

The predictive role of cognitive regulation of emotion and death anxiety in adults' suicidal ideation

Esmaeil Ramezani¹, Sana Nourimoghadam^{*2}, Behzad Rigi kooteh³

¹ Master student of Clinical Psychology, Department of Clinical Psychology, Zahedan Branch, Islamic Azad University, Zahedan, Iran

² Assistant professor. Department of Psychology, Faculty of Psychology and Educational Science, Sistan and Baluchestan University, Zahedan, Iran

³ Assistant professor of Clinical Psychology, School of Medicine, Children, and Adolescents Health Research Center, Resistant Tuberculosis Institute, Zahedan University of Medical Sciences, Zahedan, Iran

ABSTRACT

Background: Suicide attempt is one of the most unpleasant psychological and social events.

Objectives: The aim of this study was to determine the relationship of cognitive emotion regulation and death anxiety with suicidal ideation in the adult population of Zahedan.

Methods: This was a descriptive-correlational study performed among adults residing in Zahedan, Iran. The participants consisted of 384 people who were selected through the cluster sampling method. Data were collected using the Beck Scale for Suicidal Ideation (Beck, 1991), the Cognitive Emotion Regulation Questionnaire (Garfinkel, 2001) and the Death Anxiety Scale (Templer, 1970). Data were analyzed using descriptive statistics (i.e., mean and standard deviation), Pearson correlation coefficient and linear and stepwise regression methods in SPSS version 26.

Results: The findings showed that the components of cognitive emotion regulation, including self-blame, acceptance, rumination, catastrophizing and other-blame, have a significant positive relationship with suicidal ideation. On the other hand, between suicidal ideation and positive refocus, refocus on positive planning and reappraisal significant a negative relationship was noted. The results also showed a significant positive relationship between death anxiety and suicidal ideation ($P = 0.001$). The results of stepwise regression revealed in the first step that other-blame explained 0.07 of suicidal ideation variance, in the second step other-blame along with catastrophizing explained 0.12 of the variance, and in the third step, other-blame along with catastrophizing and rumination explained 0.15 of the variance related to suicidal tendencies.

Conclusion: Since the use of emotion regulation strategies without cognition and the existence of death anxiety increases suicidal ideation, therapists in counseling centers are recommended to pay attention to these variables to treat and reduce suicidal ideation.

Keywords

Cognitive emotion regulation, Death anxiety, Suicide

Introduction

1. Background

Suicide is a mental health problem, and according to the statistics of the World Health Organization (WHO), suicide is the third most common cause of death in the age group of 15 to 44 years old (1). Today, prevention in various areas is considered as one of the main priorities of organizations, especially in the field of health and treatment. Committing self-harming behaviors (e.g., suicide and self-harm) is known as an unpleasant event, the prevention of which is seriously considered in organizations (2).

Impulsivity, frustration, substance abuse, severe mental illnesses, hallucinations and delusions, severe family problems, divorce and rejection are some of the factors that explain suicide. One of the factors associated with suicide is the cognitive regulation of emotions. It seems that one of the main weaknesses of research as well as other models of studying suicidal behaviors (completed suicide, suicide attempt and suicidal ideation) is not paying attention to the role of emotions and emotion regulation processes (3). Difficulty in emotion regulation is defined as the problem of individuals in cognition, understanding and acceptance of emotions, control of impulsive behaviors, behavior in accordance with the desired goals when experiencing negative emotions and flexible use of emotion regulation strategies to meet the requirements of the situation (4).

Emotion regulation strategies are activated when faced with stressful life events and affect early emotional responses and subsequent processing (5). Ineffective cognitive emotion regulation strategies such as self-blame, rumination, and catastrophizing seem to be related to suicidal ideation and aggression (6). Difficulty in regulating emotions (difficulty in controlling impulses, lack of clarity of emotions, and lack of emotional awareness) and experiential avoidance lead to more suicidal ideation (7). Self-blame, rumination, catastrophizing, and other-blame increase the tendency to high-risk behaviors such as substance abuse and suicidal ideation, and positive acceptance and refocus strategies reduce the tendency to commit suicide (8). Emotional regulation difficulty increases suicidal ideation, but cognitive flexibility, family acceptance, and tolerance of distress reduce suicidal tendency (9).

