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RESEARCH ARTICLE

A COMMUNITY BASED CROSS SECTIONAL STUDY ON PREVALENCE OF DEPRESSION AMONG 40-55-YEAR-OLD WOMEN RESIDING IN URBAN AREA OF MAHARASHTRA INDIA STUDY AUTHOR INFORMATION

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ABSTRACT

Background. Menopause is one of the major mile stone in a woman's life, a woman under goes many changes that are both physiologic and psychosocial changes A large proportion of women undergoing menopause experience various abnormal symptoms such as, vasomotor symptoms. the vasomotor symptoms include hot flashes and night sweats; they are also considered as predominant menopausal symptoms. Multiple studies have shown that the increased risk of depression in the menopausal age group. **Objectives** To assess the prevalence the depressive symptoms in women aged 40 to 55 years , residing in urban area. **Methods** The present study is a cross sectional study, Assessment of Depression of women was done using Beck's Depression Inventory, it is a validated instrument for measuring depression. This tool is a self-rated scale, where individuals rate their own symptoms of depression. **Results:** The results of data collected from 120 women in the age group of 40 to 55 years. Mean age of the participants in the present study were 49.92 ± 4.01 years. In the present study a total of 53 women i.e. 44.1 % of the total study population had depression where mild depression was seen in 32 i.e. 26.6% and moderate depression was seen in 15 patients i.e. 12.5 %. Severe depression was seen in 6 patients i.e. 5 %. The age of the study participants was positively with the depression score with person's correlation coefficient of 0.725 and p value of 0.032 which was statistically significant. The education level of the study participants was positively with the depression score with spearman's correlation coefficient of 0.247 and p value of 0.522 which was non statistically significant. The duration of comorbidities of the study participants was positively with the depression score with spearman's correlation coefficient of 0.451 and p value of 0.048 which was statistically significant. **Conclusion:** Majority of the women i.e. 44.1 % of the total study population had depression. The depressive symptoms were found to be higher in older women and those with comorbidities. The women in the age group of 40-55 years need special attention, these women should be screened for signs of depression, so that major depressive illness can be mitigated. The treating physician should consider the mental health aspect of the patients.

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INTRODUCTION

Menopause is one of the major mile stone in a woman's life, a woman under goes many changes that are both physiologic and psychosocial changes. During this phase of transition the, majority of women undergoing menopause experience symptoms such as, vasomotor symptoms, psychological, musculoskeletal symptoms many women also experience uncommon symptoms like hot flashes and night sweats; they are also considered as predominant menopausal symptoms.

Also, the risk of depression in the menopausal age group is relatively high and multiple studies done across various regions have shown that the risk of depression is higher in this age group (Freeman, 2007; Freeman, 2004; Freeman, 2006; Cohen, 2004). There may be multiple reasons for these changes, one of the main reason for the symptoms is considered to be changes in the levels of hormones during the process of menopause. However, few studies have also shown that there is low co relations between oestrogen levels and presence of depression in this age group (Hunter, 1996; Myra, 1996).

According to the study by Mathews et al that natural menopause is a benign event for the majority of middle-aged healthy women (Karen, 1990). Women in menopausal age group come across various challenges due to change in environment and difficult family circumstances, they also have to deal with the hormonal and biochemical changes which can lead to mood changes and in some cases depression. Higher prevalence of Depressed mood are associated with Vasomotor symptoms (Jeanne Leventhal Alexander, 2007; Avis, 1999). According to a study by Freeman EW et al hot flashes and depressive symptoms occurred early in the menopausal transition, they also reported that the depressive symptoms are more likely to precede hot flashes in women with no previous experience of either symptom (Ellen, 2009). Multiple studies have been carried out in different parts of world with to determine the relation between the depression in menopausal women. However, the data regarding the depression in menopausal women in India is limited, therefore this study was undertaken to find the relation of depression with menopausal status.

OBJECTIVES

To assess the prevalence of depression in menopausal age group women in urban area.

METHODS AND MATERIALS

The present study is a cross sectional study conducted in the residing in the urban area of Maharashtra, India.

SAMPLE SIZE: In a study done by Biswajit L (Jagtap, 2016) in women belonging to perimenopausal age group, depression was seen in 31% of the study participants. The Sample size was calculated using the formula, $n = \frac{[DEFF * Np(1-p)]}{[(d^2/Z^2(1-\alpha/2)^2(N-1) + p*(1-p))]$, where p was 31%, design effect of 1 and confidence limits as 10% and confidence level of 97%, The total number calculated was 101, which was rounded off to 120.

