



## Study of Rumination and Locus of Control Roles in Depression of Female Employees of the University of Medical Sciences, Rasht, Iran

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**ABSTRACT:** Depression is a phenomenon that is considered to be one of the most complicated issues of mental health in today's world. According to the latest estimations, about 2% of people experience one or more episodes of depression during their life time. The main objective of this study was to investigate the relationship between mental rumination and locus of control in female staff in the University of Medical Sciences, Rasht in the year 2012. This research was a correlational study, and the sample consisted of 367 employees who were selected by multistage cluster sampling. The variables were measured by Beck depression questionnaire and Rotter's locus of control scale in rumination style. The results of the study showed that there is a positive and significant relationship between the two variables "rumination and locus of control" and depression. The results also indicated that rumination and locus of control have high potential in predicting depression, so that people with more rumination and external locus of control are more depressed than the other ones. Findings also showed that there is a positive and significant relationship between rumination and external locus of control.

**Key words:** Rumination, Locus of control, Depression, Female employees.

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### INTRODUCTION

The prevalence and incidence of depression disorder with a range of 10-25% for women and 5-12% for men in their life (Kaplan and Sadock, 1990) has deservedly appropriated the title "common cold" of psychiatry several years ago. It is the most common disease of this century (Lavar, 2002) and the most serious disease of the century, which will likely be ranked as the first and second most prevalent disease by the year 2020 according to the Harvard University.

Depressed mood and anhedonia are the key elements of depression. The patient may express the feeling of sadness, hopelessness, emptiness, and worthlessness. For patients, depression is often a quality that differs from normal sadness. Some patients describe it as an overwhelming emotional pain.

Depressed patients often complain about their inability to cry out, a symptom that disappears after recovery. Two-thirds of the depressed patients think about suicide and 10 to 15% of them end their lives. Almost all depressed patients (97%) complain of the energy loss which leads to difficulty in completing assignments, academic and professional dysfunction, and decreased motivation for new projects. Almost 80% of the patients suffer from sleep disorder, particularly getting up early (late-night insomnia), waking up frequently throughout the night plus obsessing about their problems over and over. Many of these patients catch anorexia and weight loss, while some patients suffer from overeating, obesity, and oversleeping. Among the theories about vulnerability

to depression, psychological theories far outweigh the other theories (Clark et al., 1999), and the response style theory of depression<sup>7</sup> is the most important psychological theory that have been ever discussed on this issue. The response style theory of depression was proposed by Nolen-Hoeksema et al. (1993). Based on this theory the severity and duration of depressive episodes is triggered by the ways in which an individual responds to his depressed mood state (Bagby et al., 2001). Nolen-Hoeksema et al. have defined the concept of rumination<sup>10</sup> in her Response Styles Theory.

Rumination is a popular word and refers to the thoughts that are repetitive, rotatory, self-centered and depressing and expresses the thoughts that have a tendency to repetition, are intentional and are centered on a certain issue, and even in the absence of the urgent and necessary environmental stimuli, these thoughts continue to appear. In cases of mild or severe depression, patients usually have a tendency to ruminate about negative issues (Lefcourt et al., 1985).

Locus of control is another important variable associated with depression (Wallis, 2005). During an extensive research, Rotter found out that some people believe that response strengtheners are dependent on their own actions, while others think that their strengtheners are controlled by other people and external forces. He named this source "Locus of Control" (Shultz, 2005). Rotter also found out that people can be classified in bipolar continuum, as people with external locus of control and those with

internal locus of control. People who believe that they can control their own destiny on many occasions (but not all) have a different behavior than those who believe that luck, fate, or powerful others are responsible for their fate. The main point in the Rotter's social learning theory is the idea that reinforcement is not automatically dependent on behaviors, but also they are able to understand the casual link between behavior and the occurrence of the strengtheners (Rotter 1954; Rotter, 1975). The internal-external control scale has been established to evaluate the degree of causal relationship between human efforts and environmental impacts. The people who gain high score in internal control generally believe that they have locus of control inside of them and are in full control of the events of their life. Those who gain high score in external control generally believe that their life is controlled mainly by external forces such as luck, fate, or other people's behavior (Feest, 2005).

