

# Prevalence of Menopausal Symptoms in Osogbo, South-West, Nigeria

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## Abstract

**Background:** Menopause is a natural biological process which is associated with a wide range of physical, vasomotor, and psychosocial symptoms in women with far-reaching effects on well-being and quality of life. This study determined the prevalence of menopausal symptoms in our environment. **Patients, Materials and Methods:** It was a descriptive cross-sectional study that involved 250 postmenopausal women recruited from three health-care facilities in Osun State over a period of 2 months (June 2022 to August 2022). The data were collected with structured questionnaires and were analysed with appropriate descriptive and inferential statistics. **Results:** Majority of the 250 women attained menopause at the ages between 55 and 64 years ( $n = 129$ ; 51.6%), with a mean age at menopause being 58.7 years ( $\pm 7.8$ ). They commonly attained menarche at 15–19 years ( $n = 147$ ; 58.8%) and had five or more previous pregnancies ( $n = 133$ ; 53.2%). Hypertension and diabetes were present in 87 (34.8%) and 26 (10.4%) women, respectively. Use of contraceptives was recorded in 128 (51.2%) women, with intrauterine contraceptive devices being the most common method. The most common menopausal symptom was internal heat in 52% of women; of the women with this symptom, 48% were relieved with medications. Having 4 or less previous pregnancies, having 4 or less children and previous use of contraceptives had a significant association with late menopause. **Conclusions:** This study concludes that age at menopause is slightly advanced in our environment and there is a high prevalence of menopausal symptoms. There is a need for support programmes for postmenopausal and elderly women to facilitate prompt and appropriate treatment of these ailments as well as providing intensive health education for the women.

**Keywords:** Menarche, menopausal, Osogbo, symptoms

## INTRODUCTION

Menopause, a natural step in the aging process, is defined as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity typified by amenorrhea for at least 12 months. It occurs gradually in women and it indicates the transition from the reproductive to the postproductive era of a woman's life. It is a condition which every woman faces in later life and it can have many associated features which may disrupt the quality of life.<sup>[1]</sup> The main reason for the climacteric problems and menopause is the end of the ovarian function. The ovary is the only endocrine gland that stops functioning before the final stages of life.<sup>[2]</sup> The root of this natural transformation lies in the biological structure of women; yet, it produces a wide range of effects on a woman's behavior and psyche, resulting in debilitating symptoms. These effects of estrogen depletion manifest with vasomotor symptoms (e.g. hot flushes and

night sweats), psychological symptoms (anxiety, depression, and mood swings), urogenital symptoms (urinary frequency, vaginal dryness, and dyspareunia), as well as musculoskeletal symptoms (bone and joint pains).<sup>[3]</sup> Some of these menopausal symptoms are associated with some distress and could constitute considerable hindrance to ability to function and adapt well to the society.<sup>[4]</sup>

The age at which natural menopause occurs is between 45 and 55 years for women worldwide,<sup>[5]</sup> and it differs across societies.

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Contemporary industrialised populations demonstrate a later median age at menopause (51.4 years) than populations that are non-industrialised or poorly nourished (48.28 years).<sup>[6]</sup> Although the timing of menopause affects long-term disease risk, little is known about factors that affect this timing. With improvement in life expectancy globally, more women in developing countries will live 30% of their lives after menopause.<sup>[7]</sup> A woman's age at the onset of natural menopause is associated with several diseases. An early menopause is associated with an increased risk of osteoporosis and increased overall mortality, while a late menopause is associated with an increased risk of breast cancer.<sup>[8,9]</sup>

Associations of disease incidence with menstrual status lead naturally to the idea that the lifetime risks of these diseases vary with age at menopause, which has further increased interest in identifying other factors associated with age at menopause.<sup>[10]</sup> In our health system, women of the reproductive age group are given more importance.<sup>[11]</sup> The postmenopausal women in both the urban and the rural areas are neglected.<sup>[12]</sup> In this study, the most common postmenopausal symptoms, namely the vasomotor, psychological, and the urinary symptoms, were investigated in the women.

This study aimed to determine the prevalence of menopausal symptoms in our environment, the average age of menopause, the attitude of women toward climacteric/menopause, as well as associated factors contributing to early/late menopause women in Osogbo, a semiurban city in South-western Nigeria.

