



The Effectiveness of Motivational Psychotherapy on Reducing Cognitive Distortions and Readiness to Commit Suicide in Adolescents

Hassan Rahmanpour ¹, Asiah Takhni Roudi ², Hossein Sahebdel ³

¹ M.A. in Geography, Club of Elites and Young Scholars, Islamic Azad University, Torbet Heydariyeh Branch, Torbet Heydariyeh, Iran

² Master of Geography and Secretary of Education of Khaf city - Iran

³ Assistant Professor, Consulting Group, Qaynat Branch, Islamic Azad University, Qaynat, Iran

Abstract

The present study was conducted with the aim of investigating the effectiveness of motivational psychotherapy on reducing cognitive distortions and readiness to commit suicide in adolescents. The research method was quasi-experimental with a pre-test-post-test design and control group. The statistical population of this research included all male students of the first secondary level of Qain city in the academic year of 2021-2022. In order to select the sample group, the available sampling method was used along with the simple random method. In this way, 30 male students of the second secondary level of Qain city, who met the criteria for entering the study (56 people), were randomly selected and were placed in two experimental and control groups through random replacement (15 people in each group). The criteria for entering the study were: 1. Obtaining a high score (one standard deviation above the average) in the questionnaire of cognitive distortions. 2. Being a volunteer. The research tools included a cognitive distortions questionnaire and a suicide attempt questionnaire, which was first performed on both experimental and control groups as a pre-test, and then the experimental group was subjected to behavioral psychotherapy (independent variable) (ten sessions of 90 minutes in ten week) and the control group did not undergo any intervention. In the end, a post-test was conducted from both groups. Covariance test was used to analyze the data. Their results showed that motivational psychotherapy significantly reduced cognitive distortions and suicide readiness in adolescents. The results of this research can open the way for counselors and psychotherapists to help teenagers.

Keywords:

cognitive distortions, readiness to commit suicide, motivational psychotherapy, adolescents

* **Corresponding author:** Hossein Sahebdel, Assistant Professor, Consulting Group, Qaynat Branch, Islamic Azad University, Qaynat, Iran

Email-Address: pcsahebdel1365@gmail.com

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1. Introduction

Suicide is recognized as a major public health problem throughout the world and is a major concern and problem for psychiatrists, psychologists and other professionals who are involved in some way with the psychological health and well-being of young people (Levi Blaze et al., 2019). Suicidal behaviors are one of the basic harms in the field of mental health (Beck, 2020). One of the most important prerequisites for suicidal behavior is suicidal thoughts, which is an important predictor of complete suicide (Levi Blaze et al., 2019). The statistics published by the World Health Organization and the health organizations of the countries have increased the global concern about the suicide rate of young people. Psychological theories generally pay attention to psychological and individual factors, and cognitive theory considers suicide as an example of problem-solving behavior. Based on the definition of the National Institute of Mental Health, suicide is a conscious attempt to end a person's life, which may turn into action or remain only in an emotional form (Deicher et al., 2010; Nock et al., 2008). In our country, the study of suicide statistics shows that this phenomenon has become a social problem, especially among women and young people, and if a solution is not thought of, its consequences and effects will have more destructive effects day by day, not only on It will affect the individual, but also the family and the people around him (Salehi et al., 2019). One of the variables that can have an effect on the readiness to commit suicide is the presence of cognitive distortions. Cognitive distortions are irrational thoughts that cause anxiety, problems in relationships, and mental disorders (Katona et al., 2015). Cognitive distortions are multifaceted and complex concepts, cognitive distortions are negative biases in thinking that make people vulnerable to mental disorders (Beck, 2020). Also, these distortions can lead to a large number of diseases and mental disorders. Many studies have proven the relationship between cognitive distortions and readiness to commit suicide (Nak et al., 2008). According to cognitive therapy theory, people's emotional and psychological problems originate from their cognitive distortions and ineffective beliefs (Prochaska and Norcross, 2018). From a cognitive point of view, in social interactions and the events that happen to him, he often faces cognitive distortions such as exaggeration, catastrophism, distortion, hasty conclusions, exaggerated generalizations, etc. (Beck et al., 1979) Therefore, he considers events to be the main cause of his discomfort and problems, while events by themselves cannot cause psychological problems in people; Rather, it is the ways of thinking and the style of processing information and giving meaning to events or the interpretation of events that creates such negative feelings and emotions in people (Skoll and Fox, 2019). According to the mentioned materials, it seems that dealing with cognitive distortions in teenagers can reduce their readiness to commit suicide and help to solve their problems. One of the important challenges facing counselors in the new era is the cultural differences of clients and the choice of treatment methods based on culture (Prochaska and Norcross, 2018). Since the common psychotherapy approaches were formed in a different cultural context compared to the native culture of Iran and their concepts are often not compatible with the cultural roots of Iranian society, in the present study, in order to help teenagers, a motivational psychotherapy approach was used to Applying a local and culture-based method, we will test the effectiveness of this new and local method. Concepts of motivational psychotherapy were first proposed by Sahibdel (2018). This theory, by using new concepts and special treatment techniques, has presented a suitable and useful method in the field of psychotherapy, which is rooted in the native culture of Iranian society and creates fewer cultural and social challenges than other approaches (Sahibdel and Tahan, 2022). Motivational psychotherapy emphasizes extensive changes in clients' lifestyles, and from this point of view, it is included in the category of extra-diagnostic treatments (Barlow, Allen and Cote, 2004). In this approach, instead of emphasizing pathology, emphasis is placed on creating motivation for change and clients are helped to achieve higher levels of mental health by changing their role in life and making extensive changes in their lifestyle (Qaysariet al., 2021). Motivational psychotherapy is unique in terms of saving time. Beyond a simple psychotherapy, this

