating with the researcher, and data from 47 participants were analyzed.

The content of the group training sessions was tailored to the substance abusers (Table 1). Multivariate analysis of covariance (MANCOVA) was used for statistical analysis at the significant level of 0.05.

Table 1. Description of QOLT intervention sessions

Session	Content
1	Communicating and introducing members, stating group rules, goals and introducing training courses, getting commitment from participants to attend meetings, introducing and discussing quality of life, life satisfaction, happiness
2	A review of the discussion of the previous session, defining the quality of life of the therapist, introducing the dimensions of the quality of life, introducing the sixteen areas of life that constitute the overall quality of life, discovering the problematic issues of the members, summarizing the discussion, providing feedback
3	A review of the previous session, introducing CASIO as the five roots, starting with one of the dimensions, introducing C as the first strategy, and applying it to the sixteen dimensions of quality of life.
4	A review of the previous session, CASIO discussion, introduction of A as the second strategy in the sixteenth dimension of quality
5	A review of the previous session, CASIO discussion, introduction of S as the third strategy to increase life satisfaction, teaching the principles of quality of life
6	A review of the previous session, a discussion of the principles of quality of life, the introduction of I as a fourth strategy, and the application of this principle to increase satisfaction.
7	A review of the discussion of the previous session, continuation of the discussion on the principles, discussion on the scope of relations and the application of important principles in the field of relations, introduction of O as the fifth strategy
8	Provide a summary of the contents of the previous sessions, summarizing and teaching CASIO in different living conditions and applying the principles in different dimensions of life and using CASIO in the sixteen areas of life
9	Reviewing the CASIO technique and performing a practical task in the form of performing natural events as a demonstration
10	Browse concepts, questions and answers, Modifying techniques and skills

Results

The mean age and standard deviation of participants were 29.91 and 6.065, respectively. About 35.6% of the samples were single, 37.8% at marriage, 26.7% divorced. Also, education was 33.3% Cycle and lower, 40% Diploma, 15.6% Higher education, 11.1% Bachelor degree or higher.

The results show that the assumption of the equality of within-subjects variances was observed for all variables. The mean scores of cognitive emotion regulation and distress tolerance increased in the post-test and follow-up phase. The effect of measurement time on cognitive emotion regulation scores and distress tolerance was significant. There was a significant difference between the mean scores of cognitive emotion regulation and distress tolerance in the experimental group in the pre-test, post-test, and follow-up. The interaction effect between time and group was also significant. The difference between the mean scores of cognitive emotion regulation and distress tolerance at different times was different according to the group variable levels. The effect of the group on cognitive emotion regulation scores and distress tolerance was also significant. There was a significant difference between the experimental and control groups in cognitive emotion regulation and distress tolerance scores. Since the interaction between the intra-group factor at the time of measurement and the inter-group factor was significant, the simple inter-group effect concerning the intra-group factor levels was evaluated using the inferential correction. There was no significant difference between the experimental and control groups in the pre-test phase's mean scores of cognitive emotion regulation and distress tolerance. However, in the post-test and follow-up, the mean scores of cognitive emotion regulation and distress tolerance in the QOLT group were significantly higher than the control group ($P< 0.001$).

Table 2. Descriptive statistics of studied variables by groups and QOLT therapy

Group	QOLT therapy	Mean	SD
Experiment	Pre-test CERQ	75.93	32.504
Control	Pre-test CERQ	90.47	30.484
Experiment	Pre-test DTS	39.53	16.106
Control	Pre-test DTS	40.93	15.149
Experiment	Post-test CERQ	110.80	29.692
Control	Post-test CERQ	81.00	26.406
Experiment	Post-test DTS	50.33	15.231
Control	Post-test DTS	40.80	15.753
Experiment	Follow-up CERQ	112.23	32.765
Control	Follow-up CERQ	79.23	27.098
Experiment	Follow-up DTS	54.12	14.454
Control	Follow-up DTS	41.76	16.237

Multivariate analysis of covariance was used to evaluate the effectiveness of psychological therapy on cognitive emotion regulation and distress tolerance. One of the assumptions of this analysis is the equality of error variances. The results of Levene's test are presented in Table 3.

Table 3. Levene's test of equality of error variances

	F	df1	df2	Sig.
Post-test CERQ	1.517	2	42	0.231
Post-test DTS	0.066	2	42	0.936

Table 4. Results of covariance analysis to examine patterns of difference

Dependent variable	DTS	CERQ
Sum of squares	13492.161	1084.933
df	6746.080	542.467
Mean square	37.717	15.121
F	2	2
P	0.000	0.000
Effect size	0.659	0.437

The results of Tables 4 show a significant difference in the scales in the experimental group. In other words, both variables of cognitive emotion regulation and distress tolerance in intervention training skills based on improving quality of life were different with the control group ($P< 0.01$). The effect size on cognitive emotion regulation in quality-based life skills training was 0.437, and the effect size on distress tolerance in quality-based life skills training was 0.659; cognitive emotion in the experimental group was compared in the post-test to the control group.

