

Correlation of Depression, Anxiety, Stress and Functional Capacity with Quality of Life in Postmenopausal Women: An Observational Study

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ABSTRACT

BACKGROUND: Women are the center of the family and have the main role for healthy living. Menopause is the onset of aging in women. It's a critical phase in their life. During this process, they experience climacteric symptoms which include physical changes like hot flushes, sweating, sleep disorders, fatigue, sexual dysfunction as well as psychological changes, such as tension, irritability, mood changes. All of these may affect their quality of life and sense of well-being. Quality of life is important in all aspects, but maintaining a high quality of life is especially crucial to improve the functional capacity of postmenopausal women. Through this study, we can obtain a more realistic portrayal of individuals' emotions, areas of difficulty in understanding their needs and distribution of health care.

AIM: To find out correlation of depression, anxiety, stress and functional capacity with quality of life in postmenopausal women.

METHOD: One hundred five Postmenopausal women with age group of 45-60 years were selected according to inclusion criteria. A written consent form was taken from the subjects. After that subjects were asked to fill DASS 21 to determine their depression, anxiety, stress and also asked to fill MENQOL to evaluate their quality of life. Then 6 MWD test was performed on post menopausal women to assess their functional capacity. Data were analysed using statistical package for social science version 28(SPSS v28) and Microsoft excel with the significance level of statical analysis is $p < 0.01$.

RESULT: Spearman's rho test showed positive correlation which is significant at the 0.01 level for depression, anxiety and stress with quality of life in postmenopausal women. Kendall's tau_b test showed negative correlation of functional capacity with quality of life in postmenopausal women.

CONCLUSION: A study concluded that depression, anxiety, and stress should be considered as risk factors for quality of life in postmenopausal women and there is no association of functional capacity with quality of life of the postmenopausal women.

Keywords: Post-menopausal women, Depression, Stress, Anxiety, Functional capacity, Quality of life, DASS 21, 6 MWD, MENQOL, QOL

INTRODUCTION

Menopause is part of the critical phases of a woman's life, which characterizes the transition from fertility to infertility. According to the north American menopause society, natural menopause is

the permanent cessation of menstruation resulting from the loss of ovarian follicular activity which is recognized to have occurred after 12 consecutive months of amenorrhoea, for which there is no obvious pathological or psychological cause.¹ Four

of five women experience psychological or physical symptoms around menopause, with varying degrees of severity and disruption in their lives.² Women experience physical changes including hot flushes, sleep disorders, fatigue and sexual dysfunction.³ Psychological changes that occur in the postmenopausal period includes depression, anxiety, irritability, nervousness, sad memories, restlessness, dislike, loss of self-confidence, lack of concentration, not enjoying life, memory problems, crying for no reason and panic or fear.⁴ All of these symptoms and experiences may affect the quality of life of menopausal women. Depressive symptoms and disorders are frequent causes of emotional and physical suffering and are associated with elevated risks of disability in diverse areas of functioning.⁵ Functional capacity reflects the ability to perform activities of daily living that require sustained aerobic metabolism. The integrated efforts and health of the pulmonary, cardiovascular, and skeletal muscle systems dictate an individual's functional capacity.⁶ World health organization defines quality of life (qol) as an individual's perception of their position in life in the context of culture and values system in which they live and in relation to their goal expectations, standards and concerns.⁷ Hence, the aim of our study is to find out correlation of depression, anxiety, stress and functional capacity with

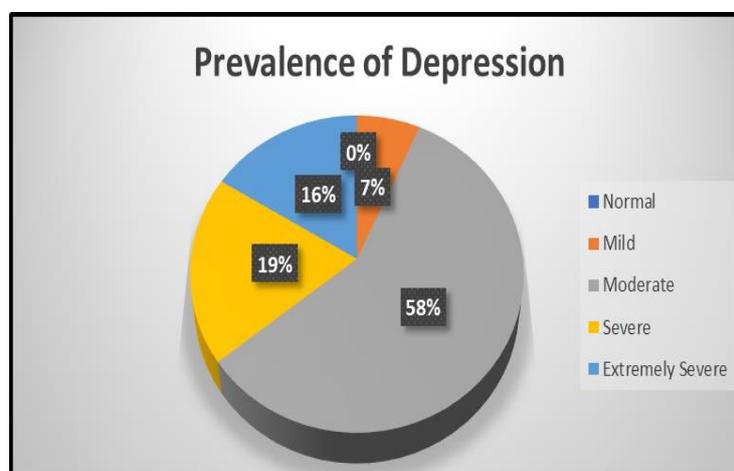
quality of life in postmenopausal women. So we can obtain a more realistic portrayal of individuals' emotions, areas of difficulty in understanding their needs and distribution of health care.

