

Comparison of the Effectiveness of Reality Therapy based on Choice Theory and Acceptance and Commitment Therapy on Communication Skills of Female High School Students

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Abstract

Background: Communication skills are components of social empowerment which assist people to cope with daily life problems and difficult situations.

Objectives: This study aimed to compare the effect of reality therapy based on choice theory and acceptance and commitment therapy on the communication skills of female high school students.

Methods: The present study was semi-experimental with pretest, posttest, and follow-up design with a control group. The statistical population included all the female high school students in Tehran during the academic year 2019-2020. A total of 45 students were randomly selected and assigned to two experimental groups (15 students in each group) and a control group (15 students). The interpersonal communication skills test of Queendom (2004) was used as a data collection tool in this study. Data were analyzed by one-way ANCOVA, and Bonferroni post hoc using SPSS (Version 24).

Results: The results indicated that reality therapy and acceptance and commitment therapy in post-test and follow-up significantly affect students' communication skills ($P < 0.05$). Also, acceptance and commitment therapy had stronger effects than reality therapy based on choice theory in improving communication skills ($P < 0.05$).

Conclusion: It can be concluded that reality therapy based on choice theory and acceptance and commitment therapy can be used as a treatment to improve the communication skills of students in educational and therapeutic settings.

Keywords: Acceptance and commitment therapy, Communication, Reality therapy, Students

Introduction

Adolescence plays a fundamental role in the cycle of psychological transformation (1). This transition stage begins at the age of 10 to 11 and ends around the age of 18 to 22. This stage is a period of biological, social, emotional, and cognitive transformation. Therefore, one of the important changes during this period is the social and communicational transformation in adolescents (2). Communication skills are those through which people communicate with others and feel competent (3). Communication skills are components of social empowerment which assist people to cope with daily life problems and difficult situations (4). Communication skills include understanding the message (the ability to clearly understand verbal and nonverbal messages), emotional regulation (the ability to control and express emotions as well as to cope with other's emotions), listening (the learned and complex process of feeling, interpreting, evaluating, storing and responding to verbal messages), understanding

communication processes (the ability to understand others and to influence social relationships) and self-assertion (being audacious enough to question about ambiguities regardless of the emotional reaction of others) (5).

Deficiencies in communication skills such as the inability to regulate emotions, poor understanding of verbal and nonverbal messages, and weakness of self-assertion can increase loneliness (6). Poor communication skills can lead to problems such as depression (7), anxiety (8), and low self-esteem (9) in people. Therapeutic interventions can be useful to reduce these problems. Numerous interventions have been used to enhance communication skills (10), including reality therapy based on choice theory (11). Reality therapy is primarily aimed at educating people about their basic psychological needs such as belonging, power, love, survival, freedom, and external control. In other words, Glasser's theory defines reality therapy as helping people satisfy their psychological needs for belonging, power, freedom, and responsible

recreation (12). Reality therapy is a counseling and psychotherapy method that assists people to examine expectations, values, and ways to meet those needs (13).

This treatment seeks to change the identity of the unsuccessful and create responsible behavior in the authorities. According to this approach, irresponsibility is what causes difficulties in people's lives (14). Reality therapy based on choice theory teaches adolescents that everyone is responsible for their behaviors, and cannot control other behaviors. Hence, their assessment of their relationships with others is satisfactory and leads to increased communication skills (15). Additionally, acceptance and commitment therapy is a third-wave therapy (16) that aims at identifying and reducing cognitive error, controlling and logically analyzing problems (17). Both treatments can improve the problems caused by adolescents' poor communication skills. However, therapists prefer to choose an effective treatment for solving social problems (communication skills), especially in adolescent patients.

Objectives

This study aimed to compare the effectiveness of reality therapy based on choice theory and acceptance and commitment therapy on the communication skills of female students.

