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Original Article

The effectiveness of compassion-focused therapy on thought fusion, ambivalence over emotional expression, and impulsivity in married individuals with a history of suicide

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Abstract

The aim of the present study was to investigate the effectiveness of compassion-focused therapy on thought fusion, ambivalence over emotional expression and impulsivity in married individuals with a history of suicide. This study was applied in terms of purpose and quasi-experimental in terms of method with pre-test and post-test design and control group. The population of this study includes all married individuals with a history of suicide whose disease was diagnosed by a specialist in the second half of 2020 to May 2021 referring to psychiatric centers in Sari to receive medical services. In this study, purposive non-random sampling was used. First, 50 individuals from the population were selected of whom 30 individuals were selected as a sample based on their scores in the questionnaires, and by random assignment, 15 individuals were placed in the experimental group and 15 individuals in the control group. Data collection included both library and field methods. In order to collect data, questionnaires of Beck Suicide (1961), Ambivalence over Emotional Expression (King & Emmons, 1990), Impulsivity (Barratt et al., 2004), and Thought fusion (Wells et al., 2001) were employed. Due to the standardization of questionnaires, their face validity was approved by the supervisors and consultants. The participants in the experimental groups received eight sessions of 70 minutes and two sessions per week for one month of compassion-focused therapy training interventions based on Gilbert (2018) treatment plan, while the control group did not receive any intervention. Data analysis was performed according to the assumptions and using SPSS software version 24, i.e. ANOVA and MANCOVA. The results showed that compassion-focused therapy is effective in thought fusion, ambivalence over emotional expression and impulsivity in married individuals with a history of suicide.

Keywords

Thought fusion
Ambivalence over emotional expression
Impulsivity
Compassion-focused therapy
Suicide

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Introduction

Suicide prevention was targeted as an integral part of the World Health Organization (WHO) psychotherapy program by 2020 (Fredrick et al., 2018). Research on suicide has shown that it is a multifactorial act (Mance-Khourey, 2012). The World Health Organization (2015) considers the causes of suicide very complex and diverse, which can be classified into five psychological, biological, cultural, social and environmental factors (Hawton, van Heeringen et al., 2009). Therefore, suicide attempt and the pattern of related factors are different across age, gender, and marital status (Havassi et al., 2017).

One of the factors that can play a role in married people with a history of suicide is thought fusion. Thinking about an event causes that event to happen and is divided into three modes of thought-action fusion, event-thought fusion and object-thought fusion (Karimi Sani et al., 2020). Ambivalence over emotional expression is another factor affecting suicide among married people and cross-sectional and prospective analysis with non-clinical examples showed that high ambivalence over emotional expression is along with lower well-being, high levels of psychological distress and symptoms of more severe depression (Qasemi Navab et al., 2017).
Impulsivity has also been reported as one of the main dimensions of suicide attempt and an important factor in

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some psychiatric disorders with the aim of self-harm and risky behaviors (Moustafa et al., 2017; Hermana et al., 2018). Impulsivity is a tendency to react quickly without planning and ignoring the effects and consequences (Izanloo et al., 2021). Joiner (2005) believes that impulsive individuals are more likely to experience painful and provocative situations, which in turn increases the risk of suicide (Swann et al., 2019). The results of a study by Santana-Campas et al. (2019) have shown that impulsivity is a stronger predictor of suicidal ideation than despair.

Nowadays one of the methods used along with medical therapies to reduce psychological problems, especially suicide, is a compassion-focused treatment approach. Compassion-focused therapy as a multidimensional model is a type of educational strategy related to attention, reasoning, practice, imagery and behavioral interventions (Irons et al., 2017).

Self-compassion is defined as sensitivity to suffering in oneself and others and striving to reduce or prevent it (Gilbert, 2014) and leads to self-emotional stability (Neff, 2011). This treatment encourages clients to focus on understanding and feeling self-compassion during negative thought processes, with a strong focus on cultivating compassion in wisdom (Yazdanbakhsh et al., 2020). In this treatment, people learn not to avoid or suppress their painful feelings; therefore, they can know their experience in the first step and feel compassion for it (Pullmer et al., 2019). In this regard, Wang et al. (2017) showed that cognitive therapy based on compassionate mind is effective in reducing impulsivity, feeling guilty and shame caused by substance use. Other studies have also shown that self-compassion is associated with fewer mental disorders, higher psychological well-being, and higher resilience to stress (Gilbert, 2009).