MATERIALS & METHOD

Ethical clearance was obtained from the institutional ethical committee prior to the study. Number of participants was calculated according to the formula, after which subjects were screened for inclusion and exclusion criteria. Subjects meeting the inclusion criteria and willing to participate in the study was included in the study. A written consent form was taken from the subjects. After that subjects were asked to fill Depression, Anxiety, Stress 21 scale (DASS 21) to determine their depression, anxiety, stress. Then 6 Minute Walk Distance (6 MWD) was performed on postmenopausal women to assess their functional capacity and also asked to fill Menopause Specific Quality of Life questionnaire (MENQOL) to evaluate their quality of life.

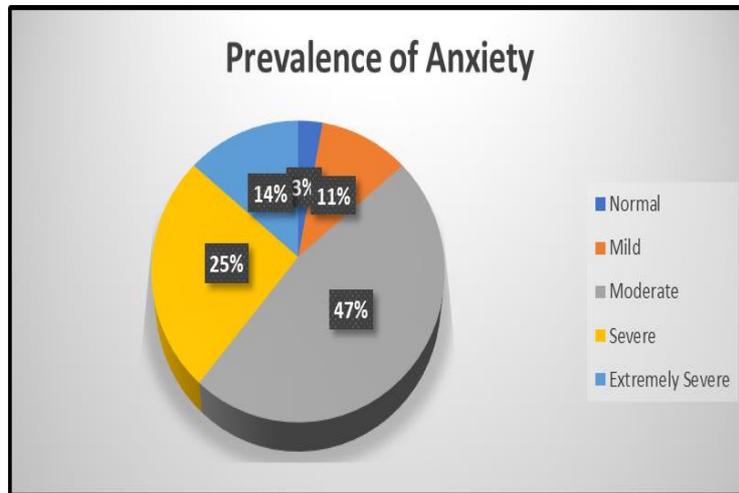
RESULT

Data were analyzed using statistical package for social science version 28 (SPSS v28) and Microsoft excel with the significance level of statical analysis is $p < 0.01$. Normality of data was analyzed with the Kolmogorov-Smirnov test.



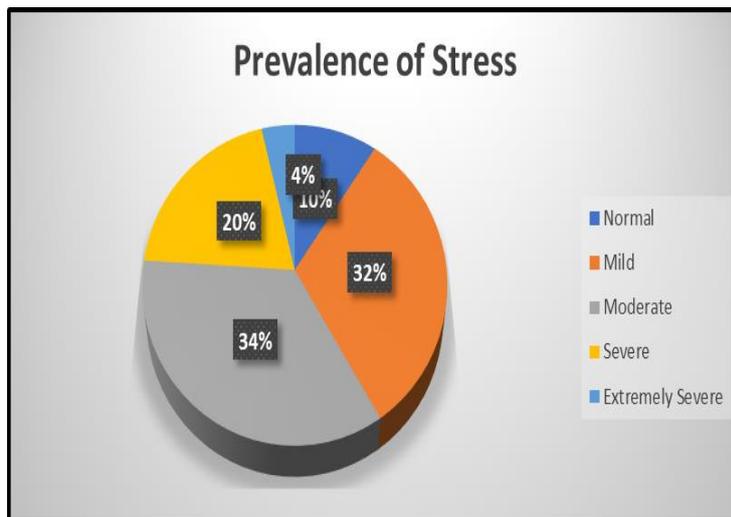
Graph 1: Prevalence of Depression

Graph 1 shows out of 105 postmenopausal women, 7% having mild depression, 58% having moderate depression, 19% having severe depression, 16% having extremely severe depression.