Methods

The present study was semi-experimental with pretest, posttest, and follow-up design with a control group. The statistical population of the study included all the female high school students during the academic year 2019-2020, Tehran. The cluster sampling method was divided Tehran into five regions (north, south, center, east, and west). Three schools were selected from the chosen regions, and a communication skills questionnaire was performed on the students. Moreover, 45 students were randomly selected from those who scored lower in communication skills. Then, 15 subjects were assigned to the first experimental group (reality therapy based on choice theory), 15 in the second experimental group (acceptance and commitment therapy), and 15 in the control group. The required sample size was calculated 45 in total based on effect size= 0.40, $\alpha=0.95$, $1-\beta$ (err prob) = 0.80 test power and 10% loss for each group. The inclusion criteria were obtaining informed consent, being 14 to 16 years, and getting a minimum score in communication skills. The exclusion criteria were being absent for more than two treatment sessions and simultaneously participating in other psychological sessions. Ethical considerations included 1) observing privacy and confidentiality, as well as the freedom of subjects so that the collected information was used only for this study,

2) explaining the objectives of the research, 3) obtaining informed consent, 4) being optional in participating or withdrawing from the study without any disadvantages, 5) answering the questions, and providing the results if desired. Also, treatment sessions were taught to the control group to comply with ethical standards. The present article has been approved by the Ethics Committee of Islamic Azad University, Tehran North Branch, Tehran, Iran (IR.IAU.TNB.REC.1399.019).

Reality Therapy Based on Choice Theory

Reality therapy is Dr. Glasser's counseling approach using choice theory (4) which has been evaluated by several experts. This therapy was first taught to an experimental group during a 12-session program.

Acceptance and commitment therapy sessions

The experimental group was trained in acceptance and commitment therapy in 12 sessions of 90 minutes once a week based on Peterson et al. (18).

Communication Skills Test-Revised (CSTR):

This questionnaire has 34 questions and five subscales of the understanding message, emotion regulation, listening, insight into communication, and self-assertion. The questionnaire is scored based on a 5-point scale (1 = never, 2 = rarely, 3 = sometimes, 4 = most of the time, and 5 = always) (19). The score range for each individual is between 34 and 170. A score between 34 and 68, 68 and 102, and higher than 102 indicates poor, moderate, and high communication skills, respectively (20). The reliability and validity of the communication skills questionnaire have been investigated in Iran. The content and face validity of the questionnaire have been confirmed, and its reliability has been measured and the coefficient of 0.86 has been reported using Cronbach's alpha (21). Also, in another study, the reliability of the questionnaire was 0.71 and significant at the level of 0.01 and the coefficient for all questions was 0.70 by the internal consistency method of Cronbach's alpha (11). In this study, Cronbach's alpha was used to assess the validity of the questionnaire with a pre-test coefficient of 0.81, post-test of 0.76, and follow-up of 0.86.

Central and dispersion indices such as mean and standard deviation were used in descriptive statistics. Multivariate analysis of variance was used in the inferential statistics section. Levene's test (for the homogeneity of variances), Kolmogorov-Smirnov test (for normality of data distribution), Box's M test, and Mauchly's sphericity test were used to investigate the assumptions of the inferential test. The above statistical analysis was

performed using SPSS (Version 22). A p-value less than 0.05 is statistically significant.

Results

Table 1-Frequency and percentage of demographic findings of the sample group

Demographic variables		Choice theory		ACT		Control	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Age	15	3	20	2	13.3	3	20
	16	4	26.6	5	33.3	4	26.7
	17	5	33.3	4	26.7	4	26.7
	18	3	20	4	26.7	4	26.7
	Total	15	100	15	100	15	100
Grade	First	4	26.7	5	33.3	4	26.7
	Second	5	33.3	3	20	2	13.3
	Third	3	20	4	26.7	5	33.3
	Fourth	3	20	3	20	4	26.7
	Total	15	100	15	100	15	100

Table 1 presents the frequency and percentage of demographic findings, including age and grade of

sample members in three reality therapy, acceptance and commitment therapy, and control groups.

Table 2- Descriptive indicators of minimum, maximum, mean, and standard deviation of communication skills

