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Correlation between Ruminative Thoughts and Anxiety among Depressed Patients

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Abstract: Background: Globally, depression is the most common mental health disorder and one of the main contributors to disabilities and impairment. It is regarded as a serious public health issue because of its steadily rising prevalence. **Aim:** The study aimed to assess correlation between ruminative thoughts and anxiety among depressed patients. **Subjects and Method:** The current study use descriptive correlation research design with sample of 65 patients diagnosed with depression were admitted to the inpatient psychiatric departments of Mansoura University Hospital. Three tools were used; socio demo graphic characteristics and clinical sheet, Ruminative Response Scale (RRS), and Generalized Anxiety Scale (GAS). **Results:** The current study's findings showed that (55.4%) of the total age group is between 30-45 years, about two thirds of participants (61.5%) were female, (78.5%) of participants had low income, the residence of (67.7%) are in rural area and (66.4%) are single. While (40%) of the studied participant had moderate rumination and (50.8%) of them showed severe rumination. The prevalence of severe anxiety was (52.3%). Anxiety and ruminative thoughts are significantly correlated ($P=0.000$). Additionally, a significant negative correlation was found between anxiety and reflection ($p=0.023$). There was statistically significant positive correlation between anxiety and brooding rumination ($p=0.002$). Anxiety and reflection rumination showed a negative, significant correlation ($p=0.023$). **Conclusion:** Patients with depression were more likely to had ruminative thought. Anxiety and ruminative thought were positively associated. **Recommendation:** It is recommended that establish mindfulness program for patients with depression to control ruminative thinking and anxiety level.

Key Words: Anxiety, Depression, Rumination thoughts, Brooding, Reflection.

INTRODUCTION

Across the globe, depression is one of the main causes of disability globally. Due to its widespread impact on a person's quality of life, it is a significant public health concern (Shahid & Tushar, 2023). It lowers the quality of life by seriously impairing functioning and negatively affecting interactions with others. According to Ratheesh et al. (2017), people with depression are more likely to experience co-occurring anxiety and problems with substance abuse, which raises their probability of suicide.

One of the cognitive characteristics associated with depression is rumination (Bartoskova, 2018). It is a dysfunctional method for regulating emotions and thoughts that is defined as ongoing attention to negative ideas, such as ruminating over unpleasant memories and evaluating situations without acting upon them (Chu et al., 2023). Additionally, Michl et al. (2013) defined rumination as "repeatedly and passively dwelling on the symptoms of distress as well as the potential reasons and implications of these symptoms.

Ruminative thoughts include two components. The first element is reflection, which is described as a more adaptive kind of rumination that takes into account adaptive coping strategies and is an intentional attempt at cognitive problem-solving to improve mood. Furthermore, Isaacs, Tehee, & Gray (2023) reported that reflection is "useful looking inward to take part in solving problems to reduce one's

depressed mood (e.g., "evaluating your personality traits to try to understand why you are depressed").

The second element, known as brooding, is a maladaptive form of rumination that takes into account the maladaptive coping styles. It involves passively comparing the present circumstance with some unfulfilled goals (e.g., "think about a recent situation and wish it had gone better), also defined as passively focusing on depressive symptoms (Akpınar Aslan et al., 2020).

A strong correlation is found between rumination and depression, in which rumination can worsen the depressed mood, extend and increase episodes, and increase the likelihood of relapse (Watkins & Roberts, 2020). There are four ways in which rumination triggers depression. Firstly, it intensifies the negative ideas associated with depression. Second, pessimistic and negative thinking about situations, which in turn impairs one's ability to solve problems effectively, Third, stress is increased by rumination because it prevents conditioned behavior. Lastly, ruminative habits are associated with lower levels of social support (Zhang et al., 2020).

Rumination is also linked to symptoms and diseases other than depression, according to a growing body of research. Prospective longitudinal studies showed that rumination predicted anxiety in addition to depression. Rumination is defined by Nolen-Hoeksema as a technique for coping with emotional distress and anxiety in which a person passively and persistently thinks about his or her distressing

symptoms and the reasons and effects of those symptoms, failing to initiate active problem solving that might alter the cause of that distress. This pattern of thinking helps to explain the role of rumination in devolving anxiety. Ruminative thoughts cause mood swings toward depression and anxiety when individuals with depression are under stress (Watkins, 2018).

