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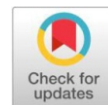
Menopausal knowledge of women in Manipur and its causal effect on stress

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ABSTRACT

The present study was carried out to assess the knowledge of menopause and menopausal stress levels, in different communities of Manipur. A total of 384 women who attained menopause age of 40-60 years were selected for the study, using techniques of Cochran's formula for infinite population. A questionnaire consisting of 22 statements of knowledge on menopause was prepared and used to assess the level of knowledge on menopause among women. The menopausal stress scale by [1] consisting of 42 statements was used to assess the menopausal stress experienced by the women. About 80 percent of women were found to have medium knowledge of menopause. In the case of menopausal stress, (64.58%) of women were reported to have stress sometimes, while, (33.34%) had almost never, and (2.08%) had it fairly often. Demographic variables namely age, age of menarche, age of attaining menopause, marital status, number of children, educational status, occupational status, income per month, communities, diet and physical activities, and menopausal problems (physical, emotional, personality, sexual and urinary/digestive problems) were found to be significantly associated. Their attitude and knowledge about menopause and stress may worsen and create more menopausal problems and lead to a stressful life. Moreover, one major challenge is that many women may not fully aware of menopausal symptoms and often generalize and consider those symptoms with other health issues. Menopause is still considered a taboo, therefore, orientation and awareness of menopause the need an hour for every woman of age 40 to 60 years. Hence, the researchers suggest conducting awareness approach to educate and sensitize women and broader community regarding menopause and promote health practices.

Keywords: Menopause, Knowledge, Stress, Women, Health, Stress.

INTRODUCTION

"Knowledge" is created through interaction with the environment and personal experience, and individuals themselves create their own knowledge of the world [2]. Knowledge of menopause implies the degree of understanding of changes in the body as a transition from a potentially reproductive to a non-reproductive state [3].

Perimenopause and postmenopausal women experience a wide range of menopause symptoms, and their lifestyle patterns such as physical, psychological, social, and spiritual adaptation directly affect their health. Many middle aged women worry about losing their womanhood and attractiveness after menopause. Postmenopausal women at midlife experience various problems and difficulty in adapting to the changes which have a direct effect on elderly women's health. Appropriate understanding of women that certain physical, mental, social, and psychological changes occur during menopause helps them with greater readiness to cope with these changes [4]. The transition can be described by women in view of their expectations and experience. Middle aged women with more knowledge of menopause were more likely to

manage menopause better, and those having more negative attitudes towards menopause were found to experience negative menopause symptoms. According to [5], more than half of the women believed the menopausal transition to be neutral and roughly one-third believed it to be harmful. Every woman experiences menopause naturally, and the stages are substantially different from those of the childbearing years. While some see it as a chance to live without menstruation, others see it as a sign that they are aging or drying up. Women's physical functioning may change as they go through menopause, and this can be stressful. Menopausal women should be knowledgeable about the menopausal transition and should have a favorable opinion of it as this may help them adjust to changes in their lives and enhance their quality of life [6].

There are differences in knowledge among women according to their age, parity, socioeconomic status, culture, level of education, and geographic location. Women may have various menopausal experiences depending on physical, emotional, cultural, and social factors. Women's attitudes are influenced by menopausal status, symptoms of menopause, and emotional well-being. Hot flushes, night sweats, impaired memory, joint pain, and urogenital symptoms [7] are all documented to be associated with unfavorable attitudes regarding the menopausal transition, and mood problems [8]. A lack of knowledge of menopause causes a wrong or negative perception of it and may lead to a stressful postmenopausal period [9].

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Menopause is an important and inevitable condition in every woman's life. They face many health issues due to a decrease in estrogen levels. It is a normal physiological and slow process and there is the social transition that takes place during this time. Women's perceptions regarding menopause are different based on their age, number of children, family income, educational status, and environmental factors. The majority of women attain menopause without adequate information and how to deal with physical and emotional problems [10]. Due to this, women may not be able to handle the challenges and it may lead to depression and social isolation. Additionally, a Menopause Too Little Information study, an international study, conducted by [11] demonstrated that women worldwide lack knowledge and preparation when it comes to menopause. The perimenopause was unknown to more than half (44%) of women worldwide until they began to experience symptoms. According to the report, menopause is still a topic that women are hesitant to approach on a global scale.