Variables		Choice theory		ACT		Control	
		M	SD	M	SD	M	SD
Understanding message	Pre-test	15.47	1.24	15.73	1.38	15.33	1.49
	Post-test	17.00	1.41	17.47	1.80	15.67	0.63
	Follow-up	16.93	1.38	17.40	1.80	15.60	1.63
Emotional regulation	Pre-test	14.27	0.59	14.73	0.70	14.60	0.63
	Post-test	15.53	0.83	16.53	1.18	14.87	1.18
	Follow-up	15.47	0.83	16.47	1.24	14.80	1.20
Listening skills	Pre-test	10.93	0.79	10.95	0.77	11.13	0.83
	Post-test	12.33	0.48	12.13	0.99	11.47	1.06
	Follow-up	12.27	0.59	12.07	0.96	11.40	0.91
Understanding communication	Pre-test	12.67	0.81	12.72	0.85	12.53	0.83
	Post-test	14.07	1.03	14.20	0.94	12.67	0.90
	Follow-up	14.00	1.19	14.18	0.91	12.60	0.82
Self-assertion	Pre-test	10.67	0.61	10.47	0.51	10.60	0.63
	Post-test	12.27	0.96	11.93	0.88	10.87	0.91
	Follow-up	12.20	1.01	11.87	0.99	10.80	0.77

Table 2 presents the mean and standard deviation of descriptive indicators including minimum, maximum, mean, and standard deviation of communication skills of experimental and control groups in the pre-test, post-test, and follow-up stages. Furthermore, the difference between the effectiveness of reality therapy based on choice

theory and treatment of acceptance and commitment on students' communication skills have been investigated by multivariate analysis of covariance, the results are presented in Table 3.

Table 3- Results of multivariate post-test dimensions of communication skills

Tests	Value	F	P	Eta
Pillai's trace	0.82	4.73	0.001	0.41
Wilks Lambda	0.24	6.66	0.001	0.50
Hotteling's Trace	2.76	8.84	0.001	0.58
Roy's largest root	2.66	18.09	0.001	0.72

The results of Table 3 indicate that Wilks' Lambda ($P < 0.001$, $F = 5.397$) is significant. The results confirmed a significant difference between the experimental and control groups in terms of post-test dimensions of communication skills and pre-test control. Accordingly, a significant difference was observed in at least one of the dependent variables, and the effect factor indicates that 50.3%

of the difference between the three groups is related to experimental interventions. After this, it should be investigated whether each dependent variable is affected separately from independent variables (reality therapy based on the choice theory and treatment of acceptance and commitment). For this purpose, a multivariate covariance analysis test has been used, and the results are presented in Table 4.

Table 4- Effects of Multivariate Analysis of Post-Test Dimensions of Communication Skills

Dependent variables	SS	Df	F	P	Eta
Understanding message	16.19	2	6.37	0.004	0.25
Emotional regulation	18.24	2	8.62	0.001	0.31
Listening skills	6.48	2	4.57	0.017	0.19
Understanding communication	18.10	2	16.04	0.001	0.46
Self-assertion	16.19	2	9.16	0.001	0.33

As shown in Table 4, the use of reality therapy based on the choice theory and acceptance and commitment therapy to the understanding message ($P = 0.004$, $F = 6.371$), emotion regulation ($P < 0.001$, $F = 8.621$), listening skills ($P = 0.017$, $F = 4.57$), understanding communication ($P < 0.001$, $F = 16.040$) and self-assertion ($P < 0.001$, $F = 9.168$) affect the post-test stage. As can be seen from the results of Table 5, the significance level obtained for social skills is less than the significance level of 0.01 obtained from the Bonferroni correction (dividing the significance level of 0.05 in five components of social skills). As a result, according to the obtained

averages, it can be said with 95% confidence that the social skills of the experimental group have increased compared to that of the control group. The results of multivariate covariance analysis have not indicated which treatment method was more effective or related to the post-test. Therefore, the follow-up test was conducted by the "Bonferroni method" to investigate the difference between the effectiveness of reality therapy based on the choice theory and acceptance and commitment therapy on the dimensions of communication skills, the results are mentioned in Table 5.

Table 5- Pairwise comparison with Bonferroni test to determine the most effective method on the dimensions of communication skills

Variables	I-J	Mean difference	P
Understanding message	Choice theory-ACT	-0.351	0.999
	Choice theory-Control	1.083	0.047
	ACT-Control	1.433	0.005
Emotional regulation	Choice theory-ACT	-0.645	0.334
	Choice theory-Control	0.933	0.066
	ACT-Control	1.578	0.001
Listening skills	Choice theory-ACT	0.078	0.999
	Choice theory-Control	0.859	0.032
	ACT-Control	0.985	0.012
Understanding communication	Choice theory-ACT	0.287	0.980
	Choice theory-Control	1.202	0.001
	ACT-Control	1.490	0.001
Self-assertion	Choice theory-ACT	0.289	0.999
	Choice theory-Control	1.425	0.007
	ACT-Control	1.537	0.001

According to Table 5, the results indicated that

the difference between the mean of act therapy and

the control group is greater than the difference between the mean of choice theory and the control group which means that the act therapy is more effective. One-way ANOVA was used to investigate

the persistence of the results (the effect of reality therapy based on the choice theory and acceptance and commitment therapy) on the difference between pre-test and follow-up scores.

