

## The Effectiveness of Group Logotherapy in Increasing Resilience and Decreasing Depression among Individuals Affected by Substance Abuse in Tehran

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### Abstract

**Introduction:** Substance use disorder is one of the chronic and often recurrent disorders that predispose a person to serious problems, such as AIDS, hepatitis and other chronic disorders. This study aimed to determine the effectiveness of group logotherapy in increasing resilience and decreasing depression among individuals with addiction in Tehran.

**Method:** Semi-experimental research method with pre-test, post-test design and control group was utilized in this study. The statistical population of this study included all individuals affected by substance abuse referred to drug rehabilitation clinic in Tehran. The sample consisted of 36 individuals with substance abuse; whose depression and resilience scores were as much as two standard deviations lower than the mean. Subjects were randomly assigned to experimental and control groups. Beck Depression Inventory and Caner-Davidson's Resilience Questionnaire were adopted. Ten 90-minute group logotherapy sessions were held for the experimental group. Data were analyzed using multivariate covariance method.

**Results:** The findings of this study indicated that group logotherapy, increased resilience and decreased depression in the experimental group.

**Conclusion:** Logotherapy can be considered as a new way of introducing purposefulness and meaningfulness in life. It increases the level of resilience and increase happiness for patients with substance abuse through assisting them in discovering their real self, selecting individual values, and finding the meaning of life.

**Declaration of Interest:** None.

**Key words:** Group logotherapy, resilience, depression, substance abuse.

### Introduction

Substance use disorder has become a major global concern; following nuclear crisis, overpopulation, and environmental pollution, it has been the fourth issues of concern among many experts (1). Substance dependence and abuse, as the most serious social problem in Iran, has different sociological, psychological, legal, economic, and political dimensions. According to the experts, addiction is the cause of many social injuries. Majorities of drug addicts are men and they are in the role of

addicted husbands or fathers, are considered as a serious threat to individual and marital life of women and a serious harm to family nature (2). According to the estimates issued by the Presidential Drug Control Headquarters on April 2013, the prevalence of substance dependence and abuse in Iran was about one million and 325 thousands addicts and that there are about 700 thousand occasional drug consumers, which can also be added to this figure (3).

Depression is one of the most important psychiatric disorders with a high prevalence among those with substance abuse. In addition to economic problems, it causes many psychological consequences, including suicide. The previous have indicated that there is a significant relationship between drug dependence and depression disorders in individuals committing suicide (4, 5). Additionally, resilience is one of the variables associated with the occurrence, progression, and relapse of substance abuse. Resilience is defined as one's successful resistance against threatening and challenging circumstances. Resilience does not merely refer to resistance against injuries or threatening conditions (passive mode in dealing with dangerous conditions); however, it is an individual's active participation in various settings and circumstances. Hence, it can be claimed that resilience is an individual's ability to establish a bio-psychological balance in a dangerous situation (6). As Luthar (2003), resilience refers to the process of positive adjustment despite the life problems, which integrates internal and external resources and leads to increased potential to deal with problems. Resilience is correlated with the health and physical aspects in individuals (7). Resilient individuals do not show self-destructive behaviors, they are emotionally calm, and they are able to change stressful conditions. According to Muston (2001), when disaster strikes and basic human needs are met, then resilience arises. As a result of the resilience, the adverse effects are corrected or moderated or even disappeared (8). Resilience can be assumed as a product of individual and environmental factors. Therefore, the resilience can be enhanced through strengthening the protective factors in individuals' environment and developing their personal skills, which can also affect an individuals' mental health (9).

According to Frankl's Logotherapy theory, the pursuit of meaning for one's life is considered an essence of life for individuals. It highlights the following fundamental principle: comfort passes through the path of difficulty and suffering. In other words, life is meaningful under any circumstances and the main

motivation for living is desire to find meaning in one's life (10).

Frankl believed that the hidden potential should be raised through determining the future and ultimate goals (11). The meanings are constantly changing, but they never go away. It should be taken in mind that it is possible to find the meaning of life even in the face of a disappointing situation. If a person finds the meaning for which he is looking, he is ready to suffer, sacrifice, and even, if necessary, put his life on it. In contrast, if there is no meaning, one tends to commit suicide, even if all his needs are met in all aspects (12). Those who understand the meaning of life in an accident are physically and psychologically more healthy than those who do not experience such an event (13).