This study is important because of the vulnerability of married individuals with a history of suicide, the role and importance of compassion-focused therapy on thought fusion, ambivalence over emotional expression and impulsivity. Psychologists in the field of research can use the findings of this study in populations and related variables, and on the other hand, they can consider and address the importance of evaluating the effectiveness of compassion-focused therapy on thought fusion, ambivalence over emotional expression and impulsivity in married people with a history of suicide in individual and group therapies and in their educational interventions. Considering the importance of thought fusion, ambivalence over emotional expression and impulsivity in suicide, for avoiding suicide in individuals with this disorder, it is necessary to evaluate the effectiveness of compassion-focused therapy on thought fusion, ambivalence over emotional expression and impulsivity in married people with a history of suicide. Thus, this study sought to answer the key question: "Does the compassion-focused treatment approach have an effect on the thought fusion, ambivalence over emotional expression, and impulsivity in married individuals with a history of suicide?"

Method

Participants

The population of the present study includes all married individuals with a history of suicide whose disease was diagnosed by a specialist and in the second half of 2020 to May 2021 referred to psychiatric centers in Sari to receive medical services. In this study, 50 members of the population were selected by purposive non-random sampling and standard questionnaires of thought fusion, ambivalence over emotional expression and impulsivity were presented to them. Among the respondents, 30 people who scored above the cut-point point in the Thought Fusion Questionnaire (a score above 500, which indicates a high level of thought fusion); in the questionnaire of ambivalence over emotional expression obtained scores above the cut-point point (score above 112, which indicates the high level of ambivalence over emotional expression) , and also in the impulsivity questionnaire, they obtained scores above the cut-point point (a score above 120, which indicates a high level of impulsivity), so they were selected as the final sample and divided into experimental and control groups by simple random assignment. Thus, 15 individuals in the experimental group and 15 individuals in the control group and 4 individuals were selected as reserve corps to be placed in the case of exclusion. Inclusion criteria were: suicide history, willingness to participate in the study, getting a suitable score in the questionnaire, not suffering from chronic diseases and other specific disorders, not having serious psychological and physical problems, not simultaneously participating in meetings or workshops of other psychological approaches, and having at least a third grade degree in junior high school). Also, the conditions for leaving the sample were: not participating in two treatment sessions, having serious psychological and physical problems, suffering from chronic diseases and other specific disorders, receiving simultaneous treatment intervention and individuals participating in compassion-focused treatment classes. Data collection was conducted through library and field techniques. In the present study, in order to observe professional ethics, the ethics code of IR.IAU.SARI.REC.1400.038 was obtained from the Islamic Azad University of Sari. The objectives of the study were also explained to the participants. Written consent to consciously participate in the research was obtained from the participants.

Procedure

In this study, after obtaining the necessary permissions, we were referred to Sari Psychiatric Hospital. The participants selected using purposive non-random sampling based on inclusion and exclusion criteria were randomly assigned to experimental and control groups. First, a questionnaire was presented to both groups, and then the experimental group underwent compassion-focused treatment based on Gilbert (2018) protocol for eight sessions twice a week for 70 minutes each session,

while the control group did not receive any intervention. Then, questionnaires were presented to both groups and finally the obtained data were subjected to statistical analysis. In order to observe research ethics, the control group was suggested to be treated with compassion if desired. This research was applied in terms of purpose and based on context it was a field experiment and in terms of method it was quasi-experimental with pre-test-post-test design and control group.

Instrument

Beck Scale for Suicidal Ideation (BSSI) questionnaire:

Designed by Beck (1961), this scale is a 19-item questionnaire instrument to detect and measure the severity of attitudes, behaviors, and suicide planning. Its validity through Cronbach's alpha is 0.95 and its concurrent validity with the Depression Scale and General Health Questionnaire is 0.76 (Anisi et al., 2006). This scale is a set based on three point degrees from 0-2. The total score of the person is calculated based on the sum of scores, which varies from 0-38. This scale has high reliability which was obtained using Cronbach's alpha coefficient of 0.9. Using test-retest method, its reliability was reported to be 0.74. The validity of this tool has also been confirmed in several international articles. The reliability of this questionnaire in this study was 0.832.

