

Presenting a Causal Model of Emotional Regulation Based on Beliefs and Spiritual Intelligence by mediating role of Rumination in Tehran Students

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Abstract

Introduction: Rumination is the constant and involuntary thinking about a negative event. Research findings suggest that there may be a relationship between emotional regulation and spiritual intelligence in students. Therefore, the main purpose of this study was to provide a causal model of emotional regulation based on spiritual intelligence mediated by rumination in students in Tehran.

Methods: The research method is applied in terms of purpose and descriptive-correlational in terms of data analysis. The statistical population of the study includes Tehran State Universities, which according to the report of the Institute of Research and Planning of Higher Education of the Ministry of Science includes a total of 29 universities. In structural equation analysis, 221 people were selected as the sample and completed the emotion regulation scales, spiritual intelligence, and rumination. The research data were divided into descriptive (mean, standard deviation and correlation) and inferential using multivariate analysis of structural equation modeling (SEM) with the help of Excel, SPSS and Lisrel software.

Results: The results showed that the causal model of emotion regulation based on spiritual intelligence mediated by rumination areas can be presented to students in Tehran ($\beta = 1.09$, $P = 0.001$).

Conclusion: According to the findings, it is inferred that spirituality and emotional regulation can be an important factor in people's adaptation to stressors and be effective in preventing rumination. Therefore, paying attention to the mentioned variables in designing more appropriate therapies helps researchers and therapists in students.

Keywords: emotional regulation" rumination" spiritual intelligence

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Introduction:

Emotional regulation is defined as the process of initiating, maintaining, modifying, or changing the occurrence, intensity, or persistence of inner feelings and emotions associated with socio-psychological and physical processes in achieving one's goals (1) and is the mechanism by which individuals they consciously or unconsciously change their emotions to achieve the desired outcome (2). Since emotion regulation is an important part of every person's life, it is not surprising that disturbances in emotion regulation can lead to sadness and even psychological trauma (3). Chang, Kazurkin, McLean, and Foa (4) also emphasize that the growth of emotion regulation is strongly supported by several cores of executive functions such as attention control, behavioral deterrence, decision-making, and other high-level cognitive processes. Increasingly, psychological research has reported that emotional processes interact with other aspects of cognition, so that both the ability of emotional stimuli affects a wide range of cognitive operations and the human ability to use cognitive mechanisms to regulate responses. Emotional effects (5).

Accordingly, cognitive strategies for emotion regulation show how a person cognitively processes when faced with adverse events and stress (6). In a study entitled *Autonomic Regulation in Response to Stress: The Impact of Predictive Strategies for Emotional Regulation and Rumination*, conducted on 56 graduate students, Naso, Wenderselt, Demir, and Diradat (7) found that further reassessment Of all the other components, it allowed participants to cope with stress. However, only those with a lower level of mental rumination were able to benefit from the beneficial effects of reassessment on emotion regulation. Joyner et al Associate the reduction of negative feelings such as anxiety with the reduction of rumination, which is consistent with Papagorgia and Well's theory of the relationship between negative emotion and rumination, which involves a vicious circle; That is, people who have a ruminant response style, without solving the problem, separate themselves from others and think about the root of their discomfort. These people are also worried about their mental rumination and state of mind. They tend to use rumination in response to negative moods. Ruminant also highlights the effects of negative mood, resulting in impaired concentration and function, and the final result of boring rumination is the continuation of rumination. Ruminants are defined as resilient and recurrent thoughts that revolve around a common theme. These thoughts involuntarily enter consciousness and divert attention from current issues and goals (8).

Ruminants see it as a way to gain insight into their problem, through which they focus on themselves, their problematic situations, and their emotions (9). In other words, they think that rumination is useful and helps them to solve their problems, but responding to problems through rumination is associated with more problems and stress. The main related characteristics of rumination are: negative emotion and depressive symptoms, negative directional thinking, poor problem solving, impaired perception and inhibition of beneficial behaviors, impaired concentration, increased stress and specific problems (10). Catalino, Arnander, Apple, and Puterman (11) in a study entitled *Acceptance*, predicted less negative daily emotions associated with stressors and rumination, which was performed on 183 people. The results showed that people who accept their thoughts and emotions They have more, experience fewer negative emotions, and this association was partly with less rumination and less stress-related, and when the daily stressors are higher, rumination predicts a stronger positive association with negative emotions. In this regard, the results of Rezaei and Rezakhani

