ANXIETY PREDICTION BASED ON INTELLECTUAL RUMINATION AND IRRATIONAL BELIEFS IN STUDENTS OF ISLAMIC AZAD UNIVERSITY, HAMADAN BRANCH

PREVISÃO DE ANSIEDADE BASEADA NA RUMINAÇÃO INTELECTUAL E CRENÇAS IRRACIONAIS EM ESTUDANTES DA UNIVERSIDADE ISLÂMICA AZAD, HAMADAN BRANCH

Diba Alinezhad 1
Mohammad Ismaeel Ebrahimi 2

Abstract: *The purpose of this study was to predict anxiety based on intellectual rumination and irrational beliefs in students of Islamic Azad University of Hamadan. The method used in this study was descriptive-correlational method. The statistical population consisted of all students of Islamic Azad University of Hamadan during the academic year 2017-2018; of these, 380 were selected by relative sampling method. Questionnaires were used for data collection, Beck Anxiety Questionnaire, Trainer Hypervisor, Gonzalez, and Nulen-Huximaa Questionnaire and Four-factor Irrational Beliefs Questionnaire in Ahvaz. Findings showed that intellectual rumination and irrational beliefs can predict anxiety in students. Therefore, it can be said that intellectual rumination and irrational beliefs may be anxious for students by decreasing positive emotional states and increasing emotional feelings.*
Keywords: *Anxiety. Intellectual Rumination. Irrational Beliefs. Students.*

Resumo: *O objetivo deste estudo foi predizer a ansiedade baseada na ruminação intelectual e crenças irracionais em estudantes da Universidade Islâmica Azad de Hamadan. O método utilizado neste estudo foi o método descritivo-correlacional. A população estatística consistia de todos os estudantes da Universidade Islâmica Azad de Hamadan durante o ano acadêmico 2017-2018; destes, 380 foram selecionados pelo método de amostragem relativa. Os questionários foram usados para coleta de dados, Questionário de Ansiedade de Beck, Hipertensão do Instrutor, Gonzalez e Questionário Nulen-Huximaa e Questionário de Crenças Irracionais de Quatro Fatores em Ahvaz. Os resultados mostraram que a ruminação intelectual e as crenças irracionais podem predizer ansiedade nos alunos. Portanto, pode-se dizer que a ruminação intelectual e as crenças irracionais podem ser ansiosas para os alunos, diminuindo os estados emocionais positivos e aumentando os sentimentos emocionais.*
Palavras-chave: *Ansiedade. Ruminação Intelectual. Crenças Irracionais. Estudantes.*

Department of Psychology, Hamadan Branch, Islamic Azad | 1
University, Hamadan, Iran.
E-mail: dibaalinezhad@gmail.com

Department of Psychology, Hamadan Branch, Islamic Azad | 2
University, Hamadan, Iran Corresponding Author.
E-mail: mse_2007@yahoo.com

Introduction

Previous studies have shown that the level of anxiety, stress and depression in students is higher than the general level (Lowell, Nash, Sharman & Lan, 2015). Anxiety is one of the main factors affecting student learning. Students show their anxiety as a complex phenomenon of varying degrees, from mild to severe, to the detriment of learning (Gomez, Silva, and Aragwo, 2008).

Anxiety is an unpleasant excitement that is expressed in terms such as worry, anxiety, panic, and fear, and all humans experience some degree of it (Spielberger, Anton and Biddle, 2015). In other words, anxiety is a complex, unpleasant, vague, and arousal of the automated nervous system, headache, sweating, palpitations, chest tightness, digestive disorders and restlessness. When anxiety appears, the concept is that within a person there is a disturbing psychological balance (Saduk and Saduk, 2011).

