

www.ajbrui.net

Afr. J. Biomed. Res. Vol.18 (May, 2015); 81 - 94

Full Length Research Paper

Experiences and Perceptions of Menopause among women in Ibadan South East Local Government area, Nigeria

Ibraheem O.M, *Oyewole O.E and Olaseha I.O

Department of Health Promotion and Education, University of Ibadan, Nigeria

ABSTRACT

Menopausal experiences and perceptions of menopausal women in Ibadan South East Local Government Area were determined. A three-stage sampling technique was used to select the LGA, wards, and participants for the study. Eight Focus Group Discussions (FGDs) were conducted and a validated questionnaire was used to interview 240 participants aged between 46 to 69 years. Five questions were used to assess participants' knowledge with each question attracting 1 point thus culminating to a maximum of 5 points. Data from the FGD were recorded on audio-tapes, transcribed and subjected to content analysis. Descriptive and Chi-square test statistics were used to analyze the quantitative data. The mean age of participants was 56.9 ± 6.2 years. The mean age at menopause was 46.1 ± 2.5 years. Eighty-five percent of participants had ever heard about menopause and the participants' major source of information included close relatives (75.5%). The mean knowledge score for menopause using a 5-point scale was 2.8 ± 1.0 . Only 28.0% of the participants could state at least one symptom of menopause and 4.1% could list the risks associated with it. Fifty-four percent who scored above the mean knowledge score had positive attitude towards menopause regarding it as a natural occurrence. Seventy percent had the belief that sexual intercourse causes sickness for menopausal women. The belief of 60.8% of the participants was that women should not tell anyone about their menopausal experiences. Eighty-three percent had experienced at least one out of the 19 common symptoms of menopause. Discomforting experiences attributed to menopause included dryness of the vagina (81.3%), pain during intercourse (76.7%) and joint pains (74.2%). Only 32.9% took action to alleviate the discomforts. Actions taken included self-medication (47.4%), adoption of sexual abstinence (13.0%) and protruding stomach (18.0%). FGD revealed that many of the participants were of the opinion that sex should be avoided by menopausal women in order to prevent adverse effects associated with menopause. There are gaps in knowledge, wrong perceptions and use of inappropriate palliative measures regarding menopause among the participants. Public enlightenment and community-based patient education interventions are needed to address these challenges.

Key words: Menopausal experiences; perception; symptoms and palliative measures

INTRODUCTION

Menopause is the normal cessation of menstruation as a result of the normal decline in ovarian function. It is characteristic of human females, universal and may occur halfway through the maximum lifespan of human

females. It is a major transitional period in the life of every woman which commences as one step in a long, slow process of natural reproductive aging involving a series of body changes that can last from one year to as long as to ten years thus ending her reproductive years (Fedigan and Pavelka, 1991; Khan and Hallad, 2006).

*Corresponding author:

E-mail: oyewole2002@yahoo.com

Received: January, 2015; Accepted: March, 2015

Abstracted by:

Bioline International, African Journals online (AJOL), Index Copernicus, African Index Medicus (WHO), Excerpta medica (EMBASE), CAB Abstracts, SCOPUS, Global Health Abstracts, Asian Science Index, Index Veterinarius

Unlike a woman's first menstruation, which starts on a single day, the changes leading up to menopause happen over several years. Menopause commonly happens anytime between the ages of 45 and 55 worldwide. In rare cases, menopause can occur in the early thirties of a woman's life and sometimes as late as when she is in her sixties (Thomas, Renaud, Benefice, De Meeus and Guegan, 2001; WHO, 1996; Xu et al, 2005).

Menopause occurs in phases which includes the pre-menopausal, peri-menopausal (early and late) and the post-menopausal phase. A woman who experiences amenorrhea for 12 consecutive months she is still in the pre-menopausal stage. A gradual decline in overall ovarian function and in the production of estrogen and progesterone begins when a woman is in her 30s. During the middle to late portion of a woman's fifth decade, anovulatory cycle and heavy uterine bleeding of unpredictable frequency and duration begins to increase. A woman is said to be in her early peri-menopausal stage if menstruation has occurred in the last 2 to 3 months but has become less predictable and consecutive menstrual cycle length which lasts for seven or more days; she can be said to be in her late peri-menopausal stage if menstruation has occurred in the past 12 months but not in the last 2 to 3 months and a woman can be regarded retrospectively as postmenopausal if menstruation has stopped for at least 12 months without surgery (Harlow and Parasmothy,2011;Upton, 1982; Utian, 1980).

Mean age at menopause vary between women across different countries or across different ethnic groups (Flint 1997; Morabia and Costanza, 1998). Studies conducted in European and American countries put the age at menopause between 50 to 52 years (Fischl 1992) and those conducted in Africa estimated it around 48 to 50 years (McMaster et al, 1997; Okonofua et al, 1990; Odum et al, 1999; Kwawukume et al, 1993; Sayed et al 2000; Kandil et al 1999). The findings of the studies conducted in countries like Japan, Taiwan, Indonesia and United Arab Emirates indicate mean age at menopause to be between 48 to 50 years (Osei-Hyiaman et al 1998; Chow et al 1997; Rizk 1998). Some studies suggest that Africans (Kwawukume et al, 1993; Okonofua et al, 1990) have an earlier age at menopause than Caucasian women. A further look at age at menopause of Africans show that the mean age at menopause for Ghananian women is 48.1 (Kwawukume et al, 1993) and Nigerian women reach it at 48.4 (Okonofua et al, 1990).

There are many possible signs of menopause and each woman feels them differently. Most women have no or few menopausal symptoms while some women have moderate or severe symptoms (Rice, 1995; Sundquist, 1997; Thomas, 2005; Buxton-Blake, 2003). Symptoms which constitute menopausal symptoms vary widely

between populations and studies (Dennerstein, 1996). The clearest signs of the start of menopause are irregular periods and when blood flow becomes lighter or heavier. Other signs may include, weight gain, hot flashes, insomnia night sweats, vaginal dryness, joint pain, fatigue, short-term memory problems, bowel upset, dry eyes, itchy skin, loss of libido, palpitations, headaches, irritability, mood swings and urinary tract infections (Avis and McKinley, 1995; Berger and Wenzel, 2001; Melby *et al*, 2005; Nusrat *et al*, 2008).