(12) showed that among the cognitive strategies of emotion regulation, the components of self-blame and rumination are positive and significant and the component of acceptance is negative and significant and also the strategies of emotional coping are positive and significant. They predict the minds of women. All people have a system of beliefs that structures their world and gives meaning to their experiences, and people without them are confused. Ellis's theory states that when an activating event occurs, the behavior of the person does not arise directly from the activating event, but between the activating event and the individual's behavior, beliefs and thoughts, and in fact his belief system, which depends on how and It affects the type of behavior (13).

Spiritual intelligence, as the basis of individual beliefs, combines the constructs of spirituality and intelligence into a new structure and plays an essential role in various fields, especially the promotion and explanation of mental health (14). Spiritual intelligence is a set of spiritual abilities, capacities and resources that their application in daily life increases adaptability (15). McGee and Grant (16) believe that spiritual intelligence is born of a deep insight into the storm of events of the day and sees the person in the face of the bittersweet events and events of water life by which people deal with semantic and value problems and solve them. Spiritual intelligence is a type of intelligence that enables people to direct their activities and lives in a deeper, richer and more meaningful way. The results of Mahmoudi, Sadeghi and Jamalamid (17) showed that there is a positive and significant relationship between the dimensions of spiritual attitude and spiritual ability with emotional cognitive regulation and based on the results, spiritual attitude positively and significantly predicts positive emotional cognitive regulation. Spiritual attitude has also been able to positively and significantly predict negative emotional cognitive regulation. In the face of stressful situations, people use different methods and strategies to control or guide and regulate emotion. Emotion regulation is defined as the efforts made by individuals to maintain, control, and enhance the experience and expression of emotion (18).

Therefore, it can be said that this research is very important and necessary among students. Also, since no research has been done to investigate and present a causal model for emotional regulation based on spiritual intelligence mediated by rumination areas in students, so the innovation of this study is to use these variables and provide a causal model. The Secretariat of the Supreme Council of the Cultural Revolution, the Psychological System, governmental and non-governmental universities and institutions of higher education can benefit from the results of this research. In this study, the conceptual model of the research is presented in Figure 1 to answer the question whether rumination has a mediating role in the relationship between emotional regulation and spiritual intelligence in students in Tehran.

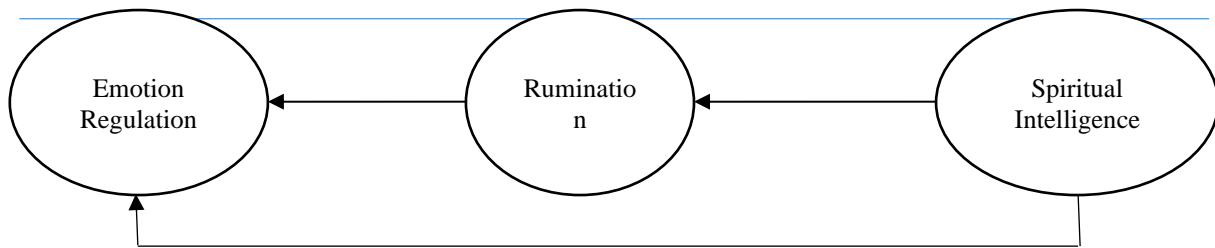


Figure1. Proposed research model

Method:

The method of the present study is correlation design based on structural equation modeling which was a multivariate correlation method. The statistical population of the study included public universities in Tehran, which according to the report of the Institute of Research and Planning of Higher Education of the Ministry of Science included a total of 29 universities. The number of students in Tehran public universities, according to the latest report of the Higher Education Research and Planning Institute of the Ministry of Science, was a total of 376,131. In structural equation modeling, there is no general agreement about the sample size (19), but according to many researchers, the minimum sample size in structural equations is 200 (20). In this study, a sample size of 250 people was considered and finally data analysis was performed on 221 questionnaires. It should be noted that simple and stratified random sampling methods appropriate to the size of the population were used to select the sample.

