ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 08 | August - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

FREQUENCY OF ANXIETY AND DEPRESSION AMONG WOMEN IN MENOPAUSAL TRANSITION

Medicine

Bichu Kuriyan Joy Student Father Muller Medical College Mangalore-575002
Dr Safeekh A T Professor Department of Psychiatry Father Muller Medical College Mangalore-575002
Dr Karen Prajwal Castelino* Associate Professor Department of Forensic Medicine & Toxicology Father Muller Medical College Mangalore-575002 *Corresponding Author

ABSTRACT

Background: Menopausal transition is a period of endocrinological changes preceding menopause and is associated with various physical symptoms and mood disturbances. This cross sectional study is aimed at finding the frequency of anxiety and depression among women during this transition. **Materials And Methods:** This questionnaire based study evaluated 45 women in menopausal transition, who visited obstetrics and gynaecology department in a tertiary hospital in Mangalore, Karnataka, using Zung anxiety and depression scales. Diagnosis of menopausal transition was made according to Stages of Reproductive Aging Workshop (STRAW). **Results:** 26.66 % of the participants had anxiety and 33.33% were diagnosed with new onset depression. A statistically significant positive correlation was found between the occurrences of anxiety and depression among women during the transition. Similarly, it was found that depression in menopausal transition is more common in women with low educational status. A statistically significant correlation was found between diagnosis of anxiety and the number of children. **Conclusion:** The frequency of anxiety and depression is higher in women during menopausal transition as compared to that of general population. Hence, periodic evaluation for this disorders is warranted to aid early diagnosis and management.

KEYWORDS

Zung Anxiety And Depression Scales, Stages Of Reproductive Aging Workshop, Depression, Anxiety, Menopausal Transition Period.

INTRODUCTION

Perimenopause or climacteric, better referred to as the menopausal transition, is a progressive endocrinologic continuum that takes reproductive aged women from regular, cyclic and predictable menses characteristic of ovulatory cycles, to a final menstrual period associated with ovarian senescence [1]. A number of physical and psychological symptoms are manifested during this transition due to the endocrinological changes characteristic of the period [2]. These symptoms are commonly referred to as "menopause syndrome" and are driven by the decline in ovarian function with fluctuation or decrease in oestrogen levels [3]. physical symptoms include hot flushes, night sweats, palpitations, headache, fatigue, dyspareunia, vaginal dryness, urinary incontinence and insomnia [2]. But the most common symptom which results in menopausal women seeking treatment are mood changes [4]. Disturbances in mood are seen in 75% of perimenopausal women in some surveys examining menstrual symptomatology and it points at the need to study psychological and cognitive symptoms associated with menopausal transition[5].

Transition to menopause confers a risk of depression onset. Studies in western countries suggests 20 to 30% of women getting affected by new onset depression during this stage. A 2 to 4 fold increased risk of depressive symptoms and a 2 fold increased risk of depressive disorder have been identified in medically and reproductively healthy women without prior history of depression[6].

In a community based study on depression and anxiety in middle aged women conducted in Punjab [7], India, the prevalence of syndromal depression and anxiety in the study population, according to Zung self-rating depression and anxiety scale was found to be 86.7% and 88.9%, respectively. In a similar study conducted in Beijing, china[8], out of the 1280 women aged 45-59 interviewed, 306 showed depression symptoms (23.9%) and 131 had anxiety (10.2%).

According to domino hypothesis, vasomotor symptoms have been associated with depressive symptoms[9], but relation of depression with menopausal status and the factors influencing it are yet to be studied. Studies conducted on anxiety symptoms have established a similar association with vasomotor symptoms[9]. But it is unclear whether the transition from pre-menopause to post-menopause is a time of increased risk, and if so what are the characteristics of women at greater risk.

Since there is a paucity of literature about the frequency of anxiety and depression in women during menopausal transition the current study was undertaken, also aiming to find out whether there is any relation between mood disturbances and various sociodemographic factors and clinical variables associated with the transition.

METHODOLOGY

The present study was conducted in department of obstetrics and gynaecology in collaboration with department of psychiatry, in a tertiary care hospital in South India. It was an observational, questionnaire based cross sectional study conducted in hospital setting following approval from institutional ethics and scientific committees. Participants are chosen among the women visiting obstetrics and gynaecology department who were aged between 38 and 50 years and was diagnosed to be in menopausal transition by a consultant gynaecologist.

