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Original Article

Comparison of the Effectiveness of Acceptance and Commitment-Based Therapy and Intensive Short-term Dynamic Psychotherapy on Perfectionism and Quality of Life in Patients with Obsessive Compulsive Disorder

Maryam Ezzatpour[1], Zahra Tanha[1*], Kourosh Amraei[2], Kourosh Goodarzi[1]

[1] Department of Psychology, Borujerd Branch, Islamic Azad University, Borujerd, Iran.
[2] Associate Professor, Department of Psychology, Faculty of Literature and Humanities, Lorestan University, Khorramabad, Iran

*Corresponding author:
Zahra Tanah, Assistant Professor, Department of Psychology, Khorram Abad Branch, Islamic Azad University, Khorram Abad, Iran.
Tel: 09371538660
Email: z.tanha@khu.ac.ir

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Abstract

Background and Objective: This research aimed to compare the effectiveness of acceptance and commitment-based therapy (ACT) and intensive short-term dynamic psychotherapy (ISTDP) on perfectionism and the quality of life of patients with obsessive-compulsive disorder.

Materials and Methods: This semi-experimental research was performed with a pre-test, post-test, and follow-up design and a control group. The statistical population of the research included all the patients of Mehr Neurological and Psychiatric Hospital as well as Imam Reza and Khorramabad Health Centers in the second half of 2023. In total, 42 participants were selected by the available sampling method and divided into three groups, namely ISTDP (n=14), ACT (n=13), and the control group (n=15). They answered the Perfectionism Inventory by Hill et al. (2004) and Quality of Life by Ware and Sherbourne (2000) in three stages. The intervention groups received scheduled intervention during eight sessions based on the treatment protocol, while the control group did not receive any training. The obtained data were analyzed using variance analysis with repeated measurements.

Results: The results showed that there was a significant difference between the effects of the two methods of ACT and ISTDP on the maladaptive dimension of perfectionism (P=0.004) and the mental health dimension of quality of life (P=0.047).

Conclusions: It was concluded that the ACT reduced the scores of the maladaptive aspect of perfectionism more and increased the scores of the mental health dimension of the quality of life, compared to the ISTDP. Therefore, it can be said that ACT is a more effective method for the reduction of maladaptive perfectionism and increase of the mental health dimension of quality of life in patients with obsessive-compulsive disorder compared to ISTDP.

Keywords: ACT, ISTDP, OCD perfectionism, Quality of life

Background

Obsessive-compulsive disorder (OCD) is one of the psychological disorders that affect the mental, emotional, and communication health of people. Although the course of OCD is usually severe and weak, it tends to become chronic and leads to a decrease in life satisfaction and damages the social, academic, occupational, and familial functions [1]. The age of onset of this disease is usually between early adolescence and early adulthood [2]. Studies in recent decades have confirmed the widespread prevalence of this disease at the age of 12 [3].

Until recently, it was believed that OCD is a rare disease with a prevalence of about 0.05%. However, several studies conducted during the last two decades have shown that the prevalence of this disease is much higher than what was previously thought [4]. Regional epidemiology studies have reported the lifetime prevalence of this disease at 2.5% [1 out of every 40 people] and its prevalence in six months at 1.6%. Moreover, in previous research, the prevalence rate of this disorder in children and adolescents was 1-4% [5]. The prevalence of this disease in the Iranian population was estimated at 1.8% [0.7% in males and 2.8% in females] [6].

The OCD symptoms significantly interfere with the mental health and general functioning of affected children and adults and lead to the incompatibility of individuals in their families or academic and work environments [7]. According to the

announcement of the World Health Organization, this disorder is the 10th most prominent cause of disability in the world, which manifests as disability in social functioning and quality of life [8]. Obsessions affect the lives of people in many different ways, such as the inability to concentrate, distractions, avoidance of the main tasks, and mental fatigue [9].

This disorder imposes a lot of economic, emotional, and social burdens on the sufferers, their families, and society and often creates a chronic and widespread condition so that the sufferers experience frequent relapses. Due to the fact that obsessive behaviors happen many times, the person feels unable to control them and therefore, experiences corrosive anxiety when facing them [10]. This disease also consumes a lot of energy and facilities from the patient and imposes a lot of medical and economic costs on them and their families [11].

Obsessed people usually have exaggerated responsibility and unacceptable thoughts due to the integration of thought and action [12]. and perform non-avoidant behaviors [13]. This category of behavioral patterns in people with OCD has severely affected their physical health [14] and also caused other mental problems and disorders [15].