The physiological facts of menopause may be universal but how women experience menopause differs by ethnicity and culture (Thomas, 2005). The experience of menopause is usually influenced by beliefs that are inherent in culture. The experiences are interwoven with a woman's social status, sex role, personal circumstances, life history and state of health (Bowles, 1990; Rice, 1995) The perceptions of menopause thus varies based on different cultural perception. A woman who belongs to a culture that perceives menopause as symptom free may not experience any menopausal symptom. For example, in a research on menopause carried out among Hmong women from Southeast Asia, they could not associate any physical changes with the occurrence of menopause. They could only recall that their menstruation became irregular, lighter in the last year of their reproductive lives. They regard the experience as an avenue to stop menstruating, an act regarded as shameful (Rice, 1995). For instance, Mayan women from South America and Rajput women in India report no 'symptoms'. Japanese women rarely mention hot flushes and the incidence of other problems such as backache and headache is low (Berger and Wenzel, 2001). Most of the time, these symptoms will lessen or stop all together after a woman has become menopausal. Popular opinion continues to portray the menopause as a major negative life event of the same magnitude as the loss of a spouse or a job. For many western societies, it signifies the end of reproduction and the acceleration of aging. This is a common stereotype that menopausal women are facing the end of usefulness and life. (Formanek, 1990)

Hill (1995) projected that the number of postmenopausal women in the world will rise from 467 million in 1990 to 1.2 billion by 2030, with most of the increase occurring in developing countries. The Population Reference Bureau (2010), states that 10% of the women population in Nigeria are 50 and above with their life expectancy at 48. Women slightly stand a better chance of living longer than men by 1 year. The Nigeria Demographic and Health Survey of 2008 documented the percentage of menopausal women as 9.4%. By disaggregation, the proportion of menopausal women steadily increases after the age of thirty.

The health of women who are within the reproductive age and are from developing countries is a source of significant concern (The Centre for Reproductive Law and Policy, 1998; Moronkola et al, 2008). There are challenges faced by women within this age. The challenge is further reinforced by the culture of silence that shrouds this phase in a woman's life. Women who eventually survive the childbearing phase go on to face yet another phase in life, which is equally challenging. As women age, they experience both physical and cultural challenges that may hinder the attainment of optimal health.

Just as there is need to focus on women of reproductive age, there is also need to ensure that the health needs of menopausal women are addressed. Women experience problems throughout their reproductive years and beyond, in part due to the limited medical care they receive during labour and delivery, combined with high parity (Elias and Sherris, 2003) As they move towards the end of their childbearing years and transit into menopausal phase, they are at risk from symptoms associated with hormonal changes, heart disease and stroke, gynaecological malignancies, osteoporosis and various genitourinary conditions among many others (Elias and Sherris, 2003).

In Nigeria, culture of silence shrouds anything that is related to reproduction. It spans from puberty, negotiating sex and condom usage, uptake of contraceptive methods and eventually to menopause. Menopause poses a lot of challenges to women in various ways; the transition from reproductive age to menopausal age is not without its problems. As women get older and advance to menopause, they may experience some of the symptoms mentioned earlier. These symptoms may be very disturbing and sometimes unpredictable especially when the affected person does not know that they are related to menopause and what to do.

Sai and Nassim (1989) opine that various researches have been carried out on the reproductive challenges of women but most of such researches have been focused on women in their reproductive age. They suggest that reproductive health should go beyond family planning to encompass all aspect of human sexuality and reproductive health need during the various stages of women's lives. Very few researches had focused on menopausal women therefore there is need to conduct a study on the various challenges that women go through in this reproductive phase of life. Through this research, various experiences and perceptions of women towards menopause can be documented and used as a springboard for intervention for this group of women.

METHODOLOGY

The Setting: The study was a descriptive and cross-sectional survey. The Ibadan South East Local Government Area (LGA) is one of the 33 local government areas in Oyo State. It is majorly located in the inner core of the metropolis which has high density population, is poorly planned with poor access areas though some urban and medium density, better planned areas with better access roads and drainage facilities are scantily located within the LGA. The population of Ibadan South East Local Government Area as at 2006 was 266,046. This figure represents 12.5% of the total population of Ibadan city. Out of the population of the local government 131272 were male (49.22%) while 153460 were female (50.78%). The population density of the local government was calculated to be 2832 persons per square kilometre.

Sampling Procedures: A three stage random sampling technique was used. The Ibadan South East Local Government area was selected from a list of local government areas in Oyo State by simple random sampling method. A list of 12 political wards was obtained and thereafter 2 wards were selected using simple random sampling method (balloting). The first ward consists of Odinjo, Oyapidan and Ode-Ige communities while the second wards consist of Yejide, Bode and Odo-Oba communities. Participants were selected at the household level purposively based on consent and eligibility. The study population were menopausal women, who were between 46 to 69 years. Eligibility criteria for inclusion were, participant must be a female, must be 45 years and above, must have stopped menstruation 12 months and above before the study, must be a member of the community and she must be able and willing to give consent verbally. In any household with more than one eligible and consented person, one person was selected by balloting. A total of 240 participants were interviewed in April, 2008.

The FGD guide covered issues of interest including knowledge, attitude and perception of respondents on menopause. Other considerations were attitude towards sex during and after menopause, the risks associated with menopause, the advantages and disadvantages associated with menopause and the methods of coping with the challenges associated with menopause. Both manual and tape recordings were used. Two research assistants were also involved in the documentation of the whole process (one as a note-taker and the other as an observer while the investigator moderated the discussion).

In all, eight FGDs were conducted. Selected participants for focus group discussions were

homogenous in nature, in accordance with their age and area of settlements. The FGDs was carried out among menopausal women. The FGD for each group lasted for an average of 55minutes. The number of respondents varied from 7-10 in each FGD. Information derived from the FGD was used to improve the semi-structured questionnaire. Modifications were made in the semi-structured questionnaire that had earlier been drafted by using findings from the Focus Group Discussion (FGD). Focus group discussions were transcribed and contents analysis performed from the transcription.

The questionnaire consisted of six sections namely the demographic characteristics of respondents, menopause experience, knowledge, attitude and perceptions of menopausal women, coping mechanisms and the availability of information on menopause. The instrument was pre-tested after which it was subjected to further modification and administered. It was analyzed using the Cronbach's Alpha model and was found to be 0.745. Modifications were made in the semi-structured questionnaire that had earlier been drafted by using findings from the Focus Group Discussion (FGD).

Data Analysis: Focus group discussions were recorded on audio-tapes transcribed and content analysis was generated from the transcription. Data generated from the FGD were documented in a descriptive form with excerpts relevant to results quoted verbatim. Frequencies and proportions were used to measure qualitative variables

Verification of completed questionnaires was conducted immediately questionnaires were submitted. At the end of the data collection process, questionnaires

were sorted and arranged serially and coding of the questionnaire was done. Also a data dictionary was derived from the coding process. Five questions were used to assess participants' knowledge with each question attracting 1 point thus culminating to a maximum of 5 points. Data was entered into a database using SPSS version 12. Mean and standard deviation were used to measure quantitative data. Association between categorical variables was investigated using chi square test.

RESULTS

Socio Demographic characteristics

The age range of participants who are menopausal was between 46-69 years with the mean age of 56.0 ± 6.2 years. Figure 1 shows the distribution. Of the 240 participants that were interviewed, 51.3% of the participants had no formal education while 26.7% attended a primary school. Those with secondary school education and above stood at 13%. Most participants were married (62.1%). Others were widowed (28.3%), separated (6.3%) and divorced (3.3%).

Regarding participants' ethnic background, an overwhelming majority were Yoruba (93.8%), while the Igbo were 2.1% and Hausa were 0.8%. Other ethnic group took up the remaining 3.3%. More than half (59.6%) were Muslims and 36.3% were Christians. The predominant type of marriage was polygyny (72.5%) followed by monogamy (27.5%). About half of the participants had more than five children, while 42.5% had between 2-4 children.