Garafsky & Crayge Emotional Regulation Questionnaire: The Garnewski & Crayge Self-Regulation Questionnaire (27) is a 36-item tool that sets self-regulatory strategies in response to life-threatening and stressful events on a five-point scale from one (never) to five (always). It measures the following: self-blame, self-blame, ruminant, catastrophic, positive re-focus, re-focus on planning, positive re-evaluation, broad perspective and acceptance. The higher the score, the more use that person has of that cognitive strategy. Garnewski and Craig (27) reported the alpha coefficient for the subscales of this questionnaire in the range of 0.71 to 0.81 and the validity coefficient of its subscales by retesting 14 items in the range of 0.48 to 0.61. Self-regulatory strategies can be considered both along one dimension (cognitive coping) and divided into two types of coping strategies: more adapted (positive / efficient) and less adapted (negative / inefficient). Positive re-focus / focus on planning, positive re-evaluation / broad perspective (quantification) and acceptance of more compromised coping strategies, and self-blame, other blame, rumination and catastrophe are less compromised coping strategies. Psychometric properties of the Emotion Regulation Scale including internal consistency, retest validity and construct validity, and predictive validity in clinical and non-clinical samples have been confirmed in foreign studies (27). In Iran, Khodapnah et al (28) also obtained the alpha coefficient for the subscales of this test in the range of 0.62 to 0.91 and also, the validity coefficient of these factors was obtained by retesting with a time interval of one week between 0.75 to 0.88. The results of principal component factor analysis show that the self-regulatory questionnaire has a seven-factor structure that includes positive refocusing / planning, positive evaluation / broad perspective, acceptance, blaming others, self-blame, rumination, and catastrophe. The content validity of the self-regulatory questionnaire was evaluated based on the judgment of eight psychologists and Kendall agreement coefficients for the subscales were calculated from 0.81 to 0.92. Cronbach's alpha of negative (inefficient) strategies was 0.89.

King Spiritual Intelligence Questionnaire: The King Question 24 Questionnaire is used to assess spiritual intelligence. This scale has 24 items and includes four components of existential critical thinking, personal meaning making, transcendent awareness and self-awareness development. They measure 7 items of critical thinking, 5 items of personal semantics, 7 items of transcendent awareness and 5 items of self-awareness expansion. The Spiritual Questionnaire items are arranged in a five-point Likert scale (strongly disagrees, disagree, occasionally, agree, and strongly agree). King (2008) in a preliminary study of the Spiritual Intelligence Questionnaire conducted on 619 undergraduate students (88 females and 131 males) of the University of St. Petersburg, Cronbach's alpha was 0.95 and the mean internal correlation of the questions was 0.36. In a study, Hossein Chari et al (29) obtained the reliability of the questionnaire with Cronbach's alpha coefficient of 0.938 and its reliability with Cronbach's alpha coefficient for the components of existential critical thinking, personal meaning making, transcendent awareness and self-awareness expansion in the order of 0.78, 0.68, 0.74 and 0.72 reported. The subscales of existential critical thinking, personal semantics, transcendent consciousness and self-awareness expansion have Cronbach's alpha coefficient of 0.89, 0.79, 0.83 and 0.85, respectively. To evaluate the validity of this scale, it has been compared with several valid questionnaires including transpersonal self-interpretation scale, mysticism scale and internal and external religiosity scale and their correlation coefficients have been 0.67, 0.63 and 0.78, respectively.

Ruminant Questionnaire: This questionnaire was developed by Nolen Hooksma and Murrow (1991) and translated by Bagherinejad et al (30). This scale evaluates negative mood reactions and consists of two subscales of ruminant responses and distraction responses, each of which contains 11 expressions. The questionnaire consists of 22 items that are graded from 1) never) to 4 (often) according to the Likert scale. Based on the experimental evidence, Laminet (2004) reported the reliability of the questionnaire by Cronbach's alpha method of 0.92 and the validity of the questionnaire by intra-class correlation method of 0.67. Also, in the research of Bagherinejad et al (30), the reliability coefficient of the questionnaire was 0.90 by Cronbach's alpha method and 0.92 and 0.89 for its dimensions. Also, the validity of the questionnaire was reported by correlating with the metacognitive belief's questionnaire of 0.65 at the level of 0.001, which shows that it has a high validity. The analysis of the information obtained from the implementation of the questionnaires was performed using Spss-V23 and Lisrel-V7.80 software. Structural equation modeling was also used to test the research hypotheses.