Furthermore, rumination in distressed people increases the likelihood of maladaptive, negative thinking, decreases the effectiveness of problem-solving strategies, creates uncertainty during problem-solving, and decreases one's willingness to participate in activities that divert attention and improve mood. Additionally, surveys and observational research demonstrate that ruminants are perceived negatively by others and receive less social support and social resistance (McLaughlin & Nolen-Hoeksema, 2011).

According to best of my knowledge, not much research has been done in examining the relation between ruminative thinking and anxiety with depressive disorders in Egypt. Therefore, this study sheds light on the relationship between ruminative thinking and anxiety with depressive disorders are under examined.

Aim of the study:

This study aims to assess correlation between ruminative thoughts and anxiety among depressed patients.

SUBJECTS AND METHOD

Research design:

This study used a descriptive correlational research design.

Setting:

The study was conducted at Mansoura University Hospital's Inpatient psychiatric department.

Research subjects:

Sixty-five patients with depression who meet the following requirements were included in the study:

- All patients with depressive disorders as determined by the Diagnostic and Statistical Manual of Mental Disorders, as well as information from patient records.
- Both genders.
- Aged between 18 and under 60.
- Communication-capable.
- Patients with depressive disorders were unrelated to substance abuse
- Patients with depressive disorders were unrelated to organic disease.

Tools: Three tools have been used in the present study to gather data:

First Tool: sociodemographic characteristics and clinical data sheet:

The researchers created this sheet after reading recent literature in the field which include clinical data and socio-demographic information about:

- Socio-demographic data: patient's name, age, gender, birth order, income, place of residence, marital status, employment, and educational attainment...etc.

- Clinical data: diagnosis, duration of illness, frequency of hospitalizations, adherence to treatments, suicide, and family history of mental health problems...etc.

Tool (2): Ruminative Response Scale (RRS): -

Nolen-Hoeksema & Morrow, (1991) developed this scale to evaluate rumination probability. It is a set of 22 self-report questions. The Likert scale was used to measure the responses ranged from "1" to "4" that refer to never, sometimes often, and almost always respectively.

According to **Treynor, Gonzalez, & Nolen-Hoeksema, (2003)**, the RRS has three dimensions: five items measure brooding, such as items 5, 10, 13, 15, and 16; five items measure reflection, such as items 7, 11, 12, 20, and 21; and twelve items measure depression related items, such as items 1, 2, 3, 4, 6, 8, 9, 14, 17, 18, 19, and 22.

This tool was translated into slang Arabic by the researchers, who then double-checked and made corrections. Then, five professionals with expertise in both psychiatric nursing and English language assessed the translated tool's content validity and determined how effectively it covered every relevant aspect of the construct it was intended to measure.

The Arabic version of this scale's test-retest reliability on a 10-day interval revealed that Cronbach's Alpha equalized 0.869, indicating strong internal consistency, according to **(Gliem, 2003)**. The assessment of intra-rater reliability equalized.997, indicating agreement, according to the findings of **Cucchna, Hoch, &Hoch, (2016)**.

Based on the tool developer's instructions, the cutoff point of this scale was determined using the percentile cut off point from the sample (i.e., classifying individuals who score in the top 33% of the sample size as "sever" ruminators and those who score in the bottom 33% as "mild" ruminators).

Tool (3): Generalized Anxiety Scale (GAD-7):

Spitzer, Kroenke, Williams, & Löwe, (2006) created this scale. It consists of seven items that rate the intensity of anxiety symptom. This scale has good validity and reliability in a community sample. Total Score of this scale range from 0–4 that refer to minimal anxiety,5–9 that refer to mild anxiety,10–14 that refer to moderate anxiety and 15–21 that refer to sever anxiety (**Rutter& Brown, 2017**).

Ethical consideration:

After obtaining approval from the Faculty of Nursing's Research Ethics Committee and inform the head of the psychiatric department of Mansoura University Hospital of the study's purpose, the researcher obtained informed consent from the participants. The researcher ensured that the participants' data would be treated in a confidential and anonymous manner and used only for research purposes. Each participant also had the freedom to ask any questions about the study and to leave at any moment for any reason.

Statistical analysis:

SPSS (Statistical Package for Social Sciences) version 22 was used to examine the data. Descriptive statistics were utilized to present the data as frequencies and percentages,

and the mean and standard deviation (SD) were used to characterize the qualitative variables. Pearson correlation was utilized to examine the correlation between continuous

parametric data. Every test was performed with a significance level (P-value) of 0.05 or less to be considered statistically significant.