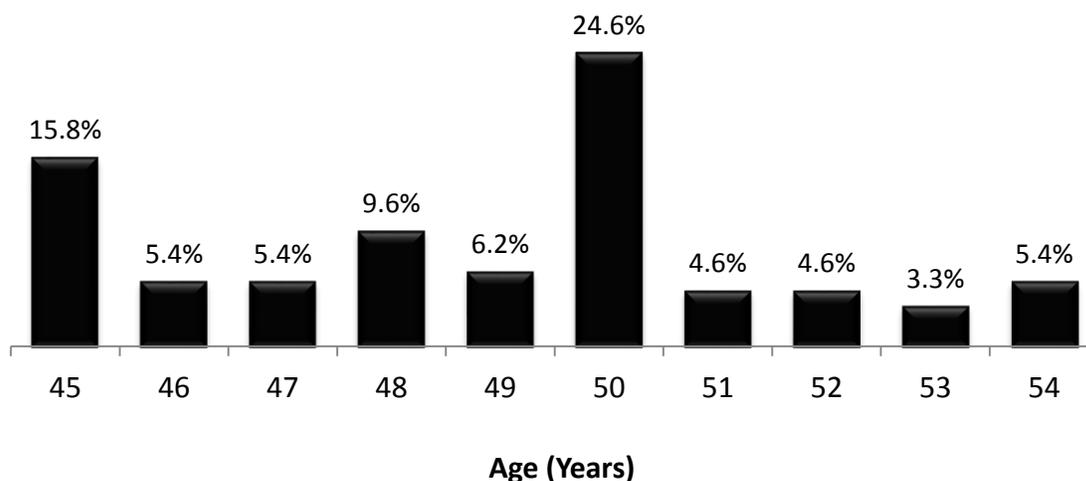


Figure 1:
Distribution of participants by age

Table 1:
Women's knowledge of cause of menopause

	Frequency	%
What is Menopause? (n=237)		
*When a woman is above 45 and has stopped menstruating for the past one year	92	38.8
When a woman reaches the age of 50 and has not had children	31	13.1
When a woman's body is hot on a regular basis	5	2.1
When menstruation stops	109	46.0
What causes a woman's menstrual period to stop flowing? (n=240)		
*Advancing age	173	72.2
No idea	21	8.5
Illness	12	5.0
Other cause	12	5.0
When a woman stops having sex	10	4.3
Infertility	6	2.5
Supernatural attack	6	2.5
What are the risks associated with menopause? (n=44)		
*Bone problem/body heat/headache/painful intercourse/night sweat	13	29.6
Infertility	10	22.7
Makes you sick	10	22.7
Makes abdomen swell	9	20.5
Death	2	4.5
Are there factors that can make a woman to reach menopause earlier?		
*Yes	137	57.1
No	103	4.9
What can make a woman to reach menopause earlier than usual (n=137)		
Starting menstruation early	39	28.5
Bearing children early	20	14.6
Having sex regularly	18	13.1
Don't know	18	13.1
*Operation of the uterus	14	10.2
Irregular menstruation	10	7.3
Using family planning	8	5.8
Sickness	5	3.7
Not treating STIs properly	5	3.7

*Correct options

Awareness of menopause

Two hundred and four participants (85.0%) indicated that they had heard that every woman would at some point in her life reach menopause while 36 (15.0%) said they had never heard of menopause. Of the 204 who had heard 120 (58.8%) of them reported they heard about it either their mother, sister, aunt or friend, a few (8.9%) became informed through the electronic and print media, 10 (4.9%) from an health care provider and 6(3.0%) from either a Muslim cleric or a pastor. Ninety-six (45.3%) of those who have heard that a woman would reach menopause reported that they were aware the symptoms of menopause while 117 (54.7%) said they were not aware of any symptoms.

By disaggregation, 40 (41.2%) of the 96 who indicated that they were aware of the symptoms of menopause reported irregular menstruation/no period as a symptom of menopause, 14 (14.6%) perceived stomach pain as one of the a symptoms, while 12 (12.5%) reported joint and body pain as a symptom of menopause and 6 (6.3%) viewed big stomach as a symptom of menopause among others. One hundred and twenty four (59.6%) opined that their awareness of menopause has helped them to cope better.

The qualitative data showed that some participants got to know about menopause based on their experience. Some also agreed that when a woman's period becomes irregular and the flow is scanty, it is an indication that

her menstruation is about to stop. Many discussants felt it was not an issue that should be discussed with people. When asked if they ever discussed menopause with anybody before they experienced it, many mentioned that they had heard about it from husbands, mothers and elderly female relatives. A discussant puts it aptly,

"... It is not what you discuss with anybody. I heard from my mother but she did not really explain it to me she just said women do not have all the time like men. She said a woman should bear all the number of children in her body before her blood is drained." (48 year old native fabric maker, Bode area)

Regarding whether participants had heard about menopause, one had this to say;

"All women must become like men later in life. In old age women and men are the same. My mother told my sister and my elder sister told me that our time is just for a while. She made us to marry very early because of our limited time." (60 year old trader, Odinjo area).

Knowledge of menopause

Based on a five point scale, the mean knowledge score for menopause among participant was 2.8 ± 1.0 . One hundred and forty two (59.2%) had good knowledge about menopause while 98 (40.8%) had poor knowledge about menopause. The level of education of participants had a bearing on their knowledge about menopause. It was observed that the higher the level of education the higher the knowledge participants had about menopause. Among 109 (45.4%) participants menopause occurs when menstruation ceases, while 92 (38.3%) defined menopause as a woman who is above 45 years old and had not seen her period in the last one year, 31 (12.9%) opined that a woman above the age of 50 and who had no children is menopausal. Majority (72.2%) mentioned old age as the cause of menopause (Table 1). A hundred and ninety six (81.7%) do not associate any risks with menopause. Those who associated any risk with menopause regarded bone problem, hotness of body among others as risks.

Five questions were used to assess participants' knowledge. Each question attracted 1 point thus culminating to a maximum of 5 points. Based on a five point 5-point scale, the mean knowledge score for menopause among respondents was 2.8 ± 1.0 . One hundred and forty two (59.2%) were knowledgeable about menopause while 98 (40.8%) were not knowledgeable about menopause. The level of education of respondents had a bearing on their knowledge about menopause. It was observed that the higher the level of

education the higher the knowledge participants had about menopause.

From the focus group discussion, many participants regarded menopause as a stage in a woman's life when she assumed different positions. To some, menopause means reaching a stage in a woman's life when she is unable to bear children anymore.

"When you have given birth to all your children... then your hila (means menopause in Yoruba) will stop." (47 year old trader, Odo-oba area)

To others it is a time when a menopausal woman becomes a man. It also signifies a stage in life when there is a reverse of roles between parents and their children.

"... old age should be a period when one reaps the fruit of having children and bringing them up to be responsible adults who are able to look after their parents when they have become old."

A few participants were of the view that when a woman is about forty-five and above, she may start to see signs that her monthly period is beginning to cease. Any moment from this time it can stop. Discussants mentioned three different ways in which menstruation can stop. Some hold that God can take it away.