Furthermore, experimental studies also indicate that people suffering from OCD have many psychological abnormalities, for example, due to their perfectionism they are often stubborn and inflexible. Moreover, this disorder is characterized by outbursts, anger, and hostility both at home and at work. These people have interpersonal problems based on hostility and are sensitive to behavior based on intimacy and warmth by others and show less sincere behavior toward others [16].

The research performed by Zherdzinski et al. [17] indicated that intellectual-practical obsessions disrupt all aspects of the quality of life of sufferers, and the quality of life in these people is lower than in others [18]. Besides, patients with OCD avoid experiencing and tolerating distress, which helps to create obsessive-compulsive symptoms and leads to difficulty in managing disturbing and unwanted thoughts, feelings, and other internal emotional experiences [19]. All of these are known processes related to psychological flexibility [20].

Many treatments have been suggested for OCD, among which, acceptance and commitment therapy (ACT) has received more attention in recent years. The ACT was proposed in the 80s by Hayes et al. [21] at the University of Nevada, Nevada, USA [22]. Unlike traditional cognitive behavioral therapy, ACT does not directly reduce symptoms but instead targets the usefulness and function of psychological experiences, such as thoughts, feelings, memories, and psychological feelings. This method tracks meaningful life activities regardless of their existence [23]. Its underlying principles include acceptance (a tendency to experience pain or other disturbing events without trying to control them) and value-based action (commitment combined with a desire to act on meaningful personal goals rather than eliminating unwanted experiences).

Moreover, there are linguistic methods and cognitive processes that lead to healthy functioning in interaction with other non-verbal dependencies. This method includes exercises based on exposure, linguistic metaphors, and other methods, such as mental care. In this treatment, instead of changing cognitions, it is tried to increase the psychological connection of the person with their thoughts and feelings. Accordingly, it is first tried to increase the psychological acceptance of the individual about mental experiences (thoughts and feelings) and, in turn, reduce the ineffective controlling actions [24]. The patients are taught that any action to avoid or control these unwanted mental experiences is ineffective or has the opposite effect and causes them to intensify; therefore, these experiences should be fully accepted [without any internal or external reaction to remove them] [25].

The central process of ACT teaches people how to stop inhibiting thoughts and not get involved with disturbing thoughts and also makes a person more tolerant of unpleasant emotions [26]. The ACT can have a positive effect on many symptoms and clinical manifestations of OCD, such as avoidance, inhibition of thought, impaired quality of life, and mood problems [27].

Another treatment proposed in this study is intensive short-term dynamic psychotherapy (ISTDP). The most basic focus of this treatment is on emotional or psychological pain, in which life is imagined as a difficult and exhausting process, the psyche is built in the conflict to cope and endure it, and defenses or avoidance mechanisms are created. It causes pain; Ways of seeing, thinking, feeling and behaving that most of these activities happen outside of consciousness [28]. These unconscious attempts to avoid emotional pain often fail, but since our awareness is limited, they are nevertheless repeated over and over again. The healing process involves re-formulation of the experience and toleration of the resulting discomfort. The understanding that therapists and clients create about these problems expands the awareness of the client and opens the way to new options for conflict management. It also increases the capacity of the client to bear emotional pain and deal with dissatisfaction and increases their ability to think

and be curious about their experiences [29].
The ISTDP evolved through the activities of Malan et al., and its common features are the experience of deep emotions during the treatment sessions, high levels of therapist activity, encouragement of the patient to cooperate, active attention paid to the time limit, as well as a therapeutic focus and selection criteria [30]. Lipro and Maltepi [31] declared that one of the emphases of ISTDP is the continuous effort of the therapist for deep emotional experience experience as a healing element. Extensive studies in the last two decades have shown that disclosure, whether in speech or writing, improves physical and mental health, as well as the functioning of the immune system and autonomic nerves [32]. The active position of the therapist and the correct application of techniques help the patient obtain the optimal result in the shortest possible time [33]. Emphasis of ISTDP is on immediate help to the patient to experience unconscious emotions that have caused unconscious anxiety, symptoms of disorder, and various defenses. The ISTDP has been clinically effective on samples with multiple psychiatric problems and samples of patients with high-resistance depression and personality disorders [34].

