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Research Article

Knowledge of Menopausal Syndrome among Menopausal Women in Urban and Rural Communities of Imo State, Nigeria

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Abstract

Menopause is a normal physiological transition defined as the permanent cessation of menstruation for twelve months in a row. In Nigeria, this shift impacts over 1.1 million women annually, but, knowledge of menopausal symptoms and management is still poor as only 31.8% of women have adequate awareness. In areas such as Imo, the menopausal experience is made more complex by cultural beliefs and the vast disparity in healthcare availability between urban and rural people.This study evaluated and compared the knowledge, perception and coping mechanisms of menopausal women of 45 years and above in urban and rural communities of Imo State, Nigeria. The specific objective of the study is to study the influence of chosen socio-demographic parameters such as educational status, occupation and marital status on knowledge, perception and coping mechanisms towards menopause. We employed a cross-sectional survey design. A total of 768 participants made up of 384 urban and 384 rural menopausal women from Imo State were selected using a multistage sampling technique. Data were obtained using validated structured questionnaire with reliability coefficient of 0.85 and analysed using Statistical Package for Social Sciences (SPSS) Version 17. Descriptive statistics (means and standard deviations) and inferential statistics including multiple binary logistic regression were used to evaluate six hypotheses at a significance threshold of $p < .05$. The results indicated considerable differences in knowledge between urban and rural respondents. The degree of information of menopausal syndrome among urban women was found to be high (mean = 70.40) and among rural women it was found to be moderate (mean = 53.58). Even though they differed, both groups had generally good attitudes on menopause, seeing it as a natural phase of life, not as an illness. Lifestyle change was the most popular coping approach. Dietary modifications to relieve menopausal symptoms were practiced by 83.3% of urban women and 74.7% of rural women. Socio-demographic variables explained 25-26% of the variance in knowledge and 17-21% of the variance in perception. Educational attainment was the most significant predictor of successful coping methods and use of Hormone Replacement Therapy (HRT).The study suggests that while a positive cultural attitude towards menopause is increasing among women in Imo State, there are still significant knowledge gaps, particularly among rural women. Rural women, who are often less informed and less likely to use evidence-based coping techniques, continue to encounter hurdles related to inadequate health information and healthcare access in metropolitan settings. The report proposes development of targeted reproductive health education initiatives, community-based awareness campaigns and menopausal counselling services within primary health care settings. These interventions are crucial for guaranteeing fair access to information and empowering women to manage menopausal symptoms and enhance their quality of life.

Keywords: *Menopause; menopausal symptoms; knowledge; perspective; coping strategies; urban-rural differences; Imo State; Nigeria.*

Introduction

Menopause is a universal biological process of women and a major shift in female reproductive life span. menopause is defined as the permanent cessation of menstruation due to lack of ovarian follicular activity and is clinically defined after twelve consecutive months of amenorrhoea[1]. This transition is characterised by increasing reduction in ovarian function with diminished synthesis of oestrogen and progesterone and final loss of reproductive potential. menopause is a complex transition with substantial biological, hormonal, psychological and social changes that affect women's health and well-being[2]

Menopause is usually considered a natural physiological process and not a medical condition. It refers to the end of a woman's reproductive period as the synthesis of ovarian hormones, mainly oestrogen and progesterone, ceases [3]. Menopause is sometimes conceptualised as a biopsychosocial process that involves biological, psychological, and social adaptations as women move from fertility to sterility. The natural menopause occurs at an average age of about 51 years, but between the ages of 45 and 55 years [4]

Menopause is classified into four basic categories as natural menopause , premature menopause , induced menopause , and radiation induced menopause . Natural menopause occurs as a normal part of ageing, but premature menopause happens before the age of 40 years due to genetic, autoimmune or other medical disorders. Induced menopause occurs due to surgical removal of the ovaries, while radiation menopause happens due to radiation therapy that destroys the ovarian function[5].

Menopause is a normal life occurrence, although it is often accompanied by a variety of medical, psychological and social difficulties. Hormonal changes throughout menopause can lead to vasomotor symptoms, sleep disturbances, mood changes, sexual dysfunction, and cognitive problems. These changes can have a negative impact on day-to-day functioning, relationships with others and overall quality of life. Up to 85% of women will have a period of menopausal transition during which they will suffer one or more menopausal symptoms [6]. Common symptoms include hot flashes, night sweats, vaginal dryness, sleeplessness, anxiety, depression, weight gain, urine incontinence, and decreased sexual desire [7].

