

ANALYSIS OF HEALTH CHALLENGES FACING MENOPAUSAL WOMEN IN OGBOMOSO, OYO STATE: IMPLICATIONS FOR FAMILY LIFE COUNSELLING

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ABSTRACT

Menopause is not a disease; it is a natural phenomenon that occurs in the life cycle of women. Menopause is characterized by cessation of menstruation and hormonal decline. Symptoms such as vagina dryness, reduced libido, hot flashes, and night sweats are usually attributed to it; which hinder the well-being of women. Therefore, this study investigates health challenges faced by menopausal women in Ogbomoso, Oyo State. This study is quantitative, and a descriptive survey design was adopted. The data was collected from 300 menopausal women aged 40-65 years. Questionnaire was used to collect data from the three Local Government Areas in Ogbomoso (Surulere, Ogo-Oluwa, and Oriire). The reliability and validity of the questionnaire were established. The study revealed that menopausal women in Ogbomoso are faced with the challenges of vaginal dryness, reduced libido, hot flashes, excessive fatigue, and poor memory. The results of the hypotheses revealed no significant differences in menopausal challenges on the basis of age and educational qualification. The study highlights the significance of family life counsellors in supporting menopausal women by providing emotional support and effective coping strategies. It was recommended that health care providers should regularly organize public awareness forums for women approaching menopause to keep them aware of menopausal symptoms and appropriate coping mechanisms to adopt. In addition, advocacy efforts should be planned to increase funding, provide facilities and specialists to cater for the needs of menopausal women in health centres and hospitals.

KEYWORDS: Menopause, Health Challenges, Menopausal Women, Counselling, Ogbomoso

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1. INTRODUCTION

The adult human female is biologically distinguished from male counterpart as a result of the presence of sex chromosomes (XX), mammary glands and the reproductive system. The female reproductive system comprises the internal and external organs. Some of these organs are ovaries, cervix, vagina, uterus, fallopian tubes and vulva. The functions of some of these organs are concerned with the production of eggs, secretion of hormones (oestrogen and progesterone) which facilitate the process of conception, pregnancy, childbirth and menopause.

Understanding the lifecycle of women revolves around recognizing the importance of reproductive health (Agbor, 2020); which involves the physical, mental and social well-being related to the reproductive system. This embraces a wide aspects of fertility, contraception, prenatal and postnatal care. In order to promote the reproductive health of women, Vizheh et al. (2021) opined that it is necessary to give adequate information and provide easily accessible healthcare services. The good health of women is essential for their well-being, family balancing, and community improvement. Women are vital components of the ecosystem; they contribute to making up and raising of younger generations. Women constitute a very important aspect of human beings; therefore, the survival of women should be given due consideration. A major aspect of women's reproductive health is the shift from the menstrual stage to menopause, which signifies the end of women's fertility periods.

The onset of menopause is as a result of the reduction of ovarian follicular function and a decrease in the circulating oestrogen levels in the blood (Nappi & Cucinella, 2020). The shift into the menopausal stage gradually arises with changes in the menstrual cycle and terminates when a woman permanently stops having menstruation, signalling the start of menopause (Adleman, 2024). This stage is usually called a change of life; which ends a woman's reproductive life and her ability to produce offspring. Menopause is completed when a woman has not had menstrual periods for twelve months consecutively, and the period resulting into this,

is described as perimenopause (McCarthy & Raval, 2020). This stage can last for several years and represents a significant shift from the reproductive years. During this transition, the number of mature eggs in the ovaries decreases, and ovulation becomes irregular.

Menopausal women are referred to as women who have stopped menstruating for a full consecutive year. Menopause is a crucial aspect of a woman's life. It occurs when the ovaries end the production of oestrogen and progesterone (Cyriac, Viswanath, and Thurkkada, 2024). According to Cook (2020), this experience typically occurs around the ages of 45 and 55 years. The process of menopause is usually marked by a reduction in the production of fertility hormones (oestrogen and progesterone). The results are night sweats, vaginal dryness, mood alteration, hot flashes, and a reduction in sexual responses.