Objectives

According to the material presented, it can be said that although the components of the research have been investigated in several studies, the combination of variables in the current research has not been used in any independent study. Moreover, no previous study has investigated the effectiveness of the two above-mentioned treatment methods on OCD. Therefore, the general purpose of the present study was to compare the effectiveness of ACT and ISTDP on perfectionism and quality of life in patients with OCD.

Materials and Methods

This semi-experimental research was performed with a pre-test, post-test, and follow-up design and a control group. The statistical population of the research included all the patients who referred to the consultation centers of Mehr Neurological and Psychiatric Hospital as well as Imam Reza, and Khorram Abad Health Centers in the second half of 2022-2023. In total, 42 participants were included in the study based on the inclusion criteria which was a score of 20 and above in the obsessive-compulsive questionnaire and the same duration of suffering from OCD. However, the exclusion criteria were psychiatric and psychotropic medication use, absence in more than two therapy sessions, and simultaneous participation in other treatment courses and interventions at the same time as research. The participants were selected through available sampling and answered the perfectionism questionnaires by Hill et al. They were divided into three groups, namely ISTDP (n=14), ACT (n=13), and control group (n=15). The ACT was planned during eight sessions based on the treatment protocol developed by Hayes et al. [1999] and the ISTDP group received the treatment protocol of Dovanlo [2000] during eight 90-minute sessions. It should be mentioned that the control group did not receive training. The obtained data were analyzed by analysis of variance with repeated measures.

Research Instruments

1. Hill's Perfectionism Questionnaire

The perfectionism scale was prepared by Hill et al. in 2004 and has 59 items and 8 subscales. In this scale, the compatible aspect includes the dimensions of order and organization, purposefulness, strive for excellence, and high standards for others, while the incompatible aspect of perfectionism consists of the dimensions of the need for approval, focus on mistakes, perception of pressure from parents, and rumination [35]. The results of the calculation of the reliability and validity of this scale in the research of Hill et al. indicated that the reliability coefficient was between 0.83 and 0.91 using Cronbach's alpha method [35]. The validity and reliability of this scale were confirmed in Iran by Jamshidi et al. in 2008. The validity of the entire scale was obtained in the preliminary survey of 68 participants using Cronbach's alpha method, with an internal consistency of 0.80 [36].

2. Var and Sherboom Quality of Life Questionnaire (SF36)

This tool is a self-report questionnaire that is mainly used to check the quality of life and health. This questionnaire has proven its effectiveness for various purposes, such as clinical work, evaluation of health policies, as well as research and studies of the general population. This questionnaire was created by Warr and Sherburne in 2000 and has 36 items and evaluates health and quality of life in two general dimensions, physical and mental health [37]. The way of answering the items of the quality of life questionnaire varies from a binary yes-no (answer package) to a six-point scale. This questionnaire evaluates the health status in eight subscales, each scale is measured by a set of items based on which it is scored. The physical health dimension has four subscales, namely physical function, physical limitation, physical pain, and general health while the mental health dimension has four subscales, namely vitality and vitality, social functioning, emotional limitation, and mental health[38]. Var and Sherboom [37] and obtained a

reliability of 0.90 using Cronbach's alpha method [38]. The reliability and validity of the Persian version of this questionnaire in Iran have been confirmed in various studies. The validity and reliability of the Persian version of this questionnaire were evaluated for the first time in Iran by Montazeri, Ghstasbi, Vahidnia, and Gandek [40] on 4,163 people aged 15 years and above. According to their report, the reliability coefficient of eight after 77-95% It was 65% later in life [40].

Acceptance and Commitment Therapy

In the present study, a treatment protocol was developed based on the method of Hayes et al. in 1999. This program was implemented by the therapist in eight 90-minute weekly sessions for patients suffering from OCD.

Intensive short-term dynamic psychotherapy

In the present study, the treatment model based on the treatment protocol developed by Dovanlo (1995, 2000) was performed on patients with OCD in eight 90-minute sessions. The purpose and content of the sessions have been compiled according to the short-term psychodynamic psychotherapy manual, that is, the seven stages of questions about problems, pressure, challenges, transference resistance, direct access to the unconscious, transference analysis, and dynamic exploration in the unconscious.

Data Analysis

The data were statistically analyzed using repeated measures analysis of variance in SPSS software (version 23). The P values of less than 0.05 were considered statistically significant.

