Contents lists available at www.innovativejournal.in

INTERNATIONAL JOURNAL OF NURSING DIDACTICS

Homepage:http://innovativejournal.in/index.php/ijnd

ISSN: 2231-5454

Ruminative Thoughts and Severity of Depression among Patients with Depressive Disorders

[1]Nahed Maher Ali AbdElshakour, [2]Osama Ahmed El-Boraie, [3]Nashwa Ibrahim

[1]Demonstrator of Psychiatric and Mental Health Nursing, Faculty of Nursing-Mansoura University
[2]Professor of Psychiatry, Faculty of Medicine-Mansoura University
[3]Lecturer of Psychiatric and Mental Health Nursing, Faculty of Nursing-Mansoura University

DOI: https://doi.org/10.15520/ijnd.v8i08.2271

Abstract: Background:Depressive disorder is the most prevalent psychiatric disorder that influences 350 million individuals worldwide. It negatively affects social, familial functioning, and work productivity due to depressive symptoms that include disturbed eating and sleep habits, lack the desire to do things, impaired social and occupational functioning, and inability to maintain successful relationship besides the depressed mood. In response to their depressive symptoms, some individuals use ruminative thoughts to identify why they feel depressed in an attempt solve their problem. However, rumination exaggerates the depressive symptoms and may impair social problem solving.
Method:A descriptive cross sectional research design was conducted in the in-patient Psychiatry Department at Mansoura University Hospital. The data was collected from 85 patients living with depression who fulfilled the inclusion criteria. The Ruminative Response Scale (RRS) and Beck Depression Inventory (BDI-II) were used to achieve the purpose of the study.***Results:***The results of the current study revealed that severity of depression positively significantly correlated with ruminative thoughts (p= 0.010). Furthermore, weak negative significant correlation between severity of depression and reflection domain of rumination in (RRS)wasdetected (p=0.011).Weak positive significant correlation between severity of depression and brooding domain of rumination in (RRS) (p=0.007).
Conclusion:in conclusion, the severity of depressive disorder was positively correlated with ruminative thoughts.

Keywords:Depression, Rumination, severity of depression.

BACKGROUND

Recently, depression is considered one of the most prevalent psychiatric problems worldwide(Bennik, Ormel, &Oldehinkel, 2013).It causes disability of adjusted Life Years (DALY) which represents approximately 4.3% of the total disability worldwide in addition to Years lost due to Disability (YLD). The disabilities caused by depression increase the international burden of disease (MusićMilanović et al., 2015).

Morbid depression influences quality of life and negatively affects social, familyand work functioning in addition to the risk of suicide and self-harm, this adds to the increased global burden of disease. Therefore, a holistic management of depressive disorders is mandatory (Watkins, 2018).

Cognitive dysfunction is among the core symptoms of depression that includes poor concentration, deficits in the following areas; verbal and nonverbal learning, short-term and working memory, problem solving, and difficulty decision making process (Lam, Kennedy, Mcintyre, &Khullar, 2014).

The Response Style Theory postulates that individuals demonstrate two styles in response to their depressed mood; first style is distraction in which individuals divert attention from their depressive mood to other activities such as enjoying a hobby like basketball. This style provides an opportunity to reduce depressed mood.Second style is rumination in which individuals focus their attention on reasons and consequences of their depressed mood in a repetitive and passive manner(Kissinger, Fisak & Richard, 2014).

When individuals respond with ruminative thoughts, they use rumination as a way to solve troubles they face in order to avoid future failures (Roekel, 2017). Conversely it stimulates past negative memories and negative view of the present and the future. Therefore, ruminations make individuals generate worse solution to troubles when compared to non-ruminative(Kolbeinsson, 2016).

Aim of the study:

The study was conducted to explore the relationship between ruminative thoughts and severity of depression among patients with depressive disorders

SUBJECTS AND METHOD

Design:

The study was carried out using a descriptive cross-sectional research design.

Setting:

The study was carried out atthe in-patient Psychiatry Department at Mansoura University Hospital.

Sample:

A total of 85 participants were included in this study, the DSS research.com sample size calculator software, at 1% ∞ error (99.0% significance) and 10.0 β error (90.0% power of the study), assuming that the average number of categorical memory to positive in depressed was 3.4 ± 1.4 (Kao., 2007)

and it may be 4.0 in our locality. The calculated sample size is 77 and 10.0% was added on the sample size for better quality of collected data, so the studied sample was 85 patients.