## PATIENTS, MATERIALS AND METHODS

### Ethical considerations

Approval for the study was obtained from the Osun State Health Research Ethical Committee (OSHREC/569T/184). Written informed consents were obtained from the patients. Questionnaires were anonymised and strict confidentiality maintained during data entry and analysis. All the data generated were in the store of a password-protected computer.

### Study design

It was a descriptive cross-sectional study using self-administered, structured questionnaires.

### Study population

Postmenopausal patients of University of Osun teaching hospital, Our Lady of Fatima Catholic Hospital and State Specialist Hospital, all located in Osogbo, Osun State, Nigeria.

### Pretesting

Fifty questionnaires were administered to postmenopausal women at the General Outpatient Clinic of Obafemi Awolowo University Teaching Hospitals Complex Ile-Ife (OAUTHC), Nigeria, to ascertain the validity of the questionnaire. OAUTHC is a tertiary hospital in the same state which attends to patients with same socioeconomic and cultural background as our study population.

### Sampling technique

Simple random sampling was used to recruit 250 patients from the outpatient unit of each hospital for this study from June 2022 to August 2022. The questionnaires were administered to consenting postmenopausal women after explaining the purpose of the study. Confidentiality was ensured by excluding the names of participants in the questionnaire.

The questionnaire consisted of questions relating to the sociodemographic characteristics of the responders, menstrual and childbirth pattern, past medical history and contraceptive use, and changes associated with menopause as well as other symptoms associated with menopause.

### Data analysis

The data were entered and statistical analysis was performed using SPSS version 20 (IBM, Chicago, USA). The descriptive statistics were calculated for the background variables and for the prevalence of the selected postmenopausal symptoms. Furthermore, a 95% confidence interval was calculated for the prevalence of the postmenopausal symptoms.

## RESULTS

A total of 250 patients were recruited in this study. The mean and median ages at menopause in this study were 58.7 years ( $\pm 7.8$ ) of the standard deviation and 57.0 years, respectively. Majority of the women (129; [51.6%]) were within the age range of 55–64 years, followed by 74 (29.6%) in the age range of 45–54 years. Majority of the respondents (182; [72.8%]) were married and 4 (1.6%) were single. The highest level of education attained by 136 (54.4%) of them was tertiary education and 62 (24.8%) had secondary education. One hundred and ninety-nine (79.6%) of the women were Christian and the remaining 51 (20.4%) practiced Islam. Other sociodemographic characteristics of the respondents are shown in Table 1.

Table 2 shows that the respondents predominantly attained menarche at ages 15–19 years (147, 58.8%), others attained menarche at ages 10–14 years (91, 36.4%), 20–24 years (7, 2.8%) and 25–29 years (5, 2%). The ages of the respondents at last menstruation were 40–49 years in 48.8% ( $n = 122$ ) and 50–59 years in 48.4% ( $n = 121$ ). They predominantly had 5–8 previous pregnancies (133, 53.2%) and 1–4 previous pregnancies (100, 40.0%). The women mostly had 1–4 and 5–8 previous childbirths, which respectively represented 52.0% ( $n = 130$ ) and 45% ( $n = 110$ ) of total previous births, respectively. The greater proportion (62%) of respondents had their last child birth longer than 15 years before recruitment for this study and 48 (19.2%) had theirs 11–15 years.

Past medical history and history of contraceptive use in Table 3 reveal that the 116 women (46.4%) lived with both their husbands and children while 22 (8.8%) lived alone. Fifty women (20%) had past medical illnesses, while 71 (28.4%) had past history of surgery. Twenty-six women (10.4%) were diabetic, and 65 (26.0%) had a family history of diabetics.

**Table 1: Sociodemographic characteristics of respondents (n=250)**

Variables	Frequency (%)
Age	
35–44	1 (0.4)
45–54	74 (29.6)
55–64	129 (51.6)
65–74	36 (14.4)
75 and above	10 (4.0)
Marital status	
Married	182 (72.8)
Single	4 (1.6)
Divorced	4 (1.6)
Separated	5 (2.0)
Widowed	55 (22.0)
Education status	
None	9 (3.6)
Primary	42 (16.8)
Secondary	62 (24.8)
Tertiary	136 (54.4)
Others	1 (0.4)
Religion	
Christianity	199 (79.6)
Islam	51 (20.4)
Mean age (years)	58.7±7.8
Median age (years)	57.0

History of hypertension and use of antihypertensive drugs were recorded in 34.8% ( $n = 87$ ) of the women, and there was a family history of hypertension in 40.8% of them ( $n = 102$ ). One hundred and twenty-eight women (51.2%) in this study gave a history that they had used contraceptives in the past with intrauterine devices and injectables being the common methods, respectively, accounting for 53.1% and 21.1%.