Table 1. Description of the acceptance and commitment treatment package

sessions	Target	Content of meetings
First	Interview and assessment, explanation of conditions and treatment process, explanation of the underlying model of acceptance and commitment treatment	Training and implementation of mindfulness exercises that must be implemented in each session, change through the use of mood frustration exercise, hard cover exercise to explain the treatment process.
Second	Explanation of the concept of acceptance and living in the now	Mindfulness practice. In this session we talked about satisfaction as well as primary and secondary suffering, using the metaphors of a wanderer and walking in the rain.
Third	Explanation of the concept of contextual self	Mindfulness practice, considering oneself as a context, allegorizing smooth sands, finding the root of reasons, using the incongruous technique.
Fourth	Explanation of the concept of breaking language threats	Mindfulness practice, putting yourself in context, practicing facing the giant iron man, doing the "yes, but" method.
Fifth	Initial assessment of values and explanation of goals	Mindfulness practice and thought suppression practice
Sixth	Clarification of values	Mindfulness practice, bus values compass, goal setting, activity planning
Seventh	Explanation of the concept of committed action	Mindfulness practice, observer practice, and chess board analogy
Eighth	End of meetings and conclusion with the aim of preparation for relapse to prevent relapse	Practice the content on the flashcards, let's live lifelong assignments of life.

Table 2. Description of the intensive short-term dynamic psychotherapy package in eight sessions

sessions	Target	The content of the meetings
First	Referral, asking about the problem of the patient	Scanning sequence starts with asking about the problem of the patient. Here, the ability of the patient to respond and explore the nature and factors of their problem is determined.
Second	Pressure technique	Usually, the patient expresses their problems and symptoms in a vague and unclear manner. At this stage, the patient resists the pressure of the therapist for more specific and accurate answers and recognition of the true nature of the experienced emotions, such as anger. The therapist relieves the pressure by requesting a detailed and complete understanding of the inner experience of the patient of their feelings.
Third	Challenge with resistance	Following the pressure of the therapist, between the resistance of the patient (desire to escape from pain) and the therapeutic agreement (desire to get rid of the problem), an intrapsychic conflict is created, and tactical and basic defenses are activated. At this stage, the therapist explains their nature and consequences to the patient and challenges them by confronting and blocking them.
Fourth	Manifestation of transitional resistance and the challenge with it	Challenging the resistance leads to the arousal of complex transitional emotions. At this stage, the therapist tries to break the transference-related defense systems by using clarification and challenge. In this process, the internal tension between the resistance and the therapeutic contract reaches its maximum. This process continues until the therapeutic contract overcomes the resistance and the possibility of breaking into the unconscious pathological material of the patient is provided.
Fifth	Reaching the unconscious	At this stage, the patient touches their transference feelings in reality. Usage of imagination to depict the impulse is the method used at this stage for the patient to access the full experience and express emotions. As a result, both the therapist and the patient can observe the pathological forces directly.
Sixth	Transfer analysis	At this stage, the therapist analyzes the transition by using the conflict triangle and the person triangle. The therapist also analyzes the similarities and differences in the way the patient defends painful and anxiety-provoking feelings in their current, past, and transitional relationships. Accordingly, the patient can understand the style of their defenses against the feelings and problems they create for themselves. They have to gain insight to be able to give up their defenses.
Seventh	Dynamic research in the unconscious	At this stage, due to the full dominance of the therapeutic contract, repeated breakthroughs occur in the unconscious emotions, and the unconscious emotions of anger, guilt, sadness, and love are revealed and experienced. At this stage, the therapist analyzes and summarizes the process of the dynamic sequence and reinforces the insight that the patient has gained.
Eighth	Summary and completion	Final summary, re-implementation of questionnaires, appreciation, and expression of gratitude, and termination of the treatment

Results

This research was conducted on 42 participants in three groups, namely ISTDP (n=14), ACT (n=13), and control groups (n=15). The mean ages of the participants were 31.79±3.91, 29.31±5.44, and 32.27±5.22 years in the ISTDP group, ACT group, and the control group, respectively. There were 4 males and 10 females in the ISTDP group, 3 males and 10 females in the ACT group, and 4 males and 11 females in the control group. In the ISTDP group, 2 participants had an undergraduate degree, 7 had a high school degree, 1 had a Bachelor's degree, and 3 had a higher degree. In the ACT group, the level of education of 3 participants was below high school, 5 had a high school degree, 2 had a Bachelor's degree, and 3 had a higher degree. In the control group, the level of education of 3 of the participants was below high school, 8 had a high school degree, 1 had a Bachelor's degree, and 3 had a higher degree.

