Symptoms during Menopausal Transition: Age at Onset, Prevalence and Burden among Women in Delta State, Nigeria

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Abstract: The menopausal phase of life is not a disease but a phase of gradual decline in ovarian function in women's life. This phase of life is physiological and associated with physical, psychosocial and cultural significance. Our study investigated the age at onset, prevalence, severity and burden among midlife women. This study was conducted among 405 midlife women in six communities in Delta State. A modified Menopause Specific Questionnaire was used. Internal consistency reliability of the subscales of the instrument was checked using the Cronbach alpha test. It yielded a result of 0.832 and validity was tested using face and content criteria. Findings from our study established age range of 40 - 60 years at the onset of menopause with a mean and SD of 50.25 ± 4.8 years. Most prevalent symptoms were profuse sweating during the day and experiences of hot flushes (vasomotor symptoms); accomplishing less work than before and poor memory (psychosocial symptoms); decrease stamina, difficulty sleeping and weight gain (physical symptoms); and changes in sexual desire and vaginal dryness (sexual symptoms). This study concluded that most symptoms were reported by women of post menopausal age. Vasomotor and sexual domains symptoms were frequently complained of in comparism with the physical and psychosocial domains, though the women did not find the experiences bothersome and can be attributed to their cultural beliefs, biological and lifestyle. Symptoms of sexual domain had strong relationship with the women's general well-being ($\square = 1.291$, t = 2.014, p = 0.05).

Key words: Menopausal symptoms, age at onset, midlife women.

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I. Introduction

It is natural for women to pass from reproductive to non reproductive phase as they age. Globally, almost 400 million women within the age range of 45 to 54 years are already in the transition phase of life [1]. In Nigeria, about 5 to 8% (2.9 to 4.7 million) of its total female population of approximately 59.5 million [2] are already in their menopausal period. Menopause is the period when there is decline in ovarian function in midlife women and it is accompanied by gradual cessation of menstruation and bearing. Some authors asserted that menopause does not refer to just one day, but to the whole of the transition period. According to [3] the transition years can last for four to eight years. This eventually results in permanent cessation of menstruation for twelve calendar months [4]. Women during this phase of life often experience a variety of symptoms due to decrease oestrogen production. Such symptoms include; hot flushes, day and night sweating, vaginal dryness, mood swings, sleeping difficulties, decrease libido, dyspareunia, forgetfulness, nervousness among many other symptoms [5,6,7]. However, there existed individual variations of the symptoms among the women as some women experience mild problems and some others, moderate to severe problems.

Menopause may be natural, premature, delayed, induced or artificial/surgical. A natural menopause is a gradual process in which there is reduction in ovarian function. It usually occurs after twelve months of cessation of menstruation in midlife women. Again, when medical intervention such as radiation, chemotherapy results in the loss of ovarian functions or removal of the ovaries with or without a hysterectomy, menopause may occur and this is known as induced menopause. It is also said to be artificial/surgical when the ovaries are removed. Similarly according to report of a cohort study by [8], although hysterectomy is associated with early menopause, the post hysterectomy diagnosis is based on the measurement of serum follicle-stimulating hormone (FSH) which may not accurately reflect natural menopause. Also, [9] study revealed that, women who had

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unilateral oophorectomy may enter menopause earlier than the average age. However, certain factors such as nulliparity, smoking, autoimmune disorders like type I diabetes, low body mass index, hereditary, racial, ethnic factor, illnesses, chemotherapy, radiation and the surgical removal of the ovaries with or without the removal of the uterus have been associated with early menopause [8, 9].

Menopausal transition has three phases according to the [10] which includes:

- **i. Perimenopause** This is the beginning of the transition phase which usual commence several years before final stoppage of menstrual flow.
- **ii. Menopause** This phase follows perimenopause and it is the end of menstrual period usually a twelve calendar months without menstrual flow.
- iii. Postmenopause This phase comes after final cessation of menses and continues for the rest of the woman's life.