Table 6- Results of one-way analysis of differential pre-test and follow-up scores in dimensions of communication skills

Variables	SS	df	F	P
Understanding message	17.20	2	7.52	0.002
Emotional regulation	18.17	2	8.72	0.001
Listening skills	9.64	2	5.06	0.011
Understanding communication	17.91	2	12.53	0.001
Self-assertion	16.17	2	8.55	0.001

Table 6 indicates the results of a one-way analysis of differential pre-test and follow-up scores in dimensions of communication skills. The score of message comprehension ($P=0.002$, $F=7.52$), emotion regulation ($P<0.001$, $F=8.72$), listening skills ($P=0.011$, $F=5.06$), understanding communication ($P<0.001$, $F=12.53$), and self-assertion ($P<0.001$, $F=8.55$) are significant. As can be seen from the results of Table 6, the significance level obtained for social skills is less than the significance level of 0.01 obtained from Bonferroni correction (dividing the significance level of 0.05 in five components of social skills). According to the obtained averages, it can be said with 95% confidence that the social skills of the experimental group have increased compared to that of the control group. This indicates that the effects of reality therapy based on choice theory and acceptance and commitment therapy on the dimensions of communication skills have continued until the follow-up stage. Therefore, it can be said that there is a difference between the effectiveness of reality therapy based on the choice theory and acceptance and commitment therapy on the dimensions of students' communication skills and the results are persistent in the follow-up phase.

Discussion

The present study aimed to compare the effectiveness of reality therapy based on choice theory and acceptance and commitment therapy on the communication skills of female high school students. The results indicated that using reality therapy based on choice theory affects communication skills in post-test and follow-up stages. This result is consistent with that of Shishehfar and Shafiabadi (23), and Hatami et al. (24). It can be said that all human beings are born with five genetic needs and all our behaviors are aimed at meeting these needs, the most important of which is the need for love and belonging that leads to developing the social and communication

relationships of the individual with others. According to Glasser, the main problem for most people seeking treatment is the same: they are either engaged in an unpleasant relationship or have no communication. Most problems of individuals arise from their inability to establish intimate relationships with others or a good and successful relationship with at least one person in their lives. The more people can communicate with others, the more likely they will experience happiness (25).

Furthermore, people's interaction with others and their skill in establishing this relationship are very essential in the sustainability of that relationship. The goal of reality therapy based on Glasser's choice theory is to help people become aware of their needs, monitor their behavior, and appropriate communication and social choices. Accordingly, people's main problem is the lack of successful relationships with others who need them in life. According to Glasser's choice theory, an unhealthy relationship is the result of undesirable behavior and choice. When people are treated with the choice theory, they can learn responsibility for their wrong choice and unhealthy and inadequate relationships. Therefore, reality therapy emphasizes internal control and tries to teach people how to make choices that determine the course of their social and communicative life (26).

Also, adolescents believe that all they do is intentional and internal behavior rather than believing that their environment or peers control them by teaching reality therapy based on choice theory. Accordingly, having the necessary communication skills is a personal choice. Therefore, it is logical to say that reality therapy based on choice theory significantly affects students' communication skills and teaches individuals not to seek control over each other. Everyone believes that they are responsible for their behaviors and cannot control others. Therefore, satisfactory evaluating of people in their social relationships increases good relationships and adequate communication skills in

the short and long term. Reality therapy based on Glasser's choice theory emphasizes the desired world and the way of managing the real world to simulate the desired world. Since optimal communication is the basis of the desired perceptual world, this treatment helps adolescents to improve their perceptual world, relationships, and communication skills in the desired direction. Therefore, reality therapy based on choice theory effectively influences students' communication skills. The results of this effect have been persistent in the follow-up stage.