Graph 2: Prevalence of Anxiety

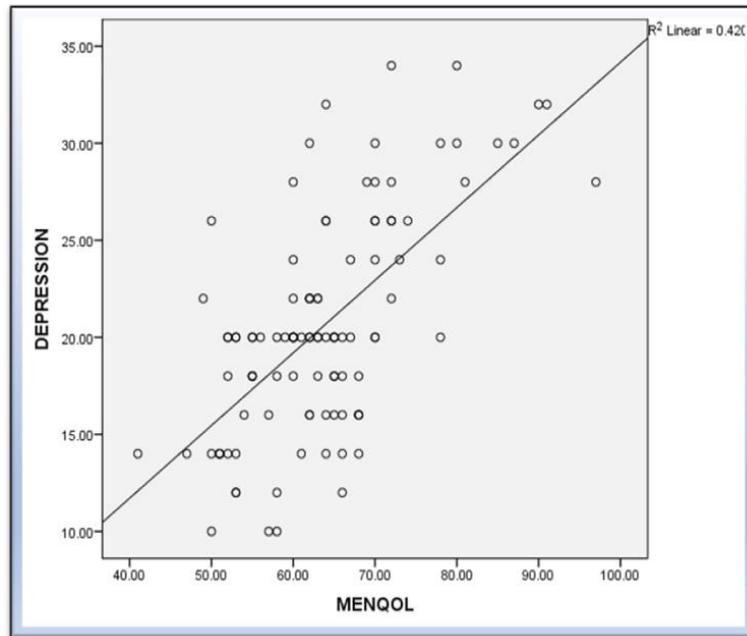
Graph 2 shows out of 105 postmenopausal women, 3% women having normal anxiety, 11% having mild anxiety, 47% having moderate anxiety, 25% having severe anxiety, 14% having extremely severe anxiety.



Graph 3: Prevalence of Stress

Graph 3 shows out of 105 postmenopausal women, 10% women having normal stress, 32% having mild stress, 34% having moderate stress, 20% having severe stress, 4% having extremely severe stress.

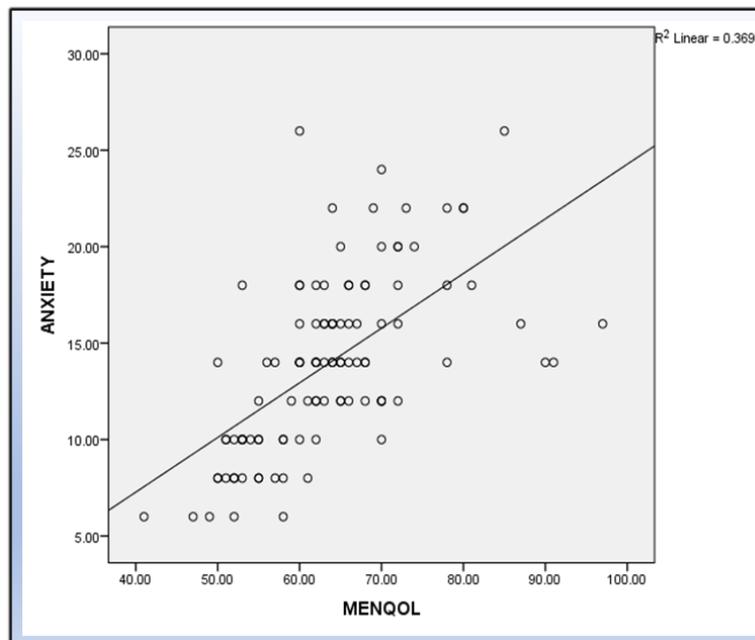
Table No.1 Correlation of depression with QOL in Postmenopausal women			
Spearman's rho			
		r value	P value
Depression	QOL	0.57	0.001
**. Correlation is significant at the 0.01 level.			



Graph 4: Correlation of depression with QOL in Postmenopausal women

Table 1 and Graph 4 shows there is moderate positive correlation of depression with quality of life in postmenopausal women.