Inclusion criteria:

1. Patients diagnosed with depressive disorders according to the DSM-5 criteria. Diagnosis was carried out by the psychiatrists at the psychiatry department, Mansoura University Hospital.
2. Patients who agreed to voluntary participate in the study.
3. Both sexes were included.
4. Age ranged from 20 to 60 years old.

Exclusion criteria:

1. Patients who had depressive disorders due to substance abuse.
2. Patients who had depressive disorders due to organic disease

Tools for data collection:

Socio Demographic Data sheet:-

This tool was developed by the researcher to assess the demographic data of the participants, it consists of; age, gender, address, marital status, level of education, occupation, income and duration of mental illness.

The Ruminative Response Scale (RRS):-

This scale was originally developed by Nolen-Hoeksema& Morrow (1991) to measure ruminative thoughts and assesses brooding, reflection and depression related items. It consists of 22 items and 4 point Likert scale(Verstraeten, Vasey, Raes, & Bijttebier, 2010). This tool was translated to slang Arabic, a content validity was implemented. The reliabilitywas achieved using Cronbach's Alpha test that equaled 0.869which reflects good internal consistency according to (Gliem&Gliem, 2003)and intra-rater reliability assessment that equalized .997 which reflects agreement according to (Cuchna, Hoch, & Hoch, 2016).

The cutoff point of this scale was calculated using percentile cut off point from the sample (e.g., selecting people who score in the top 33% of sample size as "high" ruminators and people who score in the bottom 33% as "low" ruminators) based on the recommendations of the tool developer.

Beck Depression Inventory (BDI-II):-

This scale constructed by Beck et al. in 1961, involves 21 items to evaluate depressive symptoms on individuals. This tool was translated into Arabic by Ghareeb. Scoring system interpretation includes; absence of depression (0-13), mild depression (14-19), moderate (20-28), and severe depression (29- 63)(Smarr& Keefer, 2011).

METHOD

The permission was taken from Research Ethical Committee of the Faculty of Nursing that reviews all ethical considerations and then gave permission to carry out this study. The head of the department of psychiatry at Mansoura University Hospitals give approval to conduct this study. Each patient contributed in this study provides informed consent and assuring that confidentiality would maintain. They have the right to withdraw at any time.

STATISTICAL ANALYSIS

Data was analyzed withStatistical Package for the Social Sciences(SPSS) version 22. The normality of data was first tested with one-sample Kolmogorov-Smirnov test.

Qualitative data were described using number and percent. Association between categorical variables was tested using Chi-square test. When more than 25% of the cells had expected count less than 5, Fisher exact test was used.

Continuous variables were presented as mean ± SD (standard deviation) for parametric data and Median for non-parametric data. Pearson correlation was used for the correlation between continuous parametric data while spearman correlation to correlate between continuous non-parametric data.

RESULTS

Table (1) demonstrates that the mean age of the sample is 36.56 years. Approximately two thirds of the sample (62.4%) is female. Regarding residence, (64.7%) of the sample is from rural area. Concerning the level of education, the majority of sample size is illiterate representing (43.6%) of the sample. In relation to income more than half of the studied sample (56.5%) has insufficient income. Approximately quarter of the sample is not working. Nearly two thirds of the sample has duration of illness ranging from 1 to 5 years. Concerning marital status, (45.9%) of the sample is married**.**

Table (1): Socio-demographic characteristics of the studied patients (n=85):

Socio-demographic Characteristics		N	%
Sex	Male	32	37.6%
	Female	53	62.4%
Age	20:30 years	25	29.4%
	30:40 years	27	31.8%
	40:50 years	15	17.6%
	>50 years	18	21.2%
	Mean±SD	36.56±11.3	
	Min: Max	20:57	
Duration of illness	1: 5 years	54	63.5%
	5: 10 years	27	31.8%
	>10 years	4	4.7%
	Mean±SD	4.388±3.063	

	Min: Max	1:15	
Education	Illiterate	37	43.6%
	Primary	3	3.5%
	Preparatory	7	8.2%
	Diplome	22	25.9%
	University education	16	18.8%
Occupation	Work	23	27.1%
	Not work	62	72.9%
Income	Sufficient	37	43.5%
	Insufficient	48	56.5%
Residence	Rural	55	64.7%
	Urban	30	35.3%
Marital status	Single	29	34.1%
	Married	39	45.9%
	Divorced	7	8.2%
	Widow	10	11.8%

According to table (2) there is a significant correlation between severity of depression and age. Also there is a significant correlation between severity of depression and duration of illness. Furthermore, a significant correlation between severity of depression and education is detected. Concerning the correlation between severity of depression and income a significant correlation is detected. Moreover, a significant correlation between severity of depression and address is recognized. On the other hand there is no significant correlation between severity of depression and other socio-demographic data (sex and occupation).