Results:

Demographic information of the subjects was described based on gender, age, level of education and marital status. According to the data, 88.7% of the subjects were female and 11.3% were male. 45.2% of the subjects were under 25 years old, 18.1% were between 25 and 35 years old, 28.5% were between 35 and 45 years old, 6.3% were between 45 and 55 years old and 1.8% was over 55 years old. 31.7% of the subjects had a diploma, 11.8% had a master's degree, 27.6% had a bachelor's degree, 20.8% had a master's degree and 8.1% had a doctorate. 61.5% of the subjects were single and 38.5% were married. In this section, the distribution of research variables is described using central indicators.

Table1. Statistical characteristics of research variables

Variable	Dimensions	Component	Average	The standard deviation	Skewness	elongation
Excitement regulation	Positive cognitive regulation factors	Single positive focus / planning	3.54	0.65	-0.32	-0.21
		Positive evaluation / broader perspective	3.14	0.67	0.08	-0.18
	Negative cognitive regulation factors	Blame yourself	2.49	0.77	0.85	0.79
		Blame others	2.36	0.77	0.84	0.68
		Rumination	3.05	0.66	0.14	-0.30
		Catastrophic	2.23	0.74	0.40	0.27
		the reception	2.92	0.79	0.21	-0.53
Spiritual Intelligence	Critical Existence Thinking		3.19	0.68	0.00	0.44
	Generate personal meaning		3.40	0.59	0.04	0.74
	Transcendent consciousness		2.95	0.55	0.00	0.44
	Expansion of consciousness		2.77	0.68	0.46	0.33
	Rumination		2.24	0.50	0.64	0.29

The information in Table 1 shows the statistical characteristics (mean, standard deviation, skewness, elongation, minimum and maximum) for the research variables. Also, considering the values of skewness and elongation that are within a reasonable range for guessing the normality of the data, it can be assumed that the data is normal.

Table2. Correlation matrix between research variables

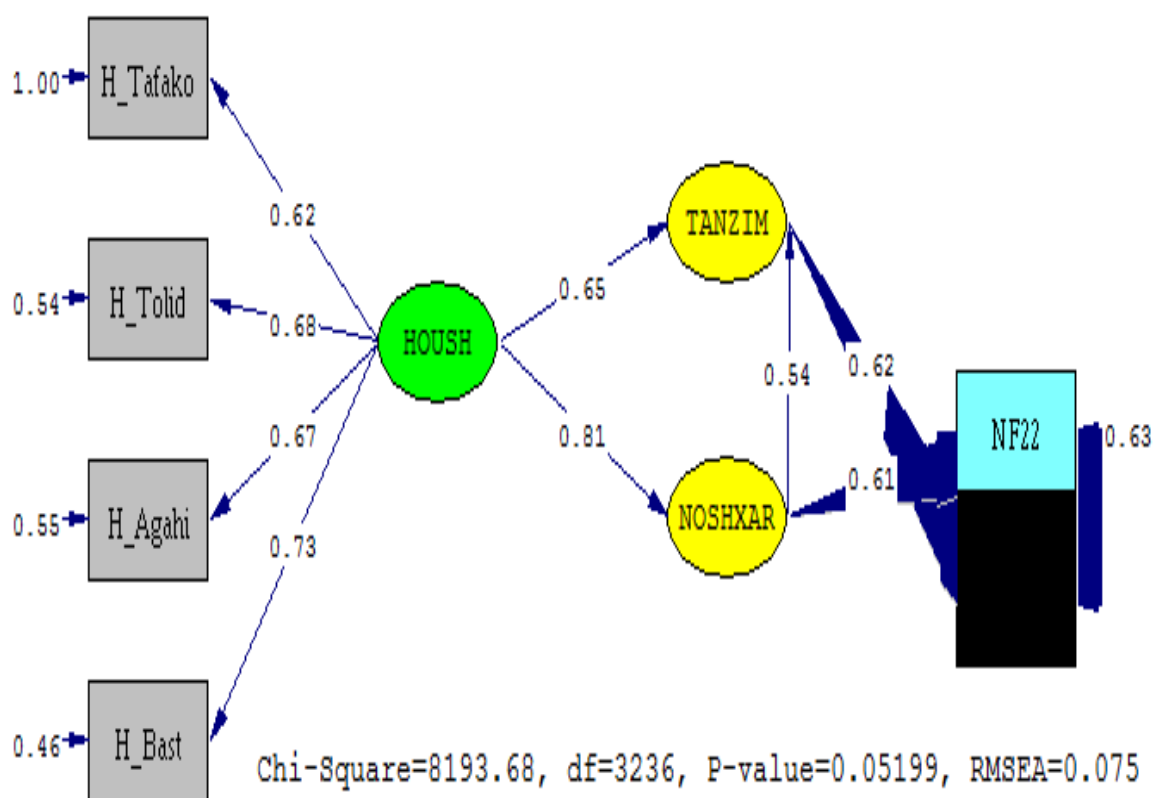
Variable		Spiritual Intelligence	Rumination	Excitement regulation
Spiritual Intelligence	Correlation	1		
	Sig.			
Rumination	Correlation	0.517**	1	
	Sig.	0.802		
Excitement regulation	Correlation	0.520**	0.638**	1
	Sig.	0.001	0.00	