Table 4 shows changes associated with menopause, and it reveals that a higher proportion of the women had changes associated with their menstrual cycles before cessation (172, 68.8%), which included scanty bleeding (44.1%), prolonged bleeding (19.4%), prolonged intervals (19.4%), and short interval (17.1%). The majority of the respondents had reduced sexual desire (104, 41.6%) and reduced pleasure (89, 35.6%). Only 12 women (4.8%) had pelvic surgery after cessation of menstruation. The major urinary symptoms experienced were frequency of micturition (52.8%) and passage of large urine volume (19.4%).

This study revealed a wide range of symptoms associated with menopause, including internal heat (99, 39.6%), sleep disturbance (38, 15.2%), memory loss (24, 9.6%), and irritability (21, 8.4%). The women mostly experienced these symptoms at irregular (nonspecific) intervals (147, 76.6%); however, a few experienced them daily (25, 13%), weekly (4, 2.1%), and twice weekly (16, 8.3%). Symptoms were severe enough to warrant Doctors consultation in 44.4% of study group, 43.2% did not need consultation while 12.4% could

**Table 2: Menstrual and childbirth pattern (n=250)**

Variables	Frequency (%)
Age at menarche	
10–14	91 (36.4)
15–19	147 (58.8)
20–24	7 (2.8)
25–29	5 (2.0)
Age at last menstrual period	
30–39	4 (1.6)
40–49	122 (48.8)
50–59	121 (48.4)
60–69	3 (1.2)
Previous pregnancies	
None	2 (0.8)
1–4	100 (40.0)
5–8	133 (53.2)
9–12	15 (6.0)
Previous childbirth	
None	4 (1.6)
1–4	130 (52.0)
5–8	110 (45.0)
9–12	6 (2.4)
Period since last child birth (years)	
<5 ago	4 (1.6)
5–10	43 (17.2)
11–15	48 (19.2)
>15	155 (62.0)
Mean age at last menstrual period (years)	49.2±4.2
Mean age at first menstrual period (years)	15.5±3.8
Mean number of previous pregnancies	5.2±1.9
Mean number of previous child birth	4.6±1.6

not ascertained if they consulted Doctors or not. The treatment offered for the symptoms included counseling in 50.4% of the women and combination of counseling and drugs in 48.9% of them. Majority of the women (237, 94.8%) had no need to be absent from work because of the symptoms associated with menopause. Other details about menopause associated symptoms are shown in Table 5.

In this study, among the clinical and sociodemographic variables having 4 or less previous pregnancies ( $\chi^2 = 5.93$ ,  $P = 0.015$ ), having 4 or less children ( $\chi^2 = 3.93$ ,  $P = 0.048$ ) and previous use of contraceptives ( $\chi^2 = 4.18$ ,  $P = 0.041$ ) had a significant association with late menopause as shown in Table 6.

## DISCUSSION

Menopause, a natural step in the aging process, represents the end of menstruation after the last menstrual period in the previous 12 months. This physiological decline in ovarian follicular activity occurs gradually in women and it indicates the transition from the reproductive to the postproductive era of a women's life.<sup>[1]</sup>

The age at which natural menopause occurs is between the ages of 45 and 55 years for women worldwide.<sup>[5]</sup> The age at menopause differs in different societies. Contemporary

**Table 3: Past medical history and contraceptive use**

Variables	Frequency (%)
Who client lives with ( <i>n</i> =250)	
Husband	53 (21.2)
Husband and child	116 (46.4)
With children	59 (23.6)
Stay alone	22 (8.8)
Have past illness ( <i>n</i> =250)	
Yes	50 (20.0)
No	200 (80.0)
Past surgery ( <i>n</i> =250)	
Yes	71 (28.4)
No	179 (71.6)
Are you diabetic ( <i>n</i> =250)	
Yes	26 (10.4)
No	224 (89.6)
Family history of DM ( <i>n</i> =250)	
Yes	65 (26.0)
No	185 (74.0)
Are you hypertensive (and drugs) ( <i>n</i> =250)	
Yes	87 (34.8)
No	163 (65.2)
Family history of hypertension ( <i>n</i> =250)	
Yes	102 (40.8)
No	148 (59.2)
Previous use of contraceptives ( <i>n</i> =250)	
Yes	128 (51.2)
No	122 (48.8)
Types of contraceptives ( <i>n</i> =128)	
OCPs	20 (15.6)
Injectables	27 (21.1)
IUCD late	68 (53.1)
Tubal	6 (4.7)
Implants	2 (1.6)
Others	5 (3.9)