Menopause is not a disease; it is a natural occurrence that every woman will attain. Menopause is usually associated with symptoms; according to Alam et al. (2020), the physical symptoms of menopause include hot flashes, night sweats, and a change in weight distribution, all of which can affect a woman's self-esteem and sense of health. In the opinion of Myint et al. 2021, the emotional symptom resulted in mood swings, irritability, and amplified emotional feeling, affecting both cognitive health and relationships. Similarly, George et al., 2022 added that menopause is manifested socially when women face adjustments in their roles and responsibilities due to discomfort, which results into changes in family dynamics and social engagements. Usman (2021) further added that the financial implications of menopause-related issues can exacerbate financial strain, therefore, compounding the stress of the transition. These symptoms are evidence that women need support and expert attention during menopausal period.

Menopausal women usually encounter series of physical challenges; hot flashes and night sweats are the most prevalent. The challenges emanated from the drastic

drop in the levels of hormones in the body particularly oestrogen which results into intense heat, distress, sweating, sleeplessness and disrupted daily activities (Sathiyaseelan et al., 2022). The aftermath effect of these changes is total discomfort and reduced quality of life. The manifestation of menopause can also be seen in the decrease of the bone mass which increases the chance of osteoporosis and fractures. In order to reduce the risks, Yong and Logan (2021) observed that supplements such as calcium and vitamin D should be recommended for menopausal women. Similarly, weight-bearing exercises and hormone replacement strategies are suggested to assist bone health and fracture risks. In addition to this, menopausal women also face the risks of heart related problems; these include but not limited to high blood pressure and heart diseases (Nappi et al., 2022). This may arise as a result of decrease in the level of lipids in the body and the distribution of fat. These challenges necessitate consistent heart screenings, implementation of healthy lifestyles and adoption of safe habits to combat the risks.

The challenges (emotional and mental health) experienced by women during menopause are multifaceted; which can greatly affect their condition. The fluctuation of the hormones resulted into mood swings, irritability and the situation made the menopausal women susceptible to depression and anxiety (Delanerolle et al., 2023). Interruptions in sleeping pattern which arise as a result of night sweats and insomnia can impair mental health; leading to a series of issues such as fatigue, poor attention and emotional tension. These situations emphasize the significance of a comprehensive health plan for women during menopause. Oyelekan et al. (2020) noted that a comprehensive health plan which includes behavioural therapies, efficient sleep and hygiene practices is highly required during this period. Olowokere and Atandero (2024) emphasized the necessity for support and open communication to assist menopausal women to navigate the challenges of this period.

The decrease in sexual desire and the experience of vaginal dryness are parts of the sexual difficulty often faced by menopausal women. This occurrence is usually attributed to the drastic reduction in the production of oestrogen in the body. Fisher et al., 2020 observed that such situation can result into discomfort and painful

sexual intimacy, thus complicating sexual interactions and reducing sexual satisfaction. As a result of the importance of sexual communication in a marital relationship, hormone therapy, vaginal lubricants, and moisturizers are often suggested to lessen the complications. Chilaka et al., 2021 added that such situation should be properly communicated between partners to foster mutual understanding and strengthen intimate relationship. Management strategies which would satisfy the couple should be looked into in order to combat the feelings of lowered attractiveness and reduced satisfaction. Olowokere & Atandero, 2024 raised the importance of a robust approach to mitigate the challenges; medical consultations, vaginal lubricants, oestrogen therapy are suggested. Similarly, a psychological approach such as counselling sessions can also be sought by menopausal women to improve self-esteem and body image.

Relevant to this study is the Biopsychosocial Model by George L. Engel (1977). The model proposed that health outcomes are the result of dynamic interactions between psychological, biological, and social factors, rather than being purely the result of biological dysfunction, as viewed by the traditional biomedical model. This integrative method stresses that an individual's well-being cannot be fully understood without considering the complex interaction among physical health, mental states, and environmental contexts (Engel, 1977).