INCLUSION CRITERIA: Women who belonged to age group of 40-55 years, residing in urban area and who consented to be a part of study were included in the study.

EXCLUSION CRITERIA

- Women who had undergone surgical menopause
- Women receiving hormone replacement therapy
- Women not residing in urban area

All Post-menopausal women who met the inclusion criteria were included in the study. Then for every woman who had attained menopause, woman in the same age group (43-55 year) who had not attained menopause was chosen. Data were collected from women by interviewing with the help of a structured questionnaire consisting of a socio-demographic data, Beck's Depression Inventory.

TOOLS OF ASSESSMENT

Assessment of Depression of women was done using Beck's Depression Inventory (Beck, 1993; Beck, 1996), it is a validated instrument for measuring depression.

This tool is a self-rated scale, where individuals rate their own symptoms of depression. The Beck Depression Inventory (BDI) takes just 5-10 minutes to complete. It provides a fast, efficient way to assess depression. The test contains 21 items, most of which assess depressive symptoms on a Likert scale of 0-3. Each item is a list of four statements arranged in increasing severity about a particular symptom of depression. BDI-II total scores have been correlated with scores on other psychological tests. Clinical interpretation of scores is accomplished through criterion-referenced procedures utilizing the following interpretive ranges: 0-13 - minimal depression; 14-19 - mild depression; 20-28 - moderate depression; and 29-63 - severe depression. Higher total scores indicate more severe depressive symptoms. All women were interviewed in the local language. Participants were informed about the and objectives of the study and an informed consent was obtained.

STATISTICAL ANALYSIS: The data was entered in Microsoft excel 2016 and coded and The Statistical Package for the Social Sciences Software Version 16.0 was used for statistical analyses. The Chi-square test was applied to find out differences in proportions. P-value less than 0.05 were considered as statistical significant.

RESULTS

The results of data collected from 120 women in the age group of 40 to 55 years. Mean age of the participants in the present study were 49.92 ± 4.01 years. 98.5% of the participants belonged to the Hindu religion, 2% belonged to the Muslim religion. Majority of study participants i.e. 61.9 % belonged to the nuclear family. Majority of participants i.e. 68.5% were graduates, followed by 16.9 %, who were post graduates. 11.5 % were educated up to secondary school, 3.1% had completed primary school. Table 1. 45.3% of the all study subjects were house wives and 54.7% of the study participants were working. 90.5% of women were married and 9.5% were widowed. 54.8% of women didn't have any co morbid conditions, 26.2% had hypertension followed by 7.1% of women who had diabetes mellitus. In the present study population 47.6% of the women complained of generalised weakness. Joint pain or muscle pain was experienced by 69% the women. Loss of appetite was seen in 16.7% of the women. 4.8% of women experienced weight gain where as 28.6 % of women experienced weight gain. In the present study genitourinary symptoms were experienced by 23.8% of the total study population 11.9% of the women complained of burning micturition, followed by complains of urge incontinence which was experienced by 9.5% , stress incontinence was experienced by 7.1% of the study participants. In the present study a total of 53 women i.e. 44.1% of the total study population had depression where mild depression was seen in 32 i.e. 26.6% and moderate depression was seen in 15 patients i.e. 12.5 %. Severe depression was seen in 6 patients i.e. 5 % Table 1. The age of the study participants was positively with the depression score with person's correlation coefficient of 0.725 and p value of 0.032 which was statistically significant. The education level of the study participants was positively with the depression score with spearman's correlation coefficient of 0.247 and p value of 0.522 which was non statistically significant. The duration of comorbidities of the study participants was positively with the depression score with spearman's correlation coefficient of 0.451 and p value of 0.048 which was statistically significant Table 2.