You know we cannot question God. He does what He likes when He likes. He can that a woman should stop at anytime. When it happens we know it is from God and we cannot question it. (54 year old hairdresser, Bode)

Also some discussants opined that some women,

"...speak to their period to go to their children and grandchildren. When she does this she is giving it as a gift to her female children and grandchildren." (56 year old trader, Oyapidan area)

A few were of the view that,

It stops when children have finished in the body. We are different from each other, some have many children and some do not have at all. We are different from each other. It is what gives us children so when children are no longer in the body, a woman stops seeing her period. (53 year old trader, Oyapidan)

All participants reported that the physical changes that occur at old age in women included cessation of monthly period, joint pains, wrinkled skin, tooth decay, backache, numbness of the feet, being afraid for no reason, not sleeping well, sweating excessively at night, forgetting things easily and eye problem. Participants regarded these changes as those related to old age and menopause.

Almost all participants also mentioned other types of changes which occur as a result of engaging in intercourse after menopause. Many were of the opinion that women who engage in intercourse after menopause

are prone to ill health. Being sexually active according to a discussant,

"...causes women to experience these physical changes which bring discomfort, anxiety, pain and sometimes uncertainty."(57, year old trader, Yejide area)

When asked what discomfort, pain and uncertainty meant another woman explained further saying;

If a woman still goes near a man after she has stopped menstruating, whatever should have been washed away by her menses would stay in the body and she will have a big stomach, it won't come down, she would not have good health and she would be discharging water involuntarily. It (sex) is not interesting anymore because you feel pain. Women of our age should not meet men anymore when you meet them things start to crawl on your skin (some participants gave nods). It is a sign that we should not engage in it anymore.(46 old tailor, Bode)

All the discussants agreed that not engaging in intercourse anymore makes them better and they don't have to live with discomfort. It was put aptly by this discussant when she said,

"It is not every time that we need sex. We need sex to have children. After having all the children God has assigned to you sex becomes a problem. You start to notice problems that were not there before... they start to appear. For me, whenever I had sexual contact with my husband, I will be sweating even when the weather was cold ...heat from within would cover my whole body. When I stopped having sex with my husband, the problem ceased"

Perception of menopause

The perception of respondents was assessed. One of the major perceptions of menopause was that participants were glad that they were getting older. Many (91.2%) are of the opinion that menopause marks a new phase of life. More than eighty percent see menopausal woman as men. Most (91.2%) also perceived of menopause as a natural occurrence that does not need to be reported in the hospital. More than half (60.9%) do not feel that women should tell anyone when they reach menopause. Also, 68.3% do not perceive of menopausal women as people who are respected. More than half (55%) do not perceive menopausal women as people who have lost their youthfulness. Many participants (70%) believe that women who engage in sexual intercourse after menopause become sick and therefore recommend that menopausal women should not have sex anymore. Many (59.2%) observed that men do not like having

sexual relations with women who are menopausal. participants do not perceive of menopause as a condition to be reported in the hospital.

Many also regarded old age as meaningful if this stage of life is spent in good health. One discussant puts this view aptly when she said;

"Now that we are old we pray that we would eat the fruit of bearing and raising children, that we would not eat it in ill health, (other participants nodded their heads in agreement) no, it (ill health) would not hinder us from eating it and we would eat it for long" (everybody echoes amen) (56 year old trader, Oyapidan)

Old age marks a period in one's life when children are regarded as their insurance for old age. When the economic status of one's children is high it is assumed that their parents would also benefit from them. Old age is synonymous with having children who are successful who would look after their aged parents. Expectations during old age are very high with the onus of care falling primarily on the children of old people. A discussant sees it as a change of role where children,

"...take up the responsibility of caring for their parents who have become children due to old age."(64 year old, Odo-oba)

Menopause experience

Experience of menopause among participants was assessed using the various symptoms that were likely to present. Ability to recall in the last one month was used to assess what their experiences had been. In all, 19 experiences were captured and assessed. Summary can be found in Table 2. Two hundred and one respondents (83.8%) affirmed that they have had at least one symptom of menopause while 39(16.3%) have never experienced any symptom of menopause.

The menopausal experiences were categorised into four types namely somatic symptoms, hormonal deficiency symptoms, emotional/psychological symptoms and skeletal symptoms. These categories can be found in Table 2. Somatic symptoms were found to be low among participants as there were barely any of the symptoms that exceeded 20%. Participants who experienced night sweats were 44(18.3%) while those who experienced hot flush/ internal heat were 37 (15.4%). Hormonal deficiency symptoms were found to be high among participants with dryness of the vagina rating as the highest (81.3%), pain during intercourse(76.7%), loss of sexual urge(69.6%), hair loss (66.3%), Urinating more than usual (18.3%), sleep disturbances (16.7%), leaking urine (12.1%), skin crawling or itching (12.1%) Emotional/psychological symptoms were very low among participants. Headaches was ranked as the

highest as 33.8% participants reported they had headaches, 20.4% reported that they forgot things easily, 10.8% had difficulty concentrating, 10.4% were in a depressive state, 9.6% very irritable and 9.2% felt like crying. Skeletal symptoms were also reported among participants. Majority (74.2%) identified joint pains as a major signs that they experienced, 38.3% documented that they had waist pain while 18% reported that they gained weight. Of all the symptoms, dryness of the vagina (an hormonal deficiency symptom) was found to be highest among the symptoms 195(81.3%) while those who felt like crying (an emotional/psychological symptom) were the lowest 22 (9.2%) (Figures 2 and 3).

Coping strategies of menopausal experiences

Participants’ coping strategy was assessed in order to exhaust the different coping methods that were used to alleviate the 19 listed symptoms included in the questionnaire. Two hundred and one (83.8%) had ever experienced at least one symptom of menopause and only a few 79 (32.9%) of the participants attempted to alleviate the discomforting experiences associated with it. Table 3 & 4 show a summary of various coping strategies employed by the respondents.

In all, there were four hundred and fourteen responses to this section of the questionnaire. Of this 161 (38.9%) still did nothing while 253 (61.1%) tried one remedy or the other. Table 4.6 shows attempt5d remedies in detail. Of the proportion that attempted to cope, self medication (either the use of drugs or herbs)

ranked highest 120 (47.4%) The least mentioned coping mechanism was sleeping in the afternoon 5(1.9%).