"Menopause, itself, is a stressful life event because of the various types of change that occur". While some women become menopausal with little difficulty, other women view menopause as a significant stressor with symptoms that disrupt their lives. Each woman who deals with menopause may find that her typical stress may need to be adjusted with management strategies because of the high level of stress that is occurring as a result of physical & psychological changes. Levels of menopausal stress usually range from mild to moderate and some of the women may go through severe levels of stress. Women experience increased tension, anxiety, and fear as they approach middle age. Due to reduced estrogen levels, during menopause the physiological and psychological changes result in fatigue, hot flashes, joint pain, weight, anxiety, sadness, and other symptoms. With a wide range of contributing and facilitating factors, experiencing stress is dynamic. A person's personality, lifestyle, social support, perception of the stressor, level of stress, life events, socio-demographic and occupational variables encountered, as well as how they respond to it can all, have an impact. Women who hold negative perceptions or attitudes toward menopause have worse menopausal problems and higher stress levels [12].

Stress affects not only health but also relationships, work performance, general sense of well-being, and quality of life. According to a National health interview survey conducted in India, 75 percent of women experience stress during the menopausal period. A survey conducted by [13] reports that 77 percent of menopausal women are under stress and stated that anxiety and insomnia hamper their marital relationships.

Thus, menopause may be a stressful transition. In modern society, menopause is seen as a sign of advancing age. A woman going through this stage of life may experience emotional stress due to misconception. Women going through the menopausal transition are preoccupied with questions like whether they will still find their husbands and families to be as supportive and considerate as they once were, whether they will still find themselves to be as attractive as they once were, and whether they will still be healthy. At this moment, a woman needs a lot of support and admiration from other people. Menopausal symptoms and negative attitudes are linked to depression, which creates methodological issues because it is challenging to distinguish which is responsible. The involvement of family and friends, the pursuit of certain enjoyable hobbies, and a change in employment are frequently cited as stress relievers. However, social support in a woman's life aids in managing stress and

issues associated with menopause that affects their psychological health. Stress affects not only women's health but also their relationships, work performance, general sense of well-being, and quality of life [14].

Objective of the Study

1. To assess the knowledge of menopausal symptoms
2. To assess the stress level among women

METHODOLOGY

Location of the study

The state of Manipur in India was selected for the present study. Manipur is a state in north-eastern India, bordered by Nagaland on the north, Myanmar on the east, part of Mizoram on the south, and the Cachar district of Assam on the west.

Sampling procedure

A group of women aged between 40 to 60 years who attended menopause and went through menopausal problems from different communities of Imphal West and East District were considered for the present study.

Selection of block

To accomplish the objectives of the present study, two districts that have a high female concentration, which are Imphal East and West were selected. There are four blocks each, namely Lamphelpat, Lamshang, Patsoi, and Wangoi in Imphal West district and Jiribam, KeiraoBitra, Porompat, and Sawombung in Imphal East district of Manipur. All four blocks from each district were purposively selected for the study

Selection of samples

After consultation with the health officials of Imphal East and Imphal West, the lists of women under the age group of 40 to 60 years who have already attended menopause were collected. From the list, women were randomly selected from each block. To maintain homogeneity in the age group of 40 to 60 years women who attained menopause, 192 samples were selected randomly from the two districts.

Sample Size

To ascertain the sample size for the quantitative phase of the study, Cochran's formula (1977) for infinite population was used:

$$n_0 = z^2 pq / e^2$$

Wherein, n_0 is the sample size, z is the selected critical value of the desired confidence level, p is the estimated proportion of an attribute that is present in the population, $q=1-p$ and e is the desired level of precision.

Assuming the maximum variability, which is equal to 50% ($p=0.5$) and taking a 95% confidence level with $\pm 5\%$ precision, the calculation for required sample size was as follows:

$P = 0.5$ and hence $q = 1 - 0.5 = 0.5$; $e = 0.05$; $z = 1.96$

$$\text{So, } n_0 = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384.16 = 384$$

Table 1. Table showing the sample size confidence level and precision for quantitative phase of study

Confidence level	Level of Precision (e)	Sample size
95%	0.05	384

Tool used for the study

I. Knowledge of menopause questionnaire

Based on a review of several research papers on knowledge of the menopausal problem, a general question consisting of 22 (twenty-two) statements was formulated. Respondents indicate their level of knowledge on menopausal problems with each 22 (twenty-two) statement. The maximum score of each statement is given 1 (1= yes, 0 = no), and total score is 22 (22 x1 = 22) respectively. The mean and standard deviation were calculated, and addition and subtraction of mean and standard deviation were done in order to categories the level of knowledge among the women.