## MATERIALS AND METHODS

The population in this research includes 7400 female employees of Guilan University of Medical Sciences in 2012. The sampling method is multistage random cluster. The sample size is 367 women who are selected through Morgan table. The following tools have been used to select data for this study:

### Beck Depression Inventory:

Beck Depression Inventory (BDI) is used to measure the severity of depression. It was first introduced by Becket al. (1979). Beck Depression Inventory is widely used in the measurement of depression in mentally ill patients as well as normal people (Beck et al., 1996). This test consists of a total of 21 clauses associated with the various symptoms during which the subjects are asked to rank the symptoms from zero to three for a four score scale. The questions are associated with the contexts including sense of disability and failure, guilt, irritability, sleep disorder, and anorexia. The test is known to be as efficient as an interview with a long and costly structure (Marnat, 1995).

The validity and reliability of Beck's inventory have been repeatedly examined, and the results are reported as high. According to Beck et al. (1988), reliability coefficient for internal consistency of the inventory items from (0.73) to (0.86), and correlation coefficient for Beck Depression Inventory and MMPI scale (0.74). A study conducted at Tehran University of Medical Sciences (Roozbeh Hospital) has shown the reliability and validity of the test in the normal and clinical population (Azargoon, 2009).

Ruminative Style Questionnaire (RSQ): The questionnaire is developed by Yoosefi (2005). This test

consists of 39 questions, each with 4 options and which are graded from zero to three, and the score of each individual is obtained by adding up the points. To investigate the reliability, validity and normalization of ruminative questionnaire, Yoosefi randomly selected 211 students of Isfahan University and administered the depressive rumination questionnaire. The concurrent validity of the test was measured with the results of its correlation with the Beck Depression and Oxford Shadkami tests. The internal consistency and reliability of the test were measured by Cronbach's alpha and test-retest, respectively. The results also showed that the questionnaire has a good internal consistency with Cronbach's alpha coefficient 0.92 (Azargoon, 2009).

### Rotter's Locus of Control Questionnaire:

Rotter developed an internal-external control scale to evaluate the internal and external control of reinforcement or locus of control which was established based on doctoral dissertation of two university students named I (Feest, 2002). Internal-External Control Scale consists of 29 items (forced-choice<sup>1</sup> type), 23 of which are scored for internal or external control, and 6 filler items which are intended to hide the real purpose of the test. The scale is scored in the external direction, so that 23 is the highest score of the external control, while zero indicates the highest internal control score. Based on the studies of Robinson and Shiver and according to Rotter, the reliability of the internal-external control conducted on the Ohio University students by bisection method was reported to be 0.73, and the reliability of internal-external control on 400 subjects using Kuder-Richardson formula 0.70. The results of a reliability test-retest conducted on 30 university students was reported to be 0.83 for an interval of one month, and 0.50 for an interval of two months. A similar reliability test-retest was conducted on 51 male and female high school students during Darabi research in Iran (1994), according to which the reliability is 0.75. Meanwhile, there is a significant correlation between the subjects' scores, on a locus of control scale (internal items), and their academic achievements (Darabi, 1994). Chary (1996) reported a reliability coefficient of 0.69 on the above mentioned scale, using the scores of 32 students in an interval of 3 weeks.

## RESULTS

The mean and standard deviation of depression variables, locus of control, and rumination in the subjects are shown in table 1. The mean and standard deviation in the depression variable are 9.39 and 8.57, in rumination 35.63 and 23.11, and in locus of control 7.32 and 3.78, respectively. Based on the main

purpose of this study, the regression analysis was used to determine the role of rumination and locus of control on depression. That is why a simple regression was initially used to determine the role of these variables on depression, and then a multiple regression was used to determine the simultaneous role of these variables on depression. Ultimately, the Pearson correlation coefficient was used to examine the relationship between locus of control and rumination.