Various factors can have an effect on students' anxiety; one of these factors is the degree to which the individual is in the process of intellectual rumination. Ruminations are a series of passive thoughts that have a recurrent aspect, focus on the causes and outcomes of the symptoms and preventing problem solving and increasing negative thoughts (Kuhn, Moore and Hinayek, 2015). Ruminations are also defined as resistant and recurring thoughts. These thoughts come in consciousness and distract attention from the issues and current goals (Jorman, 2006). Thus, one takes extreme estimates of the probability of adverse events and his own responsibility for creating or preventing the consequences of catastrophe related to thoughts and trying to control those thoughts (Billyloch, Murillo, Luciano, Garcia-Soriano, Cabidiou and Carrio, 2010). In Nazemi's research, Kazemi, Ali Zadeh Asl and Nazemi (2015), it was shown that: Intellectual rumination is known as a highly related component of anxiety, which is directly related to general anxiety. Jowz, Wilkins and Spendlow (2012) achieved the following results: There is a positive and significant relationship between intellectual and anxiety rumination in students. Star and Devila (2012) showed that: There is a positive and significant relationship between intellectual rumination anxiety and emotional frustration in students. The results of their research showed that: Intellectual and frustrated rumination can predict students' anxiety. Rector, Anthony, Lapsa, Kukowski, and Osvinson (2008) in study titled The Role of Intellectual rumination in Anxiety Disorder in non-clinical samples obtained the following results: There is a meaningful relationship between intellectual rumination and anxiety symptoms. Also, the results showed that intellectual rumination can significantly predict anxiety.

Other variables that can relate to the incidence and frequency of anxiety in people are irrational beliefs. Irrational beliefs are part of cognitive processes and include general and negative assumptions and beliefs. These general and negative beliefs are not attributed to a particular situation and are considered as ineffective attitudes or irrational beliefs (Hyland, Shillin, Adamson, and Badozic, 2014). Irrational beliefs in dealing with events and external stimuli create emotional consequences such as fear, anxiety, anger, sin, sadness, hostility, and depression. In fact, these are human beliefs that determine the nature, state and severity of emotion and behavior. Because man's behavior and emotions are caused by his irrational beliefs and beliefs, and these beliefs lead to a person's attitude toward himself, the universe and others (David, Lane and Ellis, 2009). In various researches, the association of irrational beliefs and anxiety was confirmed. Amiri and Pourhossein (2010) showed that: There is a positive correlation between irrational beliefs, stress, anxiety and depression. In addition, the results showed that stress, anxiety and depression can be predicted from irrational beliefs. McLaughlin and Nalen-Haxima (2011) conducted a study on the relationship between rumination and depression and anxiety in students. The results of their research showed that there is a significant relationship between rumination and anxiety in students. In a study titled Boyac Glow and Cook (2011), the role of irrational beliefs in student anxiety prediction was achieved by: There is a positive and significant relationship between irrational beliefs and test anxiety in students. Their results also showed that irrational beliefs can predict student anxiety. Fulton, Marcus and Mirky (2011) conducted an "anticipation" study based on irrational beliefs. The results of their research showed that there is a significant relationship between all components of irrational beliefs and anxiety in pregnant women. Also, the results of their research showed that irrational beliefs can predict anxiety. Bridges and Harnis (2010) have come to the conclusion that irrational beliefs have a positive and significant relationship with depression. The results also showed that there is a positive

and significant relationship between irrational beliefs and anxiety in students. In their research, New W. Johnson, Verbick, De Beer, Blunck, and Van Dijk (2010) showed that: There is a positive and significant relationship between irrational beliefs and depression and anxiety levels in employed people. Also, the results of their research showed that irrational beliefs have a significant effect on depression and anxiety. In sum, it can be said that the critical issue about student anxiety is its effect on learning. Students underwent anxiety in an undesirable manner, or in an eerie state. (Excessive consciousness is in a stressful state and leads to anxiety and panic) or to rush out a solution to end an anxious state (Bologn and Haloppa, 2012). Therefore, anxiety in students can have a negative effect on students' academic status and their professional performance in the future. Therefore, considering the effect of students' anxiety on personality, educational, social and economic aspects of the individual and society, the importance and necessity of further study of this behavior is clear. Therefore, the purpose of this study was to predict student anxiety based on irrational beliefs (second wave therapy) and rumination (third wave therapy). On the other hand, students are one of the most sensitive groups of society and creators of the next day of each country, Considering the destructive effects of anxiety on the body and mind, as well as the quality of students' learning and the importance of mental health in learning and increasing the scientific ability of this group of people, this study aims to predict student anxiety based on intellectual rumination and irrational beliefs; Therefore, the main issue of the present research was whether intellectual rumination and irrational beliefs could predict anxiety in students?