In addition, emotional regulation problems such as self-blame, acceptance, rumination, catastrophizing, and other-blame are directly related to suicidal behaviors, and they can be considered as predictors of suicidal behaviors (10). On the other hand, emotions incompatibility and negativity increase the risk of suicide attempt, and adjustment of adaptive and positive emotions decreases suicide attempt in individuals (11). Therefore, it seems that people who have maladaptive emotions (e.g., rumination, self-blame, catastrophizing, etc.) have more suicidal behaviors, and conversely, people who can regulate and control their emotions have less suicidal behaviors (12).

Another factor that can be associated with suicidal ideation is death anxiety, which is actually a type of anxiety that humans experience and affects their existential health, and especially their mental health function (13). Death anxiety includes a set of attitudes toward death such as fear, worry, sadness, and other anxiety-related negative emotional reactions that affect mental health. A significant number of people who spend a lot of time contemplating suicide but do not attempt suicide are overwhelmed by this type of anxiety that instills the idea of death in their minds (14).

There is a relationship between feelings of neutral belonging, self-perceived burden, and death anxiety with suicidal thoughts and actions (15). There is also a relationship between suicidal tendencies and mental pain, despair, pressure on others/loneliness, seeking help, pain relief, problem solving, impulsivity, benevolence for the family, expressing anger/hatred, financial/employment problems and anxiety and fear of death (16). Important factors that play a role in suicidal ideation include irrational beliefs, source of control, burnout, cognitive fusion, self-actualization, self-determination, measuring life meaning, neuroticism, guilt, hope, and fear of death (17).

There is a relationship between suicidal ideation and anxiety and depression. In fact, anxiety and depression heighten the risk of suicidal ideation (18). Anxiety and stress can be associated with suicide, such that anxiety can lead to increased suicide attempt, suicidal thoughts and suicidal ideation (19). Depression, anxiety, and stress have also been able to predict suicidal ideation and have been addressed in former studies (20).

2. Objectives

According to what went before, factors such as difficulty and inability to cognitively regulate emotions and death anxiety underlie and intensify the tendency to commit suicide and play a role in its formation. Therefore, due to the many problems that these factors cause for people at risk, families and the society, as well as due to the disruption that they create for people to adapt to the society and their environment, it is necessary to conduct extensive research concerning the connection between these constructs and suicide. Therefore, this study seeks to answer the fundamental question of whether there is a relationship between suicidal ideation and cognitive emotion regulation and death anxiety among the adult population of Zahedan, Iran.

3. Methods

The method of this research is descriptive-correlational.

3.1 Participants

The statistical population of this study included all adults (20 years and older) in Zahedan. According to the census statistics (website of the Statistics Center of Iran), Zahedan has a population of 672,589, of whom 364,809 are aged 20 and over. Using Cochran's formula and error rate (d) of 5%, the standard sample size was estimated to be 422 (384 people according to Cochran's formula plus 10% equal to 38 additional people because of sample attrition).

3.2 Procedures

The participants were selected by the cluster sampling method. This study was conducted based on census statistics, and 384 people aged 20 and over in 10 neighborhoods and parts of Zahedan city, including Zibashahr, Darreh Panjshir, Rajaei St., Karimabad, Daneshgah St., Moallem St., Khayyam St.-Jam-e-Jam St., Nusrat Abad county and Khorramshahr st., were selected. We attended the mentioned neighborhoods and sent the questionnaire's link to the participants' phones. About 40 people from each neighborhood aged 20 years and older of both sexes were selected and completed the questionnaire. The questionnaires were completed electronically to prevent the spread of COVID-19 disease. Each person completed a questionnaire containing 112 questions, which took between 30 minutes to an hour to complete.

Prior to performing the study, approval of the Ethics Committee of the School of Medicine of Zahedan Azad University (code of ethics: IR.IAU.ZAH.REC.1399.002) was obtained, and each participant was explained that participation in the research was completely optional, and after obtaining informed consent, 422 male and female participants were selected and based on the ethical principles of the study, the subjects were informed that this study was not dangerous for them and if during taking a history, interviews, or interpretation of the questionnaires, it was determined that the subject is prone to suicide and is considered a high-risk case for suicide attempt, the matter would be referred to a psychological or psychiatric center for treatment after reporting the issue to a family member or relative.