The age of the onset of menopause differ from one nation to another. [11] reported a menopause onset age range of 45 to 55 years with an average age of 51 years in developed countries and 48 years as average age in developing countries. Among United States of America women, 51 years was reported [12]. The [13] also reported an average age of 51 years as the onset of natural menopause. Australia recorded 52.9 years in 2010 [14]. Turkish women recorded 52.9 years in 2001 [15] and 49.1±6.4 years in 2010 [16]. India and Philippines, reported a median age of 44 years [17]. Similarly in Zaria, Nigeria, [18] reported the mean and median age of 46.16±0.37 and 46.0 years, respectively.

Women during the menopausal transition experience a variety of symptoms which can be broadly grouped into vasomotor, sexual, physical and/or psychosocial complaints [4]. Although several studies have confirmed factors like smoking, obesity and alcohol intake as influencing the onset of menopause, other factors still exist. Examples include; socio-economic status, late menarche, multiparity, prolonged menstrual cycles and drugs like oral contraceptives [5].

Physical symptoms were reported to include; body ache; aching in muscles and joints; lack of energy; sleeping difficulties; dry skin and decrease in physical strengths as most prevalent physical symptoms in menopause [6]. Other noted symptoms include; dizzy spells, palpitations and weakness; irritability; headaches; lethargy; hair changes; thinning of public; axillary and head hair; stress incontinence/urinary incontinence [4, 20].

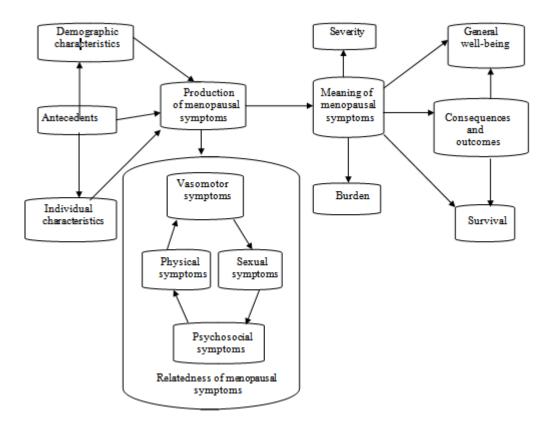
The perimenopausal transition is usually associated with changes in normal menstrual cycles and sexuality. The ovaries response to pituitary gonadotrophins (LH and FSH) decrease. First resulting in shorter follicular phases (shorter menstrual cycles) with fewer ovulation, decreased progesterone production and cycle irregularity. Consequently, estrogen production ceases [4, 20]. [6] In their study reported decrease sexual desire as the most prevalent symptom during menopause. Others symptoms are decreased libido; less full and firm breasts and dyspareunia.

Psychosocial symptoms include feeling of anxiety; forgetfulness; feeling of depression and being impatient with others as reported by [6] in their study. Also reported is irritability [20].

Many women during this period experience a vasomotor disturbance commonly known as hot flashes (a feeling of heat arising from the chest region and radiating to the neck and face). In Europe and North America, the hot flush is reported as the most common symptom of menopause, affecting around 70% of women and persisting on average for 2 – 5 years, although some 20% continue to flush into their 70s and 80s [20]. By comparison, there are relatively unreported symptoms in Japanese populations, affecting between 5 – 18% women [21]. Again in United States according to [22] in their study revealed that 45.6% of African-American women; 35.4% of Hispanic women; 31.2% Caucasian women; 20.5% Chinese women and 17.6% Japanese women reported hot flushes as a common symptom in climacteric transition.

The conceptual framework for this study is the Symptoms Experience Model (SEM). According to [23], the SEM consists of antecedents (demographic characteristics, disease and individual characteristics); symptoms experience (symptoms production, symptoms perception and symptoms expression) and consequences (impact of the symptoms on the individual's mood, functional and psychological states, progress of disease, survival and quality of life). Experienced symptoms deal with the perception of symptoms frequency, intensity, distress and meaning of symptoms that are generated and exhibited by the affected individual. Several authors identified some demographic characteristics as antecedents affecting experience of symptoms. [24] Identified age; [25] gender; [26] marital status and ethnicity; [27] culture. While [28] identified knowledge of health and values as individual factors.