Table (2) Association between depression level and Socio demographic

Socio demographic		Mild		Moderate		Severe		Significance test	
		N	%	N	%	N	%	X2	P
Sex	Male	3	3.5	7	8.24	22	25.88	0.108	4.44
	Female	8	9.4	21	24.7	24	28.24		
Age	20: 30years	3	3.5	11	12.9	11	12.9	17.51	0.008*
	30: 40years	0	0	10	11.7	17	20		
	40: 50years	3	3.5	0	0	12	14.1		
	>50years	5	8.9	7	8.24	6	7.05		
Duration of illness	1: 5years	3	3.5	19	22.3	32	37.65	10.187	0.037*
	5: 10years	8	9.4	7	8.24	12	14.11		
	>10years	0	0	2	2.4	2	2.35		
Education	Illiterate	8	9.4	8	26.4	21	24.64	18.44	0.048*
	Primary	0	0	3	3.5	0	0		
	Preparatory	0	0	2	2.4	5	5.9		
	Diploma	3	3.5	8	9.4	11	12.9		
	University education	0	0	7	8.24	9	10.6		
Occupation	Work	7	8.24	8	9.4	9	10.6	0.203	0.903
	Not work	18	21.1	23	27.1	20	23.5		
Income	Sufficient	1	1.17	17	20	19	22.4	8.764	0.013*
	Insufficient	10	11.8	11	12.9	27	31.8		
Address	Rural	10	11.8	25	29.4	21	24.7	18.263	<0.001*
	Urban	1	1.2	3	3.5	25	29.4		
Marital status	Single	2	2.4	16	18.8	21	24.64	20.793	0.02*
	Married	9	10.6	19	22.4	11	12.9		
	Divorced	0	0	1	1.2	6	7.05		
	Widow	0	0	2	2.4	8	9.4		

X2: chi square p: significant level less 0.05

Table (3) demonstrates a weak negative significant correlation between severity of depression and reflection. Also there is a weak positive significant correlation between severity of depression and brooding. Furthermore, a weak positive significant correlation between severity of depression and depression related item is detected. Finally, there is weak positive significant correlation between severity of depression and total rumination.

Table (2) Correlation between ruminative thoughts and severity of depression

Ruminative thoughts	severity of depression	
	R	P
Reflection	-0.275	0.011*
Brooding	0.291	0.007*
Depression	0.580	0.001*
Total rumination	0.277	0.010*

r=spearman correlation P=significant level less than 0.05

DISCUSSION

Depression leads to impairment in individual's mood, thoughts and functioning, this impairment is severe enough to cause disturbance in social and occupation(Wiltsee,2015).

Results of the current study revealed that the majority of the recruited sample was female participants. This may be attributed to females are more susceptible to depression due to hormonal changes they experience across their life span; hormonal changes can trigger different types of depression for example; postpartum depression and premenstrual dysphoric disorder. Additionally, in Egypt, women are influenced by gender differences and as reported in the current sample the majority of female subjects are not occupied which in turn increases their financial and emotional dependence.

This result is consistent with WHO (2017), Zoromba et al. (2014) and Girgus,Yang and Ferri (2017) who reported that women are more likely to experience depressive symptoms and diagnosed with depression compared to men. Although, this result is inconsistent with Dar et al. (2016) who reported that in studied sample males equalized 51.8% but females equalized 48.2%.

The current study showed that more than half of the studied subjects were from rural area. This may be due to exposure to several stressors such as poverty, epidemic diseases, early marriage and limited access to services and resources. This result is consistent with Weaver et al. (2015) who found that depression is more common in rural area. Also, this result congruent with Li et al. (2016) who suggested that prevalence of depression among elderly in rural area is more common than urban area. In contrast, Breslau et al. (2014) reported no variation in the prevalence of depression between rural and urban areas.

In relation to income, the study results indicated that subjects with insufficient income were more likely to develop depression. This may be due to income is one of social factors that contribute to health and wellbeing, low income is considered a stressful event that increases the susceptibility to depression as individuals have lower access to health services, and increased unfulfilled demands and needs.

