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Research Article

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Exploring the Relationship Between Anxiety and Depression in Menopause

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ABSTRACT

Background: A woman's menopause is a significant time in her life. when there hasn't been a normal menstrual cycle for at least a year. There are other related symptoms, including anxiety, sadness, and stress. Women going through the menopausal transition are more likely to experience anxiety and despair. There is, however, a dearth of studies on anxiety and depression among older women. Thus, the purpose of this study is to ascertain whether menopausal women in Bagalkot, Karnataka, experience anxiety or depression.

Methods: The dates of the descriptive study were May 19, 2023, to June 22, 2023. Using the stratified random sample procedure, 140 study participants were chosen. The research was carried out in Bagalkot's Akkana Balaga. The Hamilton Anxiety and Depression Rating Scale was used to quantify anxiety and depression. A Karl Pearson correlation coefficient was used respectively.

Results: Assessment of anxiety and depression in menopausal women; now, the anxiety's mean value 13.57, the Standard deviation 6.27, and the mean percentage 45.23%. The Chi-square is an association between anxiety and age (χ^2=10.65; p<0.05), religion (χ^2=13.01; p<0.05), income (χ^2=7.01; p<0.05), marital status (χ^2=17.96; p<0.05), and age of menarche (χ^2=17.18; p<0.05). Depression's mean value 15.12, standard deviation 8.063 and a mean percentage of 60.51%. The Chi-square is a significant association between depression and residency (χ^2=17.8; p<0.05) age of menopause (χ^2=5.44; p<0.05).

Conclusion: Findings from this study show that only one-third of older women experience anxiety and depression because of physical changes. More efforts are needed to improve the health.

Key-words: Anxiety, Depression, Menopause, Post-menopausal, Stress

INTRODUCTION

Medical researchers are now focused on menopause in most societies, particularly in developing nations [1]. This is because women experience hormonal, physical, and psychological changes as they approach menopause, which can last for several years and cause a variety of issues with their day-to-day lives and activities [2,3].

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Women's menopausal ages vary; however, they typically range from 50 to 52 years old [4]. The primary effects of menopause and cessation of menstruation are associated with low levels of estrogen and comprise vasomotor symptoms, atrophy of the genital tract, osteoporosis, cardiovascular illness, cancer, cognitive decline, and sexual dysfunction [5].

Central obesity is more common in postmenopausal women [6]. Menopause in women resulted in a redistribution of body fat mass (BFM), a 60% rise in the risk of metabolic syndrome and android obesity [7]. Menopause is not the only risk factor that can be helpful; having several children, using contraceptives, not exercising, and abusing alcohol or cigarettes are all

useful [6]. 57% of Iranian women are overweight or obese [8]. Obesity raises the risk of reproductive problems, cervical, breast, and colon cancers, hypertension, dyslipidemia, type II diabetes, and coronary heart disease [9].

A woman should be considered the most important jewel because the four purposes of life are children and happiness; everything can be achieved through her. Due to anatomical and physiological changes in the body, its life is divided into several stages. She felt very differently at different stages of her life. Compared to premenopausal women, menopausal women have a two- to four-fold increased risk of severe depression. For some elderly women, depression is a prevalent and significant problem [10]. Women are more likely to experience depression during the menopause transition, which is associated with a higher vulnerability to depression [11,12].

Depression in older women may be more strongly associated with common menopausal symptoms (e.g. VMS and poor sleep) than menopausal status.[13] The term "menopause" is often used to describe the time when a woman's ovaries gradually begin to produce eggs and female hormones such as estrogen and progesterone decrease. Decreased hormone levels cause menstrual periods to become irregular until they stop, causing physical and emotional symptoms in many women.[14]

Some menopause symptoms, such as hot flashes, night sweats, and insomnia, may also increase the risk of depression and anxiety symptoms.[15] According to our study, most older women (73.24%) have mild anxiety, 22.4% have mild-moderate anxiety, and the remaining 4.84% have severe anxiety and depression. Most (74%) of the women were in normal condition. 22% of older women have mild depression; 4% have mild depression but no major depression.

