Original Article

Group Reality Therapy in Addicts Rehabilitation Process to Reduce Depression, Anxiety and Stress

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Objectives: Substance abuse is one of the most outstanding socio-psychological hazards that can easily wreck one's personal, family and social life. Reality Therapy is a type of Cognitive rehabilitation (known as psychosocial rehabilitation method), and the application of this method in the treatment of different disorders has recently been the topic of research. The objective of this study was to examine the effectiveness of group reality therapy on the reduction of stress, anxiety and depression in addicts.

Methods: A quasi-experimental study of pretest-posttest design, with a control group was conducted. The study population consisted of all addicts attending Tehran's 'Neda' Rehab Clinic. First, the DASS-21 questionnaire was administered and then 40 people were selected from those who had scored average and higher. They were randomly assigned to two test and control groups of 20 each. Analysis of co-variance was used to analyze the data, with which pretest scores were controlled, and the effect of the independent variable on posttest scores was evaluated.

Results: Following the intervention, there were significant decreases in the mean scores of all three variables, i.e. stress, anxiety and depression in the test group.

Discussion: Psychosocial rehabilitation based on reality therapy can be considered as an effective method for reducing stress, anxiety and depression in addicts and also as an adjunctive therapy in treating other ailments.

Keywords: Psychosocial rehabilitation, Reality therapy, Stress, Anxiety, Depression, Addiction

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Introduction

Addiction to narcotics is a well-known health, psychological and social problem of the current era. According to the 2012 UN annual report, there were 230 million substance abusers aged 15-64 around the world, i.e. 5% of the entire world population (at least once in 2010). Among these 16 million (4%) are opiate users (1). In Iran, opiates are the most commonly used substances (2).

Substance abuse and dependence inflict serious social, economic, political, cultural, and health damages upon societies. Examples are communicable diseases like hepatitis and AIDS; psycho-social diseases like increasing addiction-related crime rates such as theft, murder, self-immolation, domestic violence, child abuse, and increasing rates of divorce and declining academic performance of children of addict parents (3).

Therefore, taking into account the global costs and hazards inflicted upon the individual, society and economy cost-effective modes of treatment need to be assessed for substance abuse and addiction (4). In recent years we have witnessed many developments in the field of substance abuse disorder treatments,

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such as pharmaceutical, psychological and social interventions (5). Treatment goals emphasize on three items: first, discontinuing physical dependence on drugs; second, discontinuing psychological dependence on drugs, psychosocial rehabilitation and reducing the non-physical outcomes of abuse, like anxiety & depression and improving quality of life; and eventually the prevention of relapse (6). Addiction to opiates is a chronic disease that is often associated with a psychological disorder as well. Mood disorders and most commonly depression are among the most common first-hand disorders associated with addiction, based on the 'Diagnostic and Statistical Manual of Mental Disorders, 5th Edition' (7). The prevalence of depression in these individuals is approximately 50-60% and mild depression is seen in approximately 10% (8). Depression is extremely common among the addict population and in many cases matches the criteria of major depressive disorder (9).

Different studies have been conducted on the etiology of addiction and relapse after treatment. One such factor that has been addressed many times is stress (10). The following stress signs have been observed at individual level: anxiety, depression, nervous tension, insomnia, sexual disorders, reduced hearing, fatigue, reduced attention and self-care, memory loss; psychosomatic disorders such as digestive and cardiovascular disorders, chronic headaches, gastroenteritis, colitis, dyspnea. Nowadays, stress is part and parcel of our daily lives and unavoidable. The aforementioned studies emphasize that stress itself does not threaten our health behavior, but the way we assess and cope with it does (11). In other words, coping is an important balancing variable in the relationship between stress and its outcomes such as anxiety, depression and stress (12). Group therapy is widely accepted mode of psychosocial rehabilitation and therapy in which constructive interactions take place between the members and the trained leader. Help is offered to the members by helping them take responsibility for their own emotions, by encouraging them to focus on reality and the consequences of their ongoing behavior, and to understand their thoughts (13). William Glasser is one of the most well-known therapists of addiction. In his psychosocial rehabilitation method, which is called Reality Therapy, he insists on confronting reality, taking responsibility and morally judging right and wrong behavior (14). This approach underscores the individual's freedom and responsibility and declares behavior as a responsible choice that is made by the individual, which significantly affects his mental health. The difference between healthy and unhealthy individuals lie in their sense of responsibility, living in the present, making informed choices, the power to control problems and being aware of their true needs (15).