As can be seen from the matrix in Table 2, the sign ** indicates the correlation between the variables of the research hypothesis at the level of 0.01. After drawing the structure, adding model constraints and selecting the maximum likelihood method, the implemented model and the fitting path diagram of the following figures were obtained. The following diagrams show the path diagram fitted to the data. As the Chi-square and RMSEA indices show, the model provides a more appropriate fit to the data. The model outputs are examined in the table below.

Table3. Selection of important fitting indicators of the drawing model

Indicator	Index name	Abbreviation	the amount of	Acceptable fit
Absolute fit characteristics	Covered surface (Chi-square)	-	8193.68	
	Fit Goodness Index	GFI	0.95	Larger than 0.8
Comparative fit indices	Modified fit goodness index	AGFI	0.93	Larger than 0.8
	Adaptive Fit Index	CFI	0.97	Greater than 0.9
Affordable fitting characteristics	The root of the mean squares of the estimation error	RMSEA	0.075	Less than 0.1

As can be seen, the pattern fitting indicators are in a good position.

**Figure2.** Research hypothesis model in the form of standard coefficients

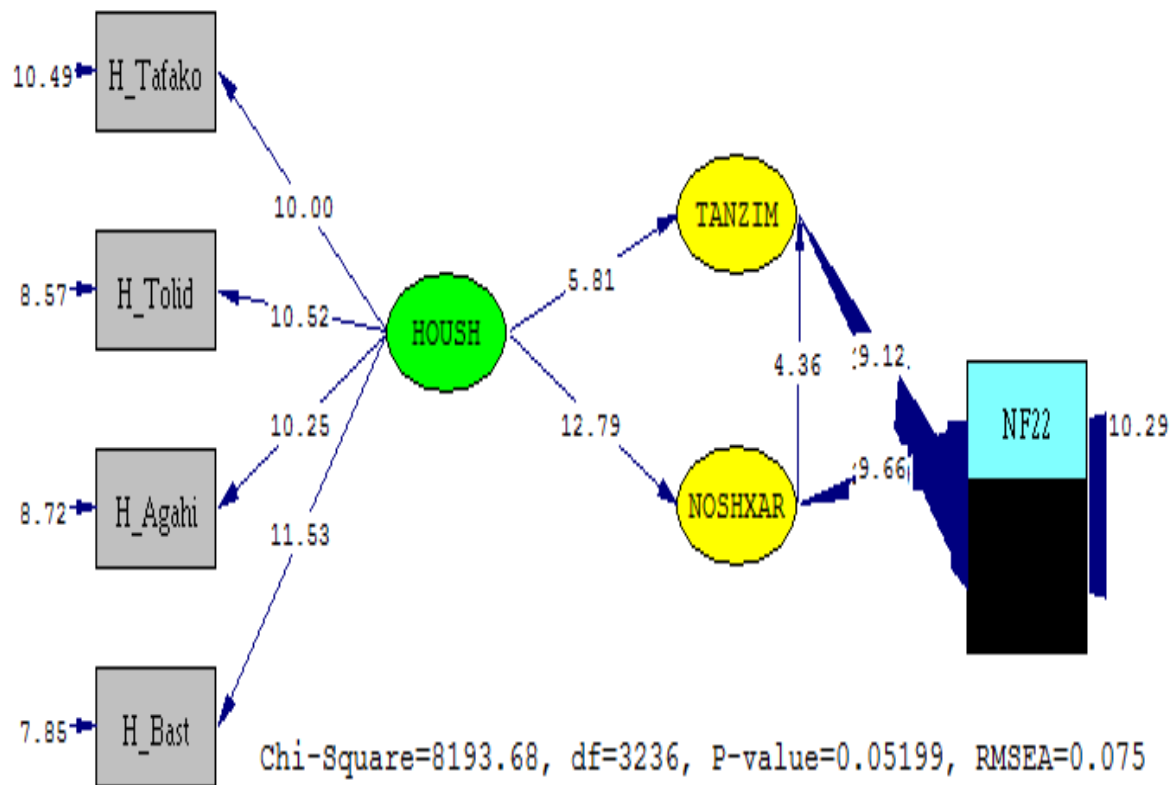


Figure3. Research hypothesis model in the significant state of coefficients

As shown in the figures above, all values of the model parameters are shown along with the path coefficients.

Table4. Separation of effects, direct, indirect and the whole model of the hypothesis

independent variable	The dependent variable	Effect		
		Direct	indirect	Total
Spiritual Intelligence	Rumination	0.81	----	0.81
Rumination	Excitement regulation	0.54	-----	0.54
Spiritual Intelligence	Excitement regulation	0.65	$0.81 \times 0.54 = 0.44$	1.09

As can be seen in Table 5, the effect of spiritual intelligence on emotion regulation through rumination mediating variable is 1.09. Therefore, according to the above figures, it is inferred that spiritual intelligence with the mediation of rumination has an indirect effect on emotion regulation in students in Tehran.

Conclusion:

The aim of this study was to present a causal model of emotional regulation based on spiritual intelligence mediated by rumination in students in Tehran. The present study is consistent with the findings of Anwar et al. (21), Naso et al. (22), Van Borna et al. (23), Catalino et al. (11). In explaining this hypothesis, it can be said that spiritual intelligence creates purpose and meaning for life. People who have a sense of meaning and purpose in life are more likely to cope in times of crisis, and hope in God enables them to experience less psychological distress (24). Spiritual intelligence also helps people to endure hardships by giving meaning to adversity and to seek solutions to it, and thus to give dynamism and movement to their lives. In other words, when faced with any stressful emotional situation, spiritual intelligence allows a person to

create new meaning by creating new meaning that, even if it is stressful and disturbing, finds meaning or purpose in it and can adapt to the new meaning. Behave in this way to change the stressor and reduce its negative emotional effects. In fact, spiritual intelligence causes a person to look at problems more gently and compassionately, to experience less worries about the past and the future, to make more efforts to find compatible solutions, and to endure the hardships of life better.

In other words, religious people experience a sense of control or acceptance through prayer, so that prayer causes an indirect sense of control over seemingly unchangeable and unfortunate situations, thus increasing their belief in their ability to regulate and manage their emotions. Behaviors such as trusting in God, worship, pilgrimage, etc. can bring inner peace to a person by creating hope and encouraging positive attitudes, and as a result, from a look of regret and repetitive thinking to the past (rumination) and an anxious look to the future (worry). Get rid of. Having meaning and purpose in life, feeling of belonging to a high source, hoping for God's help in difficult life situations, benefiting from social support and spiritual intelligence, etc., are all ways to reduce mental worries about the future and rumble about Events in the past help people with high spiritual intelligence to have less damage in the face of stressful life events and have more faith and confidence in their ability to solve problems and in regulating emotions using Be more successful with adaptive approaches to life challenges.