The degree to which women cope with menopause successfully is primarily determined by their awareness of the condition, their attitudes towards the menopausal phenomenon, and the coping mechanisms they use. Knowledge is awareness and comprehension of menopause, its symptoms, implications and therapy options [8]. Adequate information helps women to identify the symptoms of menopause and seek appropriate interventions when necessary. On the other hand, poor understanding may result in misconceptions, fear, delayed healthcare utilisation, and ineffective symptom treatment.

Perception is also key to women's menopause experience. Perception refers to the way in which people perceive and make sense of experiences and occurrences [9] Women's perception of menopause is often shaped by cultural beliefs, education and social surroundings. For some women, the menopause is a wonderful and natural, liberating time of life, while for others it is a negative indicator of ageing, loss of femininity or poor health [10]. Positive views are usually related with better adjustment and better psychological well-being.

Coping strategies are the psychological and behavioural ways in which individuals attempt to manage stressful life events and health associated problems. In the context of menopause, the coping strategies may include lifestyle changes, dietary changes, physical activity, stress management techniques, social support, medical advice, hormone replacement medication, and the use of alternative therapies [11] Research suggests that effective coping strategies can lower symptom severity and improve the overall quality of life for women during menopause.

There is increasing evidence that geographical location plays an important role in women's understanding, beliefs, and coping methods of menopause. Women in metropolitan regions tend to have more access to healthcare services, educational opportunities, health information and the media than women in rural areas. Therefore, women living in metropolitan areas are better aware of the signs and management of menopause. On the other hand, women living in the rural communities are often faced with problems such as poor health infrastructure, illiteracy, poverty and lack of access to health information [12]

Studies of menopause in Nigeria have been mostly limited to specific groups or locales and there have been few comparative studies of urban-rural variation. Understanding these differences is important in designing targeted interventions and equitable health policies when almost half the population of Nigeria lives in rural areas. In Imo State, a significant majority of the people live in rural regions, and facilities catering to specialised women's health needs are mostly available in urban places like Owerri.

Despite the growing number of women who are approaching the menopausal era in Imo State, there is little scientific research about the knowledge, perceptions and coping mechanisms of these women. The absence of state-level data inhibits the effective planning and execution of health education programs designed for the specific requirements of

women undergoing menopause. As a result, substantial urban-rural distinctions may go unnoticed, maintaining inequities in access to information and health care services.

This study was therefore conducted to assess the knowledge of menopausal syndrome, views of menopause and coping methods followed by menopausal women in urban and rural populations in Imo State, Nigeria. The findings are expected to provide evidence that will inform policymakers, healthcare professionals and public health practitioners in devising targeted interventions to enhance menopausal health and improve the quality of life of women in urban and rural settings.

MATERIALS AND METHODS

Study Design

This study employed a community-based cross-sectional comparative survey design.

Area of the Study

The study was conducted in Imo State, Nigeria. Imo State is located in the South-East geopolitical zone of Nigeria and is bounded by Abia State to the east, Anambra State to the north, Rivers State to the south, and Delta State to the west. The state consists of twenty-seven (27) Local Government Areas (LGAs), which are grouped into three geopolitical zones: Owerri, Orlu, and Okigwe.

The state is predominantly inhabited by the Igbo ethnic group and is characterized by a mixture of urban and rural settlements. Urban communities are generally associated with better access to healthcare facilities, educational opportunities, media exposure, and social amenities, whereas rural communities often experience limited access to healthcare services and health information. These differences make Imo State an appropriate setting for investigating variations in knowledge of menopausal syndrome between urban and rural women.

Study Population

The study population comprised menopausal women aged 45 years and above residing in selected urban and rural communities of Imo State. Women who had attained natural menopause or had experienced cessation of menstruation for at least twelve consecutive months were considered eligible for participation.

The estimated population of eligible women in the selected study communities was approximately 450,000.