Glasser's reality therapy is based on the subjects' capability in focusing on their needs through a rational and logical process (16). Glasser proposes 5 basic needs and recognizes them as influential in creating adaptation in the subjects. These needs are love, power, fun, freedom and survival. In Glasser's opinion humans create images in their minds to fulfill their innate needs (17-19). In Glasser's words, these images are collected in a personal photo album. The photo album is the world in which we live in and in which we fulfill our dreams. He names this world as the world of desires or the qualitative world. This world includes expectations, perspectives of success and opportunities for fulfilling our needs. In other words, through the process of fulfilling our needs, we are constantly creating a qualitative world for ourselves (20). Moreover, Glasser believes that the overall behavior consists of 4 elements that are inseparable and that occur simultaneously. These four elements are activity, thinking, feeling, and physiology. In reality therapy the treatment is in fact a type of training or special efficiency that thrives to teach the subject, in a short time, that which s/he should have learned during her/his natural development (19).

Reality therapy (RT) is considered one of the most recent counseling and psychotherapy techniques for psychiatric rehabilitation, and is based on the choice and control theory. It declares that the reason behind psychological problems lies in one's choices and irresponsibility toward meeting one's needs. In this therapy the subjects are encouraged to meet their essential needs by making better choices (21,22). In fact, the main purpose and approach of RT is to help people become aware of their needs, to monitor their behavior and make appropriate choices. Therapists believe that the basic problem with most clients is their unsatisfactory or unsuccessful relationships with the people they need (21,22). Hermann examined the effect of RT on substance abusers using the self-goals questionnaire in the second, fourth and sixth weeks. The changes reported by the substance abusers following the therapy sessions were increased self-esteem, increased awareness toward taking responsibility for one's own behavior, learning how to communicate through friendly methods rather than

applying exploratory-psychological methods. Moreover, the results of the MMPI test also showed reduced negative signs in subjects and control over life at the time of discharge (23). Group reality therapy is effective in patient compliance who suffer from chronic pain disorders (24). Furthermore, the effectiveness of RT has been proven in the following: reduction of identity crisis in incarcerated crime victims, increased self-concept in school and university students, reduction of depression, prediction of change in relationships and self- esteem and reduction of anxiety and stress (25-27).

In recent years, mental health specialists and medical & educational institutes in developed countries have created, tested and experienced different theories, models and methods for preventing and treating addiction and psychosocial rehabilitation methods for preventing its relapse. Among these are cognitive, cognitive behavioral and emotional behavioral group therapy. The effectiveness of all these types of therapies has been examined too. However, to our knowledge, domestic studies have not investigated the effectiveness of reality therapy in reducing anxiety, stress and depression yet. Hence, we sought to investigate the latter subject in reducing addicts' negative emotions.

Methods

This was a quasi-experimental study of pretest-posttest design, with a control group. The dependent variable of the test group was group RT and the dependent variables were signs of stress, anxiety and depression. The study population consisted of all addicts attending Tehran's 'Neda' Rehab Clinic in 2013. Sampling was done in two stages. Purposive sampling was done in the first stage. In the second stage randomization was applied; 40 subjects were selected from those who had completed the DASS-21 questionnaire and scored average and above (in the pretest). They were then randomly assigned to the test and control groups, each consisting of 20 subjects. The intervention i.e. group RT for 12 sessions was carried out for the test group. One week after the sessions were over both test and control groups completed the DASS-21 questionnaire (posttest). The data were analyzed with SPSS software, and described with descriptive statistics and analysis of covariance (ANCOVA). It controlled the pretest scores and evaluated the effect of the independent variable of posttest scores. The Depression, Anxiety, Stress Scale (DASS-21) was used in this study. The standardized DASS-21 scale consists of 21 questions; every 7 questions are aimed at measuring symptoms of depression, anxiety & stress. A Likert scale is used with the following answers: never, sometimes, often & almost always. The lowest and highest scores attainable in each item are 0 and 3. The grading of the scale is based on the overall scores obtained in each dimension of stress, anxiety and depression; 0-4: normal, 5-11: moderate, >12: severe.