In relation to menopause, the biological aspect comprises the physiological changes that accompany the cessation of ovarian function, such as reduced oestrogen levels, vasomotor symptoms (such as hot flashes and night sweats), genitourinary syndrome, and increased risks of osteoporosis and cardiovascular diseases (Santoro & Epperson, 2015; Davis et al., 2015). These changes are often characterized by psychological symptoms, including mood swings, anxiety, irritability, insomnia, and reduced self-esteem, which significantly impact a woman's mental health and overall quality of life (Freeman et al., 2014). Furthermore, the social dimension considers how menopause affects a woman's relationships, societal roles, recreation, employment, and cultural expectations about aging and femininity. In many cases, menopausal women may experience stigma, loss of status, or changing family responsibilities, all of which impact their psychosocial

adjustment (Hunter & Rendall, 2007; Mishra & Kuh, 2006).

The relevance of the Biopsychosocial Model in the context of family life counselling lies in its comprehensive view of health as embedded within personal and relational contexts. Family life counsellors are particularly well-positioned to respond to menopausal challenges from a holistic perspective. They can support women by offering emotional and psychological counselling to manage mood disturbances; facilitate open communication between partners and family members to reduce relational tension and misunderstandings; provide health education on menopause to empower women and their families with accurate information and encourage positive coping strategies and healthy lifestyle modifications that mitigate biological symptoms.

This integrative support is crucial, especially in societies where open discussion about menopause is limited or where women's emotional needs during midlife are overlooked. The model aligns closely with the goals of family life counselling, which seeks to promote well-being not only through individual healing but also through strengthening interpersonal and family systems. By using the Biopsychosocial Model as a theoretical lens, this study highlights the need for multidimensional interventions that address the interconnected nature of menopausal health challenges. It advocates for a counselling approach that is informed by biological realities, attuned to emotional transitions, and sensitive to social contexts thereby enhancing the support offered to menopausal women in a comprehensive and empowering way.

1.1 Statement of the Problem

Menopause is an inevitable phase for every woman that experiences menstruation. Women born with multitude of eggs stored in the ovaries. The ovaries through the assistance of the hormones oestrogen and progesterone control the menstruation. Therefore, menopause occurs when the ovaries stop the release of eggs monthly. The state of menopause often presents a series of challenges to women in this phase. The symptoms consist of sleep problems, hot flashes, night sweats, low sex drive, mood

swings, painful sexual relation, and urinary problems. Some menopausal women also exhibit joint and muscle aches, excessive hair loss, headaches, depression, loss of bladder control and loss of memory. The responses to these challenges could be mild or severe depending on several factors such as biological and medical influences, socio-economic status, public awareness, social interactions, educational attainment, support systems and environmental adaptation. These problems hinder the performance of daily activities, reduces performance at work, generates financial constraint, results in body weakness, and ultimately, it affects the overall well-being.

Researches have been conducted on menopause and menopausal experiences globally. For instance, the study of Simona, Rani and Raj (2023) focused on biopsychosocial problems faced by women during menopause; this study was conducted in India. Diri and Ighedose (2024) examined awareness level and challenges of menopausal women; this research was carried out in Yenagoa, Bayelsa State, Nigeria. Moreover, Ohamaeme, Egwurugwu, Ezeala, Ohamaeme and Ebuonyi (2017) investigated knowledge and awareness of menopausal coping strategies among women in Orlu, Imo State, Nigeria. Also, Ishak, Jamani, Arifin, Hadi and AbdAziz (2021) studied women's perceptions and experiences of menopause in Malaysia. Furthermore, Sophia, Marngar, Mol, D'souza and Frank (2022) worked on menopausal symptoms and coping strategies of menopausal women in Mangaluru and Nateri, Beigi Kazemi and Shirinkam (2017) worked on coping strategies towards menopause; this was carried out among women in Iran. There is a noticeable gap in studies specifically focused on women in Ogbomoso, Oyo State. Based on this, it is paramount to assessing the challenges of menopausal women from the sub-city and rural areas. This research specifically focused on women in Ogbomoso to find out if women in the sub-city are facing similar challenges during menopause. Therefore, this study investigates analysis of health challenges facing menopausal women in Ogbomoso, Oyo State.