approach emphasizes achieving higher levels of mental health and purposefulness and acquiring interpersonal skills (Sahibdel, 2019). Fakur et al. (2022) showed in their research that motivational psychotherapy can reduce the anxiety of children suffering from confrontational disobedience. Kayseri et al. (2021) showed in their research that motivational psychotherapy can reduce high-risk behaviors in teenagers. Motivational psychotherapy helps clients, in addition to getting rid of psychological problems, draw a better and more favorable path for their future and become useful people for society. This feature can distinguish motivational psychotherapy from other non-native approaches (Sahibdel, 2019). According to the mentioned materials, it seems that motivational psychotherapy can be a good native model to help teenagers. The present research tries to answer the question whether motivational psychotherapy can reduce cognitive distortions and readiness to commit suicide in adolescents or not.

2. Research method

The research method was quasi-experimental with a pre-test and post-test design with a control group. In this way, both experimental and control groups were pre-tested, and the experimental group was influenced by the independent variable, which is motivational psychotherapy in this research, and the control group did not receive any intervention. At the end of the sessions, a post-test was taken from both groups. The statistical population of this research included all male students of the second secondary level of Qain city in the academic year of 2021-2022. In order to select the sample group, the available sampling method was used along with the simple random method. In this way, 30 male students of the second secondary level of Qain city, who met the criteria for entering the study (56 people), were randomly selected and were placed in two experimental and control groups through random replacement (15 people in each group). The criteria for entering the study were: 1. Obtaining a high score (one standard deviation above the average) in the questionnaire of cognitive distortions. 2. Being a volunteer.

2.1. Research tool

2.1.1 Questionnaire of cognitive distortions

Cognitive distortions questionnaire was created by (Abdollahzadeh and Salar 2009) quoted in (Jozi Tehrani, 2013) with the aim of obtaining an easy tool to be aware of cognitive distortions used in daily life. This questionnaire contains 20 questions with 5 options that are graded on a Likert scale. This questionnaire measures 10 dimensions or cognitive distortions, which include; It's all or nothing, exaggerated generalization, mental filter, ignoring the positive, jumping to conclusions, macro-micro vision, emotional reasoning, should-be-better, labeling and personalization. Each of the questions is assigned a score from 1 to 5 depending on the answer, in which the option I completely agree is 1, I agree 2, I have no opinion 3, I disagree 4, I completely disagree 5; And only question number one is reverse scored from 5 to 1. Based on the scoring, each person who gets a higher score has more appropriate thinking, and whoever gets a lower score has used more cognitive distortions (Abdollahzadeh and Salar, 2019) quoted by (Jozi Tehrani, 2012). This test was standardized by (Abdollahzadeh and Salar, 2010) cited in (Jozi Tehrani, 2009) on the Iranian population, 151 women and 146 men, and the Cronbach's alpha coefficient was reported as 0.80.

Questionnaire on suicide attempts

This questionnaire was prepared and edited by (Khodabandeh et al., 2013). It has ten five-choice questions that are graded on a Likert scale (very much = 5; very little = 1). A higher score in this questionnaire indicates a greater tendency to commit suicide. The validity and reliability of this questionnaire was confirmed in the research of (Khodabandeh et al. (2013) and Cronbach's alpha coefficient was reported as 0.79 for this questionnaire.

2.1.2. Implementation method of research

After the random selection of test and control groups, the independent variable was implemented on the test group and during this time the control group did not receive any intervention. The procedures included ten sessions (each session, 90 minutes) of motivational psychotherapy (only on the experimental group). The motivational psychotherapy protocol was tested by Kayseri (2022) on teenagers and its results were reported as favorable. The description of these meetings (taken from Qaysari, 2022) is summarized in Table 1.