DM: Diabetes mellitus, IUCD: Intrauterine contraceptive device, OCPs: Oral contraceptive pills

industrialised populations demonstrate a later median age at menopause (51.4 years) than populations that are nonindustrialized or poorly nourished (48.28 years).<sup>[6]</sup> In this study, the mean age and median age of the women at the time of the interview were 58.7 years and 57 years, respectively. The mean age at menopause was 49.2 years. Our finding is similar to those of Abdullah *et al.* and Sidhu *et al.* and Adefuye *et al.* who documented median ages of menopause as 49.9 years, 48.3 years, and 48.9 years, respectively.<sup>[5,13,14]</sup>

Educational status had an important role to play in attainment of menopause. The study done by Achie *et al.* showed that the age at menopause was higher among highly educated women (tertiary education 44.11 years)<sup>[15]</sup> and this is in accordance with finding from this study in which majority of the women (54.4%) with high level of tertiary education attained menopause late. This is, however, contrary to findings of an Indian study where about 83% of the women had education below diploma level.<sup>[16]</sup>

**Table 4: Changes associated with menopause**

Variables	Frequency (%)
Change in menstrual cycle before cessation ( <i>n</i> =250)	
Yes	172 (68.8)
No	78 (31.2)
Type of changes ( <i>n</i> =170)	
Prolonged bleeding	33 (19.4)
Prolonged interval	33 (19.4)
Scanty bleeding	75 (44.1)
Short interval	29 (17.1)
Experienced change in sexual pattern ( <i>n</i> =250)	
Yes	116 (46.4)
No	134 (53.6)
Sexual pattern changes ( <i>n</i> =250)	
Increased sexual desires	9 (3.6)
Reduced sexual desires	104 (41.6)
Increased pleasure	5 (2.0)
Reduced pleasure	89 (35.6)
Reduced duration of sexual activity	21 (8.4)
Difficulty in penetration	19 (7.6)
Bleeding following sex	5 (2.0)
Vaginal dryness	18 (7.2)
Had pelvic surgery after cessation of menstruation ( <i>n</i> =250)	
Yes	12 (4.8)
No	238 (95.2)
Experienced urinary symptoms after cessation ( <i>n</i> =72)	
Frequent urination	38 (52.8)
Passing large volume of urine	14 (19.4)
Painful micturition	5 (6.9)
Urgency	9 (12.5)
Vaginal prolapsed	6 (8.3)

The prevalence of menopausal symptoms ranges widely across continents and countries; the prevalence rates in the range of 40%–60% were reported in studies among Caucasians, while a lower range of 10%–40% was reported in an Asian population.<sup>[17-19]</sup> Vasomotor symptoms such as internal heat was seen in 39.6% of the women in this study which is a frequency comparatively lower than those reported in some Indian studies.<sup>[5,6,16]</sup> It was revealed from a review by Freeman and Sherif that the prevalence of hot flushes in the North America region was lowest among the Chinese (21%), the Caucasians (31%), Hispanic (35%), and the African-American women (46%).<sup>[12]</sup> Jahanfar *et al.* also documented the prevalence of vasomotor symptoms to be as high as 67% in Malaysia.<sup>[11]</sup> This variability of prevalence of vasomotor symptoms has been emphasised among different cultures,<sup>[9]</sup> and it may be due to the influence of such factors as climate, diet, life style, women's role, and attitudes regarding the end of the reproductive life and age.

This study shows that the women experienced more of internal heat, reduced libido, and urinary frequency than other symptoms. Sexual problems among the menopausal women in this study were mainly loss of sexual desire and reduced sexual pleasure, both of which could have been due to vaginal

dryness, dyspareunia, poor vaginal lubrication, and poor health status of spouses. About 42% of women included in this study had reduced sexual desire, while 51% had internal heat. These findings are comparable with what was previously documented by Pathak and Shivaswamy in India.<sup>[16]</sup> Vaginal dryness seen in 7.2% of women in our study represents a lower prevalence compared to findings in other studies.<sup>[16,18]</sup> About eight percent of the respondents experienced irritability, a prevalence comparable to the 7.7% reported by Adefuye *et al.* in the same country.<sup>[13]</sup> In Latin America, the prevalence of the irritability was reported as 51.6%.<sup>[17]</sup> Two separate studies from Malaysia also quoted high irritability prevalence of 52% and 65%, respectively.<sup>[1,14]</sup> The wide difference in the