Antony et al applied the confirmatory factor analysis to the scale and again found the three factors of Depression, Anxiety and Stress (DAS). They found that 68% of the overall scale variance was measured by these three factors. The special values of the stress, anxiety and depression factors in the aforementioned research were 9.07, 2.89, and 1.23 respectively; and the Cronbach's α for each was 0.97, 0.92 and 0.95 respectively. Antony et al also calculated the correlation coefficients between the scale's factors, the results of which were as follows: 48% between stress and depression, 53% between anxiety and stress, and 28% between anxiety and depression (28). The validity of the scale has been examined in Iran by Samani & Jokar. The reliability of DAS was 80%, 76% and 77% respectively; and Cronbach's α was 81%, 74% and 78% respectively. Divergent, convergent and construct validity (factor analysis) were also examined (29). As ethical consideration, informed consent was obtained from participants and was assured their information will remain confidential.

Results

The descriptive statistical indices of the test and control groups, before and after the test, have been presented in the following table. ANCOVA was used to examine the difference in means (pretest and posttest) and to control the pretest scores. Before performing this test some of its assumptions were evaluated. The results of the assumptions and the ANCOVA of the test group have been presented separately.

According to the table (1) the means of the test group differ in the pretest and posttests; the participants' stress had reduced after the group RT. Levene's test was performed for the stress variable, and showed that the variances of the dependent variable's error were equal in the two groups.

Table 1. Mean and standard deviations of the groups for the stress variable

Group	Pretest		Posttest	
	Mean	Standard deviation	Mean	Standard deviation
Test	14.48	1.82	8.21	1.18
Control	14.88	1.89	14.93	1.90

To examine the significance of this difference and to control the effect of the pretest we performed the ANCOVA. It was performed to prove its important assumptions, the summarized results of which are displayed in table (2).

Table 2. Analysis of covariance for the stress variable

Source of change	Total square roots	Degree of freedom	Mean square roots	F value	P value	Eta
Covariance	13.58	1	13.58	6.06	0.23	0.13
Test group	182.28	1	182.28	81.37	0.00	0.66
Error	85.23	38	2.24			

The ANCOVA table shows that, as a covariant variable in the pretest, stress did not have a significant effect on the posttest (F=6.06; P=0.23). As shown in the table, the grouped variable (independent) has created a significant change in the group, which explains the 66% change in the dependent variable. Overall, the table shows that the group RT had a significant effect on reducing stress in the addicts under study: F= 81.37; P<0.01.

Table 3. Mean and standard deviations of the groups for the anxiety variable

Group	Pretest		Posttest	
	Mean	Standard deviation	Mean	Standard deviation
Test	14.52	1.93	7.29	1.02
Control	13.89	1.86	13.58	1.85

According to the table (3) the means of the test group differ in the pretest and posttests, meaning the participants' anxiety had reduced after the group RT. Levene's test was performed for the anxiety variable, and showed that the variances of the dependent variable's error were equal in the two groups. To examine the significance of this difference and to control the effect of the pretest we performed the ANCOVA. The table (4) shows that, as a covariant variable in the pretest, anxiety did not have a significant effect on the posttest (F=2.70; P=0.34). As shown in the table, the grouped variable (independent) has created a significant change in the group, which explains the 63% change in the dependent variable. Overall, the table shows that the group RT had a significant effect on reducing anxiety in the addicts under study: F= 81.89; P<0.01.