The results indicated that acceptance and commitment therapy affects communication skills in the post-test and follow-up stages. This result is consistent with that of Yaraghchi, Jomehri, Seyrafi, Kraskian Mujembari (27). In explaining this result, it can be said that one of the most important processes of acceptance and commitment therapy is the clarification of values and committed action. Encouraging people to identify their values and goals as well as a commitment to taking actions to achieve them despite the problems and obstacles leads to life satisfaction and happiness (28). Acceptance and commitment therapy is superior to clinical traditions and emphasizes the behavioral performance of patients in finding the cause. Psychological flexibility shows why cognitive integration and empirical avoidance are harmful and aim to empirically control disturbing experiences (29). A person fails to regulate emotions and self-expression or understand others' messages when that person is poor in communication skills. One of the most important parts of acceptance and commitment therapy is understanding the adaptive nature of emotion and increasing emotional awareness using different mindfulness interventions. Mindfulness skill is one of the techniques that predict self-regulatory behavior and positive emotional state in people.

In addition, this skill leads to the cognitive evaluation of emotions, reduction of negative emotions, increase positive emotions, and adaptive behaviors. It ultimately leads to increased emotion regulation as one of the most important communication skills in the individual. Also, people can improve their living conditions and mental health by increasing psychological acceptance of internal experiences, reaching personal values, and avoiding less avoidable problems through practicing this therapy. Active and effective confrontation with emotions, avoidance, change self-attitude and challenges, re-thinking the values and goals of life, and ultimate commitment to social and communication goals can be considered the main factors of this method. Therefore, it is logical that acceptance and commitment therapy leads to increased communication skills, and this effectiveness continues until the follow-up stage.

The results also revealed that acceptance and commitment therapy was more effective than reality therapy. In explaining this result, it can be said that acceptance and commitment therapy in patients changes the context in which their thoughts occur and reduce the impact and importance of personal events of the problem. These people clinically learn to see thoughts, emotions, memories, and physical symptoms for their sake. None of the inner events, when experienced, are inherently harmful to human health. They are traumatized due to their traumatic, unhealthy, and bad experiences that must be controlled and eliminated (30). Acceptance and commitment therapy encourages people to focus attention repeatedly on neutral stimuli and release awareness on the body and mind of people with irrational beliefs. These techniques reduce worry and physiological stress by increasing the awareness of current experiences and returning attention to the cognitive system and more efficient information processing. In the treatment pattern of reality therapy based on the choice theory, people are taught to identify their needs and prepare and implement responsible programs to achieve their needs and goals. The necessity of effective use of reality therapy based on choice theory among adolescents is to implement responsible programs by them, which spontaneously cause a shortcoming of this method compared to acceptance and commitment therapy as the development of a program to identify needs and achieve goals for most adolescents is complicated. Therefore, there is a logical difference between the effectiveness of reality therapy based on choice theory and acceptance and commitment theory on communication skills. Also, acceptance and commitment therapy is more effective than reality therapy based on choice theory on adolescents' communication skills.

This study has been conducted on female high school students in Tehran, Iran. It is suggested to conduct the same study on the students in other cities due to cultural, ethnic, and social differences. This study could have been done both quantitatively and qualitatively (in combination). However, the lack of interview conditions is one of the limitations of the research. Other applied researches should be conducted on other problems in adolescent girls such as resilience and distress tolerance. Further researches should be done to compare reality therapy based on choice theory and acceptance and commitment therapy with other therapeutic methods such as cognitive-behavioral therapy, schema therapy, mindfulness therapy, self-compassion therapy. In addition to using self-reporting tools with the possibility of bias, it is suggested that other research methods such as interviews and observations be used to measure this variable to minimize biases. Reality therapy based

on choice theory and acceptance and commitment treatment effectively improved adolescent girls' communication skills. Accordingly, psychologists, clinical counselors, and therapists are recommended to assist adolescents to have more successful communication skills and constructive social relationships by holding psychological workshops based on choice theory and acceptance and commitment therapy. Therefore, these two therapies can be used as comfortable, accessible, and low-cost treatments by centers to improve adolescent girls' communication problems.

Conclusion

It can be concluded that reality therapy based on choice theory and acceptance and commitment therapy can be used as a treatment to improve the communication skills of students in educational and therapeutic settings.

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