MATERIALS AND METHODS

For the study, a descriptive survey design was adopted. In Akkana Balaga, Bagalkot, India, 140 menopausal women provided samples using a straightforward random approach. A conventional, closed-ended questionnaire was used to gather information about menopausal women's anxiety and depression levels. Both descriptive and inferential statistics were employed to analyze the gathered data.

Source of data- The present study collected data from menopausal women.

Research Approach- Observational studies are nonexperimental studies that focus on obtaining information about people's activities, beliefs, interests, and behaviours by asking questions directly to participants. The descriptive research methods are developed when the purpose of the research is to describe the prevalence or occurrence of the phenomenon or to estimate the phenomenon's value to society. The main objective of this study is to evaluate the level of anxiety and depression among menopausal women in Akkanabalaga Bagalkot, India.

Research Design- All plans designed by a researcher to answer research questions or test research findings are called research design. A descriptive design means the study involved a one-time data analysis on menopausal women. The research design represents the population, sample size, variables, data collection tools and methods, and data analysis plan.

Variables

Dependent variable- Determine the menopausal population's depression level.

Independent Variable- assess the level of anxiety among menopausal women.

Socio-Demographic Variables- Menopausal women's sociodemographic traits are among the sociodemographic variables. Age, religion, place of residence, women's education, occupation, husband's occupation, family monthly income, marital status, kind of family, number of pregnancies, number of children still alive, nutrition, menarche and menopause ages.

Setting of Study- Setting is the environment in which information is gathered. The current investigation was carried out at India's Akkana Balaga Bagalkot. The convenience of the investigator and the availability of menopausal women were taken into consideration when choosing the study setting.

Population

Target Population- This study refers to a group of women in Bagalkot experiencing menopause.

Accessible Population- This study refers to women, who are in the state of menopause and members of Akkana Balaga Bagalkot, India.

Sample and Sample Size- Subjects drawn from units that make up the study's population constitute a sample. The sample size for this investigation is (n=140). Menopausal women in the menopause period and the members of Akkana Balaga Bagalkot, India.

Sample Technique- The sampling technique is the researcher's procedure to select the study samples. The sample for the present study is 140 menopausal women who are members of Akkana Balaga Bagalkot, India. The convenient sampling technique was used to select samples for the present study. The menopausal women were selected conveniently according to duration and who met both the in-sampling technique and the procedure that the researcher adopted in selecting the inclusion and exclusion criteria of the study.

Data Collection Tool- The methods or equipment the researcher employs to measure or observe the important variables in the research problem are known as data collection tools. The data for this study were gathered using a common anxiety and depression instrument.

Procedure for Data Collection- Prior authorization was acquired from the principal of the Sri B.V.V.S. Institute of Nursing Sciences in Bagalkot, India, by formal authorization. The BVVS Sajjalashree Institute of Nursing Sciences, Navanagar Bagalkot's institutional ethical clearance committee has granted ethical approval. Individuals who met the requirements for inclusion were chosen by a straightforward random process. The subjects gave their informed consent after the researcher gave them an explanation of the study's objectives. At the conclusion of the design stage, a pilot study was conducted to investigate and evaluate the research components. A pilot study was conducted in Akkana Balaga Bagalkot from May 19, 2023 to May 21, 2023 to determine the study design's feasibility and practicability. A study of 15 menopausal women was conducted randomly using closed-ended knowledge and practice questionnaires.

Statistical analysis- The methodical arrangement and synthesis of research data, as well as the application of the data to test research hypotheses, constitute statistical analysis. Both descriptive and inferential statistics were used in the analysis of the data. Distributions of percentages and frequencies were used to assess the demographic data. The women with children under five had their scores evaluated using the mean and standard deviation. Menopausal women's anxiety and depression levels were compared to a set of chosen sociodemographic characteristics using a chi-square test.

Ethical Approval- The ethical committee of B.V.V.S. Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot, India, received and enclosed an ethical clearance certificate. Anonymity and confidentiality regarding the data and identification of menopausal women were maintained.