In explaining this finding of the research, it can be said that rumination is defined as resistant and recurrent thoughts that revolve around a common subject. These thoughts enter consciousness involuntarily and divert attention from current issues and goals. Ruminant is a way to respond to anxiety that is especially associated with the onset, severity, and persistence of depression. Theorists believe that people chew because they believe that chewing increases their understanding of the situation and helps problem-solving thinking. Oginska-Bulik & Michalska (quoted in 2) have also reported in their research that rumination plays an important role in the difficulty in emotionally processing traumatic events. Ruminants, as a set of passive thoughts that have a repetitive aspect, prevent problem-solving in an adaptive way and increase negative emotion. People with rumination try to hide their emotions, are always comparing their behaviors when they are excited with standard behaviors (ie when the person is not experiencing any emotions) and want to face emotions like when Behave that no emotion has occurred. So they try to control the changes in their faces and do not show emotional impulses. Penpiker (1990) found in his study that emotion suppression prevents the development of emotional impulses, adaptation, or effective coping responses. In other words, people with rumination are always monitoring their behavior to correct their behavioral manifestations when emotion arises, so they use emotion regulation to suppress the expression of emotion, a process that requires energy. There is a lot that can reduce cognitive resources, increase rumination after facing an emotional event, and reduce a person's happiness due to a decrease in their ability to cope with emotional events.

Also, in explaining this finding of the research, it can be said that since spiritual intelligence represents a set of abilities and capacities and spiritual resources that work towards them increases people's adaptability (25) and thus regulates people's emotions. In his research, Smith showed that spiritual intelligence is necessary to adapt to the environment, and people with higher spiritual intelligence are better able to adapt to the pressures of life. Emotional

intelligence can be examined in several dimensions; Dimensions such as religious experiences, coping with stress, having specific goals in life, inclination to holy places, and the impact of religion on one's actions and behaviors. All of these components are principles according to which a person can withstand the pressures of life and the issues that lie ahead, and avoid actions that cause harm to the individual and society. Pargament also believes that people in a vacuum and without resources, do not face stressful life events, but they rely on a system of beliefs and actions that reduce the excitement of difficult situations (26). In fact, spirituality makes life meaningful for a person and in this way helps the person to cope effectively with difficult problems. Having an inner religion, which is the true faith, increases people's endurance in the face of adversity and helps them to overcome the challenges and problems of life and thus promote emotional regulation using adaptive emotional regulation styles.

Limitations of the research:

The researcher has faced limitations in the current research process that may have affected the quality of the past research. The following are some of them: Limitations of the tool for measuring variables that only self-report questionnaires have been used, given that the research was conducted in a limited community, caution should be exercised in generalizing the results to other communities. Observance, data and analyzes of the present study are cross-sectional studies and therefore causal conclusions about the data are not correct. Longitudinal research should be done in this regard, since the only tool for data collection in this study was a questionnaire, so it is suggested to increase the validity of the results obtained by other methods such as interview and observation with Questionnaires should be used in collecting research data. The use of longitudinal as well as long-term methods can further help to improve and generalize the findings. Since entering modernity, spirituality has found a small role in the lives of people, especially young people, in order to encourage young people, most of whom are students, plan and through various means such as education, awareness, etc., young people to Spirituality and thus promote spiritual intelligence. According to the research findings that indicate that the factor of spiritual intelligence can be effective in regulating emotions, it is suggested that the important role of religiosity and spirituality in regulating emotions and reducing rumination and anxiety in all courses, especially universities, should be considered because most Students are at the peak of excitement, these factors should be considered more by university officials and planners and help students by hiring consultants and experts in this field.

Contribution of authors:

This article is taken from the dissertation of the PhD course in General Psychology. Dr. Davari supervised this dissertation and was the main designer of the subject. Dr. Dortaj and Dr. Baseri have played the role of consultants in this study. Ms. Laia Sadat Miri, as the researcher of this dissertation, has been involved in compiling the contents and compiling the final text.

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Conflict of interest:

The authors of this article testify that this work has not been published in any domestic or foreign journal and is the result of the research activities of all authors and they are aware of

and satisfied with its publication. This investigation has been carried out in accordance with all ethical laws and regulations and no violations have been committed. The responsibility for reporting potential conflicts of interest and sponsors of the research rests with the author, and he / she is responsible for all of the above.

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