

*Original Article*

## The Relationship between Depression and Response Style Based on Rumination

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### ABSTRACT

Present study is a correlative research that was performed aiming to review and determine the relationship between depression and response styles based on rumination. Using random sampling method, 361 undergraduate students, including 213 girls and 148 boys, has been selected from different faculties. In order to collect information and research data, the Beck Depression Inventory and Rumination Questionnaire were used. Results of study indicate that in comparing depression and rumination rates, the depression severity in girls is higher than boys and the girls use the response based on rumination more than boys. In the end of article, findings are discussed and practical recommendations are presented.

**Key words:** depression, Rumination, response based on rumination, undergraduate students

### INTRODUCTION

In recent years, the study of thinking patterns and unwanted thoughts in emotional disorders and its role in the durability of these disorders have been focused by clinical specialists and researchers. One of the thinking patterns in emotional disorders is rumination [1, 2].

One of the rumination theories that has influenced much on the formation and growth of the related research is the response style theory. This theory was provided by Nolen-Hoeksema et al. They sought to response to the prevalence difference of depression among men and women and introduced the rumination as the cause. They believed that people encounter with the depressed mood in three ways, including rumination, decentralization of depressed mood and problem solving [3].

This type of thinking was observed in some of the emotional disorders such as depression, practical-intellectual obsession, disseminated anxiety disorder and post-trauma mental impact disorder. This thinking style impairs the cognitive infrastructure of patients with depression and results in increased duration and severity of depression periods [3]. Hence, the rumination has increasingly been considered as an important element in depression [4 and 5].

In a simple definition, rumination means "that an individual shows the behavior and thoughts following a state of depression and sadness, which draw his attention toward symptoms of depression. The patient secludes following the depression occurrence and talks to himself as: "It is just me who involved in such a situation; what will be the result of my depression; and what will happen if I do not overcome this situation?" [6].

In mild or severe depression states, the patient ruminates about negative issues. The rumination indicates thoughts that tend to be repeated, are with consciousness and focused on a single subject, and are still emerged even in the absence of immediate and necessary stimuli [7].

Although the idea suppressing is a usual manner in depression and can be differentiated from rumination, however, some people ruminate about negative thoughts based on commitment. These people usually believe that rumination about negative thoughts and feelings can give them insight and facilitate the problem solving, while rumination makes the individual's mood worse, and causes the patient fluctuating between repression and rumination [1].

Ruminative responses can be defined as thoughts and behaviors based on the focused attention of the depressed individual on his illness symptoms and its causes and consequences. For example, focusing on how that

nobody's feeling is motivated, or wondering that why do I feel depressed? And, being concerned about what can be the consequences of depression symptoms [6, 8].

Review of research literature shows that although the rumination concept has been of specific interest of the scholars in emotional disorders areas in recent decades, but little studies have been conducted in this area in Iran, and, the nature, severity and quality of rumination have not been reviewed in Iran's clinical samples [9].

In reviewing the literature related to rumination, five orientations can be observed:

1. Rumination: Definitions, nature, results and effective mechanisms in its production
2. Physiological aspects of rumination and related research
3. Rumination theories and its related research
4. Research related to rumination assessment and its measurement tools
5. Therapeutic strategies to reduce rumination and related research [3].

The studies originated from Nolen-Hoeksema theory have been formed given four issues, which have been considered by him and his colleagues, including:

1. Effects of rumination on mental health
2. The sources of individual differences in rumination
3. Gender differences in rumination and depression prevalence
4. Future growth incidents of rumination

Meanwhile, rumination may be based on some issues of the individual's failures or past. However, some of the mentioned definitions have been derived from their specific theoretical basis [10].

Watkins et al. [5] consider the rumination as thoughts related to the sadness feelings and refer to it as sadness. Paya Giorgio and Wales showed in a study that spontaneous negative thoughts are short and brief evaluations of failures in depressed patients; they are a long chain of repetitive recycling and self-focused thoughts, and a response to primary negative thoughts. The rumination delays the key depression recovery in behavior cognition therapy. Research has shown that the response of rumination to the boring experience will make the periods of depressed mood longer and more intense. Also, the Rumination makes the people thoughts negatively oriented, and these individuals have a weaker potential in problem solving compared to the others. Usually, the rumination provides some mechanisms that will become different dangerous factors for depression; in fact, it will result in more pressure and lower social support and optimism, and more neuroticism [7 and 11].

Papageorgiou and Wells say that negative automatic thoughts are a short and brief assessment of the failures and losses in depressed patients; while rumination is a long chain of repetitive recycling and self - focused thoughts and a response to initial negative thoughts [3, 11, 12].

Pizonski and Greenberg states that self-focusing of depressing is based on discrepancies reduction between the ideal mode and the real mode, but rumination is theory-making to deal with the problem through problem solving techniques that not necessarily occurs after the failure [3,13].

Bahrani et al. conducted a research to study the role of rumination of the positive and negative meta-cognitive beliefs related to rumination at the beginning and durability of depression among Isfahan students and concluded that the rumination of positive and negative meta-cognitive beliefs can be predictive of depression [9].

In another study by Bahrani and Mahmoudi, it was shown that the amount and intensity of negative emotions such as rumination and anxiety can be reduced by representing positive emotions [9]. Bahrani, Ghaderpour and Marzban [1] showed in a research on the impact of emotion on the students' happiness and rumination that the assessment of emotion before its creation, in addition to prevent the incidence of extreme emotions when confronting with a negative emotional situation will also avoid dramatic decline in individual's happiness after the emotional event as well as lowering his ruminations appearing after the incidence of emotion. Yousefi in conducted study on rumination in Iran revealed that training of attention reduces the rate of rumination in depressed patient [3]. Studies performed based on cognitive models of depression have been identified the role of negative cognitive styles and the rumination as the risk factors for depression [9].