In the ISTDP group, 6 participants were single and 8 were married, while in the ACT group, 4 participants were single, 7 were married, and 2 were divorced. Moreover, in the control group, 5 participants were single, 9 were married, and 1 was separated from his wife. Table 1 summarizes the mean, standard deviation, and Shapiro-Wilk index (significance level) of the dimensions of perfectionism and quality of life in the participants of the research groups in three stages, namely pre-test, post-test, and follow-up.

Table 3 shows that in the two intervention groups, the mean scores of both dimensions of perfectionism decreased in the post-test and follow-up stages, and the mean scores of both physical and mental health dimensions of quality of life increased. However, no similar changes were observed in the mentioned stages in the control group. In order to test the assumption of normality of data distribution, the Shapiro-Wilk values of the variables in all three groups were examined. According to Table 1, the Shapiro-Wilk index of none of the dimensions of the two variables of perfectionism and quality of life in the three groups and stages of performance was not significant.

Therefore, the assumption of normality of data distribution among the data was maintained.

In this research, Lon's test was used to evaluate the homogeneity of the error variances of the dependent variables. The results showed that the difference in the error variance of the scores related to any of the dimensions of the two dependent variables in the groups and in the three stages was not significant. This finding showed that the assumption of homogeneity of error variances among the data related to the research variables was maintained. Next, the assumptions of homogeneity of the covariance matrices of the dependent variables were examined using the Box's M statistic, and the sphericity condition or the assumption of the equality of the covariance matrix of the errors was examined using the Moheli test, the results of which are presented in Table 4.

Table 3. Mean, standard deviation, and Shapiro-Wilk index (significance level) dimensions of perfectionism and quality of life

Variable	Component	Group	Pre-test	Post-test	Follow-up
Mean±SD	Perfectionism - adaptive dimension	ACT	7.62±58.77	6.96±43.84	6.25±47.00
		ISTDP	8.93±59.36	49.93±7.01	50.57±6.14
		Control	9.63±61.67	59.67±7.06	7.15±60.10
	Perfectionism - maladaptive dimension	ACT	13.87±96.61	8.27±70.61	9.37±72.62
		ISTDP	13.34±102.79	7.96±77.71	6.88±84.14
		Control	10.24±95.93	8.85±97.66	10.39±95.13
	Quality of life - physical health	ACT	46.25±7.11	7.68±57.60	54.39±9.02
		ISTDP	8.34±45.32	7.26±55.15	6.68±53.36
		Control	8.87±46.30	8.20±45.42	7.32±46.56
	Quality of life - mental health	ACT	6.65±38.87	55.07±7.05	52.79±9.01
		ISTDP	38.95±7.14	8.57±48.95	6.67±45.63
		Control	6.70±37.76	6.92±38.21	37.88±6.03
Shapiro-Wilk (Sig)	Perfectionism - adaptive dimension	ACT	0.923 (0.279)	0.909 (0.180)	0.919 (0.244)
		ISTDP	0.929 (0.404)	0.912 (0.166)	0.965 (0.797)
		Control	0.960 (0.699)	0.904 (0.111)	0.955 (0.602)
	Perfectionism - maladaptive dimension	ACT	0.952 (0.635)	0.892 (0.105)	0.911 (0.193)
		ISTDP	0.909 (0.115)	0.963 (0.772)	0.885 (0.069)
		Control	0.925 (0.233)	0.922 (0.206)	0.957 (0.646)
	Quality of life - physical health	ACT	0.949 (0.586)	0.942 (0.488)	0.950 (0.598)
		ISTDP	0.916 (0.192)	0.937 (0.376)	0.902 (0.119)
		Control	0.939 (0.369)	0.925 (0.227)	0.942 (0.404)
	Quality of life - mental health	ACT	0.943 (0.501)	0.917 (0.230)	0.948 (0.567)
		ISTDP	0.898 (0.105)	0.909 (0.152)	0.964 (0.782)
		Control	0.955 (0.605)	0.961 (0.714)	0.946 (0.467)

ACT: Acceptance and commitment therapy
STDP: Intensive short-term dynamic psychotherapy

The results of the analysis in Table 4 show that the statistical index of Box's M is not significant for any of the dimensions of the two variables, perfectionism and quality of life. This article showed the establishment of the assumption of homogeneity of the covariance matrices of the dependent variables among the data. Furthermore, Table 2 shows that the Chi-squared value obtained from Moheli's test was significant for both dimensions of quality of life, namely physical health (P=0.001) and mental health (P=0.010). This finding indicated that the assumption of sphericity for the dimensions of quality of life was not established, and for this reason, the degrees of freedom related to those scores were modified using the Geisser-Greenhaus method.