RESULTS

Table (1): frequency distribution of studied participants according to Socio-demographic characteristics (N =65)

Socio-demographic characteristics	Number (n)	Percent (%)
Age in years		
18- <30	6	9.2
30- <45	36	55.4
45- <60	23	35.4
Mean ± SD 40.38 ± 6.77471		
Gender		
Male	25	38.5
Female	40	61.5
Education		
Illiterate	14	21.5
Read & write	23	35.4
Secondary and Technical school	22	33.8
University / Post graduate	6	9.2
Marital status		
Single	31	47.7
Married	22	33.8
Divorced	9	13.8
Widow	3	4.9
Residence		
Rural	44	67.7
Urban	21	32.3
Occupation		
work	24	36.9
Not work	41	63.1
Income		
Sufficient	14	21.5
Insufficient	51	78.5
Total	65	100%

Table (1) demonstrates that the patients under study had ages ranging from 18 to 60 years old, with a mean and SD of 40.38 ± 6.77. The over than half of the subjects (55.4%) belonged to the 30- to 45-year-old age range. Sixty-one percent of the studied participants were female. According to level of education 56.9% of studied participants were

illiterate or read and write. In terms of marital status, 47.7% of the participants in the study were single. Over half of the participants under study (56.7%) weren't working. Two third of participants (67.7%) live in rural. Concerning satisfactory of income nearly two thirds of the studied participants (78.5 %) had insufficient income.

Table (2): Frequency distribution of the studied participants according to clinical data (N= 65)

Clinical Data	N (65)	100%
Family history		
Negative	20	30.8 %
Positive	45	69.2 %
Duration of disease		
From 1- less 2 years	12	18.5%
From 2-5 years	34	52.3%
From >5 – 10 years	18	27.7%
More than 10years	1	1.5%
Mean ± SD		
Mode of admission		
Involuntary	31	77.5%
Voluntary	9	22.5%
Previous psychiatric treatment		
No	6	15%
Yes	34	85%
Adherence to psychiatric treatment		
No	25	38.5%
Yes, regular	12	18.5%
Yes, interrupted	28	43.1%
Suicide		
No	28	43.1%
Yes	37	56.9%
Number of admissions		
From 1- 2 times	40	61.5%
From 3-5 times	23	35.4%
More than 5times	2	3.1%
Total	65	100%

Table (2) indicates that 69.2% of the subjects under study had positive family history. 52.3% of the research participants reported having duration of illness two to five years. In relation to hospital admission majority of the participants (77.5%) were admitted to hospital involuntary. Eighty-five percent of the participants had received previous

psychiatric treatment. Medication adherence revealed that 43.1% of the participants had intermittent adherence to their medications, while 38.5% of the participants had no medication adherence at all. 56.9% of participants had suicidal ideation.

Table (3):Frequency distribution of rumination thoughts among the studied subjects

Ruminative thoughts	N	%
Mild rumination	6	9.5%
Moderate rumination	26	40%
Sever rumination	33	50.8%

Table (3) illustrates evident that 40% of the participantsshowed moderate rumination, whereas 50.8% of the participantshad high rumination.

Table (4): Mean Scoring system of ruminative thoughts among the studied subjects according to Ruminative Response Scale(RRS)

Dimension of Ruminative thoughts	Mean ± SD
➤ Brooding dimension	14.29±2.75
➤ Reflection dimension	13.18±3.5
➤ Depression related items dimension	36.73±6.9

Table 4 shows that the average score for the brooding dimension was 14.29±2.75, the reflection dimension was13.18±3.96, and the depression-related items dimension is 36.73±6.9.

Table (5): Frequency distribution of anxiety among the studied subjects according to Generalized Anxiety Scale (GAD-7)

Anxiety	N	%
Minimal anxiety	2	3.1%
Mild anxiety	7	10.8%
Moderate anxiety	22	33.8%
Sever anxiety	34	52.3%

Table (5) illustrates that more than half of participants had a high prevalence of severe anxiety (52.3%p), while 10.8% demonstrate mild anxiety.

Table (6): Correlation between ruminative thoughts and level of anxiety among the studied subjects

Ruminative thoughts domain	Anxiety	
	R	P
Brooding	.385**	0.002
Reflection	-.282*	0.023
Depression-related items	.270*	0.030
Total rumination	.458**	.000

P=significant level less than 0.05
r=spearman correlation

In Table (6) there was a negative significant association between anxiety and reflection rumination. Furthermore, a strong positive association was found between brooding rumination and anxiety. Additionally, a statistically significant positive association was found between the anxiety and depression-related items dimension. In conclusion, a positive significant association had been observed between anxiety and total rumination.