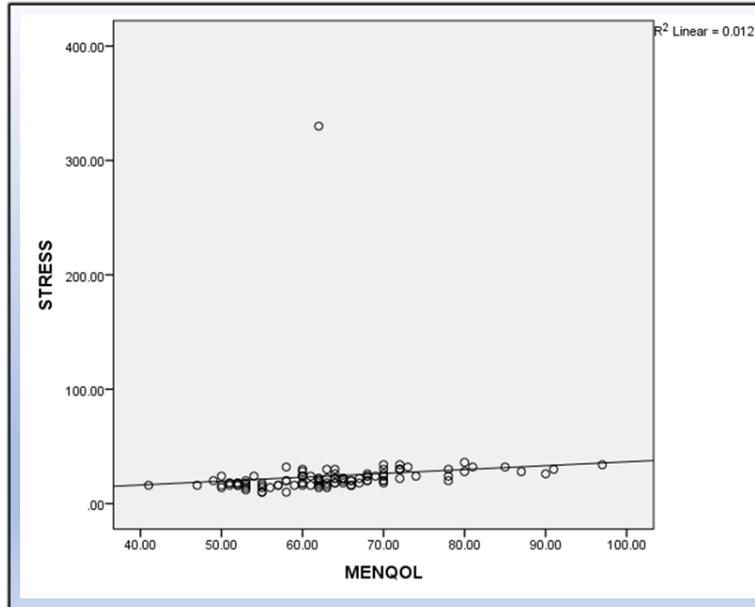
Table No. 2 Correlation of anxiety with QOL in Postmenopausal women			
Spearman's rho			
		r value	P value
Anxiety	QOL	0.67	0.001
**. Correlation is significant at the 0.01 level.			



Graph 5: Correlation of anxiety with QOL in Postmenopausal women

Table 2 and Graph 5 shows there is moderate positive correlation of anxiety with quality of life in postmenopausal women.

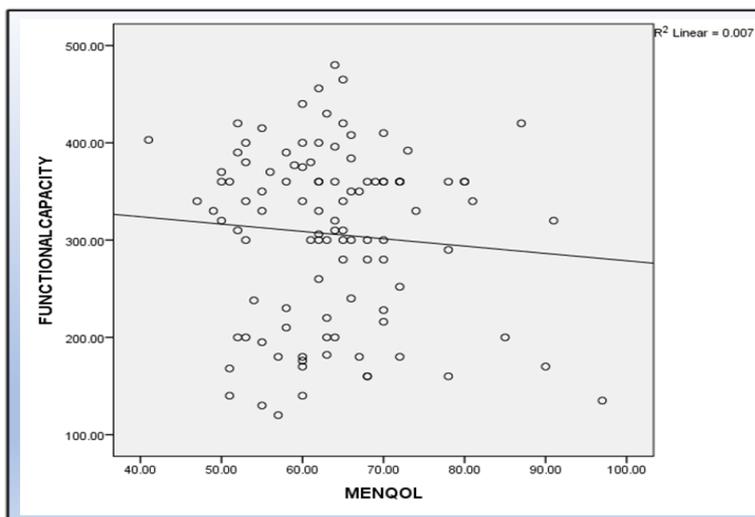
Table No. 3 Correlation of stress with QOL in Postmenopausal women			
Spearman's rho			
		r value	P value
Stress	QOL	0.62	0.001
**. Correlation is significant at the 0.01 level.			



Graph 6: Correlation of stress with QOL in Postmenopausal women

Table 3 and Graph 6 shows there is moderate positive correlation of stress with quality of life in postmenopausal women.

Table No. 4 Correlation of functional capacity with QOL in Postmenopausal women			
Kendall's tau b			
		r value	P value
Functional Capacity	QOL	-0.35	0.001
**. Correlation is significant at the 0.01 level.			



Graph 7: Correlation of functional capacity with QOL in Postmenopausal women

Table 4 and Graph 7 shows there is weak negative correlation of functional capacity with QOL.

DISCUSSION

The current study was conducted to find out the correlation of depression, anxiety, stress and functional capacity with quality of life in postmenopausal women. Here, participants with the age group of 45-60 years with mean of age group 52.76 were included according to inclusion criteria of the study.