After evaluation of the assumptions of the analysis and making sure that they are established, the data were tested using the variance analysis method with repeated measurements. Table 5 summarizes the results of multivariate analysis comparing the effect of ACT and ISTDP on the dimensions of perfectionism and quality of life.

Table 5 shows that the effect of implementing independent variables on adaptive (Wilks's lambda=0.577, η^2=0.241, P=0.001, F=6.02) and maladaptive dimensions (Wilks's lambda=0.509, η^2=0.286, P=0.001, F=7.63) of perfectionism is significant. Moreover, the effect of implementing independent variables on physical health dimensions (Wilks' lambda=0.758, η^2=0.129, P=0.031, F=2.84) and mental health (Wilks' lambda=0.714, η^2=0.155, P=0.011, F=3.49) of quality of life was also significant.

Table 4 tabulates the results of the analysis of variance with repeated measurement in explaining the effect of implementation of ACT and ISTDP on dimensions of perfectionism and quality of life.

Table 6 shows that in addition to the group effect and the time effect, the interaction effect of group×time for the adaptive dimension (η^2=0.308, P=0.001, F=8.67) and the incompatible dimension (η^2=0.345, P=0.001, F=10.27) of perfectionism is significant. Moreover, the interaction effect of group×time for the dimensions of physical health (F=0.222, P=0.008, P=0.008) and mental health (η^2=0.222, P=0.002, F=5.56) quality of life was significant.

In Table 5, the results of the Bonferroni test showed the scores related to the total dimensions of perfectionism and quality of life in three groups and in three stages of implementation.

Table 4. Results of the hypothesis test of the equality of the variance-covariance matrices and the equality of the error covariance matrix

Variable	Dimensions	Equality of variance matrix of covariances			Equality of the error covariance matrix		
		Box's M	F	P	Mauchly's	χ^2	p
Perfectionism	Adaptive dimension	7.19	0.53	0.896	0.939	2.39	0.303
	Inconsistent	21.15	1.56	0.095	0.921	3.13	0.209
Quality of Life	Physical health	6.50	0.48	0.928	0.620	18.16	0.001
	mental health	12.45	0.92	0.525	0.786	9.13	0.010

Table 5. Results of multivariate analysis in the evaluation of the effect of independent variables on perfectionism and quality of life

Variable	Dimensions	Wilks Lambda	F	df	P	η^2	Test power
Perfectionism	Adaptive dimension	0.577	6.02	4, 76	0.001	0.241	0.981
	maladaptive dimension	0.509	7.63	4, 76	0.001	0.286	0.996
Quality of Life	Physical health	0.758	2.82	4, 76	0.001	0.129	0.744
	Mental health	0.714	3.49	4, 76	0.001	0.155	0.841

Table 6. Results of analysis of variance with repeated measurement in explaining the effect of independent variables on perfectionism and quality of life

Variable	Dimensions	Effects	Sum of squares	Sum of squared error	F	P	η^2
Perfectionism	Adaptive dimension	Group effect	2488.51	5109.46	9.50	0.001	0.328
		Effect of time	1141.40	814.13	54.68	0.001	0.584
		Interaction effect of group×time	673.94	1515.76	8.67	0.001	0.308
	Inconsistent dimension	Group effect	5554.15	4453.28	24.32	0.001	0.557
		Effect of time	4386.65	4604.81	37.17	0.001	0.488
		Interaction effect of group×time	3988.12	7560.88	10.27	0.001	0.345
Quality of Life	Physical health	Group effect	1055.26	4298.90	4.79	0.014	0.197
		Time effect	630.10	1687.89	16.56	0.001	0.272
		Interaction effect of group×time	675.22	2258.84	4.45	0.008	0.186
	Mental health	Group effect	2570.28	2385.71	21.01	0.001	0.519
		Time effect	997.87	2260.52	17.22	0.001	0.306
		Interaction effect of group×time	1055.48	3706.81	5.56	0.002	0.222

Table 7. Bonferroni post-hoc test results for pairwise comparisons of the effects of groups and times for perfectionism and quality of life