Research method

Since the purpose of the study was to predict the students' anxiety based on the intellectual rumination and irrational beliefs of the students of Islamic Azad University of Hamadan, this study was descriptive-correlational. The statistical population consisted of all students of Islamic Azad University of Hamadan during the academic year 2017-2018. The number of these people was 14100 according to the report of the Department of Education. A sample of 380 was selected by relative sampling method.

Research tool
1 - Beck Anxiety questionnaire (BAI):

Beck Anxiety questionnaire is a self-report questionnaire designed to measure the severity of anxiety in adolescents and adults, as developed by Beck et al. (1996). The questionnaire is a 21-point scale that a subject in each substance chooses from one of four alternatives that indicates the severity of anxiety. Each question is scored in a four-part spectrum from 0 to 3. Each substance in the checklist is one of the common symptoms of anxiety (mental symptoms, physical and panic). This questionnaire is designed to prevent the symptoms of depression. Beck et al. (Beirami, Nemati, Megli-Tape and Razmi, 1394) reported the coefficient of internal consistency of the questionnaire using Cronbach's alpha of 0.92 and its re-test validity of 0.75. Kaviani and Mousavi (2008) standardized the Beck questionnaire in Iran. The results showed a reliability of 0.72 and reliability of 0.83 and internal consistency of 0.92.

2 - Ruminative response scale (RRS):

This scale was created by Trainer, Gonzalez and Naln-Haxima in 2003, and was first used in Persian by Bagherinejad, Salehi Fadardi and Tabatabaei (2010). The rumination responses questionnaire consists of 22 questions. The answer pattern is four options and Likert scale. How to respond to the questions is that respondents rate their agreement with each item by choosing one of the "never", "sometimes", "often" and "always" options with the "never" score of 1, sometimes "score 2," often "is the score of 3, and" always "is the score of 4.

The ruminal response questionnaire has a high internal reliability; In Laminet's research (2004), the re-test correlation for this tool was 0.67. The reliability coefficient of the questionnaire by Cronbach's alpha method is located in the range between 0.88 and 0.92 (Bagherinejad, Salehi-Fardadi and Tabatabaei, 2010). The reliability coefficient of the questionnaire was obtained by Cronbach's alpha method in Bagherinejad et al. (2010), 0.91. In this study, the reliability coefficient of the questionnaire was obtained by Cronbach's alpha ($\alpha = 0.79$).

3 - Four factor questionnaire of irrational beliefs in Ahvaz

Ebadi and Motamedine (2005) made four questionnaire of Ahwaz's irrational beliefs (IBT-A4) based on the ten factor questionnaire of Jones's irrational beliefs by factor analysis. The quadratic questionnaire of Ahvaz has 40 items and its scoring method is based on the Likert scale (1 = completely disagree to 5 = totally agree). The four factors of the questionnaire are: helplessness against change, expectation of confirmation from others, avoidance of difficulty and emotional irresponsibility. Ebadi and Motamedin (2005) used Cronbach's alpha coefficient and ballot method to check the accuracy of the test coefficient which for the whole scale (0.75) and (0.76), and the helpless subscales for change (80.80) and (0.82), expectations of others' approval (0.81) and (0.81) respectively,, Avoiding the problem (0.73) and (0.74) and emotional irresponsibility (0.75) and (0.72) (Ebadi and Motamedin, 2005). The reliability coefficient of the questionnaire was 0.88 in the Cronbach's alpha method.