Questionnaire of ambivalence over emotional expression:

This scale was designed by King and Emmons (1990) to examine the importance of the role of ambivalence over emotional expression in health. It has 28 items, of which items 1 to 16 are related to ambivalence over positive emotional expression and items 17 to 28 are related to ambivalence over entitlement expression. The range of the responses to each item is 5 degrees and varies from never to always, its scoring method is in Likert scale. *Never* is given a score of 1 and the *always* is given a score of 5. There is no inverse item, so the scoring method is the same on the whole scale and the individual's total score varies from 28 to 140. If the scores of the questionnaire are between 28 and 84, the degree of ambivalence over expression is weak. If the scores of the questionnaire are between 84 and 112, the degree of ambivalence over expression is moderate. And if the scores are above 112, the degree of ambivalence over expression is very high. The reliability of a tool is the degree to which it is stable in measuring everything it measures, that is, how well the measuring tool achieves the same results under the same conditions. Also, the reliability of the questionnaire was calculated using Cronbach's alpha. Usually, the range of Cronbach's alpha confidence coefficient is from zero (0) meaning instability, to a positive one (+1) meaning complete reliability. The closer the value obtained to a positive number one, the greater the reliability of the questionnaire. Cronbach's alpha for the ambivalence questionnaire in expression is 0.75. The reliability of this questionnaire in this study was 0.839.

Impulsivity questionnaire:

The Barratt Impulsivity Questionnaire: The eleventh edition of the Barratt's Impulsivity Scale was developed by Professor Ernest Barratt (Barratt et al., 2004) and correlates well with the Eysenck Impulsivity Questionnaire. The structure of the questions collected from both questionnaires indicates a dimension of hasty decision-making and lack of foresight. This questionnaire has 30 items and the person must answer each of the items on a four-point scale (1: Never, Rarely; 2: Sometimes; 3: Often; 4: Most of the time/always). Eleven items out of 30 items on this scale are scored in reverse (1, 7, 8, 9, 10, 12, 13, 15, 20, 29, 30). The minimum and maximum scores on the scale are 30 and 120, respectively, and the non-psychiatric control group usually scores between 50 and 60 (Swann et al., 2002). This scale assesses three factors: cognitive/attention impulsivity (making quick cognitive decisions), motor impulsivity (acting without thinking), and disorganization (lack of foresight or instant orientation) (Barratt et al., 2004). Patton et al. (1995) found internal stability coefficients for the total BIS-11 score in the range of 0.79 to 0.83 in separate populations of graduates, substance abuse patients, psychiatric patients in general, and prisoners. In Iran, for the first time, Ekhtiari et al. (2008) translated the original version of Barratt and used it in healthy people and opioid users to standardize this questionnaire. Reliability and validity in the study were 0.75 and 0.83, respectively, which indicates that the Persian translation of the Barratt impulsivity questionnaire is desirable in terms of validity and reliability. The reliability of this questionnaire in this study was 0.857.

Thought Fusion Inventory:

The Wells et al. (2001) Thought Fusion Inventory (TFI) is a 14-item self-assessment test that measures common beliefs about the meaning and power of thoughts. The TFI measures three categories of thought fusion introduced in the metacognitive model. These three factors are: 1) fusion of thought-action, 2) fusion of thought-object, and 3) fusion of thought-event. The answers are on a 100-degree continuum and from 0 = I do not believe at all to 100 = I completely believe and they are scored in tens. The maximum score that can be achieved in the questionnaire is 1400. Numerous studies have reported good validity and reliability for TFI. Khorramdel et al. (2010) in a study in an Iranian sample reported Cronbach's alpha reliability coefficients and halving method for TFI 0.87 and 0.73, respectively. In this study, using confirmatory factor analysis, 3 factors were obtained that explained a total of 60.47% of the variance of the questionnaire. The reliability of this questionnaire in this study was 0.806.