The concept of SEM therefore involves the prevalence, distress and animated meaning of manifested symptoms and the women's perception of the inevitable life changes (symptoms). Symptoms however, may occur in clusters [29], hence understanding the symptoms experienced by the midlife women will assist clinicians including nurses in viewing menopausal symptoms as influencing the women's their general well-being and being influenced by the individual woman's perception and characteristics (demographic and individual).



Diagrammatic representation of modified Armstrong's (2003) Symptoms Experience Model

The relevance of the conceptual framework to this study arises from the four components of the SEM that is, antecedents, symptoms production, meaning of symptoms and the consequences. The antecedents to the symptoms experienced (produced) by the women were the demographic and individual characteristics. The paradigm within which a woman perceives menopausal symptoms regardless of the prevalence and related distress influences the way she views it. In other words, the meaning a woman attaches to the experiences influences her perception of the produced symptoms irrespective of the frequency and related distress. However on the consequences, interaction of multiple symptoms often produces burden. Women who viewed the symptoms as natural phenomena presented with positive outcomes of general well-being. While women who viewed the symptoms as medical conditions presented negative health outcomes. According to [25], the asseveration of symptoms include; adjustment to illness and survival. But for the purpose of this study, the women's symptoms expression was positive adjustment to the changes and general well-being.

Significance of the study:

The end of a woman's reproductive life has emerged as a prominent issue in public health. This is because; menopausal transition is accompanied with several physiological changes which could be unpleasant or distressing. Therefore, investigating the life of women transiting menopause allows for transparency of shared meaning rooted in the socio-cultural and the women's subjective life. Unfortunately, this has not been fully captured in the south-south region of Nigeria as scanty information exists. Understanding the midlife women experiences will therefore help clinicians, administrators and policy makers in assessing, diagnosing, planning and implementing interventions aimed at improving the well-being of midlife women.

II. Aim of the study

The aim of this study was to investigate the symptoms experienced by Delta State women during menopausal transition period.

Research Questions:

- 1. What is the age range of Delta State women at the onset of menopause?
- 2. Which are the most prevalent symptoms experienced by the midlife women?
- 3. How bothersome are the menopausal symptoms on the women?
- 4. What is the relationship between the women's experience and their general well-being?

Alternate Hypothesis:

There is a significant relationship between symptoms of menopausal transition and general well-being of midlife women.

III. Material And Methods

Research design: A cross-sectional descriptive survey approach was used to investigate the symptoms experienced by the midlife women during menopause transition period in Delta State.

Study duration: Data were collected between January and May, 2015.

Study location: This study was conducted in Delta State, one of the oil producing states, and one of the 36 states in Nigeria located in the South South Geo-Political Zone of the country. The state has five ethic groups namely: Urhobo, Ijaw, Isoko, Itsekiri and Anioma. These ethnic groups speak different languages and common with them is the use of 'Pidgin English' language. The state also consists of three senatorial districts, twenty-five local government areas (L.G.As.) with several wards and communities. The studied communities were selected from these L.G.As and they include: Otovwodo community (Ughelli-North L.G.A); Eku (Ethiope-East); Umutu (Ukwuani); Kwale (Ndokwa-East); Kiagbodo (Burutu); and Ode-Itsekiri (Warri-South).

Sample size: A total of 420 midlife women were sampled with attrition rate of 5%.

Sample size calculation: The target population comprised of 306,470 midlife women who are already within the menopausal period. The sample size was determined using the W.G. Cochran's formula [30]. Level of conference was 95% and the level of statistical significance set was 0.05.

Inclusion criteria:

- 1. Women within the age range of 45 to 60 years
- 2. Only heterosexual women who have been menstruating actively prior to eventual gradual cessation of menses.

Sampling procedure:

The multistage sampling technique involving five stages was used for this study.

Stage 1: Stage 1 involved the use of simple random sampling to select two L.G.As in each of the three senatorial districts.

Stage 2: In this stage, simple random sampling was used to select one ward in each of the six selected L.G.As.

