

Article type:  
Original Research

1 Ph.D. Student, Department of Psychology, Gorgan Branch, Islamic Azad University, Gorgan, Iran.  
2 Assistant Professor, Department of Psychology, Azadshahr Branch, Islamic Azad University, Azadshahr, Iran.  
3 Assistant Professor, Department of Psychology, Gorgan Branch, Islamic Azad University, Gorgan, Iran.

Corresponding author email address: akbarihamze@yahoo.com



#### Article history:

Received 30 Jan 2024  
Revised 21 Feb 2024  
Accepted 24 Feb 2024  
Published online 1 Feb 2025

#### How to cite this article:

Valian, S., Akbari, H., Mirani, A. (2025). The Effectiveness of Mindfulness-Based Cognitive Therapy on Subjective Pain and Guilt in Individuals with a History of Suicide. *International Journal of Body, Mind and Culture*, 12(1), 38–43.



© 2025 the authors. This is an open-access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

## Introduction

Although the rate of suicide in Iran is very low compared to other advanced industrial countries, the surveys conducted in the last two decades in Iran showed that suicide and suicide attempts are on the rise. Suicide in Iran has been seen as a growing phenomenon. Iran ranks third among Islamic countries in terms of the

# The Effectiveness of Mindfulness-Based Cognitive Therapy on Subjective Pain and Guilt in Individuals with a History of Suicide

Sara. Valian<sup>1</sup>, Hamzeh. Akbari<sup>2\*</sup>, Arastoo. Mirani<sup>3</sup>

## ABSTRACT

**Objective:** This study aimed to determine the effectiveness of mindfulness-based cognitive therapy on subjective pain and guilt in individuals with a history of suicide attempts.

**Methods and Materials:** The research method employed a quasi-experimental design with a pre-test, post-test, and follow-up phase, including a control group. The statistical population of this study included all individuals with a history of suicide attempts referring to the Nikandish psychiatric clinic of Sari in 2020-21, among which 30 patients were selected by a convenience sampling method and divided into two experimental and control groups. Data were obtained using the Beck Depression Inventory (2001), Psychological Pain Assessment Questionnaire (2005), and Eysenck Guilt Questionnaire (2007). The experimental group received mindfulness-based cognitive therapy in eight 90-minute sessions. Data were analyzed by repeated measures ANOVA and SPSS-21 software.

**Findings:** The results showed that mindfulness-based cognitive therapy was effective in reducing subjective pain ( $F=18.66$ ,  $P<0.001$ ) and guilt ( $F=45.77$ ,  $P<0.001$ ) in individuals with a history of suicide attempts.

**Conclusion:** It can be concluded that mindfulness-based cognitive therapy is effective in reducing mental pain and guilt in people with a history of suicide attempts, and this treatment can be used to reduce psychological problems in people with a history of suicide.

**Keywords:** Pain, Guilt, Cognition, Hypnosis.

prevalence of suicide. According to statistics, there are more than 13 suicides per day in Iran They do. Most suicides occur among people aged 15 to 35. According to the Ministry of Health, 100,000 people committed suicide in 2018. An average of 125 of every 100,000 Iranians attempt suicide, of which six die (Arab et al., 2024). For comparison, in the U.S., in 2016, out of every

100,000 people, 16 people died by suicide (Angelakis & Gooding, 2021; Iveson et al., 2024).

The prevalence of suicidal ideation and attempted suicide was different in the articles, and their measurements were done with other tools. Most of the articles dealt with suicidal thoughts rather than attempts. In the majority of research, the association between various mental illnesses and high suicide rates is seen (Roohafza et al., 2014). Depression is at the top of mental illnesses and is a common mental illness. However, in addition to depression, there are other reasons, such as a family history of drug and alcohol addiction from various sources. Even academic pressures, family distancing, and lack of social support, as well as occupational concerns, have been identified as essential factors of suicide, but none seems to have as destructive effects as depression (Motillon-Toudic et al., 2022; Patten et al., 2016).