Stages of Reproductive Ageing Workshop (STRAW) staging system was used to classify women into early menopausal transition and late menopausal transition[10]. The early menopausal transition (stage -2), is characterised by regular menstrual cycles, but the interval between cycles altered by 7 days or more. Typically, cycle length become shorter. FSH levels and serum oestrogen levels may be increased, and normal ovulatory cycles maybe interspersed with anovulatory cycles. Late menopausal transition (Stage-1) is characterised by 3 to 11 months of amenorrhea.12 months or more of amenorrhea is referred to as post-menopausal stage.

Patients with previous history of any psychiatric illnesses were excluded from the study. similarly, patients with chronic diseases like hypertension, diabetes mellitus or any endocrine abnormalities, those who were on oral contraceptives or hormonal replacement therapy, or had undergone hysterectomy with or without bilateral oophorectomy were excluded. Pregnant or breastfeeding women were also not included.

To the participants who consent to take part in the study, a structured questionnaire was given. Different sociodemographic and clinical variables (age, education, employment, parity, menopausal status, marital status and history of abortions) were assessed with a semi-structured proforma.

Zung self-rating anxiety scale and Zung self –rating depression scale were used for measuring depression and anxiety. Both of them are 20 item questionnaires for measuring depression and anxiety respectively. Since Malayalam and Kannada versions of the scales are not available, the scales are translated to both these local languages. These translated scales are then translated back to English for comparison with the original scale[10].

The illiterate subjects were helped in filling the proforma by an interpreter. A written informed consent was taken from all the subjects before administering the questionnaire.

The data collected was analysed using Microsoft excel and SPSS

version 20.0(developed by IBM). Logistic regression analysis is done to find out significant risk factors for depression and anxiety. Subjects found to have anxiety and depression through the questionnaire based study will be requested to visit the hospital for further analysis.

RESULTS

This cross sectional study consisted of 45 participants in the age range of 39-48 years and the mean age of the participants was 43.8 years. Majority of them were educated above 12th standard (77.8%), and most of them were employed (73.3%). More than 95% of the participants were married and majority of them had 2 children or more. A positive history of abortion was given by 15.6% of the participants. Of all women, 53.3% were in early menopausal transition and 46.7% were in late menopausal transition. It was found that 24.4% of the participants suffered from mild anxiety, while 2.2% had moderate anxiety. Similarly, 31.1% was found to have mild depression and 2.2% have moderate depression.

No statistically significant correlation was found between age, occupation, marital status, menopausal status and history of abortions with the occurrence of anxiety and depression during menopausal transition (table 1, fig.1).

A statistically significant correlation was established between the occurrences of anxiety and depression (P=0.012) (table 2). Educational status was found to have a negative correlation with depression (P=0.030), while the same was not found with anxiety. Similarly, there exists a correlation between number of children and occurrence of anxiety during menopausal transition (P=0.031), but no such relation was found with depression.

DISCUSSION

In this study, the frequency of new onset anxiety and depression among women during menopausal transition was found to be 26.66% and 33.33% respectively. This is comparable with the results of similar studies from other parts of the world, namely Brazil (2006)[11], Puerto Rica[12]and turkey (2010)[13]. Certain studies from china like Ying et al study in Beijing[8] and Rui-xia Li et al study (2016) [14]have shown a lesser prevalence of anxiety and depression. This could be because of underreporting of depressive symptoms which is common in china[15].

In the present study, it was found that 42.22% of participants had either anxiety or depression or both which is consistent with other studies [11] [16].This study has found a positive correlation between occurrences of anxiety and depression which is statistically significant. It was found that among those diagnosed with depression 53.33% had concurrent anxiety. Similar numbers were obtained in studies done by Aartjan T F Beekman et al Robert M A Hirschfeld etc. [17-18]. Anxiety is the most common comorbidity in depressive disorders[19].

The present study also found a statistically significant correlation between the occurrence of depression in women during menopausal transition and their educational status. When 60% of the participants with education upto 12th standard developed depression, only 25.71% of those with education above 12th standard developed the same. This shows that women with lower educational status have more chances of developing new onset depression during menopausal transition. Such a relation was established in various other studies as well[12,20-24].

No statistical significance was established between occurrence of anxiety in women during menopausal transition and their education.