Discussion

The present findings showed that training in skills based on improving the quality of life increased cognitive emotion regulation and tolerance of substance abuse men in the experimental group compared to the control group. This result is in line with the results of the studies of Pohanagan and Coaley (38), Turner, Gilhard and Somerset (39), Mitchell (40), Seid et al. (41), De Leon (42), Frisch, and Sanford (43), Frisch, and Clark (44), O'Brien et al. (45), Kajbaf et al. (46). In addition, the research findings show that QOLT training on depression, anxiety, stress and anxiety, tension pain, self-efficacy Sex, substance use, youth quality of life, self-esteem, substance abuse, self-destructive behaviors have a significant effect.

The results of the present study were in line with the study of Forouzanfar et al. (27), in which the effect of acceptance-based treatment on distress tolerance and anxiety susceptibility in addictive women was significant. The results of the study by Keough et al. (21) show that acceptance and commitment therapy has a significant effect on reducing the self-destructive behaviors and negative emotions of imprisoned addicted women, which is supported by the results of this study.

Rodrigue et al. compared the effectiveness of three types of treatment in a study entitled "Psychological intervention to improve quality of life and reduce mental distress in adults waiting for a kidney transplant." The 62 patients on the kidney transplant waiting list were divided into three groups: those receiving quality of life therapy (QOLT), supportive therapy (ST), and routine care (SC). In each of the therapies, patients' quality of life, psychological distress, and social intimacy before and after treatment were assessed. The results showed that group members (QOLT) scored higher on the scale of quality of life and social intimacy than the two groups, ST and SC. In addition, both QOLT and ST showed less psychological distress than SC (47).

Padash examined the quality of therapeutic life of married men and women in Isfahan and showed that the quality of therapeutic life was influential on the marital satisfaction of married men and women (48) and in a study by Ghasemi entitled "Survey The effectiveness of quality of life therapy on mental well-being and mental health of people visiting the counseling center "on a 24-person sample (divided into experimental and control groups) and ten sessions of quality of life therapy on the experimental group; the following results. Quality of life therapy tested the mental health of the subjects in both postoperative stages. The track has increased under the scales of depression and social dysfunction. The effect of this treatment in both phases is stable. However, it was only effective in the postoperative stage in the case of physical symptoms and anxiety. The findings show that this intervention has been effective in increasing the overall mental well-being of subjects in both stages but has been

effective in reducing negative emotion and increasing life satisfaction only in the post-test stage. Also, it has been effective in increasing the positive emotions of the subjects in both stages (49).

By teaching techniques and skills to improve quality of life, a person with a history of addiction learns to manage distressing behaviors and automatic emotions in healthy ways. Even in certain circumstances, one may not control the situation, but despite these teachings, one can control one's responses and behavior. For example, by accepting strongly, he learns that not all situations in any situation should be happy or pleasant. Instead, a situation can have a negative and unpleasant emotional burden, but the person sees and accepts it as a situation. This acceptance, provided through education, can reduce a person's anxiety (45-47), thereby reducing the emotional anxiety caused by ignorance. Therefore, the person will feel more tolerant. Also, by engaging in behavioral conventions based on activities that lead to a higher quality of life, one feels a sense of responsibility for the situation and tries to calm oneself down. In other words, a commitment strategy to change and improve the quality of life can help a person to accept different situations and behaviors from the ones he or she has already done.

On the other hand, life skills improvement techniques all focus on change and sustainability. This means that people learn to be active during this training. Setting realistic goals and behavioral analysis can achieve this self-awareness and empowerment in specific situations (situations that require much distress). Emotional cognitive regulation and distress tolerance are both variables that are associated with increased awareness (47). Furthermore, in special needs, the individual achieves emotional exhaustion, which expresses his personal feelings to be understood and more emotional, and naming the person's feelings is a kind of cognitive regulation of emotions. Suppression and non-expression of emotions can make emotions clearer and ultimately the ability to recognize emotions. By expressing emotions, the result of dominant emotions and understanding that person gains the power to moderate and regulate emotions. In therapy based on acceptance, commitment, and quality of life, a person's emotional burden is reduced by achieving the four skills of refining emotions, hope, peace, and deep understanding (48).

Given that the present study has shown a positive effect of QOLT therapeutic intervention on cognitive emotion regulation and drug tolerance, increasing anxiety tolerance and cognitive emotion regulation in drug users will play a key and important role in quitting the addiction. Regarding the present study has shown a positive effect of QOLT therapeutic intervention on cognitive emotion regulation and drug tolerance, increasing anxiety tolerance and cognitive emotion regulation in drug users will play a key and important role in quitting the addiction.

The limitations in this study included addicts non-cooperation, lack of regular attendance at meetings, lack of necessary support for medical centers with researchers, and targeted non-random sampling. Also, considering the new methods of selective intervention in this study and the inability to predict the results, the researcher is very motivated to follow this career path.

Conclusion

This study showed the efficacy of Quality of Life Therapy (QOLT), on increasing cognitive emotion regulation and distress tolerance in substance abusers referring to Mashhad clinical centers. Based on the results of this study, QOLT therapy can be used as a therapeutic and educational technique in addiction clinics and medical centers. Also, according to the research capacities of the mentioned therapeutic method in psychological variables in the statistical community of substance abusers, it is suggested that the effectiveness of QOLT therapeutic intervention in other psychological variables including dysfunctional beliefs, self-esteem, self-awareness, irrational beliefs, cognitive distortions, conflict marriages in addicted couples are also examined.

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