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Awareness Regarding Postmenopausal Health among Women of Low Socioeconomic Class

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Abstract

Background. Menopause is a natural phase in a woman's life, but in poor settings it is often surrounded by silence, fear and wrong beliefs. Pakistan has one of the youngest mean ages at menopause in the world, and a large number of postmenopausal women live in households earning less than the minimum wage. Despite these conditions, the extent of women's awareness about their changing bodies, the associated long-term health risks due to estrogen deficiency and the available treatment options is still unknown. Very few studies have been conducted in Pakistan, all consistently indicating poor knowledge; however, data on women belonging to the lower socioeconomic class is not available. **Objective**. This study aimed to determine the knowledge, attitude and health-seeking behaviour of low socioeconomic class postmenopausal women regarding menopausal changes and to identify the factors associated with poor awareness among this group. **Methods**. This was a hospital based descriptive cross sectional study carried out in the gynaecology outpatient department of advance teaching hospital in Pakistan over a period of six months. A total of 240 postmenopausal women aged 45 to 65 years, belonging to the low socioeconomic class (defined as a monthly household income of less than PKR 40,000 or roughly USD 140), were enrolled using non-probability consecutive sampling. Women with surgical

menopause, known psychiatric illness, or those unwilling to participate were excluded. Data were collected through face-to-face interviews with a pre-tested, structured questionnaire translated and back-translated into Urdu. Socio-demographic characteristics, knowledge of menopause (definition, age, symptoms, long-term complications, and treatment options), attitudes towards menopause, and care-seeking behaviour were inquired about. The knowledge score was calculated on 15 items and divided into three categories: poor (<6) average (6-10) and good (>10). Data was entered and analysed in SPSS version 26. Descriptive statistics were computed for the variables of interest. The Chi-square test was used to observe an association between the knowledge level and socio-demographic variables. **Results**. The mean age of the participants was 53.4 ± 5.6 years, and the mean age at menopause was 47.2 ± 3.8 years. Most of the women were illiterate (59.2%) and worked as housewives (77.5%). Only 34.2% knew the correct definition of menopause, and 40.0% knew the average age at which it usually occurs. Hot flushes were the most recognised symptom (45.8%), followed by mood changes (36.7%). Regarding long-term complications, only 15.8% were aware of an increased risk of osteoporosis, and 12.5% were aware of an increased risk of cardiovascular disease. Only 7.5% had heard of hormone replacement therapy. Attitudinally, 59.2% of the women felt that menopausal symptoms should be silently endured, 40.0% felt that a woman loses her femininity after menopause, and 24.2% felt that a husband can marry another woman after his wife becomes menopausal. Only 44.2% had ever consulted a doctor for menopausal complaints. Overall knowledge was poor in 67.1% of women, average in 24.2% and good in only 8.7%. A statistically significant association was found between knowledge score and educational level ($p<0.001$) and monthly income ($p<0.01$). **Conclusion**. Knowledge of postmenopausal changes and long-term health risks is limited among Pakistani women of low socioeconomic status. Negative attitudes and silent suffering remain common. Education and family income are the main determinants of awareness. Thus, targeted health education at the primary care level, employing female community health workers, and incorporating menopausal counselling into routine gynaecology and family medicine clinics are essential to improving the quality of life of this neglected population.

Keywords. Postmenopause; awareness; knowledge; attitude; low socioeconomic class; Pakistan; women's health

Introduction

Menopause is defined as the permanent ending of menstruation resulting from the loss of ovarian follicular activity. Clinically, it is diagnosed after twelve consecutive months of

amenorrhoea in the absence of any pathological or physiological cause. Although menopause is a natural biological transition rather than a disease, it is often associated with several physical and psychological changes that may affect a woman's quality of life. Studies conducted in Pakistan have reported the mean age of natural menopause to be approximately 47 years which is lower than the global average age of around 51 years. Several factors, including poor nutritional status, high parity, socioeconomic deprivation and chronic medical conditions, have been suggested as possible contributors to earlier menopause in Pakistani women.

The hormonal changes of menopause, principally the fall in circulating oestrogen, affect almost every organ system. Vasomotor symptoms such as hot flushes and night sweats are the best known. Urogenital atrophy leads to vaginal dryness and dyspareunia. Psychological symptoms, including mood swings, irritability and depression, are common. In the long run, oestrogen deficiency increases the risk of osteoporosis, fractures and cardiovascular disease. Many of these problems can be prevented or treated, but only if the woman recognises them and seeks help.