RESULTS

Description of socio-demographic variables of menopausal women- The study shows that most menopausal women (73.24%) had a mild severity of anxiety, 22.4% had a mild to moderate severity of anxiety, and the remaining 4.84% had severe anxiety and depression. Most menopausal women (74%) had a normal status. 22% of the menopausal women had mild depression, 4% had moderate depression, and none had severe depression. The calculated chi-square value shows that there is a significant association found between the anxiety and age of menopausal women (χ^2=10.65; p<0.05), family monthly income (χ^2=7.01; p<0.05), marital status (χ^2=17.96; p<0.05), and age of menarche (χ^2=17.18; p<0.05). Similarly, depression's mean value is 15.12, the minimum value is 0 and the maximum value is 52 standard deviations of 8.063 and a mean percentage of 60.51%. The calculated chi-square value shows that a significant association was found between the depression and residency of menopausal women (χ^2=17.8; p<0.05) and the age of menopause (χ^2=5.44; p<0.05). A Karl Pearson correlation coefficient was used to correlate anxiety and depression, and a chi-square test was employed to determine the association between sociodemographic characteristics of anxiety and depression, respectively (Table 1).

Table 1: Frequency and percentage distribution of socio-demographic variables

Socio-demographic factor	Frequency	Percentage (%)
Age	0	0
	27	19.28
	113	80.71
Religion	140	100
	0	0
	0	0
	0	0
Residency	140	100
	0	0
Education of women	22	15.7
	54	38.57
	39	27.85
	25	17.85
Occupation of women	12	8.57
	44	31.42
	76	54.28
	8	5.71
Occupation of husband	51	36.42
	62	44.28
	17	12.14
	10	7.14
Family monthly income	8	5
	27	19
	104	74.28
Marital status	139	99.28
	0	0
	1	0.71
Type of family	76	54.28
	59	42.14
	5	3.57
Number of pregnancies	13	9.28
	75	53.57
	48	34.28
	4	2.85
Number of living children	22	15.71
	80	57.14
	33	23.57
	5	3.57
Diet	63	45
	10	7.1
	67	47.85
Age of menarche	130	92.85
	10	7.14
Age of menopause	4	2.8
	47	33.57
	80	57.14

Menopausal women's mean percentage of anxiety score, mean and SD, show that the overall mean percentage of anxiety score was 45.23% with mean and SD of 13.57±6.27 (Table 2).

Table 2: Area-wise mean, SD, and mean percentage of anxiety score

Area	Maximum Score	Mean	S. D	Mean (%)
Anxiety	30	13.57	6.27	45.23

The overall mean percentage of depression score among menopausal women was 60.51%, as demonstrated by the mean, SD, and mean percentage of depression score, which are 15.12±8.06 on average (Table 3).

Table 3: Mean, SD and mean percentage of depression score

Area	Maximum score	Mean (%)	SD	Mean (%)
Depression	52	15.12	8.06	60.51

The results of the investigation into the relationship between menopausal women's anxiety and depression show that there is a positive association between the two, with a correlation coefficient (r) value of 0.25 (Table 4).

Table 4: Correlation between anxiety and depression of menopausal women

Correlation between Emotional competence and Stress	
Correlation coefficient (r)	0.25

The results of the study on the relationship between menopausal women's anxiety and the sociodemographic variables they chose to analyze indicate that there is a significant correlation between menopausal women's anxiety and age (χ^2=10.65; p<0.05), religion (χ^2=13.01; p<0.05), family monthly income (χ^2=7.01; p<0.05), marital status (χ^2=17.96; p<0.05), and age at menarche (χ^2=17.18; p<0.05) (Table 5).

Table 5: Association of anxiety of menopausal women with their selected socio-demographic variables

Socio-demographic variables	Df	Chi-square value	p-value
Age	2	10.65	0.01*
Religion	2	13.01	0.01*
Residency	2	0.44	0.80
Education of women	6	4.88	0.55
Women occupation	3	7.02	0.07
Husband occupation	3	2.68	0.44
Family monthly income	2	7.01	0.03*
Marital status	2	17.96	0.01*
Type of family	2	3.23	0.19
Number of pregnancies	2	0.51	0.47
Number of living children	2	0.65	0.72
Diet	2	5.11	0.07
Age of menarche	2	17.18	0.01
Age of menopause	2	4.78	0.09

Df = degrees of freedom; *S=Significant (p<0.05)

The results pertaining to the correlation between menopausal women's depression and the chosen socio-demographic variables indicate that there is a noteworthy relationship between menopausal women's depression and residence (χ2=17.8; p<0.05) as well as menopause age (χ2=5.44; p<0.05) (Table 6).