This finding is in the same line with Sun, Buys and Wang (2012) who reported that depression demonstrate more prevalence in low income group compared with high income group. Similarly, Messias, Eaton and Grooms (2011) and Patel et al. (2018) approved that prevalence of depressive disorder is markedly associated with low socioeconomic status and income inequality.

Concerning educational level, nearly half of the subjects in the current study were illiterate. Result revealed a significant correlation between severity of depression and level of education. This may be due to the fact that education enables individuals to acquire and develop health behavior that are protective against depression e.g. awareness of the signs and symptoms of depression, coping strategies and help seeking behavior.

This result agrees with MusićMilanović et al., (2015) who claimed that depression is less prevalent among individuals with university degree. Also this result is congruent with Shittu et al., (2014) who reported that depressive disorder is more likely to be present in individuals with no formal education and illiterate.

However this result is in consistent with Izgar (2009) who found that there was no significant correlation between severity of depression and levels of education. Additionally, Akhtar-Danesh and Landeen (2007) reported that depression is more likely to be present in individuals whose education was post-secondary school.

The study findings illustrated significant association between depression and marital status (34.1% single+ 8.2% divorced+ 10% widow= 52.3% participant).This may be related to the lack of support people with no partner are exposed to. This result is consistent with Cheung and Yip (2015) who reported that depression is more prevalent among single nurses in compared with married other.

Also this result is consistent with Güths et al. (2017) who reported that single people are more likely to develop depression due to feeling of loneliness and social isolation. However, this result is inconsistent with Dar et al. (2016) who concluded that more than half of their studied sample was married.

Regarding age, significant association between severity of depression and age group was detected. Result indicated that depression is more prevalent in the age group 30 to 40 years of age. This may be caused by exposure to several stressful events, increased job and family related demands. This finding is congruent with Zoromba et al. (2014) who reported a relation between age and prevalence of depressive disorder, where depression was more prevalent between 20s and 40s.

This result is inconsistent with Shittu et al. (2014) and Lopes et al., (2015) who concluded that although depression can happen in all age group, it is more likely to be present in old age between 51 to 60 years in compared with young individuals. Also, Cheung and Yip (2015) reported that depression and age are not significantly correlated.

In the present study, results showed weak positive significant correlation between severity of depression and rumination. This may be explained by firstly, when individuals living with depression ruminate, they retrieve only negative memories that involve feelings of failures or insufficient abilities and usually positive ones are ignored. Secondly, individuals with rumination usually focus their attention on identifying reasons of being depressed rather than trying to solve problems. Consequently, impaired ability to efficiently solve the troubles, lead to exaggerate depressed mood. Thirdly, the content of rumination is mainly negative thoughts that are more likely to exacerbate depressed mood.

This result is consistent with Lopez (2015), González Rodríguez, Ibáñez, and Barrera, (2017), Pasyugina et al.

(2015) and Thomas, Raynor and Ribott (2014) who reported that rumination and depression are markedly correlated.However, this result is not in agreement with Bartoskova et al. (2018) who concluded that rumination is an adaptive operation in which individuals ruminate in an attempt to solve their troubles after that successful problem may happen.

In the current study a weak negative significant correlation between severity of depression and reflection is revealed. This may be attributed to reduced attention and concentration in people with depression, therefore, the capacity to look inward and introspect is reduced. Consequently, people with higher levels of introspection have better problem solving skills, improvement in mood and self-esteem and alleviation of depression.

This result agrees with Verstraeten et al. (2010) who found that individuals who have higher levels of reflection have little susceptibility to develop depression and those with less reflection are more vulnerable to develop depression. Whereas, Young, Dietrich and Lutenbacher (2014) and Thanoi and Klainin-Yobasb (2015) reported that reflection markedly aggregated levels of depressive symptoms and emotional distress.

Regarding brooding,the current study showed a weak positive significant correlation between severity of depression and brooding. This may be related to feelings of helplessness and powerlessness associated with depression, when individuals with depression think about their present reality and compare it with their expectations, they do not take an active role to reduce the discrepancy between what is felt and what they wish for.

This is in agreement with Schoofs, Hermans, and Raes (2010) who reported that brooding is considered a maladaptive strategy in which individuals compare recent status with unachieved goals thus, report depressive symptoms.

CONCLUSION

To conclude, severity of depressive disorder is positively correlated with ruminative thoughts.