Previous studies have found the positive effect of logotherapy on psychological and physical health. For example, logotherapy is effective in reducing a feeling of meaninglessness in patients with paralysis (14), reducing depression in students (15), treating the underlying stresses in individuals with post-traumatic stress disorder (16), reducing the suffering of adolescent patients with advanced cancer (14), and reducing depression in adolescent patients (17).

Considering the above-mentioned points and the positive effects of logotherapy on improving psychological health, interpersonal relationships as well as emphasis on purposeful and meaningful life, the present study seeks to investigate the impact of group logotherapy on increasing resilience and reducing depression in individuals with substance abuse.

The results of this study can be used to plan for the addiction prevention and to reduce the recurrence rate of substance consumption.

### **Methods**

This research is a semi-experimental study used a pre-test, post-test with control group design.

R	Experimental	T1	X	(Group T2 logotherapy)
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The statistical population of this study included all individuals with substance abuse in Tehran, who had referred to drug rehabilitation clinics

in 2017. Cohen’s Table was used to estimate the sample size. Based on given alpha ( $\alpha=0.05$ ), effect size ( $d = 0.50$ ), test strength (0.90), probability of type II error (0.10), the sample size was estimated to be 18 per group. The statistical sample of this study consisted of 36 individuals with substance abuse who were randomly assigned to experimental and control groups. To assign the participants, the individuals with substance dependence and abuse, whose resilience score were at least two standard deviations below the mean and whose depression scores were two standard deviations below the mean, were randomly assigned to two

experimental and control groups after obtaining informed consent. Inclusion criteria consisted of gender (male), referral to drug rehabilitation clinics, background of consuming drugs for at least one year. The exclusion criteria also included history of psychological disorders such as major depression. Beck Depression Inventory (1972) and Conner-Davidson Resilience Questionnaire (2003) were used to measure dependent variables.

The experimental group received 10 sessions of group logotherapy during a course of 5 weeks (2 sessions per week) based on Frankl's Logotherapy Theory (18) as follows:

Table 2. Group Logotherapy Sessions

Sessions	Goals	Sessions	Goals
1	Defining the goals and rules of the group, Introducing the group members to each other and to the counselor, providing information on logotherapy, questions on logotherapy, explaining the skill of "awareness of values", the need for meaning in life and group work "What I want to be." Homework: discovering creative values	6	Matching objectives with values, discussing the progress and problems with homework, analyzing goals to fit with personal values (short-, medium-, and long-term objectives), explaining the importance of experiencing all one’s values by himself Homework: Participants analyze their goals and become aware of their abandoned values.
2	Believing and accepting oneself and recognizing one’s characteristics; considering spiritual freedom as one of the dimensions of human existence, clarifying creative values, explaining the skill of "satisfying achievements" Homework: Completing the discovery of creative values and the discovery of empirical values	7	Determining new goals, discussing progress and problems with homework, expressing oneself; identifying new goals for abandoned values (short-, medium-, and long-term objectives). Discussion: Comments on the topic of identifying new goals! The participants determine and evaluate a short-, medium-, and long-term goal.
3	Clarifying empirical values; discussing progress and problems of the homework outcomes in group; recent events group practice: People and positive persons Group practice: Artistic representations, Discussion: Autonomy versus dependency Homework: To complete exploring empirical values Homework: Begin to explore attitudinal values.	8	Planning for achieving goals, group discussion on homework outcomes: each participant shares his new goals with others, plans for achieving goals (short-, medium-, and long-term objectives). A. Planning, B. Implementation, C. Evaluation, D. Adjustment and Modification Discussion: Opinions related to planning in order to achieve goals. Homework: Participants provide an achievement plan for each of their short-, medium-, and long-term goals. Homework: Writing the first part of one’s life scenario (from birth to present)
4	The clarification of attitudinal values. Discussion about progress and problems with the homework Group practice: wise sayings Group practice: My death announcement, Homework: Completing the discovery of attitudinal values Homework: Establishing a hierarchy of values.	9	Analysis of the current situation; Group discussion; Each participant shares three goals with others, for which he has some plans to accomplish. Group practice: strengths and shortcomings; Group discussion: We are in a position to choose the change or no change. Discussion: Modifying the strengths and shortcomings Homework: Describing your strengths and shortcomings Homework: Listing your strengths and shortcomings in the plans Homework: Write the second part of one’s life scenario (from now on to the future).
5	Focusing on the goals of discussing progress and problems with homework; Expansion: The hierarchy of values; Group practice: Setting goals, Group practice: Different Perspectives towards Goals Group Discussion on two tasks of accomplished goals	10	Summarizing the meetings and implementation of the post-test