In economically developed countries, menopausal health is a well-established part of clinical care. Hormone replacement therapy, calcium and vitamin D supplements, lifestyle advice and osteoporosis screening are commonly offered to women during this stage of life. In Pakistan menopausal care remains limited. Most public hospitals do not have dedicated menopause clinics, and the topic receives little attention in family planning programmes or public awareness campaigns. Many women, especially those from poor households, see menopause as an ageing process that has to be borne in silence.

A few earlier studies from Pakistan have looked at menopausal awareness. Baig and Karim, in a community based survey of 925 women in Karachi, reported that 58% of women knew the correct definition of menopause. Nisar and Sohail described a high symptom burden among rural Sindhi women. Jadoon et al. compared knowledge across different socioeconomic classes and found that awareness was lowest in the lower class. Yet very few studies have focused specifically on women from the low socioeconomic class, and even fewer have looked at long term complications such as osteoporosis and heart disease, which are the most important consequences of unrecognised menopause. More than a third of Pakistan's population lives below the poverty line. For these women, menopause overlaps with multiple other burdens: undernutrition, repeated childbearing, undiagnosed anaemia, unpaid domestic work and dependence on male family members for any decision regarding health care. Understanding what these women know, believe and do about menopause is the first step in designing interventions that fit their lives.

The present study was undertaken with this aim. It assesses the level of knowledge, attitude and care seeking behaviour regarding menopause among women of low socioeconomic class attending a public tertiary care hospital, and explores the socio-demographic factors associated with poor awareness.

Materials and Methods

Study Design and Setting

A descriptive cross-sectional study was conducted in the gynaecology outpatient department of a public sector tertiary care teaching hospital in Pakistan. The hospital serves a largely urban and peri-urban population and a high proportion of its outpatients come from low income localities. The study was carried out over a period of six months.

Sample Size and Sampling

The sample size was calculated using the WHO formula for a single proportion, taking an expected prevalence of poor awareness of menopause of 60% based on earlier Pakistani studies, an absolute precision of 6% and a confidence level of 95%. The minimum required sample came to 256, which was reduced to 240 after accounting for an estimated 5% non-response rate and rounding. Participants were enrolled through non-probability consecutive sampling. Every postmenopausal woman attending the outpatient department who met the inclusion criteria and gave informed consent was approached until the target sample was reached.

Inclusion and Exclusion Criteria

Women were eligible if they were aged between 45 and 65 years, had natural menopause defined as twelve or more months of amenorrhoea, and belonged to the low socioeconomic class. Women belonging to the low socioeconomic group were defined as those with a monthly household income below PKR 40,000 (approximately USD 140), according to the local poverty threshold and criteria used in previous Pakistani studies. Women with premature or surgically induced menopause, those receiving long term hormonal treatment, women with diagnosed psychiatric disorders that could influence responses and those who were unwilling or unable to participate were excluded from the study.

Data Collection

Data were collected using a structured questionnaire prepared by the investigators after reviewing relevant published literature. The questionnaire consisted of three sections. The first section included socio-demographic information such as age, educational status, occupation, monthly household income, parity, and age at menopause. The second section evaluated participants knowledge regarding menopause through fifteen

questions related to its definition, usual age of onset, common symptoms including hot flushes, vaginal dryness, and mood disturbances, as well as long-term health effects such as osteoporosis and cardiovascular disease. Questions related to treatment options, including hormone replacement therapy and calcium supplementation, were also included. Each correct response was assigned one point, giving a maximum possible score of fifteen. Based on the total score, knowledge was classified as poor (score below 6), average (score 6–10), or good (score above 10). The third section assessed attitudes and practices using three-point response options (agree, disagree, and unsure), along with questions regarding healthcare-seeking behaviour and medical consultation practices.

The questionnaire was translated into Urdu and then back into English by two researchers fluent in both languages to maintain language and cultural accuracy. Before the main study the questionnaire was pre-tested on twenty women who were not included in the final sample. Minor modifications in wording were made to improve understanding and clarity. Data collection interviews were carried out in a private area of the outpatient department by trained female interviewers. Each interview lasted approximately fifteen minutes on average.