Table 4. Analysis of covariance for the anxiety variable

Source of change	Total square roots	Degree of freedom	Mean square roots	F value	P value	Eta
Covariance	5.35	1	5.35	2.70	0.34	0.12
Test group	162.15	1	162.15	81.89	0.00	0.63
Error	75.24	38	1.98			

According to the table (5) the means of the test group differ in the pretest and posttests, meaning the participants' depression had reduced after the group RT. To examine the significance of this difference and to control the effect of the pretest we performed the ANCOVA.

Table 5. Mean and standard deviations of the groups for the depression variable

Group	Pretest		Posttest	
	Mean	Standard deviation	Mean	Standard deviation
Test	15.58	1.64	8.59	0.87
Control	13.78	1.52	13.83	1.61

Levene's test was performed for the depression variable, and showed that the variances of the dependent variable's error were equal in the two groups. The ANCOVA table shows that, as a covariant variable in the pretest, depression did not have a significant effect on the posttest (F=4.45; P=0.21) (table 6).

Table 6. Analysis of covariance for the depression variable

Source of change	Total square roots	Degree of freedom	Mean square roots	F value	P value	Eta
Covariance	8.56	1	8.56	4.45	0.21	0.14
Test group	158.53	1	158.53	82.56	0.00	0.67
Error	73.31	38	1.92			

As shown in the table (6), the grouped variable (independent) has created a significant change in the group, which explains the 67% change in the dependent variable. Overall, the table shows that the group RT had a significant effect on reducing depression in the addicts under study: F=82.56; P<0.01.

Discussion

Based on our results, the intervention significantly reduced the aforementioned conditions in the test group, as opposed to the control group. Our results are in line with previous studies that have evaluated the effect of RT on addicts. Hermann studied the effect of RT on substance abusers using the self-goals questionnaire in the 2nd, 4th and 6th weeks. The changes pointed out by the participants during the therapy sessions were: increased self-esteem, increased awareness toward taking responsibility for one's own behavior, learning human-friendly communication instead of applying exploratory-psychological methods (23). Vafaee-jahan et al assessed the effectiveness of RT in improving substance abusers' therapeutic indices. According to them, adding RT to other treatment and rehabilitation program, improve Treatment process of addicts and it's outcomes (30).

In the group therapy, the patient not only learns from the healer, but also learns from his/her group-mates, which is important, treatment-wise. Social learning or developing basic social skills is an important factor in psychosocial rehabilitation. The healer teaches his/her patients to pass on the information they have gained in different fields such as health concepts, mental disorders, recommendations and guidelines on life and its difficulties to others (31). Many patients think they are the only ones with problems. This feeling of uniqueness aggravates their social isolation. In group therapy however, the members become socially linked to each other upon learning their similarities (32). Although the feeling of generalization alone cannot be effective in rehabilitation, during the initial phases the group tries to recruit/absorb members and become more coordinated in its group-work, so generalization and hope become especially significant (32). A study examining the effect of RT-based group counseling on identity crisis among adolescents proved it to be effective. Moreover, it showed no difference in effect in different genders (21). Other similar studies have been conducted, all of which indicate the effectiveness of this method in reducing problems associated with adolescents' identity crisis, anxiety, mental health and sense of happiness. Psychosocial rehabilitation also helped improve their quality of life and increased their social competencies and interpersonal relationships (33). Another study investigating the efficacy of RT group therapy in treating anxiety found this method to be effective in reducing anxiety, unhealthy thoughts and perspectives and improving interpersonal relations among teenagers (34). Furthermore, domestic and international studies conducted in the field of RT have shown the effectiveness of this mode of psychosocial rehabilitation in a wide range of fields such as improving public health (35), boosting self-esteem (36), self-concept and decision-making (37), and anxiety reduction (34), all of which correspond with our findings. Cox & Klinger believe that the relation between goals and cognition, emotion, imagination and behavior are important in interventional counseling. According to them, cognitive, emotional, and behavioral impairments are closely related to goal achievement (38). In other words, the greater the difficulties among the path of goal achievement, the more cognitive, emotional, and behavioral impairments prevail. Regarding the depression, anxiety or addiction, interventional counseling needs to examine and intervene in the process of goal achievement (39).