RECOMMENDATION

The study recommends that:

- Psychosocial programs should be directed toward managing depressive disordersand consider the risk factors that affect the severity of depression.
  Implementing ruminative thoughts assessment methods in early detection and prevention of depression
- Health care providers should teach patients and families coping strategies to control ruminative thoughts and decrease the intensity of depressive symptoms.
- Replicating this research study with a larger and more diverse sample of depressed patients

ACKNOWLEDGEMENTS

We would like to thank all the patients who participated in the study and staff in the in-patient Psychiatry Department at Mansoura University Hospital for their help and cooperation during this study and appreciate the great efforts of the supervisors in this work.

REFERENCES

[1]. Bennik, E. C., Ormel, J., &Oldehinkel, A. J. (2013). Life changes and depressive symptoms: the effects of valence and amount of change. BMC psychology, 1(1), 14.

[2]. MusićMilanović, S., Erjavec, K., Poljičanin, T., Vrabec, B., &Brečić, P. (2015).Prevalence of depression symptoms and associated socio-demographic factors in primary health care patients.PsychiatriaDanubina, 27(1), 0-37.

[3]. Watkins, E. R. (2018). Rumination-focused cognitive behavioral therapy for depression.S.l.: GUILFORD.

[4]. Lam, R. W., Kennedy, S. H., McIntyre, R. S., &Khullar, A. (2014). Cognitive dysfunction in major depressive disorder: effects on psychosocial functioning and implications for treatment. The Canadian Journal of Psychiatry, 59(12), 649-654.

[5]. Kissinger, A. M., Fisak, B., & Richard, D. (2014).Depressive rumination and the mood-as-input hypothesis (Unpublished master's thesis). University of North Florida.

[6]. Roekel, L. V. (2017). The Relationship between Rumination, Positive Future Goals and Cognitive Aspects of Future Goals as Predictors of Depression (Master's thesis).

[7]. Kolbeinsson, Þ. (2016). Vulnerabilities to depression: Cognitive reactivity, depressive rumination and heart rate variability (Doctoral dissertation).

[8]. Verstraeten, K., Vasey, M. W., Raes, F., &Bijttebier, P. (2010).Brooding and reflection as components of rumination in late childhood. Personality and Individual Differences, 48(4), 367-372.

[9]. Smarr, K. L., & Keefer, A. L. (2011). Measures of depression and depressive symptoms: Beck Depression Inventory- II (BDI- II), Center for Epidemiologic Studies Depression Scale (CES- D), Geriatric Depression Scale (GDS), Hospital Anxiety and Depression Scale (HADS), and Patient Health Questionnaire- 9 (PHQ- 9). Arthritis care & research, 63(S11), S454-S466.

[10]. World Health Organization. (2017). Depression and other common mental disorders: global health estimates.World Health Organization. http://www.who.int/iris/handle/10665/254610. License: CC BY-NC-SA 3.0 IGO

[11]. Zoromba, M. A. A., Abdellatif, S. A., Hussien, E. S., &Hamed, W. E. S. (2014). Relationship between Emotional Intelligence and levels of Depression among Patients with Depressive Disorders (master dissertation, Mansoura University).

[12]. Girgus, J. S., Yang, K., &Ferri, C. V. (2017). The gender difference in depression: are elderly women at greater risk for depression than elderly men?. Geriatrics, 2(4), 35.

[13]. Dar, M. M., Tarfarosh, S. F. A., Kullah, S. M., Mushtaq, R., Manzoor, M., &Maqbool, S.(2016). Socio-Demographic and

Clinical Profile of Patients Suffering from Severe Depressive Disorders in Kashmir Valley. Age (years), 21(30), 14.

[14]. Weaver, A., Himle, J. A., Taylor, R. J., Matusko, N. N., & Abelson, J. M. (2015). Urban vs rural residence and the prevalence of depression and mood disorder among African American women and non-Hispanic white women. JAMA psychiatry, 72(6), 576-583.

[15]. Li, L. W., Liu, J., Xu, H., & Zhang, Z. (2016).Understanding rural–urban differences in depressive symptoms among older adults in China. Journal of aging and health, 28(2), 341-362.

[16]. Breslau, J., Marshall, G. N., Pincus, H. A., & Brown, R. A. (2014). Are mental disorders more common in urban than rural areas of the United States?. Journal of psychiatric research, 56, 50-55.

[17]. Sun, J., Buys, N., & Wang, X. (2012). Association between low income, depression, self-efficacy and mass-incident-related strains: an understanding of mass incidents in China. Journal of Public Health, 34(3), 340-347.

[18]. Messias, E., Eaton, W. W., & Grooms, A. N. (2011). Economic grand rounds: income inequality and depression prevalence across the United States: an ecological study. Psychiatric services, 62(7), 710-712.