Table 2:
Symptoms associated with the experience of menopause (n=240)

Symptoms	Yes (%)	No (%)
Somatic symptoms		
Night sweats	44 (18.3)	196 (81.7)
Hot flush/ Internal Heat	37 (15.4)	203 (84.6)
Hormonal deficiency symptoms		
Dryness of the vagina	195 (81.3)	45 (18.7)
Pain during intercourse	184 (76.7)	56 (23.3)
Loss of sexual Urge	167 (69.6)	73 (30.4)
Hair loss	159(66.3)	81(33.7)
Urinate more than usual	44 (18.3)	196(81.7)
Sleep disturbances	40 (16.7)	200 (83.3)
Leaking urine	29(12.1)	211(87.9)
Skin crawling or itching	29(12.1)	211 (87.9)
Emotional/Psychological symptoms		
Headaches	81(33.8)	159(66.2)
Forgetting things easily	49 (20.4)	191 (79.6)
Difficulty in concentrating	26 (10.8)	214 (89.2)
Depressive state	25 (10.4)	215 (89.6)
Feeling irritable	23 (9.6)	217 (90.4)
Felt like crying	22(9.2)	218 (90.8)
Skeletal symptoms		
Joint pains	178 (74.2)	62 (25.8)
Waist pain	92(38.3)	148 (61.7)
Gained weight	44 (18)	196 (81.7)

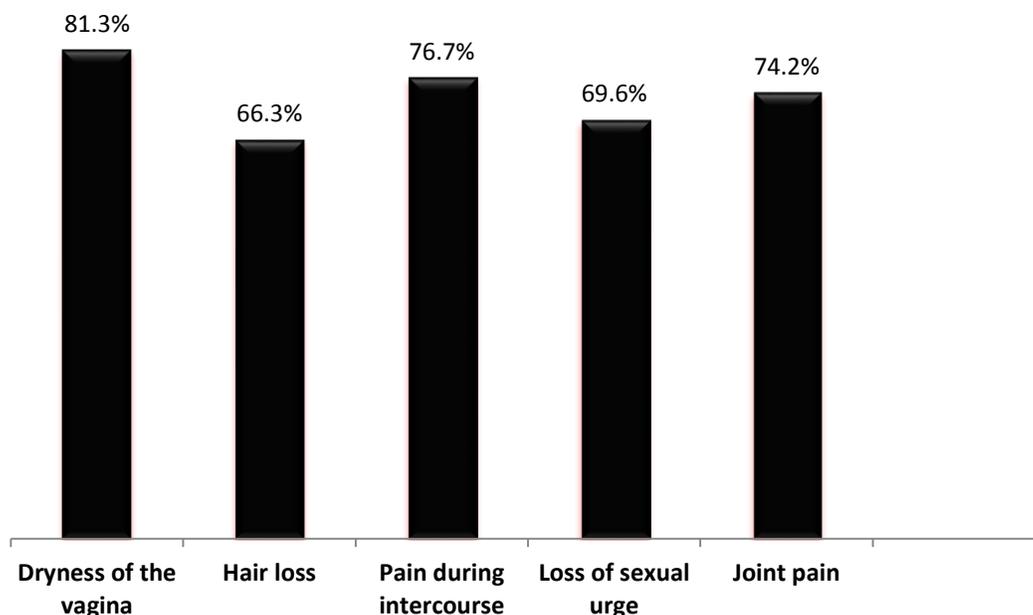


Figure 2:
Most reported symptoms of menopause

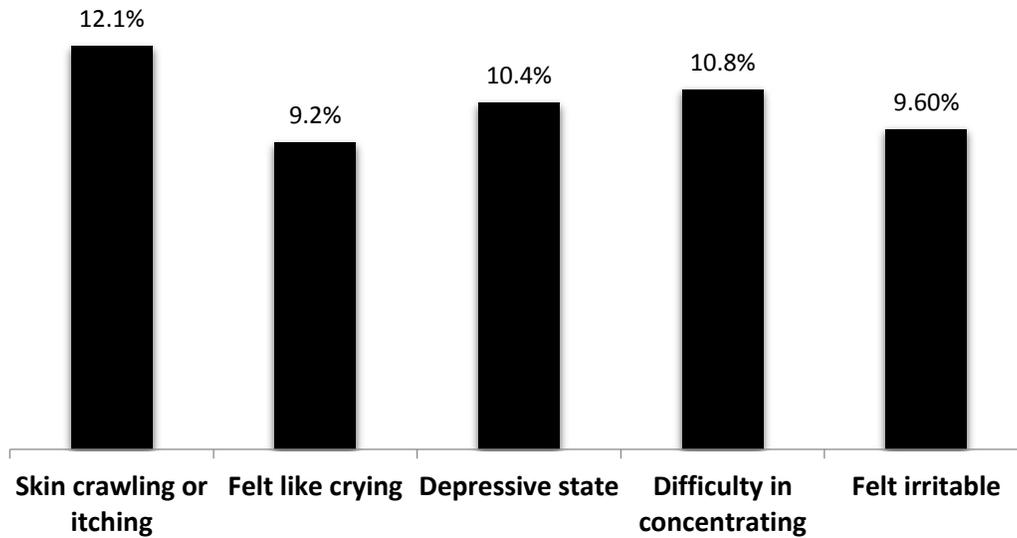


Figure 3:
Least reported symptoms of menopause

Table 3:
Attempts made by women to cope with menopause

	No (%)
Participants who attempted at least one remedy	79(32.9)
Participants who made no attempt	161 (67.1)
Total	240 (100%)
Women who perceived coping strategies were effective	206 (49.75)
Women who perceived their coping strategies were ineffective	208 (50.25)
Total	414 (100%)

No coping mechanism was attempted for loss of sexual urge. Of the 38 (48.1%) who reported that they attempted coping strategies for other discomforting symptoms and also reported loss of sexual urge 33 (86.8%) reported that doing nothing to their loss of sexual urge was effective. Thirty (37.9%) reported doing nothing to their hair loss and 29(96.6%) affirmed that doing nothing was not effective .

Almost all agreed that they adjusted by shifting focus away from the challenges that menopause brings to their children and grandchildren. A discussant regards this shift as;

“...bidding farewell to the stress of going near men.” (65 year old retiree, Yejide area)

Where the challenge that abounds basically is how to avoid sex, most participants were of the view that when they avoid sex, these physical changes that they have noticed do not occur and when they do, it is minimal. Many were in agreement with the view which was aired by a discussant below;

“Some of us have husbands who have many wives, when they notice that a particular wife is no longer interested in having intercourse, they shift attention to other willing wives. Some other women have only one husband. Such women may tell their husbands to get younger wives for themselves.” (65 year old retiree, Yejide).

Table 4:
Types of strategies adopted by women to cope with menopause

Coping mechanism	No (%)
Self-medication	
Use of drugs	87(34.38)
Use of herbs	33(13.04)
Stopped having sex to avoid pains during sex, loss of sexual urge	33(13.04)
Took bath while hot or could not sleep	14(5.5)
Body massage to reduce pains in my joint and waist	13(5.1)
Tell my relatives to remind me about things I forget	13(5.1)
Put a bowl in the room to urinate into at night	12(4.7)
Rob palm oil on my body when my body itches	10(3.9)
Prayed	9(3.55)
Ran away to avoid sex with spouse	9(3.55)
Reduced fluid intake to reduce urination	8(3.2)
Went to the hospital	7(2.7)
Sleep in the afternoon to catch up with lost sleep at night	55(1.9)

*Multiple responses

DISCUSSION

All participants were female who were already menopausal. Menopause is peculiar to women as it is a stage in the cycle of reproductive aging of women which is universal (Zulkefli and Sidik, 2003; Thomas, 2005). Participants were aged between 46-69 years. Mean age of participants at menopause was 46.1 years, which is lower than figures from the western world (Gold et al, 2001; WHO, 1996) but it is in agreement with the findings from Okonofua et al, 1990 and Agwu et al, 2008), although Ozumba and colleagues (2004) documented a slightly higher mean age at menopause as 49.4 years. Beyene (1989) opined that low nutritional status due to low socio-economic status may be responsible for reaching menopause early. A large majority of the participants were from low socio-economic status. The study shows varying marital status with those who are still married being the highest and those who are divorced being the lowest. Polygamy was higher among participants compared to monogamy. This may be in consonance with the predominant religion (Islam) practised among participants and the fact that it is a common cultural practice in Yorubaland.