A multivariate covariance analysis (MANCOVA) was used to analyze the data. To facilitate data analysis, the SPSS Software version 18 was used.

### Results

As shown in Table 2., the mean and standard deviation of the resilience score for the

participants in the experimental group were 31.71 and 9.31 in the pre-test phase, and 46.91 and 14.006 in the post-test phase, respectively. The equivalent statistical indices for the control group were 31.44 and 9.79 in the pre-test phase and 32.22 and 9.31 in the post-test, respectively.

Table 2: Descriptive statistics of participants' resilience and depression scores in pretest and posttest

Source of change	Group	Stage	M	SD	Minimum	Maximum
Resilience	experiment	Pre-Test	31/71	9/31	16	47
		Posttest	46/91	14/006	30	74
	control	Pre-Test	31/44	9/70	18	53
		Posttest	32/24	9/31	21	55
Depression	experiment	Pre-Test	33/31	6/51	22	37
		Posttest	23/65	5/14	11	35
	control	Pre-Test	32/78	6/82	24	38
		Posttest	32/22	5/68	22	37

Furthermore, the mean and standard deviation of the depression score for the participants in the experimental group were 31.31 and 6.51 in the pre-test phase, and 23.65 and 5.14 in the post-test phase, respectively. The equivalent statistical indices for the control group were 32.75 and 6.82 in the pre-test phase and 32.22 and 5.68 in the post-test, respectively.

Levin's test was used to check the homogeneity of the variables.

Table 3. Results of Levine's test for homogeneity analysis of dependent variables

Source of change	F	df1	df2	Sig.
resilience	6/34	1	34	0/25
depression	4/35	1	34	0/32

The results showed that Levin's test was not significant in terms of the resilience ( $F = 6.34$ ;  $P=0.25$ ) and depression ( $F=4.35$ ;  $p= 0.33$ ).

Therefore, the variance of the experimental and control groups were not significantly different with regard to resilience and depression; thus, the assumption indicating the homogeneity of the variances was confirmed. To test the homogeneity of the covariance matrix, Box test was employed (Table 4).

Table 4. Results of homogeneity analysis of covariance matrices

	Box's M	F	df	Sig.
Equality of Covariance Matrices	3/723	0/82	3	0/391

Considering that the F-value for the Box test is not significant, the covariance matrices of the variables are not significantly different. Hence, the assumption of homogeneity of the covariance matrices is observed in this study.

Table 5. Result of MANCOVA regarding the mean resilience and depression scores

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's Trace	0/835	42/29	2	25	p <0/001	0/61
Wilks' Lambda	0/327	42/29	2	25	p <0/001	0/61
Hotelling's Trace	3/034	42/29	2	25	p <0/001	0/61
Roy's Largest Root	3/033	42/29	2	25	p <0/001	0/61

Table 5 indicates that there is a significant difference between experimental and control groups in post-test and pre-test at  $p < 0/001$ . Accordingly, it can be claimed that there is a significant difference between the two groups in terms of at least one of the dependent variables (i.e., resilience and depression) in the

post-test phase. To find out the difference, two univariate-covariance analyses were carried out and the results are listed in Table 6. The effect size coefficient shows that 61% of the difference between the two groups can be explained by the experimental intervention.