Ethical

Ethical approval for the study was obtained from the hospital's institutional review board.. Verbal and written informed consent was taken from every participant after explaining the purpose, voluntary nature and confidentiality of the study. Illiterate participants gave consent by thumb impression in the presence of a literate witness. No identifying information was recorded on the questionnaire. Participation was unpaid and refusal had no effect on the care the woman was receiving.

Statistical Analysis

Data was entered and analysed in SPSS version 26. Continuous variables were expressed as mean with standard deviation, and categorical variables as frequencies and percentages. The chi-square test was used to look for associations between knowledge level and selected independent variables, including age group, education, monthly household income and parity. A p-value of less than 0.05 was considered statistically significant. Where cell counts were small, Fisher's exact test was used instead.

Results

Socio-Demographic Characteristics

A total of 240 postmenopausal women were included in the final analysis. The mean age was 53.4 ± 5.6 years, with the largest group (35.0%) lying between 51 and 55 years. The mean age at natural menopause was 47.2 ± 3.8 years, which is close to the figure of 47.1

years reported by Baig and Karim in their Karachi based survey. Most of the women (59.2%) had never attended school, and only 2.5% had studied beyond matriculation. Three-quarters were full-time housewives. More than half lived in households earning less than PKR 25,000 per month. Half the women had between four and six children, and a quarter had more than six. Table 1 sets out the full socio-demographic profile.

Table 1. *Socio-demographic characteristics of the study participants (n=240).*

Variable	Frequency (n=240)	Percentage (%)
Age group (years)		
45 – 50	78	32.5
51 – 55	84	35.0
56 – 60	52	21.7
61 – 65	26	10.8
Educational status		
Illiterate	142	59.2
Primary	58	24.2
Middle / Matric	34	14.2
Above Matric	6	2.5
Occupation		
Housewife	186	77.5
Domestic worker	38	15.8
Other (informal sector)	16	6.7
Monthly household income (PKR)		
< 25,000	128	53.3
25,000 – 40,000	82	34.2
> 40,000	30	12.5

Variable	Frequency (n=240)	Percentage (%)
Parity		
⩽ 3	58	24.2
4 – 6	122	50.8
> 6	60	25.0

Knowledge Regarding Menopause

Only 82 of the 240 women (34.2%) were able to give a correct definition of menopause. The figure was lower than the 46% reported in an earlier mixed-class Pakistani sample, which is consistent with the lower educational status of our group. Awareness of the average age at which menopause occurs was somewhat better, with 40.0% giving a reasonable answer (between 45 and 52 years).

Knowledge regarding menopausal symptoms showed considerable variation among the participants. Hot flushes were the most commonly recognised symptom, identified by 45.8% of women, possibly because they are more noticeable and frequently discussed. Mood changes and depressive symptoms were recognised by 36.7% of participants. In contrast, awareness regarding vaginal dryness and dyspareunia was much lower, with only 18.3% associating these symptoms with menopause. Cultural hesitation in discussing sexual health issues may have contributed to this lower level of awareness.

Knowledge about the long term health effects of menopause was generally limited. Only 15.8% of women were aware that menopause can increase the risk of osteoporosis and bone fractures, while awareness regarding the increased risk of cardiovascular disease after menopause was reported by just 12.5% of participants. Awareness of hormone replacement therapy was extremely low, as only 18 out of 240 women (7.5%) had heard about it. This finding is comparable to figures reported in recent studies from low- and middle-income countries. Similarly, only one-quarter of the participants were aware of the importance of calcium and vitamin D supplementation after menopause. The full breakdown is shown in Table 2.