Stage 3: This stage used simple random sampling to select one community each in the six selected wards.

Stage 4: Stage 4 involved the use of systematic random sampling to select ninety households with sampling interval of five from each of the six selected communities.

Stage 5: This final stage used a purposive sampling method to select one subject per household until the sample size was reached.

Instrument for data collection:

A Menopause-Specific Quality of Life (MENQoL) questionnaire [31] was used to generate data for the study. The instrument was translated to 'Pidgin English' before administration to accommodate all the respondents. The questionnaire consists of two sections. Section A asked questions about the Sociodemographic characteristics of the respondents. While Section B worded in a 7-point likert scale formal comprising of 29 items with four domains: vasomotor; psychosocial, physical and sexual domains measured the degree of menopausal symptoms as experienced over the last one month. Responses ranged from 'not bothersome' (0) to 'extremely bothersome' (6) with a score range of 0-174. However, collected data were interpreted thus: 0 (no problem); 1-44 (mild problem); 45-88 (moderate problem); 89-132 (severe problem); and 133-174 (very severe problem).

Validity and reliability of the study instrument:

The instrument was pilot-tested at Owhelogbo community in Delta State. Forty-four midlife women were conveniently selected for the pilot study.

Procedure methodology:

The questionnaire was administered to the respondents face-to-face. Three research assistants were trained for two days to assist in the collection of data. The assistants were registered nurses and midwives with

adequate knowledge of menopause transition. Data were collected between January and May, 2015 and 405 questionnaires were retrieved making a 96.4 return.

Method of data analysis:

Data generated from the study were analyzed through the use of Statistical Package for Social Sciences (SPSS) version 20.0. Descriptive statistics such as frequency distribution, percentages, means and standard deviation were used to answer the research questions. While inferential statistics such as multiple regressions was used to test the hypothesis. A p-value of 0.05 was considered significant.

Ethical consideration:

Adequate permission was obtained from the six communities through the community heads. Participation in the study was voluntary. Responses to the items on the questionnaire did not demand for any personal identity to ensure confidentiality.

IV. Results

Table1 above shows the age at onset of menopause as reported by the respondents. Reported age range at onset of menopause was 40-60 years with mean and SD of 50.25 ± 4.8 . The median age was 53 years and modal age 53 years. More than half of the respondents representing 54.6% stopped menstruating within the age range of 51-55 years.

Table (1) Age of the respondents' at onset at menopause

| Variables (years) | Frequency | Percentage (%) Means SD | | | |
|-------------------|-----------|--------------------------------|--|--|--|
| 40-45 | 44 | 10.9 | | | |
| 46-50 | 94 | 23.2 | | | |
| 51-55 | 221 | 54.6 50.25 ± 4.8 | | | |
| 56-60 | 46 | 11.3 | | | |
| Total | 405 | 100.0 | | | |

Table 2 above shows the vasomotor, psychosocial, physical and sexual experiences of the respondents during the menopausal transition period. Vasomotor domain revealed that majority of the respondents (67.9%) sweat profusely during the day; 66.9% sweat at night and 62.2% experienced hot flushes. However, women in the postmenopausal age were mostly affected by the vasomotor symptoms. Psychosocial domain shows that majority of the respondents (67.7%) reported accomplishing less work than they used to be. 57.0% experienced poor memory and 52.6% had feeling of being anxious or nervous. Nearly half of the respondents (49.9%) felt depressed, 48.4% were satisfied with their personal life, 46.9% had feeling of wanting to be alone while 43.3% were being impatient with other people. Women in the postmenopausal age reported most of the psychosocial symptoms. In the physical domain, most of the respondents (75.1%) reported decrease in stamina, 71.1% had feeling of lack of energy, 65.7% experienced decrease in physical strength, 64.4% had difficulty sleeping and 60.5% had weight gain. Furthermore, 59.5% had aching in their muscle and joint, 58.8% had feeling of being tired or worn out, 56.0% had occurrence of drying skin and 51.6% of the respondents had aches in the back of their head and neck. Less than half of the respondents (44.4%) experienced changes in appearance, 40.7% experienced low backache and 38.0% experienced frequent urination. Minority of them (32.1%) said they had bloated feeling and 31.1% reported increased facial hair, texture or tone of skin. Only 26.0% reported involuntary urination when laughing or coughing and 18.5% flatulence (wind) or gas pain. Most of the physical symptoms were seen in the postmenopausal women. While in the sexual domain, majority of the respondents (71.6%) experienced changes in their sexual desire, 66.9% reported vaginal dryness during intercourse and 53.8% tried to avoid intimacy. Menopausal women were mostly affected by the sexual symptoms.