In a study conducted in order to develop a background of the response styles theory, after coming to the conclusion that the response styles theory relies on the relationship between depression and rumination, it is suggested according to the present evidence that rumination is also associated with other mental damages, including anxiety, over-indulgence, drinking and self-hurting [6].

In another research conducted by Sakamoto et al. on 89 undergraduate students in Japan, it was shown that self-focused attention or deep thinking or insight is correlated with prolonged and severe periods of depression. Also, a significant relationship was found between cognitive symptoms and rumination, and between misleading activities and emotional symptoms [14].

In the present study that was performed aiming to review and determine the relationship between depression and response styles based on rumination, these questions are suggested that whether there is any difference between depression and rumination of male and female students?

Meanwhile, in addition to this question, a hypothesis has been also suggested that there is a meaningful relationship between depression and rumination in students.

## MATERIALS AND METHODS

The present research is a descriptive type study that has been performed by a correlation method. The statistical population of the study has included all male and female students who have been studying in academic year of 2011-2012 at Hormozgan University. In the present study, random stratified relative sampling method has been used. The sample size of 361 Hormozgan University students, including 213 girls and 148 boys, has been selected from different faculties. In order to collect information and research data, the Beck Depression Inventory and Rumination Questionnaire were used. The Beck Depression Inventory includes 21 items and each item consists of four statements that each of grades a symptom of depression from zero to three. The total score of each individual is obtained by summing the scores in all aspects. The validity and reliability of the Beck Depression questionnaire have been repeatedly examined, which results have been reported at high levels. Beck et al. have reported the internal consistency reliability coefficient of the questionnaire items from 0.73 to 0.86 and the correlation coefficient of the Beck Depression Inventory with the MMPI scale as 0.74. The questionnaire reliability in the present study was calculated using the Cronbach's Alfa coefficient that was equal to 0.86. The rumination questionnaire was developed by Yousefi [3]. The test includes 39 four-option questions that each of them is graded from zero to three, and each person's score will be obtained by summing these scores. Yousefi has reported the reliability of the questionnaire using Cronbach's alpha equal to 0.92, and has evaluated its validity using the factors analysis method at an appropriate level. The reliability coefficient of this questionnaire was obtained through calculating the Cronbach's alpha coefficient as 0.93.

## RESULTS

Considering that the complete depression score is 63 and the non- depression score is equal to zero, data analysis results showed that the male students' depression average score is equal to 15.93 and the female students' depression mean score is equal to 16.88. This suggests that depression rate in female students is more than depression rate in male students. However, there is no significant difference between depression of male and female students. The survey of rumination status in male and female students' rumination also suggests that the average of rumination in boys is equal to 37.88 and in girls 43.3. The situation of averages shows that the rumination rate in female students is higher than male students, and there is a significant difference between male and female students' rumination. The results are presented in Table 1.

To test the research hypotheses, the relationship between depression scores and rumination scores of the students was calculated. The results showed that the relationship values in female students and male students were respectively as  $r = 0.648$  and  $r = 0.502$ , and the relation value in the whole sample is as  $r = 0.591$ , which all the three values are statistically significant. The results are presented in Table 2.

**Table 1.** Summary of t-test results of independent groups of rumination and depression scores in the male and female students

Variables	group	N	M	SD	T value	P.
Depression	Male	142	15.93	10.23	-0.848	0.3
	Female	201	16.88	10.09		
Rumination	Male	142	37.88	18.64	-2.39	0.02
	Female	201	43.31	23.41		

**Table 2.** Correlation matrix of rumination and depression scores in study sample

Group	Variables	r	P.
Male	Depression	0.648	0.001
	Rumination		
Female	Depression	0.502	0.001
	Rumination		
Total	Depression	0.591	0.001
	Rumination		

## DISCUSSION

The present study was conducted aiming to examine and explain the relationship between depression and the response based on rumination. The results showed that in comparing depression and rumination rates, the depression severity in girls is higher than boys. Also, the girls use the response based on rumination more than boys. These results are consistent with the statements of Nolen- Nolen-Hoeksema et al. [6, 8], which suggest that women suffer rumination two times more than men; however, it is not the only unique source of women's greater vulnerability to depression. In their view, the women suffer from supposing stresses such as sexual abuse and childhood stress, which increase the women tendency to use rumination more. Also, women believe more than men that controlling the negative emotions such as sadness, fear and anger is difficult, and as a result of this feeling of helplessness, they use rumination more [1].

The results of this study consistent with previous research also showed that there is a relationship between depression and responses based on rumination. Studies such as Bagheri nezhad et al. [4], Azargoon et al. [7], Bahrami et al. [1] and Nolen-Hoeksema [6] have confirmed that there is a significant relationship between depression and responses based on rumination. Meanwhile the naturalism studies have shown that people who emphasizing on rumination show more prolonged and more symptoms of depression experiencing and its sever consequences, when they are sad comparing with those have not rumination when suffer sadness [8, 15, 16].

The results of this study can provide the necessary insight for therapists in counseling and clinical situations and can help them in the treatment of depression and other disorders related to rumination. It is suggested that future research will study the topics such as intervention at the level of individuals' rumination and its effect on mood and anxiety disorders.

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