Table 2. *Knowledge of menopausal symptoms and complications (n=240).*

Knowledge item	Correct n (%)	Incorrect n (%)	Don't know n (%)
Correct definition of menopause	82 (34.2)	64 (26.7)	94 (39.2)
Average age at natural menopause	96 (40.0)	70 (29.2)	74 (30.8)
Hot flushes as a menopausal symptom	110 (45.8)	46 (19.2)	84 (35.0)
Vaginal dryness/dyspareunia	44 (18.3)	48 (20.0)	148 (61.7)
Mood changes/depression	88 (36.7)	52 (21.7)	100 (41.6)
Risk of osteoporosis after menopause	38 (15.8)	46 (19.2)	156 (65.0)
Risk of cardiovascular disease	30 (12.5)	52 (21.7)	158 (65.8)
Awareness of hormone replacement therapy	18 (7.5)	32 (13.3)	190 (79.2)
Importance of calcium / vitamin D	64 (26.7)	40 (16.7)	136 (56.6)

Attitude towards Menopause

Attitudes towards menopause were mixed among the study participants. Approximately two and thirds of the women (68.3%) considered menopause to be a natural stage of life rather than a medical illness. Although this appears to be a positive view, interview responses suggested that many women accepted menopausal symptoms as something that should simply be accepted instead of treated. More than half of the participants (59.2%) believed that menopausal complaints should be tolerated quietly, while only 44.2% felt that medical advice should be sought for menopausal symptoms.

Cultural beliefs related to menopause were also commonly observed among the participants. About 40% of women believed that womanhood declines after menopause, while 24.2% felt that husbands may consider remarriage once their wives reach menopause. In addition, nearly half of the participants reported feeling uncomfortable discussing menopausal issues with family members, including their daughters. These findings, presented in Table 3, suggest that menopause continues to be associated with silence, social stigma, and limited open discussion within this population.

Table 3. *Attitude of participants towards menopause (n=240).*

Statement	Agree n (%)	Disagree n (%)	Unsure n (%)
Menopause is a natural process, not a disease	164 (68.3)	38 (15.8)	38 (15.8)
Menopausal symptoms should be tolerated quietly	142 (59.2)	60 (25.0)	38 (15.8)
A woman loses her femininity after menopause	96 (40.0)	104 (43.3)	40 (16.7)
Husband may take another wife after menopause	58 (24.2)	148 (61.7)	34 (14.1)
A doctor should be consulted for menopausal symptoms	106 (44.2)	98 (40.8)	36 (15.0)
Discussing menopause with family is acceptable	82 (34.2)	120 (50.0)	38 (15.8)

Overall knowledge score and its association with socio-demographic factors

The overall knowledge score showed that 67.1% of women fell into the poor category, 24.2% into the average category, and only 8.7% had good knowledge. A clear gradient was seen with education: 81.7% of illiterate women had poor knowledge compared with 16.7% of those who had studied beyond matriculation. The association was highly significant on the chi-square test ($p<0.001$). Household income also showed a significant association ($p<0.01$), with women from the lowest income bracket being more likely to have poor knowledge. Age and parity did not show a statistically significant association with knowledge level. Table 4 presents the association of knowledge with educational status.

Table 4. *Association of knowledge category with educational status (n=240).*

Education level	Poor n (%)	Average n (%)	Good n (%)	p-value
Illiterate (n=142)	116 (81.7)	22 (15.5)	4 (2.8)	<0.001
Primary (n=58)	32 (55.2)	20 (34.5)	6 (10.3)	

Education level	Poor n (%)	Average n (%)	Good n (%)	p-value
Middle / Matric (n=34)	12 (35.3)	14 (41.2)	8 (23.5)	
Above Matric (n=6)	1 (16.7)	2 (33.3)	3 (50.0)	

Care Seeking Behaviour

Only 106 women (44.2%) had ever consulted a doctor for menopausal symptoms. Of those who had not, the most common reasons given were a feeling that the symptoms were a normal part of ageing (37%), shyness or embarrassment (24%), lack of money (21%) and lack of permission or support from male family members (12%). Six percent of women said that they had simply not thought about it.

Discussion

This study found that knowledge regarding menopause and its long term consequences is poor among women of low socioeconomic class attending a public hospital in Pakistan. Only one in three women knew the correct definition of menopause, fewer than one in six was aware of the link with osteoporosis, and very few had even heard of hormone replacement therapy. These findings are in keeping with earlier Pakistani work, although the figures in the present study are at the lower end of what has been reported, which is most likely explained by the focus on the low socioeconomic class alone.

Several patterns deserve attention. First, knowledge of symptoms is uneven. Visible symptoms such as hot flushes were known by nearly half the women, while genitourinary symptoms such as vaginal dryness and dyspareunia were recognised by less than a fifth. Part of this gap is cultural; sexual symptoms are difficult to discuss with a stranger during a short OPD interview. Even so, it suggests that women suffer from these symptoms in silence, without realising that medical help is available.