Table (2) Prevalent signs and symptoms of menopause as experienced by respondents

| Variable | s | Frequency (%) | | | Total (%) | Mean±SD | Ran |
|----------|-----------------|----------------|-----------|----------------|------------|---------------|-----|
| | | Peri-menopause | menopause | Post-menopause | | | k |
| Vasomot | or domain | | | | | | |
| • | Sweating during | 85 (21.0) | 86 (21.3) | 104 (25.7) | 275 (67.9) | 0.68 ± 0.46 | 1 |
| the day | | 78 (19.3) | 78 (19.3) | 96 (23.6) | 271 (66.9) | 0.66±1.24 | 2 |
| • | Night sweat | 84 (20.7) | 84 (20.7) | 103 (25.5) | 252 (62.2) | 0.62 ± 0.48 | 3 |
| • | Hot flushes | | | | | | |

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| D | | 1 | | | 1 | |
|--------------------------------------|-----------|------------|------------|------------|---------------|----|
| Psychosocial domain | 05 (21.0) | 05 (21 0) | 104 (25.7) | 274 (67.7) | 0.60.046 | _ |
| Accomplishing | 85 (21.0) | 85 (21.0) | 104 (25.7) | 274 (67.7) | 0.68±0.46 | 1 |
| less than I used to | 71 (17.5) | 72 (17.8) | 88 (21.7) | 231 (57.0) | 0.57±0.49 | 2 |
| Experiencing | 66 (16.3) | 66 (16.3) | 81 (20.0) | 213 (52.6) | 0.53±0.50 | 3 |
| poor memory | 62 (15.3) | 63 (15.6) | 77 (19.0) | 202 (49.9) | 0.50 ± 0.50 | 4 |
| • Feeling anxious | 61 (15.1) | 61 (15.1) | 74 (18.2) | 196 (48.4) | 0.48 ± 0.50 | 5 |
| or nervous | | | | | | |
| Feeling | 58 (14.3) | 59 (14.6) | 73 (18.0) | 190 (46.9) | 0.47±0.50 | 6 |
| | 55 (13.6) | 55 (13.6) | 67 (16.5) | 177 (43.7) | 0.44±0.49 | 7 |
| depressed, down or blue | 00 (10.0) | 00 (10.0) | 07 (1010) | 177 (1517) | 0111=0119 | , |
| • Being | | | | | | |
| dissatisfied with my | | | | | | |
| personal life | | | | | | |
| Feelings of | | | | | | |
| wanting to be alone | | | | | | |
| Being impatient | | | | | | |
| with other people | | | | | | |
| Physical domain | | | | | | |
| | 94 (23.2) | 95 (23.5) | 115 (28.4) | 304 (75.1) | 1.60±1.31 | 1 |
| • Decrease in | , , | ` ′ | ` ' | , , | | |
| stamina | 89 (22.0) | 90 (22.2) | 109 (26.9) | 288 (71.1) | 1.24±1.08 | 2 |
| • Feeling a lack of | 82 (20.2) | 83 (20.5) | 101 (25.0) | 266 (65.7) | 1.24±1.23 | 3 |
| energy | 81 (20.0) | 81 (20.0) | 99 (24.4) | 261 (64.4) | 1.17±1.16 | 4 |
| Decrease in | 76 (18.8) | 76 (18.8) | 93 (22.9) | 245 (60.5) | 1.08±1.13 | 5 |
| physical strength | 74 (18.3) | 75 (18.5) | 92 (22.7) | 241 (59.5) | 1.25±1.32 | 6 |