rates of irritability is attributed to deployment of different methods to assess irritability in the patients. Another important symptom noted in our study is sleep disturbance, which was experienced by 20% of the women; our findings, however, show a lower prevalence than those of Chedraui *et al.* in Latin America (68.4%), Jahanfar *et al.* in Malaysia (63.4%), and Hafiz *et al.* in Australia (33.7%).<sup>[1,20,21]</sup> There are wide variabilities in occurrence and frequency of menopausal symptoms across ethnic origins and countries of residence which underscore the importance of environmental and sociocultural factors such as diet, exercise, and other life style modifications as key determinants of presence and severity of sleep-related symptoms.<sup>[1]</sup>

**Table 5: Other symptoms associated with menopause**

Variable	Frequency (%)
Other symptoms (n=250)	
Internal heat	99 (39.6)
Sleep disturbance	38 (15.2)
Loss of memory	24 (9.6)
Irritability	21 (8.4)
Others	8 (3.2)
How often are the symptoms (n=192)	
Daily	25 (13.0)
Weekly	4 (2.1)
Twice weekly	16 (8.3)
Nonspecific	147 (76.6)
Need to see a doctor (n=250)	
Yes	111 (44.4)
No	108 (43.2)
Don't know	31 (12.4)
Treatment given (n=139)	
Counseling	70 (50.4)
Counseling and drugs	68 (48.9)
Others specify	1 (0.7)
Need for off duty from work (n=250)	
Yes	13 (5.2)
No	237 (94.8)
Period of off duty (n=12)	
Days	7 (58.3)
Weeks	5 (41.7)

Urinary frequency was reported in 52.8% of the women enrolled for this study. This symptom was, however, less reported in other studies by Agwu *et al.* in Nigeria (38.7%), Ashrafi *et al.* in Iran (17.4%), and Hafiz *et al.* in Australia (35.2%).<sup>[8,21,22]</sup> The difference in urinary symptoms across countries and regions may be due to the woman's attitude toward hygiene- and health-related behavior.

In this study, having at least 4 pregnancies in the past, having many children ( $\geq 4$  children), and previous use of contraceptives tended to increase the age at which menopause occurred. This is similar to a study done by Gold *et al.*<sup>[23]</sup>

Only 44.0% of the respondents had reasons to visit their doctors on account of menopausal symptoms, and this is in contrary to findings from an Indian study by Singh and Arora<sup>[6]</sup> in which majority of the women did not seek medical treatment for their symptoms. In this study, the modalities of treatment included counseling alone or in combination with drugs in conformity with global practice.<sup>[6]</sup> Drugs for the treatment of these symptoms are commonly hormone based; however, nonhormonal treatment is useful for patients who have contraindications to the use of hormone-based medication.<sup>[24]</sup>

## CONCLUSIONS

This study has clearly shown that there is an increase in age at attainment of menopause in our environment. It also showed that

**Table 6: Factors associated with late menopause**

Variables	Late menopause		$\chi^2$	P
	Yes	No		
Age at menarche ( $\leq 14$ )	50	41	3.095	0.079
Marital status (married)	83	99	1.07	0.301
Previous pregnancy ( $\geq 4$ )	59	43	5.93	0.015*
Previous children ( $\geq 4$ )	73	64	3.93	0.048*
Educational status (primary and below)	24	27	0.01	0.931
Previous contraceptive use	69	59	4.18	0.041*
Change in menstrual pattern	84	88	0.34	0.561
Experienced changes in sex pattern	61	55	2.16	0.142
Had pelvic surgery	5	7	0.18	0.673

\*Statistical significance

having 4 or more previous pregnancy, having 4 or more children, and previous use of contraceptives had a significant association with late menopause. There was a high prevalence of vasomotor and genitourinary symptoms in this study. This underscores the need for health-care services to pay more attention to women's health in the postmenopausal periods in Nigeria. Support programs for postmenopausal and elderly women should be encouraged and intensified by governments and nongovernmental organisations across communities, regions, and the country at large. This is with a view to promoting appropriate treatment and intensive health education for the women whenever required.

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### Conflicts of interest

There are no conflicts of interest.

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