Due to the location of the study site which is a Yoruba speaking state, most participants are Yorubas where parity was high as also confirmed in the study. This confirms the Nigeria Demographic and Health Survey (2008) report which stated Total Fertility Rate (TFR) as 5.7 which could increase when level of education and socio-economic status of women are low. Slightly more than half of the participants have no form of formal education. Many participants were born around the era when free primary education was established in the western region. Preference for the boy child and the practice of early marriage for the girl child may be the reason why many did not have any formal education. Most of the participants in the study were artisans thus implying that they are of low socio-economic status. This may also be as a result of the selected study site which is an inner core area where traditional lifestyles believe in bearing a large number of children (Mingo et al, 2000; Rasmussen, 2000).

The level of awareness of menopause was high among respondents. They were of the opinion that it is an inevitable stage in the cycle of reproduction but majority were not informed about the likely signs of menopause. This may be connected to the finding that more than half of them did not experience the signs of menopause. Rice (1995) opines that a woman who belongs to a culture that perceives that menopause is symptom free may not experience signs of menopause since they did not know what the symptoms are.

The major source of information on menopause for participants was from significant others such as mother, sister, aunt and friends. Agee (2000) stated that transfer of knowledge about menopause from mother to daughter was much more common among African-Americans than white women. Filipino women also obtained information about menopause from female relatives (Berg and Lipson, 1999). Findings from this study revealed that health care providers were among the least source of information about menopause to participants. Zulkefli and Sidik (2003) reported medical and health personnel as those who provide the least source of information about menopause in a study carried out among teachers in Malaysia. This may be due the lack of knowledge of participants about the signs of menopause which even when they occur, they may not regard them as signs of menopause. Hence, they may not report them at the health facility. Women who are pregnant have course to visit health facilities for ante-natal and post natal services and they are readily provided with vital information that is relevant to their stage. The opportunity to meet women during menopause does not exist.

More than half of the respondents had never heard about the symptoms associated with menopause. Those who said they were aware mentioned stomach pain, big stomach, and black blood among other as symptoms of menopause while almost half of those who were aware mentioned irregular menstruation, itching body, hotness of the body as symptoms. Wambua (1997) also reported in the study he carried out on menopausal women from Nairobi, Kenya that black blood and stomach pain were regarded as symptoms of menopause.

Study showed that many participants could identify old age as the cause of menopause but few knew that there are risks associated with menopause. Risk factors associated with menopause include infertility, swelling of stomach, becoming sick among others. A study carried out by Wambua (1997) revealed that menopausal women from Nairobi, Kenya lacked understanding about the risk associated with menopause. Many participants only know that menstruation stops but do not know when it can be said that it has finally occurred. The explanation of how menopause literally occurs and the risks associated with it are scientific and may not be what can be explained in lay terms.

Few participants were aware of the causes of early or premature menopause. Reasons given for this include, starting menstruation early, not having sex regularly, illness, using family planning, bearing children early and having sex regular. Rice (1995) documented similar responses among Hmong women from South-East Asia. This level of knowledge about

menopause is related to the level of education as a low level of education will not avail participants to source for more information about menopause (Ozumba et al, 2004). Thomas (2005) documented a slightly contrary view on the effect of education on knowledge about menopause. Her study revealed that there was little correlation between the reported level of education and knowledge about menopause.

From the FGD, many agreed that menopausal women have become men. Chirawatkul et al, (2002) stated that menopause among Thai women implied a change in status whereby women were able to discuss issues that were formerly discussed among men only. Rice (1995) also documented that women would become clean like men after menopause. Menopause brings a radical change in the relationship of man and woman. More than half the women totally lack interest in sexual activities and become withdrawn. With menopause there is lack of necessary and essential hormones. As a result of this, there will be decrease in the flow of blood in the vagina. There is consonance between findings of this study on this issue and that of Chirawatkul et al (2002). Almost all respondents held the view that menopause bring an end to sexual relations between a man and a woman.

Sexual activity among participants was low. Adekunle et al, (2000) and Okunofua et al, (1990) carried out studies in the South west Nigeria and they documented similar findings on the level of sexual activity. Okunofua et al (1990) stated a lesser prevalence of sexual activity among their study population. It was gathered from the FGD that those who still engage in sexual activities do so to avoid the disruption of their marital homes to gain favours from their spouses and to compete with others wives in polygamous homes. Olawoye et al, (1998) agreed with this view point as they also reported that some still engage in sexual activity in order to avoid the disruption of their marriage.

The participants had a misconception about the effect of sex on the health of a menopausal woman. Many participants opined that sexual activity after menopause makes a woman sick. With menopause there is lack of necessary and essential hormones - estrogen and progesterone in the body. This will decrease the flow of blood in the vagina. As a result, walls of vagina will become thinner and they will lose their elasticity. These factors cause discomfort while having sexual intercourse. There may be irritation and infection too causing serious aversion to sexual intercourse. Thus menopause, all over the world, is believed to be a cause in the decrease in sexual activity. However, experts believe that this may not always be so. Menopause is the stage when no ovulation takes place in a woman's body

and this is related to her reproductive cycle and not to her sex drive (Hill,1995).

Furthermore, FGDs revealed that participants regarded menopause as an avenue to take care of their grandchildren since sexual relations with their husbands was no longer existent. Rice (1995) reported that the Hmong women from South east Asia also hold this view. This view point is explained accurately by the grandmother hypothesis which explains why menopause arose in human evolution, and how late life infertility could actually confer an evolutionary advantage. (Austad, 1994).

Menopausal symptoms are common to most women, but variations reflect differences in attitudes, societies, and individual perceptions (Speroff, 2002). In this vein, respondents were able to recall that they experienced at least one symptom of menopause. participants reported dryness of the vagina, pain during intercourse and loss of sexual urge as some of the highest symptoms of menopause. This may occur when the walls of vagina become thinner and thus it loses its elasticity. Joint pains were also documented as a symptom. Joint pain was reported as high in the study carried out by Okunofua, et al (1990) A very low proportion reported that they did not experience any sign of menopause. Many Chinese women also reported not having any symptom though the proportion was very high among them (Shea, 2006). The same was recorded among Hmong women of South East Asia (Rice, 1995).

Prevalence of night sweat and hot flush was low among participants compared to some other studies where these symptoms were reported as high (Agwu et al, 2008; Ozumba et al, 2004; Nusrat et al, 2008). Also, participants were emotionally and psychologically stable as symptoms under this category were the least reported. The stability of participants may be because they are no longer under pressure to fight for their husband's attention.