Table 1

Sl. No	Demographic Features	Total Women	Anxiety Diagnosis			Depression Diagnosis			P Value	
			No Anxiety	Mild Anxiety	Moderate Anxiety	No Depression	Mild Depression	Moderate Depression	Anxiety	Depression
1	Age								0.6	0.197
	39	4	4	0	0	3	1	0		
	40	4	1	3	0	1	3	0		
	41	4	3	1	0	1	3	0		
	42	6	5	1	0	5	1	0		
	43	3	3	0	0	3	0	0		
	44	2	1	1	0	1	1	0		
	45	6	5	1	0	3	3	0		
	46	5	4	1	0	4	0	1		
	47	6	4	2	0	5	1	0		
	48	5	3	1	1	4	1	0		
2	Occupation								0.1	1
	Unemployed	12	6	5	1	8	4	0		
	Employed	33	27	6	0	22	10	1		
3	Marital Status								1	0.553
	Married	43	31	11	1	29	13	1		
	Unmarried	1	1	0	0	0	1	0		
	Widowed	1	1	0	0	1	0	0		
	Divorced	0	0	0	0	0	0	0		
4	Menopausal Status								0.9	0.43
	Early Menopausal Transition	24	18	6	0	15	9	0		
	Late Menopausal Transition	21	15	5	1	15	5	1		
5	Abortion								0.7	1
	History Of Abortion	7	6	1	0	5	2	0		
	No Abortion	38	27	10	1	25	12	1		
6	Education								0.03 (Significant)	0.085
	10th	6	1	5	0	2	3	1		
	12th	4	3	0	1	2	0	2		
	Degree	22	16	6	0	17	5	0		
	Diploma	7	5	2	0	6	1	0		
	Postgraduate Degree	6	5	1	0	6	0	0		
7	Number Of Children								0.031 (Significant)	0.221
	No Children	2	1	1	0	0	2	0		
	1 Child	5	2	3	0	3	2	0		
	2 Children	29	25	3	1	21	8	0		
	3 Children	8	5	3	0	5	2	1		
	4 Children	1	0	1	0	1	0	0		

Table 2

ANXIETY DIAGNOSIS - DEPRESSION DIAGNOSIS CROSSTABULATION	DEPRESSION DIAGNOSIS							TOTAL
		Mild		Moderate		Normal		
ANXIETY DIAGNOSIS		No. of participants	Percentage	No. of participants	Percentage	No. of participants	Percentage	
	Mild	6	13.33%	1	2.20%	4	8.88%	11
	Moderate	1	2.20%	0	0	0	0	1
	Normal	7	15.55%	0	0	26	57.77%	33
Total		14		1		30		45

P=0.012,significant.

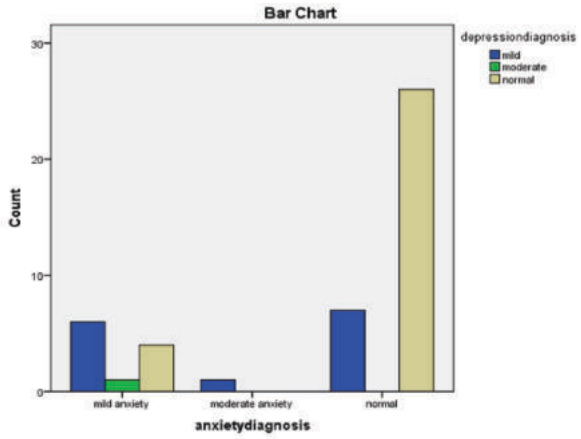

Figure 1

This finding is consistent with the 34-year longitudinal Swedish cohort study [25] on incidence and risk factors for depression and anxiety disorders, which suggests that low education and other socioeconomic indicators are greater risk factors for depression than for anxiety.

In this study, it was found that there exists a statistically significant relation between number of children and development of anxiety in women during menopausal transition. When only 13.79% of the participants with 2 children developed anxiety, 44.4% of participants with 3 or more children developed the same. This could be due to various sociocultural factors regarding parenting and also expectations about the children, which affects the lives of middle aged women.

No significant relation was established between other sociodemographic factors like age, occupation, marital status, menopausal transition status and history of abortion, with the occurrence of anxiety and depression during menopausal transition. This is consistent with Gloria M Suau et al study (2005) [12]. Alvarado Fernando Polisseni et al study in brazil (2009) [26] also establishes the same except for occupation. They found that paid activity acts as a protection factor for development of depression.

Limitations of the study must be taken into account while interpreting the results. Primarily, this was a hospital based study conducted in a single tertiary care center and hence the results cannot be generalized for the entire population. Furthermore, though subjects with past history of psychiatric disorders were excluded from the study, it does not rule out the possibility of existence of subclinical symptoms of anxiety or depression which failed to receive clinical attention or diagnosis.