Compassion-focused treatment protocol

Interventions related to compassion-focused therapy training were performed in eight sessions of 70 minutes and two sessions per week for 1 month according to Gilbert (2018) treatment plan.

Table 1. Description of compassion-focused therapy training sessions

Sessions	Session title	Session Objectives and Interventions
1	Case conceptualization	Establishing a therapeutic relationship with clients, case-based conceptualization based on compassion; Definition of compassion; Introduction and familiarity with compassion-focused therapy.
2	Introducing emotion regulation systems	Providing a summary of the previous session. Introducing the three emotion regulation systems and how they affect the individual, explaining the difference between a threat-focused mind and a compassionate mind. Assignment: Examine which emotional system is more active in painful situations.
3	Familiarity with the old, new and the conscious brain	Assess the task and provide a summary of the previous session of familiarity with the old, new and the conscious brain; Teaching relaxation breathing practice and how to perform it; Introduce mindfulness skills, eating and conscious attention (such as: raisin eating practice) Assignment: Do relaxing breathing exercises in situations outside the session, eating and conscious attention at home.
4	Familiarity with the characteristics of compassion and knowing the compassionate person	Assess the task and provide a summary of the previous session and explaining the six characteristics of compassion (components of passion) Including: sensitivity, well-being, empathy, compassion, non-judgment, tolerance of confusion, definition of a compassionate person and its characteristics (wisdom, power, kindness, non-judgment, and accountability), explanation of the issue that to be compassionate, clients must learn skills. Assignment: The client should write examples of the components passion dimension in his life for the next session. The clients should examine the characteristics of the compassionate person in themselves.
5	Compassion skills: Compassionate reasoning Compassionate attention	Assess the task and provide a summary of the previous session of using a relaxing breathing rhythm, teaching how to visualize the sympathetic self, practicing imagining your best state, performing the sympathetic chair technique (or the three-chair technique). Assignment: The clients should do obsessive rumination for a few seconds and then practice self-compassion and pay attention to the difference between the two situations; Clients deal with self-criticism using compassionate chair practice.
6	Compassionate imagery Compassionate sensory experience	Assess the task and provide a summary of the previous session of relaxing breathing rhythm, introducing the power of imagery for humans and its relationship with the three emotion regulation systems, imagery to create a safe place, compassionate coloring Assignment: Use compassionate imagery when faced with suffering
7	Feeling compassionate	Assess the task and provide a summary of the previous session of performing a relaxing breathing rhythm before each exercise. Practice compassion towards others, at the end of this exercise, the clients should write a few sentences about the feeling that this exercise have given them. Self-centered compassion for others, the practice of receiving compassion from others, at the end of this exercise the clients write a few sentences about the feeling that this exercise have given them. Practicing self-compassion, the technique of creating an ideal and complete compassionate image for yourself, a brief reference to the concept of fear of compassion Assignment: The clients must use the learned exercises outside the meeting and in a real environment with others.

8	Compassionate behavior	Assess the task and provide a summary of the previous session. Explain the true meaning of compassionate behavior, generate ideas for compassionate behavior, teach yourself compassionate letter writing, summarize past sessions, and provide a summary of them. Assignment: The clients should take a kind action for themselves or another person every day; Generate and practice ideas for compassionate behavior; Write a compassionate letter to yourself at home.

Results

Table 2. Mean and standard deviation of research variables of the two groups in the pre-test

Group	**Experiment**		**Control**	
Index/ Variable	Mean	SD	Mean	SD
Fusion of thought-action	476.66	35.8	478.00	45.07
Fusion of thought-object	473.33	35.79	469.33	29.14
Thought fusion	950.00	66.44	947.33	62.04
Ambivalence over positive emotional expression	69.56	3.17	63.80	3.07
Ambivalence over expressing entitlement	49.00	1.55	49.00	2.23
Ambivalence over emotional expression	111.06	3.08	112.80	3.21
Motor impulsivity	36.33	1.79	63.53	1.92
Cognitive impulsivity	28.93	1.62	29.33	1.39
Disorganization	40.86	1.76	39.33	2.25
Impulsivity	106.13	3.66	105.20	3.89

As can be seen in Table 2, the mean and standard deviation of the research variables of the two groups are shown in the pre-test. In the pre-test stage, the means of research variables in the two groups are almost equal. Descriptive statistics including the mean and standard deviation of research variables of the two groups in the post-test are given in Table 3.