DISCUSSION

Depression is recognized as a serious public health issue that impacts all dimension of life and has detrimental effects on social skills, productivity, quality of life, and employment. It also increases treatment expenses (Roekel, 2017).

The characteristics of the participants in this study showed that over half of the participants is between the ages of 30 and 45, two third of participants were female, over half of the subjects not work. Moreover, two thirds of the studied subject had insufficient income, majority of the participants were from rural area and over half of the patients have suicidal thoughts.

The current study revealed that depressed patients have sever level of ruminative thought. This outcome might be due to individuals with depression believed that they obtained a greater awareness of their emotions and troubles by continues thinking and focusing on feeling, its causes, and its effects rather than taking active steps to solve the problem which in turn exacerbates depression.

This result is consistent with Wells, (2019), who state that rumination is a cognitive vulnerability element in the onset and maintenance of depression. Furthermore, Cano-López et al., (2022) report that when individuals with depression ruminate, they frequently "recall negative memories that happened to them in the past, evaluate situations in their present situations more negatively, and are more pessimistic about the future". Also, the majority of rumination's content consists of negative ideas that are more likely to worsen

depressive symptoms. However, this finding not agree with the findings of Bartoskova et al. (2018), who claimed that rumination is an adaptive process in which people ruminate to find solutions to their problems.

The current study revealed there was a positive correlation between ruminative thoughts and anxiety. This may be due to rumination is started as attempt to solve problems. When the problem-solving attempts not effectively resolved or failed, depression and negative affect increase as efforts to understand distress. Thus, worry and anxiety about finding solutions to problems keeps rumination as continuing cyclical. Additionally, when depressed individuals are distressed, they more likely to focus on only bad experiences, such as feelings of inadequacy or failure, which makes them feel anxious and result in negative emotion.

This finding aligns with the findings of Joubert et al., (2023), who stated that worry and rumination had dramatically effect in increase intensity, onset, relapse rate of depression and anxiety. Also, Taylor & Snyder, (2021) and Yang, (2014), who revealed that rumination and worry are negative thought processes that seem to have a role in the development and maintenance of a variety of anxiety and mood disorders, including major depressive disorder and generalized anxiety disorder. Rumination linked to exacerbate likelihood of anxiety symptoms.

However, this finding is not consistent with Michl et al. (2013), who stated that rumination can assist individuals who experience extreme anxiety in reducing their distress. Anxious people may use rumination as an adaptive technique. Moreover, Feldman et al. (2014) reported that rumination helps worried individuals to achieve their goals more consistently. They believed that ruminative thoughts can be attempts to find alternative way for reaching unattained targets or valuing oneself for not reaching the targets; as a result, the levels of anxiety is reduced.

The current study demonstrated a statistically significant positive correlation between anxiety and brooding

rumination. This may be attributed to brooding is maladaptive behavior in which individuals persistently focus on negative thoughts, feelings, problems as well as negative interpretation and comparing one's current situation with unfulfilled goals, that intensifies negative outcomes, including anxiety and depression.

This outcome is in line with the findings of **Martínez Vispo et al. (2022)** and **Hasegawa et al. (2018)**, who revealed that there was significant relationship between brooding rumination, anxiety, and depression. Also, **Jose & Weir (2013)** reported that brooding rumination raised anxiety levels and brooding appears to be induced by anxiety.

According to the current study, there was a negative significant relationship between reflection rumination and anxiety. This finding may be explained by the fact that reflection involves deliberated effort to solve problems in order to reduce depressive feelings and anxiety symptoms. Also, reflection intended to know upsetting feelings and ideas in order to prepare for proactive coping.

This finding is inconsistent with **Satyshur et al. (2018)**, who found that in both healthy and depressed individuals, reflection had no effect on depressive symptoms or a negative mood. Instead enhance mindfulness that refer to a deliberate, nonjudgmental awareness of the present moment. Additionally, this result is in consistent with **Thanoi and Klainin-Yobasb (2015)** who revealed that there was a positive significant correlation between reflection and emotional distress, anxiety and depressed symptoms.

CONCLUSION

Based on the findings in the current study, ruminative thought was more common among depressed patients. Ruminative thought was positively correlated with anxiety.

RECOMMENDATIONS

It is recommended that establish mindfulness program for patients with depression to control ruminative thinking and anxiety level. Furthermore, psycho educational program will be used for depressed patients and their families to improve their coping strategies and social problem-solving skills. Also, Implementation of ruminative thoughts assessment method should be considered as basic assessment tool during assessment of depressed patient.

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