CONCLUSION

Frequency of anxiety and depression is reported to be high among women during menopausal transition because of various biopsychosocial changes they undergo during that phase. This study is done to find out the frequency of anxiety and depression among women during menopausal transition. Both anxiety and depression was found to be much higher (26.66% and 33.33% respectively) among this group compared to the general population. This study also found a positive correlation between occurrences of anxiety and depression. Higher educational status was found to be a protective factor for depression. Number of children was found to have a correlation with the occurrence of anxiety. Other sociodemographic factors like age, occupation, marital status and menopausal transition status did not have any significant relation either with anxiety or with depression. Further studies with bigger sample size are needed evaluating various psychosocial aspects and how it affects women during menopausal transition. Considering the high prevalence of anxiety and depression, it is advisable for every woman to undergo evaluation for these disorders during menopausal transition so that early diagnosis and management can be done.

REFERENCES

1. Hoffman, L. B., Schorge, O. J., Scaffer, I. J., Halvorsan, L. M., Bradshaw, K. D., & Cunningham, F. G. (2008). *Menopausal Transition. William's Gynaecology*.
2. Dar, S., Wani, Z., Bhat, B., Sheikh, S., Nabi, J., Khanam, A., Nazir, D., & Nazir, M. (2020). Anxiety and depression in menopausal transition: A hospital-based study from Kashmir. *Medical Journal of Dr. D.Y. Patil Vidyapeeth*, *13*(1), 37. https://doi.org/10.4103/mjdrdypu.mjdrdypu_68_19.
3. Zhou, Q., Wang, B., Hua, Q., Jin, Q., Xie, J., Ma, J., & Jin, F. (2021). Investigation of the relationship between hot flashes, sweating and sleep quality in perimenopausal and postmenopausal women: the mediating effect of anxiety and depression. *BMC Women's Health*, *21*(1). https://doi.org/10.1186/s12905-021-01433-y.
4. Ballinger, C. B. (1990). Psychiatric aspects of the menopause. *The British Journal of Psychiatry: The Journal of Mental Science*, *156*(6), 773–787. https://doi.org/10.1192/bjp.156.6.773.
5. Bromberger, J. T., Kravitz, H. M., Chang, Y., Randolph, J. F., Avis, N. E., Gold, E. B., & Matthews, K. A. (2013). Does risk for anxiety increase during the menopausal transition? Study of Women's Health Across the Nation. *Menopause (New York, N.Y.)*, *20*(5), 488–495. https://doi.org/10.1097/gme.0b013e3182730599.
6. Sadock, B. J., Sadock, V. A., & Ruiz, P. (2009). *Psychiatry And Reproductive Medicine. Kaplan And Sadock's Comprehensive Textbook Of Psychiatry*.
7. Bansal, P., Chaudhary, A., Soni, R. K., Sharma, S., Gupta, V., & Kaushal, P. (2015). Depression and anxiety among middle-aged women: A community-based study. *Journal of Family Medicine and Primary Care*, *4*(4), 576. https://doi.org/10.4103/2249-4863.174297.
8. Li, Y., Yu, Q., Ma, L., Sun, Z., & Yang, X. (2008). Prevalence of depression and anxiety symptoms and their influence factors during menopausal transition and postmenopause in Beijing city. *Maturitas*, *61*(3), 238–242. https://doi.org/10.1016/j. maturitas.2008.09.002.
9. Cohen, L. S., Soares, C. N., Vitonis, A. F., Otto, M. W., & Harlow, B. L. (2006). Risk for new onset of depression during the menopausal transition: The Harvard study of moods and cycles. *Archives of General Psychiatry*, *63*(4), 385. https://doi.org/10.1001/archpsyc.63.4.385.
10. Freeman, E. W., Sammel, M. D., Liu, L., Gracia, C. R., Nelson, D. B., & Hollander, L. (2004). Hormones and menopausal status as predictors of depression in womenin transition to menopause. *Archives of General Psychiatry*, *61*(1), 62. https://doi.org/10.1001/archpsyc.61.1.62.
11. Veras, A. B., Rassi, A., Valença, A. M., & Nardi, A. E. (2006). Prevalência de transtornos depressivos e ansiosos em uma amostra ambulatorial brasileira de mulheres na menopausa. *Revista de Psiquiatria Do Rio Grande Do Sul*, *28*(2), 130–134. https://doi.org/10.1590/s0101-81082006000200005.
12. Suau, G. M., Normandia, R., Rodriguez, R., Romaguera, J., & Segarra, L. (2005). Depressive symptoms and risk factors among perimenopausal women. *Puerto Rico Health Sciences Journal*, *24*(3), 207–210.
13. Timur, S., & Şahin, N. H. (2010). The prevalence of depression symptoms and influencing factors among perimenopausal and postmenopausal women. *Menopause (New York, N.Y.)*, *17*(3), 545–551. https://doi.org/10.1097/gme.0b013e3181cf8997.
14. Li, R.-X., Ma, M., Xiao, X.-R., Xu, Y., Chen, X.-Y., & Li, B. (2016). Perimenopausal syndrome and mood disorders in perimenopause: Prevalence, severity, relationships, and risk factors. *Medicine*, *95*(32), e4466. https://doi.org/10.1097/md.0000000000004466.
15. Yen, S., Robins, C. J., & Lin, N. (2000). A cross-cultural comparison of depressive symptom manifestation: China and the United States. *Journal of Consulting and Clinical Psychology*, *68*(6), 993–999. https://doi.org/10.1037/0022-006x.68.6.993.
16. Seritan, A. L., Iosif, A.-M., Park, J. H., DeatherageHand, D., Sweet, R. L., & Gold, E. B. (2010). Self-reported anxiety, depressive, and vasomotor symptoms: A study of perimenopausal women presenting to a specialized midlife assessment center. *Menopause (New York, N.Y.)*, *17*(2), 410–415. https://doi.org/10.1097/gme.0b013e3181bf5a62.
17. Beekman, A. T. F., de Beurs, E., van Balkom, A. J. L. M., Deeg, D. J. H., van Dyck, R., & van Tilburg, W. (2000). Anxiety and depression in later life: Co-occurrence and communality of risk factors. *The American Journal of Psychiatry*, *157*(1), 89–95. https://doi.org/10.1176/ajp.157.1.89.
18. Hirschfeld, R. M. A. (2001). The comorbidity of major depression and anxiety disorders: Recognition and management in primary care. *The Primary Care Companion to CNS Disorders*, *3*(6). https://doi.org/10.4088/pcc.v03n0609.
19. Kessler, R. C., Berglund, P., & Demler, O. (2003). The epidemiology of major depressive disorder: results from the National Comorbidity Survey Replication (NCS-R): Results from the national comorbidity survey replication (NCS-R). *JAMA*, *289*(23), 3095–3105. https://doi.org/10.1001/jama.289.23.3095.
20. Choi, H., Lee, D., Lee, K., Kim, H., & Ham, E. (2004). A structural model of menopausal depression in Korean women. *Archives of Psychiatric Nursing*, *18*(6), 235–242.