Table 1: Summary of treatment sessions

The title of the session	Session number
Getting to know and expressing the goals of the meetings, expressing expectations and focusing on the therapeutic relationship	1
Full self-description	2
Identify roles	3
Identifying lies, rooting, pathology	4
Identifying lies, rooting, pathology	5
Identifying lies, rooting, pathology	6
Education and conceptualization of the rich mind	7
Education and conceptualization of the rich mind	8
Implementation of personal circle techniques, facing the fear	9
Commitment to change	10

3. Findings

Data were analyzed using appropriate statistical tests; In the descriptive section, frequency distribution tables and graphs were used, and in the inferential analysis section, one-variable covariance analysis with a significance level of $p \geq 0.05$ was used. The sample group in the present study was 30 male students of the second secondary level of Qain city. The average age of the sample group was 17.32.

Table 2: Descriptive characteristics of subjects in dependent variables

The standard deviation	Average	At least	Maximum	Abundance	Groups	Indicators
63/11	01/48	30	65	15	The experiment	Pre-test cognitive distortions
86/10	13/47	29	67	15	Witness	
21/5	68/87	73	95	15	The experiment	Post-test cognitive distortions
65/9	37/46	31	66	15	Witness	
6/64	45/36	27	44	15	The experiment	Suicide attempt before the test
42/7	37/35	32	42	15	Witness	
55/3	13/16	12	22	15	The experiment	Attempted suicide after the test Indicators
65/8	28/33	29	48	15	Witness	

As the above table shows, the mean and standard deviation of the pre-test in the test and control groups are almost the same. Levin's test of homogeneity of variances was used to ensure the assumption of homogeneity of variances of two groups. The results are shown in the table below.

Table 3: Levin's homogeneity of variances test

Significance level	Degree of freedom 2	Degree of freedom 1	The ratio of F
0.1345	29	1	2.403

As can be seen in the table above, the significance level (0.1345) is greater than 0.005, and therefore the hypothesis of homogeneity of variances is established. Kalmogorov-Smirnov test was used to ensure the normality of distribution of variables.

Table 4: Kolmogorov-Smirnov test to check the normality of distribution of variables

Significance level	The value of the Kolmogorov-Smirnov statistic (z)	Variable
0.945	0.526	Cognitive distortions
0.577	0.780	Suicide

As can be seen in Table 3, all research variables have a normal distribution ($P < 0.05$).

First hypothesis: motivational psychotherapy is effective in reducing cognitive distortions of adolescents.

Table 5: Covariance analysis of the factor of cognitive distortions by removing the pre-test effect

Eta coefficient	Significance level	F	Mean square	Degrees of freedom	Set of squares	Statistical indicators
512.	000.	28.327	925.818	1	925.818	Pre-exam
597.	000.	40.025	1308.134	1	1308.134	Group
Eta coefficient	Significance level	F	Mean square	Degrees of freedom	Set of squares	Statistical indicators
512.	000.	28.327	32.683	27	882.449	Error
			Mean square	29	3024.300	Total corrected

As can be seen in the above table ($F=40.025$ and significance level, $P > 0.05$), it shows that motivational psychotherapy has significantly and with 99% confidence reduced the cognitive distortions of adolescents. Therefore, the research hypothesis is accepted and the null hypothesis is rejected. The value of the eta coefficient also shows that 59% of the changes were caused by the independent variable, i.e. motivational psychotherapy. Second hypothesis: motivational psychotherapy is effective in reducing suicide readiness in teenagers.

Table 6: Covariance analysis of the suicide attempt factor by removing the pre-test effect

Eta coefficient	Significance level	F	Mean square	Degrees of freedom	Set of squares	Statistical indicators
365.	002.	16.288	18.446	1	18.446	Pre-exam
358.	001.	15.088	216.048	1	216.048	Group
Eta coefficient	Significance level	F	Mean square	Degrees of freedom	Set of squares	Statistical indicators
			386.621	27	386.621	Error

365.	002.	16.288	Mean square	29	602.700	Total corrected
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As can be seen in the above table ($F=15.088$ and significance level, $P>05$), it shows that motivational psychotherapy has significantly and with 99% confidence reduced the level of readiness to commit suicide in teenagers. Therefore, the research hypothesis is accepted and the null hypothesis is rejected.