| Difficulty | 74 (18.3) | 74 (18.3) | 90 (22.2) | 238 (58.8) | 1.13±1.22 | 7 |
| sleeping | 70 (17.3) | 71 (17.5) | 86 (21.2) | 227 (56.0) | 0.98±1.10 | 8 |
| Weight gain | 65 (16.0) | 65 (16.0) | 79 (19.6) | 209 (51.6) | 1.07±1.32 | 9 |
| | | (, | () | (* 11) | | |
| Aching in muscle | 56 (13.8) | 56 (13.8) | 68 (16.8) | 180 (44.4) | 0.73±1.03 | 10 |
| & joints | 30 (13.0) | 30 (13.0) | 00 (10.0) | 100 (44.4) | 0.75±1.05 | 10 |
| Feeling tired or | 51 (12.6) | 52 (12.8) | 62 (15.3) | 165 (40.7) | 0.71±1.05 | 11 |
| worn out | , , | ` ′ | ` ' | ` / | | 12 |
| Drying skin | 47 (11.6) | 48 (11.8) | 59 (14.6) | 154 (38.0) | 0.61±0.93 | |
| Aches in back of | 40 (9.9) | 41 (10.1) | 49 (12.1) | 130 (32.1) | 0.53±0.93 | 13 |
| neck or head | 39 (9.6) | 39 (9.6) | 48 (11.9) | 126 (31.1) | 0.49±0.92 | 14 |
| • Changes in | 32 (8.0) | 33 (8.1) | 40 (9.9) | 105 (26.0) | 0.39±0.78 | 15 |
| | | | | | | |
| appearance, texture or tone | 23 (5.7) | 23 (5.7) | 29(7.1) | 75 (18.5) | 0.33 ± 0.82 | 16 |
| of your skin | | | | | | |
| Low backache | | | | | | |
| Frequent | | | | | | |
| urination | | | | | | |
| Feeling bloated | | | | | | |
| Increased facial | | | | | | |
| hair | | | | | | |
| • Involuntary | | | | | | |
| urination when laughing or | | | | | | |
| | | | | | | |
| coughing | | | | | | |
| • Flatulence (wind) | | | | | | |
| or gas pains | | | | | | |
| Sexual domain | | | | | | |
| Change in your | 90 (22.2) | 108 (27.0) | 91 (22.4) | 290 (71.6) | 1.41±1.220 | 1 |
| sexual desire | | | | | .6 | |
| Vaginal dryness | 83 (20.5) | 103 (25.4) | 85 (21.0) | 271 (66.9) | | 2 |
| during intercourse | | | | | 7±0.47 | |
| Avoiding | 67 (16.5) | 83 (20.5) | 68 (16.8) | 218 (53.8) | | 3 |
| intimacy | | | | / | 0.90±1.22 | |
| minucy | | | | | | |

Table 3 reveals the burden of menopausal symptoms of the respondents on the four domains of Menopause-specific quality of life. Vasomotor domain had mean and SD score of 50.3 ± 5.04 and sexual domain had 46.3 ± 5.69 . This shows that these domains presented with moderate problems. While psychosocial domain had 38.0 ± 7.11 and physical domain had 36.9 ± 7.52 indicating mild problems. The vasomotor domain had the highest mean score while physical domain had the lowest mean score.

Table (3) Distribution of Respondents' Menopausal Symptoms on Domains of the MENQoL