Effective health promotion and education can help people to maintain and improve their health, reduce and manage illness. This can thus improve the wellbeing and self-sufficiency of individual, families, organizations and communities at large (U.S Department of Health and Human Services, 2005).Some gaps were identified as a result of the study. These include a low level of knowledge about menopause, its symptoms and the risks associated with it, misconceptions about sex during and after menopause, avoiding sex by living separately from spouses, self-medication and a low level of involvement of health care providers in the provision of information about menopause.

Also, there are some implications for health promotion and education. There is need to create

awareness about menopause among women in their reproductive age in order to help them prepare for this stage of life. Women who are already menopausal can be trained as peer educators in order to educate other menopausal women in churches and mosques. Information, education and communication (IEC) messages can be developed to address knowledge and attitude about menopause. Support can be given to menopausal women through individual and couple counselling. Counselling of couples can be very valuable for partners in mid-life. Women need to educate their partners about the changes that occur in their bodies as well as those they experience. They can build mutual support by keeping one another informed.

Also, health care providers can be trained on communication skills to enhance doctor-patient relationship between them and menopausal women. Awareness can be created about menopause as a reproductive health issue among health care providers. Health care providers need to play a greater role in delivering health messages about menopause to the public in general and women in particular. Health care providers must also assess and manage correctly the risk factors for common health problems among perimenopausal and/or menopausal women, including osteoporosis, heart disease, and cancers. They should offer screening tests and exercise that are appropriate for menopausal women.

Information should be provided on the importance of having regular balanced diet for every woman in different age groups order to help reach menopause later and to reduce the signs of menopause. Furthermore, advocacy can be targeted towards government and policymakers, unilateral and bilateral agencies so that menopause can be addressed properly. Though, it is a reproductive health issue, it can be given attention as women in their children bearing age will eventually become menopausal.

Women were aware about irregularity of menstruation as a symptom of menopause; though they experienced other symptoms they could not relate them to menopause. The source of information among participants reveals that medical and health personnel do not provide adequate information about menopause. There are misconceptions that need to be corrected about menopause which could be corrected by medical and health personnel.

Also, the attitude of participants towards menopause was positive. They experienced more hormonal deficiency symptoms of menopause like, dryness of the vagina, pain during intercourse and loss of sexual urge than somatic and psychological symptoms.

In conclusion, the study revealed that menopausal women in the study group did not know about the risks associated with menopause. They regarded sex as the cause of most illnesses that occur in women after menopause thus sex is highly discouraged among menopausal women. They looked forward to getting older and becoming like men. Many participants did nothing about the symptoms they experienced while those who made any attempt tried remedies like self medication, body massage, praying, stopped having sex. Only a very small fraction visited the hospital.

References

- Adekunle, A.O., Fawole, A.O. and Okunlola, M.A. (2000):** Perceptions and attitude of Nigerian women about the menopause *Journal of Obstetrics and Gynaecology*, Vol. 20, No. 5: 525-529.
- Agee, E. (2000)** Menopause and the transmission of women's knowledge: African American and white women's perspectives, *Medical Anthropology Quarterly*, 14(1) pp. 73-95.
- Agwu, U.M., Umeora, O.U.j. and Ejikeme, B.N. (2008):** Pattern of menopausal symptoms and Adaptive ability in a rural population in Southeast Nigeria. *Journal of Obstetrics and Gynaecology* 28(2) pp.217-21.
- Austad, S.N. (1994):** Menopause: an evolutionary perspective. *Experimental Gerontology*, May-Aug.; 29(3-4) 255-63.
- Avis, N.E. and Mckinlay, S.M. (1995):** Massachusetts health study: An epidemiological investigation on the menopause. *Journal of American Medical Women's Association*, Mar-Apr 50 (2): 45-9, 63.
- Berg, J. M. and Lipson, J. (1999):** Information sources, menopause beliefs and health complaints of midlife Filipinas. *Health Care for Women International*, 20, 81-92.
- Bowles, C.L. (1990):** The menopausal experience: socio-cultural influences and theoretical models. Formanek R, ed. *The meanings of menopause: historical, medical and clinical perspectives*. Hillsdale, NJ: Analytic Press, 157-75.
- Berger, G.E and Wenzel, E. (2001):** Women, body and society. Cross-cultural differences in menopause experiences. Downloaded from <http://www.ldb.org/menopause.htm> on the 16th December, 2010.
- Beyene Y (1989):** From menarche to menopause: reproductive lives of Peasant women in two cultures, Albany: State University of New York Press.
- Buxton-Blake, P. (2003)** Recognizing menopausal symptomatology. *Home Health Care Management Practice*. Vol. 15.147: pp. 147-151.
- Chirawatkul, S., Patanasri, K. and Koochaiyasit, C. (2002):** Perceptions about menopause and health practices among women in northeast Thailand. *Nursing and Health Sciences*. Vol.,4.No.3: pp.113-121.
- Chow, S.N., Huang, C.C. and Lee, Y.T. (1997):** Demographic characteristics and medical aspects of menopausal women in Taiwan. *Journal of the Formosan Medical Association*. Vol. 96.No10.