Researchers also consider depression to be a severe risk factor for suicide. Also, studies have shown that there are more suicidal thoughts and attempts in students with high depression and anxiety. Some also stated that depression has the highest correlation with suicidal thoughts. Others have also identified depression and neuroticism as the causes of suicidal thoughts. Since suicidal thoughts are associated with suicide attempts, it seems that changing thoughts and beliefs can reduce this (Asieieva et al., 2022; Cubbon et al., 2021; Motillon-Toudic et al., 2022; Paljärvi et al., 2023; Remes et al., 2021; Tanrıverdi et al., 2022).

In this regard, mindfulness-based cognitive therapy is considered a targeted approach to treat people with a history of depression. Mindfulness-based cognitive therapy can affect the change of thoughts, alter the unconscious, and help individuals stay in the moment. Leaving the painful past, disturbing memories, and negative thoughts can reduce the burden of mental pain and bias (Badeleh et al., 2013; Golden, 2012; Kirsch et al., 1995; Yusefi et al., 2022). This study aimed to determine the Effectiveness of mindfulness-based cognitive therapy on subjective pain and guilt in people with a history of suicide attempts.

## Methods and Materials

### *Study Design and Participants*

The method of this study was quasi-experimental with a pre-test, post-test, and follow-up design with a control group. The statistical population of this study included all individuals with a history of suicide attempts referred to the Nikandish Psychiatric Clinic in Sari in 2020-21. Among them, 30 patients were selected by convenience sampling and were divided into two experimental and control groups. Inclusion criteria were the desire to attend regular and consecutive meetings, to have a minimum diploma level of education, to be in the range of 20 to 50 years of age, and to have no physical or mental problems. Exclusion criteria included non-willingness to complete the course or the questionnaire, and having more than one meeting absence at group meetings.

Using the random table method, the participants were placed into two groups (control and experimental). The sample size was determined using G\*Power software at a significance level of 0.05, test power of 0.90, and effect size of 1.42.

### *Data Collection Tools*

**Psychological Pain Assessment Questionnaire (PSEQ):** This questionnaire is based on Bandura's concept of self-efficacy. The questionnaire consists of ten items, and each item assesses the patient's ability to perform a group of activities despite pain using a 7-point Likert scale (0 to 6). The patient's score on this scale ranges from 0 to 60, with higher scores indicating a greater sense of self-efficacy in managing chronic pain. The Persian version of PSEQ has acceptable reliability in the Iranian population with chronic pain. Additionally, the construct validity of the Persian version of PSEQ was evaluated in a sample of 169 patients with chronic pain, yielding findings that support the validity and reliability of the Persian version. In addition, confirmatory factor analysis results suggest that the pain self-efficacy questionnaire is saturated with one factor (Changi Ashtiani et al., 2024; Seyed Ali Tabar & Zadhasn, 2023).

**Eysenck Guilt Test (2007):** This questionnaire consists of 30 items, with a score range of 0 to 1. Hariri (2008, quoting Asgari, 2009) used Cronbach's alpha and splitting methods and obtained 0.67 and 0.68

coefficients for each of them, respectively, and to measure its validity, the score correlated with the score of the criterion question, and it was found that there was a significant relationship between the score of the questionnaire and the criterion question ( $p < 0.001$  and  $r = 0.28$ ). In Hariri's research, three questions were omitted due to low factor load, resulting in a final questionnaire with 27 items. Consequently, the minimum score in this questionnaire is 0, and the maximum is 27. A high score indicates a high level of guilt and contributes to the total score for this variable (Glad et al., 2024).

### Intervention

The experimental group received mindfulness-based cognitive therapy, based on Golden's (2012) Protocol, in eight 90-minute sessions per week for two months.

**Table 1**

*Mean and standard deviation of the scores of research variables in two experimental and control groups*

Variable	Group	Pre-test		Post-test		Follow-up	
		M	SD	M	SD	M	SD
Mental pain	Experimental	45.05	8.33	37.30	6.66	38.20	6.97
	Control	44.10	8.02	45.40	8.24	45.00	8.26
Feeling guilty	Experimental	22.80	4.38	17.89	3.33	17.97	3.40
	Control	21.41	4.49	20.49	4.53	20.45	4.52

Repeated measure analysis of variance was used to investigate the significant difference between subjective

### Data analysis

In the descriptive data analysis, statistical indices related to each of the research variables were calculated. Repeated measure analysis of variance and SPSS-22 software were used in the inferential statistics section.