Second, awareness of long term complications was extremely limited. Osteoporosis and cardiovascular disease together account for a substantial part of the morbidity and mortality of older women. If a woman does not know that these risks exist, she is unlikely to take preventive measures such as a calcium-rich diet, weight bearing exercise, smoking cessation or routine blood pressure checks. Awareness regarding the role of calcium and vitamin D was low, with only 26.7% of women recognising their importance, despite the increased risk of osteoporosis associated with multiparity and poor socioeconomic conditions in this region. Cultural factors also appeared to strongly influence attitudes towards menopause. Many women in the

present study considered menopause a condition that should be tolerated rather than medically managed. The belief, reported by nearly one quarter of participants, that husbands may marry again after their wives reach menopause highlights the social insecurity and emotional concerns experienced by some ageing women in patriarchal communities. Changing such perceptions may require not only health education but also wider social awareness and greater involvement of male family members.

The strong relationship between educational status and menopausal knowledge observed in this study is similar to findings reported in other Pakistani studies. Education appears to play a major role in improving awareness about menopause, possibly more than factors such as age or parity. This suggests that improving female literacy may have long-term benefits for women's health awareness in later life. In the short term, educational strategies using verbal counselling and pictorial materials may be more effective, particularly for women with limited reading ability.

Care seeking behaviour was generally poor among the women. Less than half had ever consulted a doctor for menopausal symptoms. The reasons they gave such as considering these symptoms a normal part of aging and financial constraints, and lack of permission or support from family suggest that many women are not only poorly informed but are also actively discouraged from seeking medical help.

Improving the situation will need more than awareness campaigns. It will need affordable services at the primary care level, female health workers who can build trust, and a willingness on the part of obstetricians and gynaecologists to spend time on menopausal counselling rather than only on reproductive and pregnancy related issues.
The study has several strengths. It focuses specifically on the low socioeconomic class, which is the group most in need of attention and the least studied. The sample size was adequate, the questionnaire was pre-tested and translated into the local language, and the interviewers were trained female staff. Data was collected in private to minimise embarrassment. The use of standard cut-offs for knowledge scoring allows comparison with future studies.

There are also limitations. First, the study was conducted at a single tertiary care hospital and the findings may not be fully generalisable to rural areas or to women who never reach a hospital. Second, the cross-sectional design does not allow causal inferences. Third, the assessment of attitudes relied on self-reporting, which is influenced by social desirability bias. Some women may have given answers they thought the interviewer wanted to hear. Fourth, surgical menopause was excluded, so the findings cannot be extrapolated to women who undergo hysterectomy or bilateral oophorectomy. Fifth, the knowledge score, while based on items used in similar

Pakistani studies, has not been formally validated in this population. Despite these limitations, the consistency of the findings with earlier studies adds weight to the conclusions.

Conclusion

Women of low socioeconomic class in Pakistan suffer through the menopausal transition with very limited understanding of what is happening to their bodies and even less awareness of the long term health risks involved. Knowledge is shaped by education and household income and both of these factors are not easy to change in the short term. At the same time, attitudes are strongly influenced by silence, cultural stigma, and the idea that menopausal symptoms should simply be endured quietly. Because of this, many women remain at risk to serious health problems such as osteoporosis, cardiovascular disease, and psychological distress, yet they still rarely seek medical advice or reach a doctor when they need help.

Several practical steps can help address this issue. Menopausal counselling should be included as a routine part of care in gynaecology and family medicine clinics in public hospitals, especially those serving low-income communities. Women Health Workers, who already play a key role in Pakistan's primary healthcare system, should be trained to provide basic education on menopause and equipped with simple pictorial materials for women who cannot read. Public awareness efforts should also involve men in the family as their support often determines whether women are able to seek medical help. In addition, schools and adult literacy programmes should include basic information on reproductive and menopausal health in their teaching. Finally, more community-based research is needed to better understand the experiences of women living in rural areas and urban slums, who are likely facing even greater challenges than those who reach tertiary care hospitals.

Menopause is a universal experience but the hardship related to it in low income communities is not. With relatively modest investment in education, counselling, and basic support services, it is possible to make a meaningful difference in the quality of life of millions of postmenopausal women in Pakistan.

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