Table 2. The score is interpreted as

Level of knowledge	
15 and above	High
11 to 15	Medium
11 and below	Low

II. Menopausal stress scale

For this study, the Menopausal Stress Scale developed by [1] was used to assess the stress experienced by women during menopause. This scale consists of 42 statements: 14 are positive and 28 are negative statements. Stress was rated by 5 points i.e. Never, Almost Never, Sometimes, Fairly Often, and Very Often. For positive statements, it was scored as 4- Never, 3- Almost Never, 2- Sometimes, 1- Fairly Often, and 0- Very Often and for negative statements 0- Never, 1- Almost Never, 2- Sometimes, 3- Fairly Often and 4- Very Often was assigned for responses of the respondents. The higher the score more is the stress.

Table 3. Norms for Interpretation of Menopausal Stress

Scores	Interpretation
0-33	Never
34-67	Almost never
68-100	Sometimes
101-134	Fairly often
135-168	Very often

Results and Discussion

Knowledge on menopause

Knowledge is the state of being familiar with something or aware of its existence, usually from experience or study [15]. It is important to ensure that women have knowledge about the menopausal transition, as menopause refers to the time in every woman's life when menstruation stops. The present study analyzed the collected information on knowledge of menopause

1. Level of knowledge on menopause
2. Association between the knowledge with demographic variables.

1. Level of knowledge on menopause

Every woman's experience of menopause is different. Some may get to experience all of the symptoms or none of them. Some women are barely noticeable, while for others it's life-altering. Some may be reluctant to share their problems, even though they suffer because they think it's too personal to share. The scores on knowledge of menopause obtained by the respondents were analyzed and categorized according to the knowledge level.

Table 4. Distribution of respondents according to their knowledge on menopause

Level of knowledge	Women (n=384)	
	Frequency	Percentage
Low	42	10.94
Medium	311	80.99
High	31	8.07

With regard to knowledge of menopausal problems, (80.99%) of women have medium knowledge, (10.94%) have low knowledge, and only (8.07%) of them have good knowledge. It was also observed that women were aware of common menopausal problems studies by [16] and [17] found that most women had an average understanding of what menopause is and when it happens. They also found that women believed menopause to be a normal part of aging.

According to [18], a misunderstanding or unfavorable perception of menopause results in a stressful postmenopausal phase. Additionally, studies have demonstrated that by understanding more about menopause and better preparing themselves for this stage of life, women can avoid or reduce many of its emotional and psychological effects [19].

1. Association between the knowledge with demographic variables

Chi Square test was carried out to check whether there was an association between the knowledge and demographic variables in the study area.

Table 5. Distribution of respondents in association with knowledge and demographic variables

Demographic variables	χ^2	Significant value
Present age		
40-45	41.772	.141 ^{NS}
46-50		
51-55		
56-60		
Age of attaining menopause		
40-45	42.834	.005 *
46-50		
51-55		
Age of menarche		
10-12	19.120	.638 ^{NS}
13-15		
16-18		
Marital status		
Unmarried	26.587	.227 ^{NS}
Widow		
Married		
Educational status		
Illiterate	1.236	0.000*
Primary		
HSLC		
HS pass		
Graduation		

Demographic variables	χ^2	Significant value
Present age		
Occupational status		
Housewife	36.566	.307 ^{NS}
Mission		
Govt		
Others		
Monthly income		
Low (Below Rs.10,000/-)	38.682	.228 ^{NS}
Medium (Rs. 10,000- Rs. 30,000/-)		
High (Above Rs. 30,000/-)		
Number of pregnancies		
0	26.833	.218 ^{NS}
1-3		
4-6		
Diet		
Vegetarian	28.593	0.003 *
Non-Vegetarian		
Physical activity		
Active	67.074	0.001 *
Moderately Active		
Insufficiently active/ sedentary		
Communities		
Tangkhul	45.286	.075 ^{NS}
Kuki		
Meitei		
Kabui		