3.3 Measures

Data were collected using the Beck Scale for Suicidal ideation (Beck, 1991), the Cognitive Emotion Regulation Questionnaire (Garmsky, 2001), and the death anxiety scale (Templer, 1970), and demographic data were used.

The Beck Scale for Suicidal ideation (BSSI): This scale is a 19-item self-report tool. In this scale, each question is rated based on 3-point Likert scale, and the total score can range from 0 to 38. On this scale, a score of 0-5 indicates the presence of suicidal ideation, a score of 6-19 indicates suicidal tendency, and a score of 20-38 indicates intent to commit suicide (21). This scale has a high reliability. Using the Cronbach's alpha method, the coefficients were 0.87 to 0.97 and using the test-retest method, the reliability of the scale was 0.54. Also, the BSSI had a correlation with the Goldberg Depression questionnaire at 0.76. Also, the validity of the scale using Cronbach's alpha method was equal to 0.95 (22).

Cognitive Emotion Regulation Questionnaire (CERQ): This questionnaire was developed by Garmsky, Kraj and Spinhaun (23). It is a multidimensional questionnaire used to identify individuals' cognitive coping strategies after experiencing negative events or situations. This questionnaire is a self-report tool and has 36 items, the answer to which is based on a 5-point Likert scale as 1, 2, 3, 4, 5. Items have four choices (1 = never, 2 = rarely, 3 = sometimes, 4 = more often, 5 = always). This questionnaire conceptually constitutes nine distinct subscales, each of which is a specific cognitive emotion regulation strategy and has four items. These strategies include self-blame, acceptance, rumination, positive refocus, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, and other-blame. It can be used for people aged 12 years and older (both normal people and clinical population). Five subscales of the Cognitive Emotion Regulation Questionnaire are compatible and the other four subscales are incompatible. Garnewski et al. (23) reported good validity and reliability for this questionnaire. Structural validity and reliability of this scale in Iran have been confirmed using confirmatory factor analysis, and its reliability has been reported using Cronbach's alpha coefficient for each of the subscales to range between 0.64 to 0.82 (24).

Death Anxiety Scale: Templer (25) developed the Death Anxiety Questionnaire in 1970. This questionnaire is self-administered and consists of 15 correct and incorrect questions. The highest score a person can obtain is 15 and the lowest score is 0. People who obtain high scores on this test have a high level of death anxiety. Studies on the validity of the Death Anxiety Scale show that this scale has an acceptable validity. Templer obtained a retest coefficient of 0.83 on this scale and reported its validity as optimal (25).

Conti Wiener and Plachik (26) reported the split-half reliability of the Death Anxiety Scale as 0.76 and the correlation of each question with the total score spanned from 0.30 to 0.74 with an average of 0.51 for the elderly and 0.44 for the student group. In Rajabi and Bahmani (27) research, the split-half reliability coefficient of the Death Anxiety Scale was calculated to be 0.62 after applying the corrected Spearman Brown formula. Also, the internal consistency of the questionnaire was examined by calculating the Cronbach's alpha coefficient, which was equal to 0.73 for the whole questionnaire.

3.4 Statistical analysis

The data obtained from this study were analyzed using Pearson correlation coefficient and linear and stepwise regression methods in SPSS, version 26.

4. Results

The results of demographic variables showed that 0.73% of the respondents belonged to the age group of 17-34 years, 23.2% were in the age group of 35-52 years, and 2.9% in the age range of 53-70 years, and 58.9% of the respondents were male. In terms of education, 13.2% of the respondents did not have a diploma, 45.8% had a diploma, 9.7% of the respondents had above diploma education, 26.3% had a bachelor's degree, and 0.5% were postgraduates. In addition, 61.8% of the respondents were single, 55.8% were employed, and the remaining were unemployed.

Pearson correlation and stepwise regression analysis were used to test and answer the research question.