- Dennerstein, L. (1996):** 'Well-being, symptoms and the menopausal transition', *Maturitas* 23: 147-157.
- Elias, C. and Sherris, J., (2003):** Reproductive and sexual health of older women in developing countries, *BMJ*, 327: 64-65.
- Fedigan, L.M. and Pavelka, M.S.M. (1991):** Menopause: A comparative life history Perspective. *Yearb Phy Anthropol* Vol. 34. nos 13. pgs. 13-38.
- Flint, M.P. (1997):** Secular trends in menopause age. *Journal of Psychosomatic Obstetrics. and Gynaecology*. Vol.18: pp.65-72.
- Fischl, F. (1992):** Contraceptive in the climacteric. *Wiener Medizinische Wochenschrift*. Vol. 142 (5-6) 4.
- Formanek, R. (1990):** Continuity and the change of life. R.Formanek. Ed. *The Meanings of Menopause*, Hillsdale, NJ: The Analytic Press. pp.3-41.
- Gold, E.B., Bromberger, J., Crawford, S., Samuels, S., Greendale, G.A., Harlow, S.D. and Skurnick, J. (2001)** Factors associated with age at natural menopause in a multiethnic sample of midlife women, *American Journal of Epidemiology*, vol.153. No.9: pp. 865-74.
- Harlow, S.D. and Paramsmothy P. (2011):** Menstruation and the menopause transition. *Obstetrics and Gynaecology Clinics of North America*. Vol. 38 No. 3: pp. 595-607.
- Hill, K. (1995):** The demography of menopause. Baltimore, Maryland: Johns Hopkins Population Centre, WP 95-07
- Khan, H., and C.G., Hallad, S.J. (2006):** Age at menopause and menopausal transition: Perspectives of Indian rural women. Retrieved on the 5th July, 2009 from <http://www.princeton.edu/download>.
- Ismael N. (1994):** A study on the menopause in Malaysia. *Maturitas*. Vol.19:205-9.
- Hill, K. (1995):** The demography of menopause baltimore, Maryland: Johns Hopkins Population Center, WP 95-07 Papers On Population.
- Hawkes, K., O'Connell J.F., Blurton Jones, N.G., Charnov,E.L. and Alvarez, H. (1998):** Grand-mothering, menopause and the evolution of human life histories.Proceedings of the National Academy of Sciences (USA) 95:1336-1339.
- Kandil O. F., Hassanien, M.K., Kandil, H.O. and Fata, A.M. (1999):**. The Menopausal age and distribution of menopausal symptoms among some Egyptian women. *Journal Egyptian Society Of Obstetrics and Gynecology*. Vol.25: 10-12.
- Kwawukume E.Y., Ghosh T.S. and Wilson J.B., (1993):** Menopausal age of Ghanaian women. *International Journal Gynaecology Obstetrics* Vol. 40:151-5.
- McMaster, J, Pitts, M., and Poyah, G. (1997):** The menopausal experiences of women in a developing country: there is a time for everything: to be a teenager, a mother and granny in women health; 26 (4): 1-13.
- Melby, M.K., Lock, M. and Kaufert, M. (2005):** Culture and symptom reporting at menopause. *Human Reproduction Update*. Vol. 11, No. 5: pp. 495-512.
- Mingo, C., Herman, C. J. and Jasperse, M. (2000):** Women's stories: ethnic variations in women's attitudes and experiences of menopause, hysterectomy and hormone replacement therapy. *Journal of Women's Health and Gender-Based Medicine*, Vol. 9(Suppl. 2), S-27-38.
- Morabia, A. and Costanza, M.C. (1998):** The world health collaborative study of neoplasia and steriod contraceptives: international variability in age at menarche, first livebirth and menopause. *American Journal of Epidemiology*. Vol. 148:1195-1205.
- Moronkola, O.A., Ojediran, M.M. and Amosu, A. (2006):** Reproductive Health Knowledge, beliefs and determinants of contraceptives use among women attending family planning clinics in Ibadan, Nigeria. *African Health Science*.6(3): 155-159.
- National Population Commission (NPC) and ICF Macro. (2009).** Nigeria Demographic and Health Survey 2008.Abuja: Nigeria: National Population Commission and ICF Macro.
- Nusrat, N., Nishat, Z., Gulfareen, H., Aftab, M. and Asia, N. 2008. Knowledge,Attitude and Experience of Menopause., *Journal of Ayub. Med. Coll. Abbottabad*. Vol. 20. No.1. pp. 56-59.
- Odum, C.U., Anorlu, R.I. and Ohaya, N.I., (1999):** Clinical presentation and management of menopause in Lagos, Nigeria. *International Journal of Gynecology and Obstetrics* Vol. 66 (3).
- Okonfua, F.E., Lawal, A. and Bamgbose, J.K., (1990)** Features of Menopause and Menopausal Age in Nigerian Women. *International. Journal of Obstetrics* 31(4):341-5.
- Olawoye, J.E., Olarinde, E. S. and Aderibigbe, T.O. (1998):** Women and menopause in Nigeria. Ibadan: The Social Sciences and Reproductive Health Research Network (SSRHN)
- Osei-Hyiaman, D., T. Satoshi, T., Ueji, M., Hideto, T. and Kano, K. (1998):** Timing of menopause, reproductive years, and bone mineral density *American Journal of Epidemiology*. Vol.148 (11).
- Ozumba, B.C., Obi, S. N., Obiliki, E. and Waboso,P. (2004):** Age, symptoms and perception of menopause among Nigerian women. *Journal of Obstetrics. Gynaecol. Ind*. Vol.54, No. 6: pp.541-542.
- Population Reference Bureau. (2010):**. Fact sheet on Nigeria. Downloaded on 23th June, 2010 from <http://www.prv.org/template.cfm>
- Rasmussen, S. J. (2000):** From childbearers to culture-bearers: transition to post childbearing among Tuareg women. *Medical Anthropology*, 19, 91-116.
- Rice, P.L. (1995):** Pos laus, tsis coj khaub ncaws lawn: the menopause in Hmong women, *The Journal Reproductive and Infant Psychology* , Special Issue on Menopause, 13, 79-92
- Rizk, D.E., Bener, A., Ezimokhai, M., Hassan, M.Y. and Micallef, R. (1998):** The age and syptomatology of natural menopause among united Arab Emirates women *Maturitas*. Vol.29(3).
- Sai, F. and Nassim, J. (1989):** The need for a reproductive health approach. *International Journal of Gynaecology and Obsterics* Suppl. 3.
- Sayed, G.H, El-Nashar, I.H., Nasr, A., El-Gebaly, O., M. M. and Shaaban,M..M.. (2000):** The menopausal transition-an egyptian perspective. *Journal of Egyptian Society of Obstetrics and Gynaecology* 25 (7-9).

- Shea, J.L. (2006):** Chinese women's symptoms: relation to menopause, age and related Issues. *Climacteric* Vol.9(1): 30-9.
- Speroff, A. (2002):** The perimenopause: definitions, demography, and physiology. *Obstetrics and Gynecology Clinics of North America*, 29, 397-410.
- Sundquist, K. (1997):** Menopause: A natural part of life. *Lamp*. Vol 54(6), pp.27-28.
- The Centre for Reproductive Law and Policy (1998):** Women's reproductive rights in Nigeria: a shadow report. Retrieved on 12th December, 2008 from <http://www.reproductiverights.org>
- Thomas F., Renaud F., Benefice E., De Meeus T. and Guegan J. (2001):** International variability of ages at menarche and menopause: patterns and main determinants. *Human Biology*, Vol.73 No.2: pp.271-290.
- Thomas, S.E. (2005):** Menopause knowledge and attitudes of english speaking Caribbean women: implications for health education. *Californian Journal of Health Promotion*. Vol. 3, Issue 3, 167-176.
- U.S. Department of Health and Human Services (2005) Theory at a Glance retrieved on the 22nd of October, 2007. National Institutes of health.
- Upton, G.V. 1982.** The perimenopause: physiologic correlates and clinical management. *Journal of Reproductive Medicine* 27(1),pp.1-27
- Utian, W.H., 1980.** Menopause in modern perspective: a guide to clinical practice. New York: Appleton-Century-Crofts.
- Wambua, L.T. 1997.** African perceptions and myths about menopause. *East African Medicine Journal*, Vol.74 (10): pp 645-46
- World Health Organization Scientific Group. (1996):** Research on the menopause in the 1990s. WHO Technical Services Department series no. 866. Geneva, Switzerland: World Health Organization.
- Xu, J., Bartoces, M., Neale, A.V., Daily, K.R., Northup, J. And Schwartz, K.L. (2005):** Natural history of menopause symptoms in primary care patients: a metronet study. *Journal of the American Board of Family Practice* 18 (5): 374-38
- Zulkefli, N.A. and Sidik, S. (2003):** Prevalence of menopausal symptoms among female teachers in Seremban, Negeri Sembilan, *Asia Pacific Family Medicine*, Vol.2:235-238.