https://doi.org/10.1016/j.apnu.2004.09.006.
21. da Silva, A. R., & d'Andretta Tanaka, A. C. (2013). Factors associated with menopausal symptom severity in middle-aged Brazilian women from the Brazilian Western Amazon. *Maturitas*, *76*(1), 64–69. https://doi.org/10.1016/j.maturitas.2013.05.015.
22. Kuh, D. L., Wadsworth, M., & Hardy, R. (1997). Women's health in midlife: the influence of the menopause, social factors and health in earlier life. *BJOG: An International Journal of Obstetrics and Gynaecology*, *104*(8), 923–933. https://doi.org/10.1111/j.1471-0528.1997.tb14352.x.
23. Unsal, A., Tozun, M., & Ayranci, U. (2011). Prevalence of depression among postmenopausal women and related characteristics. *Climacteric: The Journal of the International Menopause Society*, *14*(2), 244–251. https://doi. org/10. 3109/ 13697137. 2010.510912.
24. Husain, N., Creed, F., & Tomenson, B. (2000). Depression and social stress in Pakistan. Psychological Medicine, 30(2),395–402. https://doi.org/10.1017/s0033291700001707.
25. Samuelsson, G., McCamish-Svensson, C., Hagberg, B., Sundström, G., & Dehlin, O. (2005). Incidence and risk factors for depression and anxiety disorders: Results from a 34-year longitudinal Swedish cohort study. *Aging & Mental Health*, *9*(6), 571–575. https://doi.org/10.1080/13607860500193591.
26. Polisseni, Á. F., Araújo, D. A. C. de, Polisseni, F., Mourão Junior, C. A., Polisseni, J., Fernandes, E. S., & Guerra, M. de O. (2009). Depressão e ansiedade em mulheres climatéricas: fatores associados. *Revista Brasileira de Ginecologia e Obstetricia: Revista Da Federacao Brasileira Das Sociedades de Ginecologia e Obstetricia*, *31*(1). https://doi.org/10.1590/s0100-72032009000100006.