Variable		Times		Difference in means	Standard error	Probability value
Perfectionism	Adaptive dimension	Pre-test	Post-test	8.78	1.04	0.001
		Pre-test	Follow-up	7.39	1.00	0.001
		Post-test	Follow-up	-1.40	0.84	0.311
	Inconsistent dimension	Pre-test	Post-test	16.46	2.20	0.001
		Pre-test	Follow-up	14.48	2.38	0.882
		Post-test	Follow-up	-.197	1.85	0.001
Quality of Life	Physical health	Pre-test	Post-test	-6.81	1.62	0.001
		Pre-test	Follow-up	-5.49	1.44	0.401
		Post-test	Follow-up	1.32	0.86	0.001
	Mental health	Pre-test	Post-test	-8.88	1.72	0.001
		Pre-test	Follow-up	-6.91	1.66	0.001
		Post-test	Follow-up	1.98	1.05	0.201
Variable		Differences between groups		Difference in averages	Standard error	Probability value
Perfectionism	Adaptive dimension	ACT	ISTDP	-3.41	2.26	0.563
		ACT	Control	-10.60	2.50	0.001
		ISTDP	Control	-7.18	2.46	0.017
	Inconsistent dimension	ACT	ISTDP	-8.27	2.38	0.004
		ACT	Control	-16.30	2.34	0.001
		ISTDP	Control	-8.03	2.25	0.002
Quality of Life	Physical health	ACT	ISTDP	1.50	2.34	1.00
		ACT	Control	6.69	2.30	0.018
		ISTDP	Control	5.19	2.25	0.080
	Mental health	ACT	ISTDP	4.40	1.74	0.047
		ACT	Control	10.96	1.71	0.001
		ISTDP	Control	6.56	1.68	0.001

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STDP: Intensive short-term dynamic psychotherapy

According to Table 7, results of the Bonferroni test comparing the effect of time showed that the difference between the mean scores of the dimensions of perfectionism and those of the quality of life in the pre-test-post-test and pre-test-follow-up stages was statistically significant, but the difference between the mean scores in the post-test-follow-up stages was not significant. Furthermore, the results of the Bonferroni test comparing the group effects in Table 5 indicated that the mean difference of both dimensions of perfectionism in the two experimental groups was statistically significant, compared to the control group. Accordingly, the implementation of both methods of ACT and ISTDP caused the mean adaptive and maladaptive dimensions of perfectionism to decrease in the post-test and follow-up stages, compared to the pre-test stage. In line with the results related to the group effects in the Bonferroni test, the changing trend of the mean scores of the dimensions of perfectionism in the graphs of Figure 1 shows that the changes caused by the ACT and ISTDP on perfectionism remained after the end of the treatment period.

Based on Table 7, the results of the Bonferroni test comparing the effect of the group indicated that the difference in the mean values of both dimensions of quality of life in the two ACT and control groups was statistically significant. Accordingly, the implementation of ACT increased the mean value of quality of life in the post-test and follow-up stages, compared to the pre-test stage. Moreover, unlike the physical health dimension, the difference in the mean values of the mental health dimension of quality of life in the two ISTDP and control groups was statistically significant. In line with the results related to the group effects in the Bonferroni test, the changing trend of the mean scores of the physical and mental health dimensions of the quality of life in the graphs of Figure 1 showed that the changes caused by the ACT on both dimensions of the quality of life and the changes caused by ISTDP follow-up on its mental health dimension remain after the end of the treatment period.

Based on Table 5, there was a significant difference between the effects of the two methods of ACT and ISTDP on the maladaptive dimension of perfectionism (P=0.004) and the mental health dimension of quality of life (P=0.047). Accordingly, the ACT reduced the scores of the maladaptive dimension of perfectionism more and increased the scores of the mental health dimension of the quality of life more, compared to the ISTDP. Therefore, it can be said that ACT is a more effective method for the reduction of maladaptive perfectionism and increase of the mental health dimension of quality of life in patients with OCD, compared to ISTDP.