Table 1. Showing the distribution of study participants according to age, education marital status, comorbidities and grade of depression according to bdi

| SYMPTOMS | CATEGORY | Total | MILD DEPRESSION | MODERATE DEPRESSION | SEVERE DEPRESSION | X ² value | P VALUE |
|-------------------|--------------------|-------|-----------------|---------------------|-------------------|----------------------|---------|
| Age | 40-45 | 12 | 8 | 3 | 1 | 2.202 | 0.901 |
| | 46-50 | 21 | 11 | 8 | 2 | | |
| | 51-55 | 17 | 10 | 4 | 3 | | |
| | Above 55 | 3 | 2 | 1 | 0 | | |
| Education | Primary | 4 | 1 | 2 | 1 | 10.83 | 0.093 |
| | Secondary | 10 | 3 | 4 | 3 | | |
| | Graduate | 22 | 16 | 4 | 2 | | |
| | Post graduate | 17 | 11 | 6 | 0 | | |
| Marital status | Married | 41 | 27 | 11 | 3 | 4.91 | 0.085 |
| | Widowed/ separated | 12 | 4 | 5 | 3 | | |
| Co morbidities | Present | 40 | 22 | 12 | 6 | 2.292 | 0.318 |
| | Absent | 13 | 9 | 4 | 0 | | |
| Depression grades | | 53 | 31 | 16 | 6 | | |

Table 2. Correlation between the depression score and other variables

| | | DEPRESSION SCORE |
|----------------------------|------------------------|------------------|
| AGE | Pearson' Correlation | 0.725 |
| | P value | 0.032* |
| EDUCATION | Spearman's Correlation | 0.247 |
| | P value | 0.522 |
| DURATION OF CO MORBIDITIES | Pearson's Correlation | 0.451 |
| | P value | 0.048* |

46 women i.e. 38.1% of the women said that they felt sad all the time, 9 women i.e. 7.1% of women had feeling of hopelessness. 26.2% of women felt that they do not enjoy life like before. 28.6 % felt guilty all the time. 16.7% of women felt that they were disappointed. 2.4% of women had suicidal thoughts. 19% of the women admitted that they cried more often than before. Majority of women i.e. 57.3% felt irritated. 47.6% admitted to having lost interest in other people. 42.5% of women had sleep problems. 26.2% of women had change in appetite. 57.1% were worried about their own health. 69% women agreed that decreased interest in sex. 19% of the study population admitted to having no interest in sex.

DISCUSSION

In the present study a total of 53 women i.e. 44.1 % of the total study population had depression where mild depression was seen in 32 i.e. 26.6% and moderate depression was seen in 15 patients i.e. 12.5 %. Severe depression was seen in 6 patients i.e. 5 %. The age of the study participants was positively with the depression score with person's correlation coefficient of 0.725 and p value of 0.032 which was statistically significant. The education level of the study participants was positively with the depression score with spearman's correlation coefficient of 0.247 and p value of 0.522 which was non statistically significant. The duration of comorbidities of the study participants was positively with the depression score with spearman's correlation coefficient of 0.451 and p value of 0.048 which was statistically significant. In a study by Parul et al on mental health in women above 40 years at Vadodara, the results showed lower levels of depression in which 4.62% had minimal depression, 11.29% had mild depression, and 18.18% had severe depression (Dave, 2005). In study done in united states by Anderson et al., in women aged 40–60 years, 33%

had moderate to severe depression based on Zung-self-rating scale scores (Anderson, 1987). In a comparative study conducted by Dasgupta and Ray on postmenopausal women nearly 87.3% of rural women were suffering from depression while 60% of urban women suffered from depression (Dasgupta, 2009). In the present study, correlation analysis showed that with increasing age, there was an increasing trend in prevalence of depression. This is in agreement with findings of Poongothai et al. in their study in Chennai (Poongothai, 2009). In the present study, it was seen that severe depression was more in widows (25 %) whereas, in married women severe depression was in 7% of them. Poongothai et al. reported similar finding that prevalence of depression in married women was 15.9% and in widowed it was 26.6% (Poongothai, 2009). In the present study, Anxiety was seen in women in higher age group. Similar results were observed in study by Singh et al (2005) which was done in school teachers of Varanasi City and revealed that anxiety level was found to be mild in 64% cases and moderate in 32% cases (Singh, 2005). Similar results were seen in a hospital based study by Mukherjee et al. where 74.66% of women had anxiety with tension (Mukherjee, 1996). In a cross-sectional study on Japanese women (aged 40–69 years) by Shiwaku et al., it was reported that, anxiety was more in peri-menopausal group (39%) when compared with the premenopausal (28%) and postmenopausal women (30%) (Shiwaku, 2001).

CONCLUSION

Majority of the women i.e. 44.1 % of the total study population had depression. The depressive symptoms were found to be higher in older women and those with comorbidities. The women in the age group of 40-55 years need special attention.

These women should be screened for signs of depression, so that major depressive illness can be mitigated. The treating physician should consider the mental health aspect of the patients.

Conflict of Interest: None

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