| Domains | | Frequency | Percentage (%) | Range | Mean ± SD |
|--|-----------------------------------|------------------------------|------------------------------------|-------|-----------------------|
| Vasomotor Domain (| VD) | | (70) | | 52 |
| No problem Mild problem Moderate problem Severe problem 132 Very severe problem 174 | 0 1-44 45-88 89- 133- | 139 117 92 26 31 | 34.3 28.9 22.8 6.3 7.7 | 0-174 | 50.3±5.04 Moderate |
| Sexual Domain (SD) | | | | | |
| No problem Mild problem Moderate problem Severe problem 132 Very severe problem 174 | 0 1-44 45-88 89- 133- | 145 127 88 20 25 | 35.8 31.4 21.7 4.9 6.2 | 0-174 | 46.3±5.69 Moderate |
| Psychosocial Domain | (PsyD) | | | | |
| No problem Mild problem Moderate problem Severe problem 132 Very severe problem 174 | 0 1-44 45-88 89- 133- | 193 106 62 26 18 | 47.7 26.3 15.2 6.4 4.4 | 0-174 | 38.0±7.11 Mild |
| Physical Domain (Physical Domain (Physic | yD) | | | | |
| No problem Mild problem Moderate problem Severe problem 132 Very severe problem 174 | 0 1-44 45-88 89- 133- | 204 97 62 20 22 | 50.4 24.0 15.3 4.9 5.4 | 0-174 | 36.9±7.52 Mild |
| Total | | 405 | 100 | | |

TESTING OF HYPOTHESIS

There is a significant relationship between symptoms of menopausal transition and general well-being of midlife women.

Table 4 above reveals multiple regression analysis to determine the relationship between symptoms of menopausal transition and the women's general well-being. From the analysis, R 31.3% is the correlation between the independent variables (symptoms of menopausal transition) and the dependent variable (general well-being). While R² 98.0% is the variation that was explained by the independent variable. The model was statistically significant (F=10.317, df=4, p <0.001). Thus, there is significant relationship between symptoms of menopausal transition of midlife women and their general well-being. However, only sexual symptoms had significant relationship with their general well-being (0.045). The physical domain variables with \Box 0.153 were the best predictor of the women's general well-being followed by variables of sexual domain \Box 0.115; vasomotor domain \Box 0.067 and psychosocial domain \Box 0.045. With value of R² (adjusted) 88%, it indicates that 88% of the variance of general well-being status is explained by the combined effects of the four domains of the MENQoL variables. The remaining 12% of variation is explained by other factors such as co-morbidity issues, genetic factors, socio-demographic variables etc. Therefore, the alternate hypothesis is therefore accepted.

Table (4) Multiple regression analysis on symptoms of menopause on the women's general well-being

| Model (Independent variables) | Unstandardized coefficients | | Standardized Coefficients | T | Sig | Remark |
|-------------------------------|-----------------------------|-----------|------------------------------|--------|-------|--------|
| | Beta (□) | Std error | Beta (□) | | | |
| Constant | 50.333 | 0.813 | | 61.895 | 0.000 | |
| Vasomotor | 0.775 | 0.738 | 0.067 | 1.051 | 0.294 | NS |
| Psychosocial | 0.222 | 0.403 | 0.045 | 0.551 | 0.582 | NS |
| Physical | 0.430 | 0.239 | 0.153 | 1.803 | 0.072 | NS |
| Sexual domain | 1.291 | 0.641 | 0.115 | 2.014 | 0.045 | S |

V. Discussion

On age at onset of menopause, this study revealed 40-60 years with mean and SD of 50.25 ± 4.8 years at the onset of menopause among Delta State, Nigeria women. A median age of 53 years and modal age of 53 years were also noted. This finding is in congruence with 51 years among US women [12]. [13] Also reported an average age of 51 years as the onset of natural menopause. Australia recorded 52.9 years in 2010 [14]. Turkish women recorded 52.9 years in 2001 [15] and 49.1 ± 6.4 years in 2010 [16]. This is however contrary to that of India and Philippines women who reported a median age of 44 years [17]. Similarly in Zaria, Nigeria [18] reported the mean and median age at menopause of 46.16 ± 0.37 and 46.0 years, respectively.

The most prevalent signs and symptoms of menopausal transition include the following: hot flushes and profuse sweating both day and night (vasomotor symptoms) which were mostly reported by women in the postmenopausal age. This is consistent with the findings of [7] in Pakistan which revealed most prevalent symptoms of hot flashes and night sweats and Turkish women [16]. In parallel, [32] and colleagues documented fewer vasomotor symptoms among Malaysian women. Also, among United States African-American, Hispanic, Caucasians, Japanese and Chinese women [22].