*Significant at .05 significant level

NS: Non- significant

Results presented in Table 5 revealed that association between the knowledge and demographic variables namely age of attaining menopause ($\chi^2=42.834$, $p=.005$), educational status ($\chi^2=1.236$, $p=0.000$), diet ($\chi^2=28.593$, $p=0.003$) and physical activity ($\chi^2=67.074$, $p=0.001$), is less than the alpha level of significance of 0.05. This indicated that there exists a statistically significant association between the knowledge of women on menopause and demographical variables namely age of attaining menopause, education, diet and physical activity considered in the study. The probable reason may be that as women ages, they begin to learn and identify ways to tackle their own health problems and issues through their experience and adapting to the changes. In the past, health workers neglected or took less initiative to create awareness regarding menopause, leaving women to learn and adapt as they went through life, as the respondents in the interview stated that they learned more about menopause when they went through it. This may be because people are unaware or pay less attention to women's issues. According to [20], negative events that occur as women transition from one stage to another are replaced by positive ones that enable them to grow and develop. Previously, there was less knowledge among the people, and it was not widely discussed. Respondents have reported that they learned more about menopause when they experienced it, healthcare workers in the past overlooked or showed less initiative, leaving women to learn and adapt as they moved through life. Similarly, [21] reported in their study that women's attitudes became more positive after they had experienced menopause. Some women enter menopause unprepared as they are unaware or have never heard of menopause since it is not discussed widely or openly in society. Besides, educated women might have an interest in asking, reading, listening to, and watching any information sources related to their well-being. Media, health awareness programs, and family and friend circles are all important in providing correct and appropriate health advice. However, in this study, since most women are literate, they learn from their friends and through various sources of media and try to keep themselves healthy in order to support their families for sustenance. The respondents added that being active in physical activities keeps them active in carrying out their daily activities and mentioned that the food they eat plays an important role. Thus, it can be inferred that knowledge has an association with the years of attaining menopause, education, diet, and physical activities of the respondents. In support of these findings, age of menopause, educational attainment, and type of job are associated with women's knowledge, according to [22]. The results are also in line with [16], who indicated that age and education are related to knowledge of women.

Menopausal stress experienced by women

Women face particular difficulties and stresses during midlife, requiring a greater understanding of the elements that affect their level of life satisfaction. Life events like having teenage children leave their homes for higher studies, having grandchildren, or going through menopause are often associated with becoming older, and they frequently cause more tension, anxiety, and fear. Some women experience stress during menopause, which may be partially brought on by hormonal changes that cause hot flashes and sleep disturbances as well as issues with their families and personal lives, such as the demands of teenagers, children leaving the home, aging parents, midlife spouses, career changes, etc. Chronic stress may weaken the immune system, increasing the risk of sickness.

Stress too has an impact on personal relationships, performance at work, sense of wellbeing, and quality of life in addition to overall health.

Menopause may cause loneliness or dissatisfaction for some women. It is possible to experience anxiety or depression if she is having problems coping [23]. Seventy-five percent of women report feeling stressed during menopause, according to an Indian National Health Interview Survey. The Menopausal Stress Scale [1], which comprises 42 statements, was used in the current investigation to assess the severity of menopausal stress. The women's stress levels were calculated using frequency and percentage. Additionally, the correlations between stress and menopausal issues and stress and demographic characteristics were also analyzed.

Level of menopausal stress experienced by women

The number of menopausal stressors experienced by women may differ from one person to another. They may experience multiple or merely exposed to a particular event. It can be external and internal. Categorizations of menopausal stress experienced by women are presented in Table 6

Table 6. Menopausal stress experiences by women

Level of menopausal stress	Women (N=384)	
	Frequency	Percentage
Almost never	128	33.34
Sometimes	248	64.58
Fairly often	8	2.08

In the study, most of the respondents (64.58%) encounter menopausal stress sometimes followed by almost never (33.33%) and fairly often (2.08%)

When the data was analyzed, women were found to experience various kinds of positive and negative stress. It was found that most of the women encountered stressful situations only sometimes. This could be due to hormonal changes, such as physical, emotional, and personality changes, as well as other factors, such as the stress of carrying multiple social roles in life. Being a mother, a wife, an employee, and an active member of society, women in Manipur (Imphal East and Imphal West) play important roles inside and outside their homes. It was also clear from the result that most of the women experienced stress sometimes, followed by almost never, which may be due to their busy schedules to fulfill their daily needs and meet their family's needs, which sometimes makes them forget their own problems and burdens while being busy with other activities. Few respondents reported encountering them fairly often, which could be due to family and personal issues such as demands from adolescents' children, children leaving home for boarding or hostel, caring for aging parents, financial problems, and partner's challenges (such as not having a husband and a drinking husband).

According to [18] a misconception or unfavorable perception of menopause results in a stressful postmenopausal phase. In addition, they engage in moderate physical activity, which may also be a factor in why the majority of the women sometimes experience stress. In the same way, studies have shown that getting some exercise each day is crucial for reducing stress. Further, studies by [24] and [25] revealed that most of the respondents were moderately stressed, followed by low-level and high-level stress experienced by menopausal women.

Relationship between menopausal stress and demographic variables

Women experienced different levels of stress during menopause, which may have been caused by differences in a number of factors, including the study population, environment,

and social factors, as well as socioeconomic, educational, lifestyle, parity, and other associated factors affecting health issues. In the present study, the majority of women expressed that they face stress only sometimes. An attempt has been made to observe whether menopausal stress has any association with demographic variables. Chi-square was calculated, and as evident from Table 7, there exists a statistical association.