Discussion

This research aimed to compare the effectiveness of ACT and ISTDP on perfectionism and quality of life in patients with OCD. The results indicated that ACT further reduced the scores of the maladaptive dimension of perfectionism and increased the

scores of the mental health dimension of the quality of life, compared to ISTDP follow-up. Accordingly, it can be said that ACT is a more effective method for the reduction of maladaptive perfectionism and increase of the mental health dimension of quality of life in patients with OCD, compared to ISTDP. These results are in line with those of the research conducted by Mohammadi [40], Nowrozi and Kajbaf [41], Esmi et al. [42], Mehriyar [43], Yazerlo, Kalantari, Mehrabi [44], Nikparvar et al.[45] based on the effect of ACT on perfectionism and quality of life.

In explaining the effectiveness of ACT on perfectionism in OCD patients, it can be said that in this treatment approach, it is believed that pain is an inevitable part of life that can be accepted while trying to avoid pain causes more suffering. Fighting pain is considered a form of non-acceptance or resistance to "what is". The intensity of suffering depends on the degree of integration of clients with thoughts and emotions related to pain [21]. Previous studies have shown that avoidance is a common response to chronic pain and can take a myriad of forms, such as avoiding work or social activities or overusing alcohol, food, or medication. This method often helps in the short term, but in the long term, experiential avoidance leads to frustration, dissatisfaction with life, and feelings of insignificance [26].

In fact, acceptance techniques in ACT (E.G., observation and acceptance of thoughts and emotions as they are) help to tolerate pain. Pain acceptance seems to represent an adaptive form of coping with pain, whereby a person responds to pain-related experiences without trying to control them, and engages in worthwhile activities as well as achievement of personal goals, regardless of these negative experiences [22]. Therefore, the use of pain acceptance techniques is considered a positive way to regulate pain, which leads to lower levels of pain intensity and disability caused by it [24].

Results of the statistical analysis showed that ISTDP is effective in perfectionism and quality of life in females with OCD, compared to the control group. In explaining this finding, it can be said that ISTDP is a reliable method for compassionately dealing with resistance, strengthening the will and motivation of patients to face the past and liberate the true self. What Dovanlo saw, and ISTDP therapists continue to see, is that humans have an innate power, will, and drive to heal, which is more powerful than even the most debilitating mental health problems. The ISTDP is, in essence, a method designed to unleash the healing power that can emerge within each of us and to exercise its full potential in healing. The thing that is so beautiful and inspiring about ISTDP is working with people who, often for decades, have struggled, suddenly regaining the strength and confidence to change their lives [32].

Unconscious processes can lead to negative health effects in any body system, including the digestive system, cardiovascular system, respiratory system, immune system, muscular system, and skin. Anxiety and defensiveness can lead to increased concern about the body and negative interactions with the treatment and health system. In addition, these problems can secondarily lead to disability and depression. The ISTDP therapists understand that the problems of patients are caused by defenses that develop in response to anxiety associated with unconscious emotion. Anxiety and defenses may be completely unconscious to the person experiencing them. As a result of those destructive relationships, physical symptoms and a wide range of psychiatric symptoms. Majority of patients suffering from anxiety, depression, substance abuse, and interpersonal problems have emotional blocking [34].

Limitations

This research, like other studies, had some limitations, including the number of samples. This study was performed on people with OCD who referred to the hospital, and therefore it is not possible to generalize the results to other patients with semi-clinical OCD. There was another limitation in the selection of the group, considering some psychological variables (e.g., knowledge and attitude of clients about therapeutic interventions, their psychological expectations, and mindset) and demographic variables (e.g., education level and economic conditions). The sample is considered another limitation of the present research; therefore, it is suggested that OCD patients in society, such as the elderly, physically ill, and students should also be considered in future research, and in addition, the effect of follow-up should be investigated in the long term.

Conclusions

Based on this study, it was concluded that the ACT reduced the scores of the maladaptive dimension of perfectionism more and increased the scores of the mental health dimension of the quality of life more, compared to the ISTDP. Accordingly, it can be said that ACT is a more effective method for the reduction of maladaptive perfectionism and increase of the mental health dimension of quality of life in patients with OCD, compared to ISTDP.

Compliance with ethical guidelines

All ethical principles were considered in the present study. The participants were informed about the research purposes and procedures. Moreover, informed consent was obtained from the

participants, and they were assured of the confidentiality of their information.

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Authors' contributions
This study is taken from the Ph.D. Dissertation of the first author, submitted to the Department of Psychology, Borujard Branch, Islamic Azad University, Borujard, Iran. Dr. Zahra Tanha and Kourosh Amraei were thesis supervisors and Dr. Kourosh Goodarzi was the thesis adviser.

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Conflicts of Interest
The authors reported no conflict of interest.

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