### Findings and Results

The mean age of the participants in the experimental group was 35.3 (8.4), and the mean age of the control group was 36.2 (7.9). Additionally, the minimum and maximum ages in the experimental group were 30 and 48 years, while in the control group, they were 31 and 50 years.

pain score and guilt in both experimental and control groups.

**Table 2**

*Results of the normal distribution of scores and the test of homogeneity of variances*

Variable	Group	Kolmogorov-Smirnov			Levene's Test		
		df	Statistics	P	df	Statistics	P
Mental pain	Experimental	15	1.411	0.220	28	1.500	0.245
	Control	15	0.780	0.850			
Feeling guilty	Experimental	15	0.810	0.510	28	2.33	0.180
	Control	15	0.970	0.160			

The results of repeated measures of multivariate analysis of variance among the studied groups in the variables of subjective pain and guilt showed that the effect between subjects (group) is significant, and this effect means that at least one of the groups differs from

each other in at least one of the variables of subjective pain and guilt. The intra-subject effect (time) for the study's variables was also significant, which means that during the pre-test, at least one of the mean variables was associated with a change in follow-up.

**Table 3**

*Repeated measure analysis of variance for comparison of pre-test, post-test, and follow-up of feelings of guilt and subjective pain in experimental and control groups*

Variables	Source	SS	Df	MS	F	P	Eta Square
-----------	--------	----	----	----	---	---	------------

Mental pain	Time*Group	37.480	2	18.740	70.50	0.001	0.71
	Group	131.610	1	131.610	18.66	0.001	0.24
Feeling guilty	Time*Group	150.020	1.70	104.240	51.53	0.001	0.64
	Group	418.170	1	54.150	45.75	0.001	0.44

The results indicate that analysis of variance for the intra-group factor (time) is significant, as is the interaction between groups. These results indicate that, considering the group effect, time alone is a significant

factor. The interaction between group and time is also meaningful. The Bonferroni post hoc test was used for pairwise comparison.

**Table 4**

*Bonferroni post hoc test results for comparison of guilt and subjective pain*

Variable	Steps	Post-test	Follow-up
Mental pain	Pre-test	7.55*	6.23*
	Post-test	-	0.89
Feeling guilty	Pre-test	5.60*	5.05*
	Post-test	-	0.51

The results show that the scores of the variables of guilt and subjective pain in the experimental group at the post-test stage are lower than those in the control group. In other words, the experimental group had a high effectiveness in reducing guilt and mental pain. Also, these results show that guilt and subjective pain in the follow-up stage in the experimental group were significantly reduced compared to the control group.

## Discussion and Conclusion

This study aimed to determine the Effectiveness of mindfulness-based cognitive therapy on subjective pain and guilt in individuals with a history of suicide attempts. The results showed that mindfulness-based cognitive therapy was effective on subjective pain and guilt in people with a history of suicide attempts. This result is consistent with the prior results (Angelakis & Gooding, 2021; Arab et al., 2024; Asieieva et al., 2022; Changi Ashtiani et al., 2024; Cubbon et al., 2021; Glad et al., 2024; Motillon-Toudic et al., 2022; Paljärvi et al., 2023; Patten et al., 2016; Remes et al., 2021; Seyed Ali Tabar & Zadhan, 2023; Tanrıverdi et al., 2022; Yusefi et al., 2022)

Mindfulness-based cognitive therapy can affect the unconscious and negative thoughts, so it can also be expected to affect the grief of self-interpretation and others. Although the Effectiveness of cognitive approaches on flourishing and improving the quality of life has been proven in many studies (Badeleh et al., 2013; Golden, 2012; Kirsch et al., 1995; Yusefi et al., 2022), the combination of cognitive approaches can have a faster effect and more profound impact on the audience. The