Table 6: Association of the levels of depression among menopausal women with their selected socio-demographic variables

Socio-demographic variables	Df	Chi-square value	p-value
Age	3	1.25	0.71
Religion	3	4.23	0.23
Residency	3	17.8	0.01*
Education of women	1	0.22	0.63
Occupation of women	1	0.44	0.50
Occupation of husband	1	0.02	0.88
Family monthly income	1	0.25	0.61
Marital status	1	0.22	0.63
Type of family	1	0.48	0.48
Number of pregnancies	1	1.07	0.30
Number of living children	1	0.01	0.92
Diet	2	2.66	0.26
Age of menarche	1	0.4	0.52
Age of menopause	1	5.44	0.01*

Df=Degrees of freedom; *S=Significant (p<0.05)

DISCUSSION

This study aims to measure stress and depression among pregnant women in Akkana Balaga Bagalkot. We described this study to assess psychological symptoms of physical inactivity and behaviour among older Emirati women by Smail *et al*. [16]. Research shows that elevated vasomotor symptoms and weight gain are associated with symptoms of fatigue, insomnia, anxiety, and depression, as well as mental stress and memory problems.

This study's findings align with those of Juang *et al.* [17] and Shaver's [18] investigations. Only the postmenopausal era was linked to depression, according to the current study, although this relationship altered when different characteristics were considered. The outcomes align with earlier research carried out in Taiwan's rural areas.

The results of this study are based on de Kruif *et al*. [19]. Depression and symptoms of depression during perimenopause and menopause compared to other woman's hormonal levels: In a perimenopausal study of menopausal women ages 40 to 75, women were expected to experience depression or symptoms of depression. In comparison to the premenopausal phase, depression symptoms are more prevalent during the perimenopausal phase (Hedges g=0.44, 95% CI=0.11-0.73, p=0.007). Vasomotor symptoms and depression during perimenopause had an odds ratio of 2.25 (95% CI=1.14-3.35; p<0.001).

In a research study, Terauchi *et al*. [20] found that whereas NRS was linked to sadness in students, perimenopause anxiety, depression, and sleeplessness were connected with anxiety in pregnant and postmenopausal women.

The research for these findings was carried out by Bromberger *et al.* [21]. Does stress become more likely when a woman is pregnant? No age restriction on the National Women's Health Survey. Early or late perimenopause or post-menopause symptoms of depression were more likely to be reported by women with lower baseline levels of depression (odds ratio 1.56 to 1.61).

Freeman *et al*. [22] and Juang *et al*. [23] serve as the foundation for our study. Hot flashes are linked, although not exclusively, to psychological symptoms of anxiety and sadness in postmenopausal and perimenopausal women. The model's overall results align with research indicating that personality symptoms have a stronger correlation with VMS than physical alterations.

The present study draws upon the findings of Gallicchio *et al*. [24] investigation on the correlates of depressive symptoms in women going through the menopausal transition. In the study, depressive symptoms were present in almost 25% of the women (CES-D >or=16); more menopausal symptoms were found to be substantially and independently correlated with depressed symptoms.

CONCLUSIONS

When we look at the anxiety distribution of menopausal women, it is seen that the majority (73.24%) have mild anxiety, the remaining 22% have mild anxiety, and 4.84% have major anxiety. The majority of menopausal women (74%) are in a normal position, according to the incidence of depression in pregnant women. 22% of older women have mild depression, 4% have mild depression but no major depression. Menopausal women have many physical and psychological problems. Therefore, we can prevent menopause symptoms in under-age and old-age women by providing appropriate and effective education to all women.

This study will help raise awareness about menopause issues such as anxiety and depression, so with this in mind, we are using this study to measure anxiety and depression in older women mothers. If we provide the necessary information and education to care for women in the future, the risk of anxiety, depression and many other problems will decrease.

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CONTRIBUTION OF AUTHORS

Research concept- Prof. Jayashree. Itti
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Data collection- All researchers
Data analysis and interpretation- All researchers
Literature search- All researchers
Writing article- All researchers
Critical review-. Mrs. Sharanamma. B. Bantanur
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Final approval- Prof. Jayashree G Itti

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