Conclusion

Based on our findings, group Reality Therapy as psychosocial rehabilitation has positive and significant effects on addicts' mental health. Hence,

we recommend further investigation into the concepts of the RT theory for helping addicts. Furthermore, we recommend teaching the principles and techniques of this theory to families to expand the society's mental health and help improve the status of substance abusers. The advantages of group psychotherapy and rehabilitation such as member interaction, modeling etc. double in comparison to individual psychotherapy when approaches are applied in group form. In fact, as a result of the members' interaction with each other, and through self-disclosure, support, empathy, and a feeling of mutual understanding they can reach a better understanding of themselves, their problems and cope better with them.

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References

1. UNODC. World drug report 2012. New York: United Nations Publications, 2012 9211482569.
2. Mokri A. Brief overview of the status of drug abuse in Iran. Arch Iranian Med. 2002;5(3):184-90.
3. West R, Brown J. A Theory of addiction. Second Edition ed. Chichester, UK: John Wiley & Sons; 2013.
4. Stimson GV, Fitch C, Rhodes T. The Rapid Assessment and Response Guide on Injecting Drug Use:(IDU-RAR). Stimson GV, Fitch C, Rhodes T, editors. United Kingdom: World Health Organization; 1998.
5. McKay JR. Lessons learned from psychotherapy research. Alcoholism: Clinical and Experimental Research. 2007;31(s3):48s-54s.
6. Tuker J. Changing in addictive behavior. In: Tucker J, Donovan D, Marlatt G, editors. Changing Addictive Behavior: Bridging Clinical and Public Health Strategies. First ed. New York: The Guilford press; 2004. p. 3-44.
7. Association AP. Diagnostic and statistical manual of mental disorders, (DSM-5®). US: American Psychiatric Pub; 2013.
8. Ilgen M, Jain A, Kim HM, Trafton JA. The effect of stress on craving for methadone depends on the timing of last methadone dose. Behav Res Ther. 2008;46(10):1170-5.
9. Mc Govern MP, Fox TS, Xie H, Drake RE. A survey of clinical practices and readiness to adopt evidence-based practices: Dissemination research in an addiction treatment system. Journal of substance abuse treatment. 2004; 26(4):305-12.
10. Rohsenow DJ, Martin RA, Monti PM. Urge-specific and lifestyle coping strategies of cocaine abusers: relationships to treatment outcomes. Drug and alcohol dependence. 2005; 78(2):211-9.
11. Thoits PA. Social support as coping assistance. Journal of consulting and clinical psychology. 1986;54(4):416-23.
12. Tremblay PF, King PR. State and trait anxiety, coping styles and depression among psychiatric inpatients. Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement. 1994;26(4): 505-19.
13. Shaffer JB, Galinsky MD. Models of group therapy. 2nd ed. Englewood Cliffs, NJ: Prentice-Hall, Inc; 1989.
14. Mottern A, Mottern R. Choose wealth: A Choice Theory Based Financial Management Program. International Journal of Reality Therapy. 2006;25(2):16-22.
15. Wubbolding RE, Brickell J, Imhof L, Kim RI-z, Lojk L, Al-Rashidi B. Reality therapy: A global perspective. International Journal for the advancement of counselling. 2004; 26(3):219-28.
16. Glasser W. Reality Therapy: A New Approach to Psychiatry. New York: HarperCollins Publication; 2010.
17. Glasser W. Choice Theory: A New Psychology of Personal Freedom. New York: HarperCollins Publication; 2010.
18. Glasser W. Choice Theory. international Journal of Reality Therapy. 2006;25(3):43-5.
19. Zeeman RD. Glasser's Choice Theory and Purkey's Invitational Education--Allied Approaches to Counseling and Schooling. Journal of Invitational Theory and Practice. 2006;12:46-51.
20. Glasser W, Glasser C. Eight Lessons for a Happier Marriage. New York: HarperCollins Publication; 2009.
21. Kakia L. Effect of group counseling based on reality therapy on identity crisis in students of guidance schools. The quarterly journal of fundamentals of mental health. 2010;12(1):430-7.
22. Darabi M. Study of efficiency of teaching choice theory and reality therapy courses on increasing of intimacy among irreconcilable wives. Tehran: University of Social Welfare and Rehabilitation Sciences; 2007.
23. Hermann KS, Betz NE. Path models of the relationships of instrumentality and expressiveness, social self-efficacy, and self-esteem to depressive symptoms in college students. Journal of Social and Clinical Psychology. 2006; 25(10):1086-106.
24. Sees KL, Clark HW. Opioid use in the treatment of chronic pain: assessment of addiction. Journal of Pain and Symptom Management. 1993;8(5):257-64.
25. Elbaum B, Vaughn S. School-based interventions to enhance the self-concept of students with learning disabilities: A meta-analysis. The Elementary School Journal. 2001:303-29.
26. Wexler HK, Williams R. The Stay'n Out therapeutic community: Prison treatment for substance abusers. Journal of Psychoactive Drugs. 1986;18(3):221-30.
27. Durlak JA, Wells AM. Primary prevention mental health programs for children and adolescents: A meta-analytic review. American journal of community psychology. 1997;25(2):115-52.
28. Antony MM, Bieling PJ, Cox BJ, Enns MW, Swinson RP. Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. Psychological Assessment. 1998; 10(2):176-81.
29. Samani S, Jokar B. Reliability and Validity of the Short Form of the Depression Anxiety Stress Scales in Iran. Journal of Social and Human Sciences. 2007;26(3):65-77.