Table 1: Correlation coefficient results between cognitive emotion regulation dimensions and suicidal ideation

Variables		Suicide	
		r	sig
Cognitive emotion regulation scales	Self-blame	0.230	0.001
	Acceptance	0.10	0.02
	Rumination	0.233	0.001
	Positive refocus	-0.14	0.002
	Refocus on planning	-0.189	0.001
	Positive reappraisal	-0.187	0.001
	Putting into perspective	0.06	0.09
	Catastrophizing	0.25	0.001
	Other-blame	0.27	0.001
	Total cognitive regulation	0.07	0.08
	Death anxiety	0.20	0.001

Table 1 shows that the subscales of cognitive emotion regulation dimensions have a significant relationship with suicidal ideation. Therefore, the subscales of self-blame ($P = 0.001$, $r = 0.230$), acceptance ($P = 0.02$, $r = 0.10$), rumination ($P = 0.001$, $r = 0.233$), catastrophizing ($P = 0.001$, $r = 0.25$), and other-blame ($P = 0.001$, $r = 0.27$) had a significant positive relationship with suicidal ideation. However, positive refocus ($P = 0.002$, $r = -0.14$), refocusing on planning ($P = 0.001$, $r = -0.189$), and positive reappraisal ($P = 0.001$, $r = -0.187$) had a significant negative relationship with suicidal ideation at the 0.95 and 0.99% confidence levels. In addition, there was no significant relationship between putting into perspective and the overall score of cognitive emotion regulation with suicidal

ideation. The results also revealed a significant positive relationship between death anxiety and suicidal tendencies ($P = 0.001$, $r = 0.20$) at the level of 0.99% confidence.

Table 2: Results of stepwise regression analysis to predict suicidal ideation from cognitive emotion regulation dimensions

Step	Predictive variable	Correlation	Correlation coefficient	R coefficient	Beta	t	Significance level
First step	Other-blame	0.27	0.07	0.07	0.27	5.55	0.001
Second step	Other-blame	0.35	0.12	0.12	0.30	6.32	0.001
	Catastrophizing				0.23	0.78	0.001
Third step	Other-blame	0.39	0.15	0.15	0.17	2.99	0.003
	Catastrophizing				0.29	5.82	0.001
	Rumination				0.23	3.68	0.001

Table 2 demonstrates that in the first step, other-blame (subscales of cognitive emotion regulation) was entered into the equation, and it could predict 0.07 of the variance of suicidal ideation. In the next step, other-blame with catastrophizing (subscales of cognitive emotion regulation) were entered into the equation and were able to predict the variance by 0.12%. In the third step, other-blame with catastrophizing and rumination (subscales of cognitive emotion regulation) were entered into the equation and were able to explain 0.15% of the variance of suicidal ideation. Other subscales (i.e., self-blame, acceptance, positive refocus, positive reappraisal, putting into perspective, and total cognitive emotion regulation score) were excluded from the equation because they did not meet the requirements to enter the equation. Therefore, other-blame ($p = 0.003$ and $Beta = 0.14$), catastrophizing ($p = 0.001$ and $Beta = 0.29$), and rumination ($p = 0.001$ and $Beta = 0.23$) have significant positive relationship with suicidal ideation scores; thus, they are positive and significant predictors of suicidal ideation.

Table 3: Results of ANOVA to predict suicidal ideation from cognitive emotion regulation subscales

Variables	Model	Sum of squares	Degree of freedom	Mean squares	F(df)	Significance level
Other-blame	Remaining regression	09.681	1	09.681	85.30 (1,378)	001.0
Catastrophizing	Remaining regression	88.1157	1	88.1157	75.27 (1,377)	001.0
Rumination	Remaining regression	10.1432	1	10.1432	64.23 (1,376)	001.0

Table 3 shows that due to the fact that the significance levels of the other-blame ($F = 30.85 = 0.851$), catastrophizing ($F = 27.75 = 0.001$), and rumination ($F = 0.23 = 0.001$) variables were higher than 0.05, the independent variables (other-blame, catastrophizing and rumination) explain the changes of the dependent variable (suicidal ideation) well.

5. Discussion

The aim of this study was to investigate the relationship of cognitive emotion regulation and death anxiety with suicidal ideation in the adult population of Zahedan. The results exhibited that death and anxiety the subscales of cognitive emotion regulation, including self-blame, acceptance, rumination, catastrophizing, and other-blame, had a significant positive relationship with suicidal ideation, whereas the subscales of positive refocus, refocus on planning, and positive reappraisal had a significant negative relationship with suicidal ideation. Stepwise regression results showed that in the first step, other-blame explained 0.07 of variance, in the second step other-blame and catastrophizing predicted 0.12 of variance, and in the third step, other-blame along with catastrophizing and rumination predicted 0.15 of variance of suicidal ideation.