Table 6. Results of ANCOVA analysis in MANCOVA test regarding the mean post-test scores of resilience and depression

Dependent Variable	Source of change	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared	Eta
resilience	Pre-Test	38/60	1	38/60	0/638	0/43	0/027	
	group	1529/83	1	1529/83	25/51	0/001	0/56	
	Error	410/91	28	15/75				
depression	Pre-Test	116/29	1	116/29	9/745	0/022	0/161	
	group	2339/85	1	2339/85	52/50	0/001	0/628	
	Error	897/90	28	32/03				

According to the above table, there is a significant difference between the experimental and control groups in the post-test in terms of the variable resilience at  $p < 0.001$ . The effect size coefficient suggests that 56% of the difference between the two groups can be explained by experimental intervention. Also, there is a significant difference between the experimental and control groups in the pre-test in terms of the variable depression at  $p < 0.01$ . The effect size coefficient suggests that 62% of the difference between the two groups can also be explained by experimental intervention.

### Discussion

This study was to determine the effectiveness of group logotherapy on decreasing depression and increasing resilience of individuals with substance abuse. The findings of this study confirmed that group logotherapy significantly increases resilience and decreases depression in individuals with substance abuse. With regard to the positive effect of logotherapy on increasing resilience,

the findings of this study were in a similar vein with the findings obtained by Robat Mili, Mehrabizadeh, Zargar and Karimi (19); Gholami, Pasha, and Soudani (20), Mehri Nezhad and Rajabi Moghaddam (21), Hosseinian, Soudani, and Mehrabi Zadeh (18). Regarding the positive effect of logotherapy on reducing depression, a number of other studies (e.g., Kyung AK, Shin JK, Mi-Kyung S, Mi-Jeong K, (22); Blair, (17); Rezaei, Refahi, & Ahmadi Khah, (23); and Mehri Nezhad & Rajabi Moghaddam, (21) concluded similarly. Depression occurs when one fails in the pursuit of meaning in life events. Logotherapy is an effective way to change the experience of depression in the contemporary world. The following tenet of logotherapy is unique: "Under any circumstances, one can achieve conceptual meaning of merit and qualification through accepting the life responsibility and realizing the search for meaning." (24). have a goal or meaning in life has a positive correlation with mental health and well-being and a reverse correlation with alcohol consumption. An

increase in meaning of life may be associated with important aspects of treating patients with cocaine and alcohol dependence. Recurrence of the disease can be predicted by 6 months later due to lack of meaning in one's life (25). Lack of meaning is associated with neuroticism, depression and anxiety symptoms, and ineffective knowledge (26).

To explain this result, it can be argued that logotherapy can be effective in the treatment of chronic diseases; Life becomes meaningful for individuals when they can consider a model or a goal in their lives (27). On the other hand, logotherapy can be considered as a new way of introducing purposefulness and meaningfulness in life. Logotherapy is a philosophical approach to individuals and their existence, which deals with important life themes and issues such as: the meaning of suffering, existential gap, death and life, freedom and responsibility towards oneself and others, hope and disappointment, resilience and lack of resilience, and searching for meaning and dealing with meaninglessness. This approach allows people to see beyond the everyday problems. From Frankl's viewpoint, one of the roots of vulnerability for individuals is their meaninglessness and purposelessness. The search for meaning and goal brings about the perfection and growth of human personality and eliminates mental disorders (28).

All in all, it can be concluded that the group logotherapy is a suitable and appropriate treatment for individuals with substance abuse. On the other hand, it seems that the provision of comprehensive and detailed programs to prevent and treat depression and increase resilience as well as rich knowledge in the field of logotherapy can be highly effective for individuals with substance abuse and play the role of primary prevention in the community. Each study has a number of limitations beyond the control of the researcher and this study was not an exception. Some limitations of this study was the participants' level of education, mental health status and religious beliefs, duration and type of addiction, and the number of their attempts for quitting drugs. Also, given that the randomization has not been completed and the initial selection has been screened, it is better to be cautious in generalizing the findings

Regarding the implementation of research findings, the counselors, psychologists and drug rehabilitation clinics are recommended to hold logotherapy sessions, if possible, in order to reduce the consequences of addiction in the two dimensions of resilience and depression. The drug rehabilitation centers or other social service organizations are suggested to introduce the patients to the counseling centers so that the experts can teach them the concepts relevant to logotherapy.

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