Table 2 contains the information about regression analysis, the role of rumination and locus of control on depression. The rumination coefficient of

determination is  $R^2 = 0.35$ , indicating that 0.35 of variance in depression is interpreted by rumination in the whole study group. The locus of control coefficient of determination is  $R^2 = 0.25$ , indicating that 0.25 of variance in depression is interpreted by rumination in the whole study group. Table 3 shows the results of simultaneous regression analysis of depression in terms of rumination and locus of control variables. According table 3, the correlation coefficient between rumination and locus of control is 0.452, which is significant in the level ( $p < 0.001$ ).

**Table1.** The mean and standard deviation of the study variables

Variable	No.	Mean	Standard deviation	Max	Min
Depression	367	9.39	8.57	40	0
Rumination	367	35.63	23.11	94	0
Locus of control	367	7.32	3.78	17	0

**Table2.** The Results of Regression Analysis, the Role of Rumination and Locus of Control in Depression

Criterion Variable	Depression					
	R	R <sup>2</sup>	B	β	t	P
Predictor Variables						
Rumination	0.59	0.35	0.22	0.59	3.11	0.001
Locus of Control	0.50	0.25	0.13	0.10	2.32	0.001

**Table 3.** Simultaneous Regression Analysis in Terms of Predictive Variables (Rumination and Locus of Control)

Model	Multiple Correlation Coefficient	Coefficient of Determination	Modified
1	0.64	0.42	0.41

## DISCUSSION

The results showed that rumination had a positive and significant role in the prediction of depression in female employees of Guilan University of Medical Sciences. This consequence is consistent with the study results of Azargoon et al. (2009), and Fili et al. (2011). The results also confirm the previous findings of the foreign researchers on the relationship between rumination and depression, including Moulds et al. (2007).

The result is also consistent with the theory of Teasdale et al. (2000). According to this theory, the mind has a tendency to infer and interpret about the incidents and can lead to outbreak of reactions and stable emotions. In those who are prone to depression, the mind tends towards irrationally pessimistic and upsetting thoughts which can result in persistent sadness and anxiety. Many people think that they should try to focus on their inside, so that it can boost their emphatic insight and help them to find a solution for their problems. Thus, they will get stuck in rumination and this in its turn can lead to persistent depression. Research evidence suggests that rumination has detrimental consequences such as: Poor problem solving, low motivation, effective behavioral inhibition, cluttered focus and

understanding .The results showed that locus of control can significantly predict depression in the whole study group. The result is compatible with the findings of Thomas (2001), Toner and Monroe (1996). It seems that people who actively take control of their lives and properly assess and manage their problems are less likely to have mental disorders such as depression.

Based on the results of the study, rumination and locus of control have a greater predictive power on depression when they act simultaneously, and can interpret about 41% of the depression variance in the whole study group. This result is consistent with the new theories of cognitive therapy which are intended to decrease depression (Ma and Teasdale, 2004). The theory of cognitive therapy which is based on mindfulness (Segal, Williams and Teasdale, 2000), is a promising approach in explaining the cognitive behavior therapy, and the recurrent depression is assumed to be the recurring episodes of depressive mood and ruminative thinking (Crane, 2009).

According to the results of the study, there is a considerable correlation between rumination and locus of control in the female employees of Guilan University of Medical Sciences. Since no internal and

external research has been conducted to investigate the relationship between these two variables, it can be said that it is a new and fresh approach of its kind. To justify this relationship, it should be noted that people with high internal control are naturally facing the problems with a greater skill and intelligence than those with external control, and are less likely to be affected by daydreaming, fussiness, stress, etc. This result is consistent with the findings of Masoudnia (1997), which indicates that people with a high internal control make better use of coping strategies.

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