Results

To provide a clearer picture of research findings, demographic features are presented.

Table 1: Frequency distribution of sample individuals in terms of gender

gender		Frequency	Precent
	Male	151	40.70
	Female	220	59.3
	Total	371	100

Table 1 shows that among 151 sample members participating in the male study and 220 female sample members.

Table 2: Distribution of sample population by age

age		Frequency	Precent
	19-25	147	39.6
	26-32	113	30.5
	33-38	83	22.4
	39-45	17	4.6
	46-50	11	3
	Total	371	100

Table 2 showed 147 age group members (19-25), 113 age-old (32-26), 83 age-old (33-38), 17 age-old (39-45) and 11 Sunnis were between the ages of 50 and 46.

Table 3: Frequency distribution of sample individuals according to marital status

Marital status		Frequency	Precent
	Single	214	57.7
	Married	157	42.3
	Total	371	100

Table 3 shows 214 sample members participating in single research and 157 married sample members.

Table 4: Frequency distribution of sample individuals in terms of faculty

Faculty		Frequency	Precent
	Humanities	177	47.7
	Science	75	20.2
	Technical Engineering	45	12.1
	art and architecture	74	19.9
	Total	371	100

Table 4 shows that 177 sample members participated in the research from the Faculty of Humanities, 75 from the Faculty of Basic Sciences, 45 from the Faculty of Engineering and 74 students from the Faculty of Arts and Architecture.

Table 5: Average and standard deviations of research variables

	Mean	standard deviation
Anxiety	35.37	4.22
Intellectual rumination	43.38	4.02
Helplessness against change	51.42	8.08
Expecting approval from others	32.66	6.65
Avoid the problem	13.13	2.96
Emotional irresponsibility	31.62	4.21

According to Table 5, the mean and standard deviations of the variables of research were obtained as follows. Anxiety (37.35, 24.4), intellectual, (48.43, 4.02), resilience to change (51.42, 8.08), expectation of confirmation from others (66.32, 6.65) , Avoiding the problem (13.13, 2.96) and emotional susceptibility (62.31, 4.21).

Table 6: Kolmogorov-Smirnov test and Shapiro-Wilk test for data normalization

	Kolmogorov-Smirnov test			Shapiro-Wilk test		
	Statistics	Degrees of freedom	Significant level	Statistics	Degrees of freedom	Significant level
Anxiety	0.076	371	0.134	0.913	371	0.082

Regarding the results of Table 6, it is clear that the significant level of anxiety variability was found in the Kolmogorov-Smirnov test (Sig = 0.134) and Shapiro-Wilk test (Sig = 0.082). Considering that in the Kolmogorov-Smirnov test and Shapiro-Wilk test, a significant level above Sig = 0.05 indicates that the data is normal, it can be said that the explanation of the data is normal.

Table 7: Anxiety regression analysis based on Intellectual rumination and irrational beliefs

R	R^2	$ADJR^2$	F	P
0.509	0.260	0.249	25.593	0.001

Table 8: Standardized and non-standardized regression coefficients of variables

		B	SE	β	T	P
	Constant	8.352	2.687		3.119	0.002
	Rumination	0.360	0.051	0.344	7.039	0.001
Irrational beliefs	Helplessness against change	0.102	0.025	0.195	4.134	0.001
	Expecting approval from others	0.090	0.030	0.141	2.975	0.003
	Avoid the problem	0.300	0.067	0.211	4.453	0.001
	Emotional irresponsibility	-0.022	0.047	-0.022	-0.477	0.633