Revealed psychosocial symptoms of accomplishing less work than they used to be and experiences of poor memory were mostly reported by postmenopausal women. This is in congruence with the findings of [16] who found high frequency of poor memory or forgetfulness among Turkish women. Feelings of being anxious or nervous and feeling of depression were averagely. This is supported by [7] who reported average frequency of feeling of anxiousness and contrary fewer feelings of depression among Pakistan women. Notwithstanding, the study finding was also parallel with [16] findings of very high frequency of nervousness among Turkish women. Again lower records of being satisfied with personal life, feeling of wanting to be alone and being impatient with other people were obtained. In contrast, [7] study found high frequency of being impatience with others.

A high percentage of physical symptoms reported were decrease in stamina and feeling of lack of energy. These are closely followed by reports of decrease in physical strength, difficulty sleeping, weight gain, aching in their muscle and joint, feeling of being tired or worn out and occurrence of drying skin which most postmenopausal women reported. These are in agreement with the submissions of [7] in Pakistan that most women reported lack of energy, decrease in physical strength, aching in muscles and joints, feeling of tiredness, sleeping difficulties and drying skin. In India women, high frequency of muscle-joint pains was reported [33]. Malaysian women also reported most cases of aching muscles and joints and lack of energy [32]. [16] Also reported high frequency of feeling of tiredness among Turkish women. In contradiction, Pakistan women reported high frequency of aching in back of the head [7]. A little below averagely reported symptoms were changes in appearance, texture or tone of skin and low backache. Though contrary [7] findings among Pakistan women, Malaysian women [32], Turkish women [16] and India women [33] who reported high frequency of low backache. A few reports of frequent urination, bloated feeling and increased facial hair were obtained. This is contrary to [33] submission of very scanty increase facial hair among India women. Very scanty reports of involuntary urinate when laughing or coughing and flatulence (wind) or gas pain equally prevailed in this study.

Revealed sexual symptoms were high records of changes in sexual desire, dryness in vaginal during intercourse and averagely reported was trying to avoid intimacy. These were reported by most women in the menopausal age. This is supported by [34] findings in Benin City, Nigeria who reported that the women were no longer sexually active. Although parallel with Pakistan women reports of reduced sexual desire and avoiding intimacy [7]. India women reported scanty cases of feeling of dryness during intimacy [33] and Malaysia women near average cases of vaginal dryness [32].

Regarding burden of menopausal symptoms on the women and their general well-being, this study revealed an average degree of moderate problems in vasomotor and sexual domains of the MENQoL. While

psychosocial and physical domains showed low degree of mild problems. The vasomotor domain had the highest mean score while physical domain had the lowest mean score. This study finding was however not compatible with that of [16] who submitted that Turkish women reported low degree of moderate problems in vasomotor and psychosocial domains, though average degree in mild to severe sexual symptoms. These differences of symptoms are likely due to cultural beliefs, biological and lifestyle factors. However, the midlife women in this did not find these symptoms bothersome. Only the symptoms of sexual domain had strong relationship with the women's general well-being ($\square = 1.291$, t = 2.014, p = 0.05).

VI. Conclusion

This study established 50.25±4.8 years as the average age of onset of menopause. It also concluded that vasomotor symptoms followed by sexual symptoms were most prevalent among the midlife women. These symptoms caused the women moderate problems. Even with the moderate problems, the women did not find the symptoms bothersome. This can be attributed to high value placed on female independence in their cultural background, genetic makeup and their exposure to menopausal symptoms within their family, friends and religious groups. However, understanding of midlife women experiences will help clinicians, administrators and policy makers in assessing, diagnosing, planning and implementing interventions aimed at improving the well-being of midlife women.

VII. Recommendations

Based on the finding of our study, the following recommendations were made:

- 1. Health education of women before transiting the menopausal period is necessary to improve the health of midlife women.
- 2. The government should establish special clinics to provide care and implement interventions to improve the health of women transiting menopause period.
- **3.** Study of this nature should be conducted with a larger sample of women in Nigeria for generalization of findings.

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