30. Vafaa'ei JZ, Sepehri Z, Salehi J. Comparing effectiveness of enrichment and enhancement of life and reality therapy to improve the therapeutic index of the drug abusers. Research in Clinical Psychology and Counseling. 2013;3(1):99-118.
31. Geraree G. Influence of group counseling with reality therapy approach on reducing youth identity crisis. Tehran: Allameh Tabatabaee University; 2001.
32. Latafati R. Influence of group's behavioral-cognitional modification on increasing of self-sufficiency among girl pupils with external control resource. Tehran: University of Social Welfare and Rehabilitation Sciences; 2004.
33. Raesi F. A survey on effect of group counseling on reducing identity crisis among girls teenagers of third and fourth district of Isfahan city. Tehran: Tarbeyat Moallem University; 2013.
34. Shafeeabadi E, Delavar A, Sedreepoosh N. Effect of group counseling with reality therapy approach on reducing anxiety among girl teenagers. J knowledge Res Psychol 2005;25:21-34.
35. Ebadian H. Examining the efficacy of Glasser's group counseling approach in intermediate schoolboys' public health status. Tehran: Allameh Tabataba'I University; 2006.
36. Moradi S, Ghanbari B, Sh'erbaf H. Effectiveness of Reality Therapy group on enhancing the self-esteem of students at Ferdowsi University of Mashhad. Psychological and Educational Studies. 2010;11(2):227-38.
37. Mason D, Palmer C, Duba D, Jill D. Using reality therapy in schools: Its potential impact on the effectiveness of the ASCA National Model. International Journal of Reality Therapy. 2009;29(2):5-12.
38. Cox W, Fadardi J, Klinger E. Motivational process underlying implicit cognition in addiction. In: Wiers R, Stacy A, editors. Handbook of implicit cognition in addiction. Thousand Oaks, California: SAGE; 2006. p. 253-66.
39. Trusty J. African Americans' Educational Expectations: Longitudinal Causal Models for Women and Men. Journal of Counseling & Development. 2002;80(3):332-45.