Sample Size Determination

The sample size was determined using the formula for comparative studies as described by Bolarinwa (2020):

$$ n = \frac{(Z_{\alpha/2} + Z_{\beta})^2 [P_1(1-P_1) + P_2(1-P_2)]}{(P_1-P_2)^2} $$

Where:

- n = minimum sample size per group
- $(Z_{\alpha/2}) = 1.96$ at 95% confidence interval
- $(Z_{\beta}) = 0.84$ at 80% study power
- $(P_1) = 0.40$ (expected proportion from previous study)
- $(P_2) = 0.50$ (assumed proportion for comparison)

The calculated sample size was 384 participants for each study group (urban and rural women), resulting in a total sample size of 768 respondents.

To ensure adequate representation, 384 menopausal women were selected from urban communities and 384 from rural communities.

Sampling Technique

A multistage sampling technique involving stratification, simple random sampling, and systematic sampling was used.

Stage One: Stratification of Imo State

Imo State was stratified into its three geopolitical zones:

- Owerri Zone
- Orlu Zone
- Okigwe Zone

Stage Two: Selection of Local Government Areas

The Local Government Areas were classified into urban and rural LGAs.
The urban LGAs selected included:

- Owerri Municipal
- Owerri North
- Owerri West
- Orlu
- Okigwe

For the rural category, two LGAs were selected from each geopolitical zone using simple random sampling, resulting in six rural LGAs:

- Ngor-Okpala
- Ahiazu Mbaise
- Nwangele
- Njaba
- Obowo
- Ihitte-Uboma

A total of eleven LGAs were included in the study.

Stage Three: Selection of Communities

Two communities were selected from each chosen LGA using simple random sampling techniques. This yielded twenty-two (22) study communities comprising both urban and rural settings.

Stage Four: Selection of Respondents

Eligible menopausal women were selected using systematic sampling techniques. Household listings and community registers served as sampling frames where available.

The sampling interval (k) was determined using the formula:

[k = \frac{\text{Population of Eligible Women}}{\text{Allocated Sample Size}}]

A random starting point was selected in each community, after which every kth eligible woman was recruited until the allocated sample size was attained.

Sample Allocation

The total sample size of 768 respondents was proportionally distributed across the selected communities according to population size to ensure adequate representation of both urban and rural populations.

Instrument for Data Collection

Data were collected using a structured, interviewer-administered questionnaire developed from an extensive review of literature on menopause and menopausal syndrome.

The questionnaire consisted of five sections:

Section a: Knowledge of Menopausal Syndrome

This section assessed respondents' knowledge regarding menopause, causes, symptoms, complications, and available management options.

The questionnaire contained close-ended items measured on a four-point Likert scale of:

- Strongly Agree (SA)
- Agree (A)
- Disagree (D)
- Strongly Disagree (SD)

Validity of the Instrument

The instrument was subjected to face and content validity by experts in Public Health, Reproductive Health, and Measurement and Evaluation. The experts assessed the questionnaire for clarity, relevance, comprehensiveness, appropriateness, and alignment with the study objectives.

Their observations and recommendations were incorporated into the final version of the instrument before administration.

Reliability of the Instrument

The reliability of the instrument was established using the test-retest method. The questionnaire was administered to menopausal women aged 45 years and above residing in Aba and Uzoakoli communities of Abia State, which were not included in the study but shared similar characteristics with the study population.

The questionnaire was re-administered after an interval of ten days to the same respondents. Data obtained from both administrations were analyzed using Pearson Product Moment Correlation Coefficient.

A reliability coefficient of 0.85 was obtained, indicating that the instrument possessed a high degree of consistency and reliability.

Ethical Considerations

Ethical approval for the study was obtained from theMinistry of Health Research Ethics Committee Owerri before commencement of the study.

Permission was also obtained from community leaders and relevant authorities within the selected communities.

Participation was entirely voluntary, and informed consent was obtained from all respondents before data collection. Respondents were assured of anonymity, confidentiality, and the exclusive use of information provided for research purposes.

Participants were informed of their right to decline participation or withdraw from the study at any stage without any consequences. All data collected were anonymized and securely stored to protect participants' privacy.

Method of Data Collection

An introductory letter was obtained from the Department of Public Health, Imo State University, and presented to community leaders and women's association leaders in the selected communities.

Eight trained research assistants assisted in data collection. The research assistants received training on the objectives of the study, questionnaire administration, ethical considerations, and respondent confidentiality.