To determine the contribution of Intellectual rumination variability and irrational beliefs on students' anxiety, Intellectual rumination variability and irrational beliefs as predictor and anxiety variables were analyzed as the criterion variable in the regression equation by input method. According to the above table, the model was significant for sample members (P <0.01, F = 25.593, R^2 = 0.249 = 0.29). Therefore, it can be said that Intellectual rumination and irrational beliefs as predictive and explanatory variables in the sample members are 25.25, explain the variance of students' anxiety scores. The beta coefficients obtained in Table 8 also show that: A change in the magnitude of a standard deviation in the intellectual-induced ruminant variable and the avoidance of problem, helplessness, and expectation of confirmation from others resulted in 34.0, 21.0, 19.0 and 14.0, the standard deviation of change Anxiety levels in students. Regarding the results of Table 8 and based on the predictive variables, the regression equation for anxiety is as follows:

y = 8.352 + 0.344 (intellectual thinking) + 0.211 (avoiding the problem) + 0.195 (helplessness to change) + 0.141 (Expected approval from others).

Conclusion

The purpose of this study was to predict anxiety based on rumination and irrational beliefs in students. The results showed that intellectual rumination and irrational beliefs can predict anxiety in students, and intellectual rumination and irrational beliefs can explain the anxiety changes in students. Therefore, it was determined that intellectual and intellectual variables as predictive and explanatory variables in sample members predict a significant percentage of anxiety in students. This research finding is consistent with the results of Nasemi et al. (1394), Amiri and Poorhossein (2010), Joez et al. (2012), Star and Devila (2012), McLaughlin and Nalen-Haxima (2011), Rektor et al. (2008), Blackstone and Cooke 2011), Fulton et al. (2011), Newwhoeinson et al. (2010), Bridges and Harnis (2010)researches.

In explaining this finding, it can be argued that irrational beliefs lead to an unusual and unhealthy personality. Therefore, anxiety, which is a mental and unhealthy disorder, can reasonably and theoretically be the result of irrational beliefs. Boyak Throo and Kook (2011) consider false cognitions and false beliefs as a major cause for mental illness, especially anxiety. In other words, the excitement and behavior of people is largely the result of how they think and think about the world around them. People with high irrational beliefs are responsible for any bad thing that happens. These people exaggerate the issues and problems; they consider themselves to be overpowered and think of themselves as the weakest and the most disadvantaged. Given these features in people with high irrational beliefs; it can be expected that the level of anxiety in these people is high. On the other hand, rumination, given the negative impact on the processing of information, leads the person from here and now to processing in the past and the future; this will exacerbate mood and anxiety disorders. In other words, one of the main causes of mental rumination and anxiety is the movement of the mind towards the future and the prediction of events that their occurrence is likely to cause anxiety and distress. Those involved with rumination may be less likely

to find useful solutions to the problems and negative lives of their lives. The intellectual rumination increases the effects of negative mood on thought. In these situations, people are more likely to use negative thoughts, and negative memories are raised in the face of reality. The intellectual rumination includes a long chain of recurrent, cyclic, negative, and self-centered thoughts that can respond to negative thoughts. Therefore, it can be expected that the presence of intellectual rumination in students is related to their level of anxiety and anticipation in students. On the other hand, unreasonable thoughts in students create belief in obligation and duty in them, and cause the person to achieve an unhealthy, anxious and unusual personality; In other words, irrational thinking leads to neuroticism and a tendency toward perfectionism and absolutism, which in turn increases the level of anxiety. Therefore, it can be said that irrational beliefs and rumination in interaction with each other predict anxiety in students. In other words, because people have high irrational beliefs, and they continually rumor these beliefs; it can be expected that these two variables (irrational beliefs and rumination) interact with each other anxiously in students.

Among the limitations of this research, there are a large number of questionnaires that can cause fatigue of respondents and use of self-assessment tools (questionnaires). It is suggested that in addition to using a shorter questionnaire than viewing and interviewing. Regarding the relationship between intellectual rumination and intellectual revolutions and anxiety in students; it is suggested that effective and useful methods (such as emotional management training or choice theory training) should be used as workshops to reduce intellectual rumination upsurge and irrational beliefs and, consequently, anxiety in students.

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