These results are consistent with the results of Sepehri Nejad and Hatamian (7), Adibnia, Ahmadi and Mousavi (8), Heidarinejad et al. (9), Niasvis et al. (10), Harris et al. (11), Aung and Thompson (12), Rashid et al. (15), Abbaspour et al. (16), Boroujerdi and Mazandarani (17), Bernardo et al. (18), Michel et al. (19) and De Oliver Paymental et al. (20).

Sepehri Nejad and Hatamian (7) in a study reported a significant relationship between difficulty in emotion regulation (difficulty in controlling impulse, lack of emotion clarity, lack of emotional awareness, etc.) and experiential avoidance. Their findings also indicated that the predictor variables can all predict 33% of suicidal ideation variation. Accordingly, difficulty in regulating emotions with an impact factor of 0.41 and experiential avoidance with an impact factor of 0.29 could predict suicidal ideation. Adibnia et al. (8) in their research concluded that cognitive emotion regulation strategies, including self-blame, rumination, catastrophizing, and other-blame and a tendency to high-risk behaviors (such as substance abuse, diseases such as AIDS and hepatitis and suicidal ideation) had a significant positive relationship and positive acceptance and refocus strategies had a significant negative relationship with the tendency to high-risk behaviors.

Heidarinejad et al. (9) found that difficulty in emotional regulation had a significant positive relationship with suicidal tendency, but the variables of cognitive flexibility, family flexibility, and distress tolerance had a significant negative association with suicidal ideation. In addition, the results of stepwise regression analysis showed that cognitive flexibility and difficulty in emotion regulation in sum were able to predict 17% of variance in suicidal ideation.

Niasvis et al. (10) approved that emotional regulation problems such as self-blame, acceptance, rumination, catastrophizing, and other-blame had a significant negative relationship with suicidal behaviors and are predictors of suicidal behaviors. In a study, Harris et al. found a significant relationship between emotion regulation and suicide attempt. In other words, maladaptive and negative emotions increase the risk of suicide attempt, and it has a significant positive relationship with it. Conversely, regulating compatible and positive emotions reduces the risk of suicide attempt in individuals. Aung and Thompson (12) in a study entitled "The effect of coping and regulating emotions in the occurrence of suicidal behaviors" found that maladaptive emotions (rumination, self-blame, catastrophizing, etc.) increased the likelihood of suicidal behaviors and had a significant positive relationship with suicide. Hence, regulating compatible emotions reduces suicidal behaviors in individuals.

According to Gross's emotional regulation model, people who have more intense emotional responsiveness and have difficulty accepting, appraising, and controlling emotional responses are prone to different types of self-harming behaviors (31). In explaining these results, it can be stated that one of the reasons for the variability in suicidal ideation is the effect of emotion on suicidal ideation and the integration of emotional experiences with them. Clinical evidence suggests that negative emotional experiences such as anger, sadness, frustration, and abandonment in individuals increase suicidal ideation, thoughts, and tendencies (28).

In addition, cognition and emotions are critical aspects of human life, and the interaction of these two constructs is manifested in most people's behaviors; thus, to better elucidate suicidal tendencies and their behavioral correlates, it is necessary to study both cognition and emotion constructs. The results of this study showed a significant positive relationship between negative emotions and suicidal tendencies. This means that the more negative and maladaptive

emotion strategies such as self-blame, acceptance, rumination, catastrophizing, and other-blame are used to deal with environmental problems, the more suicidal tendencies increase among these individuals, and they become more prone to suicide. Conversely, when people, with full awareness of their own thoughts, use positive emotional strategies such as positive refocus, positive refocus on planning, and positive reappraisal, they replace suicidal thoughts with positive thoughts.

The results also revealed that death anxiety has a direct and significant relationship with suicidal ideation. Results of the present study are inconsistent with those of previous studies. In explaining this inconsistency, it can be stated that the sample of the present study may be those who had meaningless life, did not have good adjustment to life, were hopeless in life, and were unable to give meaning and value to death, and they are usually more confused about death. In fact, underestimating this superior goal of life, feeling of mental and psychological well-being, has negative effects on the psyche of the sample of the study, which has created problems in their mental and physical health. This increase in stress and behavioral problems, hopelessness, anxiety and depression make people prone to suicide and suicidal ideation.