researchers concluded that there was a significant positive and negative relationship between stress, anxiety, and depression with negative cognitive emotion regulation strategies (guilt, rumination, self-blaming, blaming others) and positive cognitive emotion regulation strategies (acceptance, positive reassessment, positive self-attention). Therefore, in treatment programs, special attention should be paid to cognitive strategies, especially maladaptive strategies such as self-blame, rumination, Acceptance, and catastrophizing. On the other hand, people may experience a sense of failure, defect, and inadequacy in everyday life. Following the experiences and evaluations that people have of themselves, they may have feelings of shame and guilt, and follow them with suicidal thoughts and despair (Badeleh et al., 2013; Yusefi et al., 2022). The cognitive approach can help patients control their minds in the present moment, rather than being affected by the emotions of past bitter experiences and the fear of future events, to cope with the challenges of living a clear, calm, and wise life.

The sample of this study was exclusive to suicide attempt patients in psychiatry and psychological clinics in Sari City. Therefore, the findings of this study should be cautious about generalizing the findings of this study to other patients attempting suicide. Because suicide attempts are one of the most risky behaviors in the field of psychiatry, and impulsive behaviors can be a result, individual meetings on a weekly and regular basis are associated with many challenges and difficulties. The lack of cooperation from some patients in completing the

questionnaire, which took a considerable amount of time, is another limitation of this research. Due to the need and demand of some research clients to continue treatment and ethical issues, the researcher skipped the follow-up periods. The convenience sampling method makes it difficult to generalize the results. It is recommended that these therapeutic approaches be repeated with additional samples, participants, and experimental or comparative designs. Research should be conducted to compare the Effectiveness of different types of meditation, yoga, and changing beliefs on suicide attempters. The stability of the therapeutic effects of the mindfulness-based cognitive therapy approach should be evaluated in both short-term and long-term periods.

### Acknowledgments

We want to express our appreciation and gratitude to all those who cooperated in carrying out this study.

### Declaration of Interest

The authors of this article declared no conflict of interest.

### Ethical Considerations

The study protocol adhered to the principles outlined in the Declaration of Helsinki, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional. Before the project began, participants became familiar with the plan's specifications and regulations. The subjects' attitudes and beliefs were respected. The experimental and control group members were allowed to leave the study at any stage. In addition, if the control group members were interested in completing the survey after the study, the experimental group received similar treatment sessions. All documents, questionnaires, and confidential records were in the hands of the executors only. Informed written consent was obtained from all volunteers.

### Transparency of Data

Following the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

### Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

### Authors' Contributions

All authors equally contributed to this study.

### References

- Angelakis, I., & Gooding, P. (2021). Experiential avoidance in non-suicidal self-injury and suicide experiences: A systematic review and meta-analysis. *Suicide and Life-Threatening Behavior*, 51(5), 978-992. <https://doi.org/10.1111/sltb.12784>
- Arab, A., Zeraatkar Makki, M., Eftekhari Kenzraki, F., & Afsharpour, P. (2024). Predicting Suicidal Thoughts Based on Emotion Regulation Difficulties and Perceived Social Support in High School Students. *Journal of New Ideas in Psychology*, 24(20), 1-13. <https://jnip.ir/article-1-1093-fa.html>
- Asieieva, Y., Kirsho, S., Akimova, L., Bogach, O., & Kovalska, N. (2022). Demonstration of Inclination to Suicide, Anxiety, and Depression among Young People with Cyber Addiction. *Revista Romaneasca pentru Educatie Multidimensionala*, 14(1), 52-68. <https://www.lumenpublishing.com/journals/index.php/rrem/article/view/4121>
- Badeleh, M., Fathi, M., Aghamohammadian Sharbaf, H. R., Taghi Badeleh, M., & Ostadi, N. (2013). Compare the effect of group cognitive behavioral hypnotherapy and group cognitive behavioral therapy on increasing the self-esteem of adolescents. *Journal of Fundamentals of Mental Health*, 15(59), 194-204. <https://doi.org/10.22038/jfmh.2013.1833>
- Changi Ashtiani, M., Fattahi, N., Balali, D., Alavi, S. H., & Mahmoudzadeh, M. (2024). Effectiveness of Mindfulness-Based Schema Therapy on Mental Pain and Experiential Avoidance in Patients with Cardiovascular Diseases. *Journal of Assessment and Research in Applied Counseling (JARAC)*, 6(1), 90-96. <https://doi.org/10.61838/kman.jarac.6.1.10>
- Cubbon, L., Darga, K., Wisnesky, U. D., Dennett, L., & Guptill, C. (2021). Depression among entrepreneurs: a scoping review. *Small Business Economics*, 57(2), 781-805. <https://doi.org/10.1007/s11187-020-00382-4>
- Glad, K. A., Aakvaag, H. F., Wentzel-Larsen, T., Dyb, G., & Thoresen, S. (2024). What will others think of me? The longitudinal association between trauma-related shame and guilt and psychopathology after a terror attack. *BJPsych Open*, 10(1), e30, Article e30. <https://doi.org/10.1192/bjo.2023.624>
- Golden, W. L. (2012). Mindfulness-based cognitive therapy for Anxiety Disorders. *American Journal of Clinical Hypnosis*, 54(4), 263-274. <https://doi.org/10.1080/00029157.2011.650333>
- Iveson, M. H., Ball, E. L., Whalley, H. C., Deary, I. J., Cox, S. R., Batty, G. D., & McIntosh, A. M. (2024). Childhood cognitive ability and self-harm and suicide in later life. *SSM-Population Health*, 25, 101592. <https://doi.org/10.1159/000524947>
- Kirsch, I., Montgomery, G., & Sapirstein, G. (1995). Hypnosis as an adjunct to cognitive-behavioral psychotherapy: A meta-analysis. *Journal of consulting and clinical psychology*, 63(2), 214-220. <https://doi.org/10.1037/0022-006X.63.2.214>
- Motillon-Toudic, C., Walter, M., Séguin, M., Carrier, J.-D., Berrouguet, S., & Lemey, C. (2022). Social isolation and