Table 3. Mean and standard deviation of research variables of the two groups in the post-test

Group	**Experiment**		**Control**	
Index/ Variable	Mean	SD	Mean	SD
Fusion of thought-action	123.33	18.77	475.33	36.22
Fusion of thought-object	97.33	19.44	478.00	40.03
Thought fusion	220.66	36.54	953.33	71.28
Ambivalence over positive emotional expression	36.73	3.45	62.66	4.28
Ambivalence over entitlement expression	30.13	3.54	47.46	2.44
Ambivalence over emotion expression	66.86	6.62	110.13	6.47
Motor impulsivity	21.46	2.29	32.4	2.79
Cognitive impulsivity	20.46	2.29	29.53	1.50
Disorganization	27.46	2.50	39.40	2.13
Impulsivity	69.40	4.91	101.40	5.03

Table 3 shows the mean and standard deviation of research variables in the two groups. There is a difference between the means of research variables in the two groups and significance of this difference is examined in the inferential statistics section.

Table 4. The results of Shapiro and Wilks test assuming normal distribution of scores

Variable		Degree of freedom	Significance level	Statistical value
Fusion of thought-action	pre-test	29	0.644	0.279
	post-test	29	0.682	0.309
Fusion of thought-object	pre-test	29	0.699	0.377
	post-test	29	0.723	0.457
Thought fusion	pre-test	29	0.703	0.411
	post-test	29	0.678	0.397
Ambivalence over positive emotional expression	pre-test	29	0.635	0.419
	post-test	29	0.741	0.480
Ambivalence over entitlement expression	pre-test	29	0.659	0.410
	post-test	29	0.774	0.482
Ambivalence over emotion expression	pre-test	29	0.823	0.502
	post-test	29	0.724	0.496
Motor impulsivity	pre-test	29	0.632	0.455
	post-test	29	0.754	0.468
Cognitive impulsivity	pre-test	29	0.653	0.436
	post-test	29	0.712	0.457
Disorganization	pre-test	29	0.692	0.461
	post-test	29	0.658	0.401
Impulsivity	pre-test	29	0.744	0.432
	post-test	29	0.653	0.491

As can be inferred from the results of Table 4, since the level of significance obtained in the Shapiro and Wilks tests of the research variables is more than the criterion value of 0.05, as a result, it can be said that the distribution of the target variables in the sample is a normal distribution and we can test the research hypotheses through parametric tests.

Table 5. Results of Levene's homogeneity of Variance test of the research variables

Variable	F	Degree of freedom 1	Degree of freedom 2	P
Thought fusion	0.352	1	29	0.558
Ambivalence over emotional expression	2.752	1	29	0.108
Impulsivity	1.27	1	29	0.265

Table 6. Results of multivariate analysis of variance

Group test	Effect size	F	df_1	df_2	Sig.	Partial Eta Squared
Lambda Wilkes	0.026	285.669	3	27	0.001	0.974
Pillais Trace	0.974	285.669	3	27	0.001	0.974

As can be seen in Table 5, the results of Levene's homogeneity of Variance tests are not significant for any of the studied variables. The results reveal that the differences in the variables in thought fusion, impulsivity and ambivalence over emotional expression among the subjects are significant (p = 0.001; F3,75, 285.669). According to the confirmation of the research assumptions, to analyze the main hypothesis, multivariate analysis of covariance (MANCOVA) can be used and the results of which are shown in the Table7:

Table 7. Results of interaction test between groups

Resources	Variable	Total squares	Degrees of freedom	Average squares	F	The significance level	Partial Eta Squared
Group	Thought fusion	203.024	1	203.024	11.680	0.002	0.318
	Ambivalence over emotional expression	462.703	1	462.703	288.830	0.001	0.92
	Impulsivity	1724.592	1	1724.592	744.908	0.001	0.948
Error	Thought fusion	434.536	28	17.381			
	Ambivalence over emotional expression	40.050	28	1.602			
	Impulsivity	57.879	28	2.315			

The results of Table 7 showed that the differences between the variables of thought fusion, ambivalence over emotional expression and impulsivity in the married individuals with a history of suicide in the two groups of pre-test and post-test had a significant difference. Hence it can be concluded that compassion-focused therapy is effective in the style of thought fusion, ambivalence over emotional expression and impulsivity in married people with a history of suicide, and the research hypothesis is confirmed.