Yalum also considered emptiness and death as one of the restlessness and existential concerns of people, which is caused by the lack of meaning in life in a world that is inherently meaningless (32).

Furthermore, since the questionnaires were completed by subjects during Covid-19 outbreak, according to psychodynamic theory, these individuals might use defense mechanisms as unconscious processes through which a stressful experience changes. Samples might use inverse reaction as a defense mechanism, that is a mindset or attitude that conflicts with a suppressed desire and manifests itself in response to it. In fact, this inverse reaction can first be the suppression of death anxiety and then mutual investment in something different but with the same force such as suicide. Also, one trait is transformed into another trait in the inverse reaction and these characteristics of the inverse reaction have two states of extremeness and rapid growth but the new behaviors that a person pursues after an inverse reaction are related to and often contradict the behaviors that he or she has discarded. Subjects may also have used an emotion-focused coping strategy instead of a problem-focused coping strategy, which seeks to respond emotionally to stress, especially with the help of defense mechanisms.

One of the most important limitations of the present study, which limits the generalizability of its results, is the specificity of the statistical population and its sample, which is limited to the city of Zahedan.

5.1.Conclusion

Therefore, considering that the use of emotion regulation strategies without awareness and with death anxiety increases suicidal ideation, it is recommended that counselors and therapists, especially in counseling centers, pay attention to these components to treat and reduce suicidal ideation.

Acknowledgements

The author thanks all people who participated in the study

References

- [1] Rostami C, Daliri S, Sayehmiri K, Delpisheh A, Sayehmiri F. The incidence of suicide attempt in Iran (2001-12): A metaanalysis. JKUMS 2016; 19: 374-82.
- [2] Query W-bIS. Reporting System (WISQARS).Centers for Disease Control and Prevention. NationalCenter for Injury Prevention and Control. 2016.
- [3] Hasani J, Miraghaie AM. The relationship between strategies for cognitive regulation of emotionsand suicidal ideation. Contemporary Psychology. 2012;7(1):61-72. [In Persian].