- suicide risk: Literature review and perspectives. *European Psychiatry*, 65(1), e65, Article e65. <https://doi.org/10.1192/j.eurpsy.2022.2320>
- Paljärvi, T., Tiihonen, J., Lähteenvuo, M., Tanskanen, A., Fazel, S., & Taipale, H. (2023). Mortality in psychotic depression: 18-year follow-up study. *The British Journal of Psychiatry*, 222(1), 37-43. <https://doi.org/10.1192/bjp.2022.140>
- Patten, S. B., Williams, J. V. A., Lavorato, D. H., Bulloch, A. G. M., Wiens, K., & Wang, J. (2016). Why is the prevalence of major depression not changing? *Journal of Affective Disorders*, 190, 93-97. <https://doi.org/10.1016/j.jad.2015.09.002>
- Remes, O., Mendes, J. F., & Templeton, P. (2021). Biological, Psychological, and Social Determinants of Depression: A Review of Recent Literature. *Brain Sciences*, 11(12).
- Roohafza, H., Mosharraf, S., Mousavi, G., Khani, A., Andalib, E., Reihani, M., & Abbasalizadeh, A. (2014). The Prevalence and Determinants of Suicidal Behaviors in the Central Region of Iran. *International Journal of Body, Mind and Culture*, 1(2), 142-153. <https://doi.org/10.22122/ijbmc.v1i2.11>
- Seyed Ali Tabar, S. H., & Zадhasn, Z. (2023). Effectiveness of Mindfulness-Based Cognitive Therapy on Mental Pain, Distress Tolerance, and Psychological Hardiness in Breast Cancer Patients. *Health Nexus*, 1(1), 56-63. <https://doi.org/10.61838/hn.1.1.9>
- Tanrıverdi, D., Bekircan, E., & Koç, Z. (2022). The Relationship Between Psychache and Suicide Risk With Spiritual Well-Being Levels of Patients Diagnosed With Depression. *Journal of the American Psychiatric Nurses Association*, 10783903221079796.
- Yusefi, R., Hafezi, F., Bakhtiarpoor, S., & Makvandi, B. (2022). Comparing the effectiveness of cognitive-behavioral hypnotherapy and mindfulness therapy on pain perception and self-efficacy in women with breast cancer in Gorgan. *Applied Family Therapy Journal (AFTJ)*, 3(5), 209-227. <https://doi.org/10.61838/kman.aftj.3.5.13>