[19]. MusićMilanović, S., Erjavec, K., Poljičanin, T., Vrabec, B., &Brečić, P. (2015).Prevalence of depression symptoms and associated socio-demographic factors in primary health care patients.PsychiatriaDanubina, 27(1), 0-37.

[20]. Shittu, R. O., Odeigah, L. O., Issa, B. A., Olanrewaju, G. T., Mahmoud, A. O., &Sanni, M. A. (2014). Association between depression and social demographic factors in a Nigerian family practice setting. Open Journal of Depression, 3(01), 18.

[21]. Izgar, H. (2009). An Investigation of Depression and Loneliness among School Principals. Educational Sciences: Theory and Practice, 9(1), 247-258.

[22]. Cheung, T., & Yip, P. S. (2015). Depression, anxiety and symptoms of stress among Hong Kong nurses: a cross-sectional study. International journal of environmental research and public health, 12(9), 11072-11100.

[23]. Akhtar-Danesh, N., &Landeen, J. (2007).Relation between depression and sociodemographicfactors.International Journal of Mental Health Systems, 1(1), 4.

[24]. Lopez, G. C. (2015). Do mindfulness, rumination or social problem-solving factors predict distress? (Unpublished master's thesis).Rowan University.

[25]. González Rodríguez, M., Ibáñez, I., & Barrera, A. (2017).Rumiación, preocupación y orientaciónnegativa al problema: procesostransdiagnósticos de los trastornos de ansiedad, de la conductaalimentaria y delestado de ánimo. ActaColombiana de Psicología, Vol. 20, no. 2 (jul.-dic. 2017); p. 30-41.

[26]. Pasyugina, I., Koval, P., De Leersnyder, J., Mesquita, B., &Kuppens, P. (2015).Distinguishing between level and impact of rumination as predictors of depressive symptoms: An experience sampling study. Cognition and Emotion, 29(4), 736-746.

[27]. Thomas, J., Raynor, M., &Ribott, D. (2015). Depressive rumination and experiential avoidance: A task based exploration. Personality and mental health, 9(1), 58-65.

[28]. Bartoskova, M., Sevcikova, M., Durisko, Z., Maslej, M. M., Barbic, S. P., Preiss, M., & Andrews, P. W. (2018). The form and function of depressive rumination. Evolution and Human Behavior, 39(3), 277-289.

[29]. Verstraeten, K., Vasey, M. W., Raes, F., &Bijttebier, P. (2010).Brooding and reflection as components of rumination in late childhood. Personality and Individual Differences, 48(4), 367-372.

[30]. Young, C. C., Dietrich, M. S., &Lutenbacher, M. (2014).Brooding and Reflection as Explanatory of Depressive Symptoms in Adolescents Experiencing Stressful Life Events. Issues in mental health nursing, 35(3), 175-180.

[31]. Thanoi, W., &Klainin-Yobas, P. (2015).Assessing rumination response style among undergraduate nursing students: A construct validation study. Nurse education today, 35(5), 641-646.

[32]. Schoofs, H., Hermans, D., &Raes, F. (2010). Brooding and reflection as subtypes of rumination: Evidence from confirmatory factor analysis in nonclinical samples using the Dutch Ruminative Response Scale. Journal of Psychopathology and Behavioral Assessment, 32(4), 609-617.

[33]. Güths, J. F. D. S., Jacob, M. H. V. M., Santos, A. M. P. V. D., Arossi, G. A., &Béria, J. U. (2017). Sociodemographic profile, family aspects, perception of health, functional capacity and depression in institutionalized elderly persons from the north coastal region of Rio Grande do Sul, Brazil. RevistaBrasileira de Geriatria e Gerontologia, 20(2), 175-185.

[34]. Patel, V., Burns, J. K., Dhingra, M., Tarver, L., Kohrt, B. A., & Lund, C. (2018). Income inequality and depression: a systematic review and meta- analysis of the association and a scoping review of mechanisms. World Psychiatry, 17(1), 76-89.

[35]. Gliem, J. A., &Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education.

[36]. Cuchna, J. W., Hoch, M. C., & Hoch, J. M. (2016). The interrater and intrarater reliability of the functional movement screen: A systematic review with meta-analysis. Physical Therapy in Sport, 19, 57-65.

[37]. Wiltsee, T. (2015). An examination of the relationships between rumination, social problem-solving, mindfulness and depressive symptomology. master thesis, RawanUnversity.