Questionnaires were administered directly to eligible women during community meetings and other organized gatherings. Participants who were unable to complete the questionnaire independently were assisted by the research assistants.

Completed questionnaires were retrieved immediately after completion to ensure a high response rate and minimize data loss.

Method of Data Analysis

Data were coded and entered into the Statistical Package for Social Sciences (SPSS) version 17.0 for analysis.Descriptive statistics including frequencies, percentages, means, and standard deviations were used to summarize respondents' characteristics and study variables.

RESULTS

Table 1: ***Menopausal Women's Mean Knowledge of Menopause in Urban and Rural Imo State***

Location	N	Minimum	Maximum	Mean	SD	Remark
Urban	366	16.67	100	70.40	24.58	High
Rural	372	0.00	100	53.58	29.83	Moderate
Total	738	0.00	100.00	61.92	28.60	

The descriptive statistics presented in Table 1 shows that mean knowledge of menopause of menopausal women in urban and rural communities in Imo state were 70.40 and 53.58 respectively. The mean scores suggest that menopausal women in urban communities had high knowledge of menopausal syndrome while those in rural areas had moderate knowledge. The standard deviation scores (urban = 24.58 and rural = 29.83) indicates that there was more variability in the knowledge scores of menopausal women in rural areas compared to those in urban areas.

DISCUSSION

The findings of this study revealed that knowledge about menopausal syndrome was much higher among menopausal women in urban areas of Imo State than their rural community counterparts. The results are consistent with earlier research that found significant differences in awareness about menopause between urban and rural populations[13]. For

example, research found that urban women in Nigeria had higher levels of awareness and knowledge of menopause than women in rural areas. Urban women were shown to have better grasp of menopausal symptoms, aetiology and its therapeutic options as compared to rural women[14].

The observed urban-rural disparity in knowledge may be explained by differences in educational attainment, access to healthcare facilities, exposure to health information, and socioeconomic possibilities. In the cities, women usually have better access to health care facilities, skilled health care experts, mass media, internet resources and health promotion programs that provide information about menopausal health. In addition, the increased literacy levels of urban dwellers could boost their ability to interpret and utilise health information available[15].

The findings further back the statement that geographical location is an important factor in women's knowledge and understanding of menopause. Women living in urban areas were more likely to participate in health education initiatives, seek professional medical advice and seek evidence-based information about menopausal symptoms and management. Thus, they are more likely to recognise menopausal changes and use appropriate coping mechanisms[16]. On the other hand, the comparatively poor awareness among women in rural areas could be explained by limited access to health care facilities, lower levels of education, inadequate transmission of health information, and cultural views about menopause. In many rural communities, reproductive health and menopause talks are generally considered private or culturally sensitive topics, restricting possibilities for women to obtain appropriate information. Moreover, shortages of health workforce and health education programmes in rural areas may lead to chronic knowledge gaps[17]. This data is consistent with [19], who showed that rural women, although experiencing a higher burden of menopausal symptoms, are less likely to seek professional healthcare services than urban women. The discrepancy, the authors suggest, stems from impediments such as inadequate healthcare facilities, budgetary constraints, lower literacy rates, and sociocultural norms that hinder healthcare-seeking. Such hurdles may prevent rural women from getting the timely information and support needed for the effective management of menopausal symptoms[19,20].

The present study findings thus highlight the need for focused health education interventions to improve menopause-related knowledge among women, particularly those living in rural settings. Strengthening community-based health promotion programs, incorporating menopause education into basic healthcare services and utilising local media channels could greatly increase knowledge and comprehension of menopausal syndrome among women in Imo State.

Conclusion

The study evaluated the knowledge of menopause syndrome among menopausal women in urban and rural populations in Imo State, Nigeria. The results showed that there were considerable differences between the two populations in terms of the level of information. The urban women had significantly higher understanding about menopausal syndrome than the rural women. The results indicate that access to education, health care services, health information and other social resources greatly increases women's knowledge of menopause and its treatment.Menopause is a natural biological transition, but lack of understanding may severely affect women's ability to recognise symptoms, seek appropriate treatment and adopt effective coping techniques. The observed lower level of awareness among rural women indicates the necessity for targeted public health initiatives to bridge the information gap and ensure equitable access to menopausal health education.

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