4. Discussion and conclusion

The results of the present study showed that motivational psychotherapy can reduce cognitive distortions and readiness to commit suicide in adolescents. This finding is in line with the research results of [Kaysari \(2022\)](#), [Kaysari et al. \(2021\)](#) and [Fekur et al. \(2022\)](#). In explaining these results, the following reasons can be put forward: participating in group meetings and increasing group actions and reactions and creating diversity in life can help improve the mental state of teenagers and create positive thinking in them. On the other hand, Glaser believes that the sense of responsibility and control and the proper satisfaction of needs, especially the need for love and belonging, which is satisfactorily fulfilled in the group, improves the individual's morale and creates favorable conditions ([Prochaska and Norcross, 2018](#)). Motivational psychotherapy uses the concepts of environmental mind, lie, four walls, selfishness and rich mind to help clients ([Qaysari et al., 2021](#)). In this approach, clients are helped to get a proper understanding of their life situation by fully describing themselves in the treatment session and also by doing homework. During the treatment, they realize how they describe themselves based on other people's mentalities and are caught in hard and resistant walls and realize how much they have harmed themselves ([Sahibdel and Tahan, 2022](#)). By describing themselves, they realize how much they are influenced by others and realize that changing and experiencing new roles is not as difficult as they thought before. With the help of the therapist, they break the false walls and achieve the mental state of "I can" ([Sahibdel, 2018](#)). In this research, by using the rich mind technique, which is rooted in Eastern philosophy and Iranian-Islamic mysticism, teenagers were helped to pursue bigger and more desirable goals in life and free themselves from trivial and unimportant issues. In the rich mind technique, it is believed that bigger concerns swallow smaller ones. Mental patients often suffer from absurd and pointless worries and cannot create big and healthy goals and concerns for themselves. They usually get caught up in absurd and contemptible topics ([Sahibdel and Tahan, 2022](#)). In the rich mind technique, clients are helped to pursue more desirable goals and view their problems from a higher height. They are able to solve problems by minimizing them. In this way, clients can overcome the hard and resistant four walls that are the result of their belief that I can't do it and experience a new world. They experience the ability to change and are able to replace the previous unhealthy role with a new one. The concept of lies in motivational psychotherapy is rooted in postmodern philosophy. In postmodern philosophy, truth is divided into two categories, including objective truth and subjective truth. Mental truth is the result of people's minds and has no external source ([Diacona, 2014](#)). Subjective truth in motivational psychotherapy is called a lie. Because it can be something other than this and it is not absolute. The participants in the current research realized the wrong and harmful beliefs about themselves by finding the roots of the lies. mental truths (lies) that were taken from the environment and were not absolute. But these mentalities trapped them in the framework of their current role and deprived them of the courage to change ([Sahibdel and Tahan, 2022](#)). Accepting mental illness as an absolute truth leads clients to the conclusion that they have no way out and they accept being caught in the terrible four walls of inability and incapacity, and surrender to it. They come to the conclusion that they are really sick and feel powerless to change. In motivational psychotherapy, clients are helped to understand that their beliefs about themselves and their illness are just a mental truth by using the principle of lies. In this way, clients can question everything they believed and who they are and what their characteristics are. This doubt is the starting point of change ([Sahibdel, 2018](#)). By gaining insight into lies and their pathology, the participants were able to gain a better perspective and make extensive changes in their lifestyles. They practiced loving themselves and were gradually able to eliminate the

traumatic parts of their role. Instead of directly changing thoughts, motivational psychotherapy changes the client's lifestyle and starts the change and confrontation from the place where it seems easier for the client. Therefore, in this approach, there is less resistance from clients. Unlike cognitive-behavioral treatments, in the motivational psychotherapy approach, the direct change of thoughts is not the goal of treatment (Fekor et al., 1401). Therefore, in the current research, to change the cognitive distortions of teenagers, emphasis was placed on the apparent changes in their daily behavior and performance. In motivational psychotherapy, it is believed that external changes lead to internal changes. Therefore, by manipulating the visible performance of clients, the therapist gradually encourages them to make more extensive changes in their lifestyle and advances this work from easier steps to more difficult steps (Sahibdel and Tahan, 2022). This method of treatment can be a breakthrough for therapists, especially when dealing with teenage clients who are more resistant to treatment.

One of the limitations of the current research is that the information and data were collected through self-reporting by the subjects and by means of a questionnaire, which is always influenced by many influential factors such as the tendency of the respondents to provide answers from the society. It is pleasant. Therefore, it is suggested that in order to achieve more accurate treatment results, researchers in future researches should try to control the factors affecting the generalizability of the results, such as sampling method and other geographical areas, and in order to investigate the long-term effects of the studied treatments, follow-up studies be done. It is also suggested that motivational psychotherapy is given more attention as a local approach and its effectiveness is tested in many areas.

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