The present study found majority of postmenopausal women had moderate depression (58%) in prevalence, which is in accordance with Vikas Yadav, Akanksha Jain et al. that 42.47 % of perimenopausal and postmenopausal women have some form of depression.⁸ This study has found out that there is moderate positive correlation of depression with quality of life in postmenopausal women. This result of present study is supported with a study conducted by Caliskan Pala S, Unsal A et al. They found that women are more vulnerable to depression in premenopausal and postmenopausal periods. Being single/widowed, having a poor income level, having low social support, and low QOL are important risk factors which increase the frequency of depression.⁹ Another study done by Bashar M et al. reported that psychological symptoms are strongly correlated with menopausal women and have significant impact on QOL of early postmenopausal women than late postmenopausal women.¹⁰ Grochans E, et al. also found the factors predisposing pre-, peri-, and postmenopausal women to depressive symptoms are lower education, lack of a life partner, unemployment, high anxiety, and neurotic personality.¹¹

The present study found majority of postmenopausal women had moderate anxiety (47%) in prevalence. Siegel AM, Mathews SB et al. showed that anxiety can certainly lead to poor quality of life and to worsening of comorbid mood disorders and medical illness.¹² This study has found out

that there is moderate positive correlation of anxiety with quality of life in postmenopausal women. This result is in consistent with a cross sectional study done by Jorge et al. who found anxiety was independently associated with severe QoL impairment in this postmenopausal Latin American sample. A strong association was found between anxiety and severe somatic symptoms, which include hot flashes, sleep disorders and muscle and joint complaints. Hence, screening for anxiety and management in this population is important.¹³

The present study found majority of postmenopausal women had moderate stress (34%) in prevalence. According to Sarveswaran G., Jayaseelan V. et al. there is more than one-fourth of the postmenopausal women had high to very high level of stress.¹⁴ This study has found out that there is moderate positive correlation of stress with quality of life in postmenopausal women. The result of the study is somewhat similar to the study done by Jayabharathi B. et al. Their results showed that the majority of postmenopausal women 90 (70.4%) had very high level of stress which negatively affected the QOL of postmenopausal women.¹⁵

This study has found out that there is weak negative correlation of functional capacity with quality of life in postmenopausal women. da Silva GC et al. found that the relationship between regular physical activity, improved functional capability and quality of life, as demonstrated by better performances in the functional capacity tests resulting in a wider perception of quality of life for most of the senior women involved.¹⁶ The result of present study is in accordance with this study. Another study done by Racziewicz D, Bojar I et al. showed that work ability correlates positively to functional exercise capacity, which correlates negatively to adipose tissue accumulation in perimenopausal women with non-manual employment, but not in postmenopausal cases.¹⁷ In the present study the mean of BMI is 27.49 of

postmenopausal women and Dulac MC, Carvalho LP et al. had also seen an association between abdominal obesity and FC in active postmenopausal women and that the strongest association and the best predictor of FC was lower limb muscle strength. Thus, active postmenopausal women with abdominal obesity may not necessarily have a reduced FC if lower limb muscle strength is preserved.¹⁸

The results of present study are also in consistant with Binu Paulose, Neetha Kamath et al. They reported that Indian women are ignorant about the changes taking place in their reproductive system. The changes are inherent everywhere, there is no exception for human life. The changes may be developmental or transitional. Midlife is one such transitional periods, which brings about menopause in women and demands significant changes in the QOL.¹⁹ Karmakar N, Majumdar S et al. had seen their results supported that menopause causes both physical and psychiatric problems. Education, creating awareness and providing suitable intervention to improve their QOL are important which should be imparted to menopausal women at both individual and community level.²⁰

CONCLUSION

It is concluded that a large number of factors were associated with experiencing menopausal physical and psychosocial problems, which had negative effects on the quality of life among postmenopausal women. Depression, anxiety, and stress should be considered as risk factors for quality of life in postmenopausal women.

LIMITATION

Socioeconomic factors & educational level were not considered in the study.

Duration of menopause was not considered.

For functional capacity, only 6 MWD was used.

FUTURE SCOPE OF THE STUDY

Further study with a larger population.

Comparative study can be done on perimenopausal and postmenopausal women.

Various measures can be used for functional capacity.

Declaration by Authors

Ethical Approval: Approved

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Conflict of Interest: The authors declare no conflict of interest.

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