Discussion

According to the results, compassion-focused therapy was effective in thought fusion, ambivalence over emotional expression and impulsivity in the married individuals with a history of suicide. This result is consistent with the findings of studies by Saeedi et al. (2015), Sohrabi (2015), Abbaspour et al. (2015), Ahmadi et al. (2015), Shahar et al. (2017), Åsa et al. (2020), Ashworth et al. (2011) and Qasemi Nawab et al. (2017).

Explaining this finding, it can be said that self-compassion acts as a positive psychological trait to improve the acceptance of abilities and psychological well-being of individuals. People with higher levels of compassion tend to have more self-devotion, a sense of human sharing, and a greater sense of self-awareness, and are more effective at regulating and balancing emotions, and usually have more positive emotions in dealing with stressful life issues and situations and use more adaptive strategies. In addition, these characteristics prevent some negative emotions such as anxiety and stress. Various studies present compassion as an essential structure for emotion regulation, because compassion itself is essentially a kind of mindfulness act that allows a person to understand and accept the most painful emotions in life, without being frustrated by them. (Neff et al., 2015).

Also, the people with thought fusion and obsessive compulsive disorders, tend to evaluate bothering thoughts negatively. So they consider themselves accountable to adverse consequences in their minds. This accountability against adverse thoughts arise from beliefs (Sohrabi, 2015). As self-compassion is defined as sensitivity to suffering in a person and others, striving to reduce or prevent it (Gilbert, 2014) leads to self-emotional stability (Neff, 2011). Compassion-focused therapeutic intervention encourages clients to focus on understanding and feeling self-compassion during negative thought processes, with a strong focus on cultivating compassion in wisdom (Yazdanbakhsh et al., 2020). Therefore, the effectiveness of compassion-focused treatment on thought-action fusion in married individuals with a history of suicide can be justified. On the other hand, ambivalence over emotional expression possibly is considered as an emotional trait which effects emotional experiences along with universal tendencies or cultural display rules. Some people express their emotions freely and without any anxiety about the consequences, but some other are conservative to transmit their emotional modes. There is a scientific relationship between ambivalence over emotional expression and depression, because ambivalence over emotional expression by preventing from expressing emotions associates with obsessive rumination (Abbaspour et.al, 2020). Therefore, the effectiveness of compassion-focused therapy on ambivalence over positive emotional expression in people with a history of suicide can be justified.

Also, increase in impulsivity is related to rise in negligence and decrease of self-control, and there is a significant relationship between impulsivity, risk taking, and suicide (Åsa et al., 2020). Since compassion-focused treatment for people with higher levels of impulsion which are trans-diagnostic elements of experiences in clients and are considered as vulnerability factors in psychological disorders, are designed and they can intervene in the improvement of treatment, without considering the main reason(s) of reference. The effectiveness of compassion-focused therapy on the impulsivity components of the object in married individuals with a history of suicide can be justified.

Conclusion

According to the results of this study, which showed that compassion-focused therapy has an effect on thought fusion, ambivalence over emotional expression and impulsivity in married individuals with a history of suicide, it is necessary that the mentioned method be used in psychological treatment centers and social emergency centers in order to primary and secondary prevention of suicide.

Limitations of the Study

One of the limitations of this research was that the population was limited to married individuals with a history of suicide in Sari, so it is limited in generalizing the results to a larger community. It is also suggested that the findings of this study be used to reduce thought fusion, ambivalence over emotional expression and impulsivity of married individuals with suicidal ideation. Counselors and psychologists in service clinics introduce and apply compassion-focused treatment for people at the risk of suicide.

Disclosure Statement

According to the authors of this article, there is no conflict of interest and it is taken from the dissertation for obtaining a degree in general psychology at the Islamic Azad University, Sari branch. We hereby appreciate the assistance of all the loved ones who contributed to this research.

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