Table 7. Distribution of respondents in association with menopausal stress and demographic variables

Demographic variables	χ^2	Significant value
Present age		
40-45	4.619	0.000
46-50		
51-55		
56-60		
Age of attaining menopause		
40-45	3.408	0.000
46-50		
51-55		
56-60		
Marital status		
Unmarried	2.564	0.000
Married		
Widow		
Number of pregnancies		
0	266.126	0.000
1-3		
4-6		
Education		
Illiterate	645.419	0.000
Primary		
HSLC		
HS Pass		
Graduation above		

Demographic variables	χ^2	Significant value
Present age		
Occupation		
Housewife	448.964	0.000
Mission workers		
Government		
Other		
Income per month		
Low (Below Rs.10,000/-)	442.388	0.000
Medium (Rs. 10,000- Rs. 30,000/-)		
High (Above Rs. 30,000/-)		
Diet		
Vegetarian	276.874	0.000
Non-Vegetarian		
Physical activity		
Active	256.874	0.000
Moderately active		
Insufficient active/Sedentary		

*Significant at .05 significant level

It is clearly indicated that age, marital status, education, occupation, income, diet, and physical activity significantly influence women's stress. Further, the results showed that as the women got older, they were particularly vulnerable to the stress hormone imbalance. [26] stated that women feel more capable and experienced as they age, the aging process itself may be stressful when taking into account physical issues that arise. The results are further supported by a study conducted by [27] that found a strong relationship between age and stress in postmenopausal women. Similar findings were observed by [28] and [29] in their investigations, which indicated that physical and psychological complaints increase with age. The results also showed that the number of pregnancies, marital status, education level, occupation, income, nutrition, and physical activity are all associated with the severity of menopausal stress. It is known that married women and those who are physically active are found to have less stress, which thus comprised the majority of the study sample. Women who are happily married have better intimate and sexual

relationships, greater physical and mental health, and social support to help them deal with challenging circumstances that can cause depression [30]. However, having more children may affect women's lives since they will have to pay more for their education and support. Despite this, women seem to be happy when they have more children, which has a good effect on their lives as they become older and receive more love and support from them.

Furthermore, it has been seen that postmenopausal women who engage in physical activity experience lower levels of stress, anxiety, and depression than sedentary women of the same age [31]. Considering the relationship between vitamin D and depression, anxiety, and stress in women, assessment and medical treatment for vitamin D deficiency are advised for postmenopausal women [32].

In addition, respondents experienced family and personal challenges throughout this time, such as the pressures of teenagers, adolescents moving out, aging parents, midlife husbands, and changes in employment. During this time of life, women may be balancing a job, a challenging partner, the hardship of being single, an aging partner, teen children, health issues, or caring for elderly parents, etc. Another aspect that could contribute, according to [33], is the many demands midlife women face, particularly those who are wives.

Additionally, the findings can be supported by another study by [27] where the stress of post-menopausal women is significantly associated with age, educational status; and occupation. [34] also stated that any stressful experiences during the menopausal years can be attributed to life events and other changes occurring with the menopausal changes in a woman's life. Likewise, [24] reported that menopausal stress was associated with education and monthly family income. Thus, the level of stress among menopausal women may vary with lack of support system, stressful past events, type of occupation, family income, and also dietary intake and physical activity.

Conclusion

The results demonstrated that most of the women have medium knowledge of menopause and experience menopausal stress sometimes. Attitude and knowledge about menopause and stress contributed to worsening the effects of menopausal problems. Adopting a healthy and positive lifestyle was believed to control the effects of menopausal problems.

Hence, due importance should be given to the postmenopausal health of women. Addressing these silent issues in women's lives will improve their quality of life. Apart from the specific treatment, health education should also be an integral part of the health care regime for women in their mid-life years. Health care providers should be well-informed about menopause to the women and they should be encouraged to communicate openly about the problems faced during menopause. Women should be oriented about the importance of regular exercise, weight control, and need for a balanced diet, etc. to ensure a healthy lifestyle. Therefore, it can be revealed from the findings that the changes occurring in women during 40-60 years of age require proper attention for the well-being of oneself, and society and to enhance quality of life. The family and society as a whole will experience an inclusive result of good health when women are healthy mentally and physically, and it depends on early life nutrition care and environment, which are the foundation for long-term health and life.

Future scope of the study

The current study provides valuable insights into the menopausal problems and stress experienced by women in Manipur. Every woman should be made aware of the menopausal transition since it affects every woman uniquely and in various ways. Currently there is no menopause policy for women employees in the government or private sectors. The Health department of Government of Manipur should proactively initiate policy measures to address health and stress among women.

Conflict of Interest

The authors declare no conflict of interest.

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