- [4] Gratz KL, Roemer L. Journal of psychopathology and behavioral assessment. Journal of Psychopathology and Behavioral Assessment. 2004;26(1):41-54.
- [5] Gross JJ. Emotion regulation: Current status and future prospects. Journal of Psychological Inquiry. 2015;26(1):1-26.
- [6] Brausch AM, Woods SE. Emotion regulation deficits and nonsuicidal self-injury prospectively predict suicide ideation in adolescents. Suicide and Life-Threatening Behavior. 2019;49(3):868-80
- [7] Sepehreinjad M, Hatamian P. Forecast of Suicidal thoughts based on Emotional Dysregulation and Experimental Avoidance in Nurses. IJNR. 2018; 13 (4) :39-44, URL: <http://ijnr.ir/article-1-2042-fa.html>
- [8] Adibnia F, Ahmadi A, Mousavi A M. Prediction of the Tendency High-risk behaviors Based on Cognitive Emotion Regulation Strategies and Metacognitive Beliefs among Adolescents. Journal of Modern Psychological Research, 2018;13(50):21-43
- [9] Heidari Nejad M, Heidari H, Davoudi H. Prediction of Tendency to Suicide based on the Difficulty of Emotional Regulation, Cognitive Flexibility, Family Flexibility and Distress Tolerance. RBS. 2020; 18 (2) :169-181 URL: <http://rbs.mui.ac.ir/article-1-790-fa.html>
- [10] Neacsiu AD, Fang CM, Rodriguez M, Rosenthal MZ. Suicidal behavior and problems with emotion regulation. Suicide and Life-Threatening Behavior. 2018;48(1):52-74.
- [11] Harris L, Chelminski I, Dalrymple K, Morgan T, Zimmerman M. Suicide attempts and emotion regulation in psychiatric outpatients. Journal of affective disorders. 2018; 232:300-4.
- [12] Ong E, Thompson C. The importance of coping and emotion regulation in the occurrence of suicidal behavior. Psychological reports. 2019;122(4):1192-210
- [13] Rice J. The relationship between humor and death anxiety. Department of psychology. Copy-right. 2009.
- [14] Hoelterhoff M. *Resilience against death anxiety in relationship to post-traumatic stress disorder and psychiatric co-morbidity* (Doctoral dissertation, University of Plymouth). 2010.
- [15] Veiskarami H, Barzeghar bafrooei M, yousefvand L. The Relationship Between Religious Orientation and Death Anxiety in the Elderly: The Mediation Role of Aging Perception and Spiritual Well-Being. Aging Psychology, 2018;3(4):281-291
- [16] rashid S, kiani Chalmari A, yeganeh N, Zeinaddini S. The relationship between Death Anxiety, Mattering, Perceived Burdensomeness and Thwarted Belongingness with Suicidal Behavior in college students (The Interpersonal-Psychological Theory for suicide). IJEC. 2017; 1 (1) :32-42 URL: <http://ijec.ir/article-1-26-fa.html>
- [17] Abbaspour Z, Fathalipour Z, Mombeini I. Identifying Factors Affecting Attempt to Suicide in Izeh and Masjed Soleyman. Quarterly of Social Studies and Research in Iran, 2020;9(1):215-233
- [18] Boroujerdi F, Mazandarani S. Meta- analysis of studies on death anxiety. Education Measurement. 2020;9(36):119-136
- [19] Bernardo Tauil C, Cortez Grippe T, Maciel Dias R, Dias-Carneiro RPC, Moita Carneiro N, et al. Suicidal ideation, anxiety and depression in patients with multiple sclerosis. Arquivos de Neuro-Psiquiatria, 2018;76(5): 296-300
- [20] Michelle SP, Julia EM, Sadia RC, et al. Effects of anxiety on suicidal ideation exploratory analysis of a paroxetine versus bupropion randomized trial. International Clinical Psychopharmacology. 2018;23(5):249-254
- [21] De Oliveira Pimentel F, Delia Mea CP, Depieue Patias N. Victim of bullying symptoms of depression, anxiety and stress and suicidal ideation in teenagers. Acta colombiana de Psicología. 2020; 23(2):230-240
- [22] Beck A, Kovacs M, Weisman A. Handbook of psychiatric measures: Beck Scale for Suicide Ideation. American Psychiatric Association. 2000.
- [23] Anisi J, Fathi-Ashtiani A, Soltaninezhad A, Amiri M. Prevalence of suicide ideation and related factors among troops. Mil Med J. 2006;8(2):113-8.

- [24] Garnefski N, Kraaij V, Spinhoven P. Negative life events, cognitive emotion regulation and emotion problems, *Pers Individ Differ*, 2001; 30: 1311- 1327.
- [25] Abdi S, Babapoor J, Fathi H. Relationship between Cognitive Emotion Regulation Styles and General Health among University Students. *JAUMS*, 2011;8(4):258-264
- [26] Templer D I, Lavoie M, Chalgujian H, Thomas-Dobson S. The measurement of death depression. *Journal of Clinical Psychology*, 1990;46(6): 834-839.
- [27] Langs R. Unconscious death anxiety and the two modes of psychotherapy. *The Psychoanalytic Review*. 2008; 95(5):791-818.
- [28] Rajabi G, Bahmani M. Factor analysis of questions about death anxiety scale (Persian)]. *Journal of Psychology*. 2001; 5(4):331-4.
- [29] Hasani J, Miraghaie AM. The relationship between strategies for cognitive regulation of emotions and suicidal ideation. *Contemporary Psychology*, 2012;7(1): 61-72
- [30] Basharpour S, Hoseinikiasari S T, Soleymani E, Massah O. The Role of Irrational Beliefs and Attitudes to Death in Quality of Life of the Older People. *Salmand: Iranian Journal of Ageing*. 2019; 14 (3) :260-271. URL: <http://salmandj.uswr.ac.ir/article-1-920-fa.html>
- [31] Gratz KL, Roemer L. Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of psychopathology and behavioral assessment*. 2004 Mar;26(1):41-54.
- [32] Yalom ID. Staring at the sun: Overcoming the terror of death. *The Humanistic Psychologist*. 2008 Nov 18;36(3-4):283-97.