Research Question

1. What are the health challenges of menopausal women in Ogbomoso?

Research Hypothesis

1. There is no significant difference in the health challenges of menopausal women in Ogbomoso based on age.
2. There is no significant difference in the health challenges of menopausal women in Ogbomoso based on educational qualification.

2. METHODOLOGY

The descriptive survey design, which adopted a quantitative method in the data collection, was adopted for this study. The study population comprised married women in Ogbomoso, Oyo State, while the target population was menopausal women in Ogbomoso. Ogbomoso is one of the prominent sub-cities in Oyo State, Nigeria. The town is made up of three Local Governments, namely: Oriire, Surulere, and Ogo-Oluwa. The inclusion criteria for this study are women who are literate and are within the age range of 40-65 years. 300 menopausal women were sampled through a multistage sampling procedure. The projected 2024 population estimates revealed that the population of married adults in Oriire, Surulere, and Ogo-Oluwa Local Government Areas (LGAs) is 253,000, 239,000, and 230,000, respectively. These sum up to 722,000 married adults. From this population, 300 menopausal women were proportionally sampled, which corresponds to: 105 (Oriire LGA); 99 (Surulere LGA), and 96 (Ogo-Oluwa LGA), respectively. A multi-stage sampling technique was used to select menopausal women from Oriire, Surulere, and Ogo-Oluwa LGAs in Ogbomoso, Oyo State. In the first stage, two wards were randomly selected from each LGA using a ballot method. In the second stage, key locations such as health centres, markets, and religious institutions were identified within the selected wards. Finally, purposive sampling was employed to recruit menopausal women who met the study's inclusion criteria in each of the LGAs. In some cases where menopausal women were not easily identifiable, snowball sampling was used to reach the respondents.

The questionnaire that was used for this study was designed by the researchers after a careful review of literature. The researchers carried out a test-retest type of reliability on the instrument. The questionnaire was administered twice at an interval of four weeks on menopausal women in Kwara State who were not part

of the respondents. The data collected was correlated using Pearson's Product-Moment Correlation, and a correlation coefficient of 0.88 was obtained. In order to check the validity of the instrument, it was given to experts in the Department of Educational Guidance and Counselling; experts from the Department of Health Promotion and Environmental Health Education, University of Ilorin, Nigeria. The corrections were noted and amended before being taken to the respondents. The consent of the respondents was sought before the administration of the questionnaire. The respondents were guided on how to fill the questionnaire appropriately, and the copies of the questionnaire were retrieved after the administration for analysis. The data collected was analysed using mean at 2.50 benchmarks and Analysis of Variance at 0.05 alpha level.

3. RESULTS

Table 1: Percentage Distribution of Respondents

Variable	Category	Frequency	%
1. Age	40- 45 years	70	23.3
	46- 50 years	78	26.0
	51- 55 years	59	19.7
	56 years and above	93	31.0
	Total	300	100.0
2. Years in Marriage	10 years and below	132	44.0
	11 years and above	168	56.0
	Total	300	100.0
3. Educational Qualification	Primary School Certificate	21	7.0
	SSCE	61	20.3
	NCE/ND	112	37.3
	First Degree/HND	78	26.0
	Postgraduate	28	9.3
	Total	300	100.0

Research Question: What are the health challenges of menopausal women in Ogbomoso?

Table 2: Mean and Rank Order on the health challenges of menopausal women in Ogbomoso

N	Challenges of Menopausal women include:	Mean	Std. D	Rank
12	decrease in fertility	3.67	.470	1 st
10	Vaginal dryness	3.30	.574	2 nd
7	excessive weight gain	3.17	.759	3 rd

1	serious fatigue	2.80	.904	4 th
6	decreased libido	2.75	.910	5 th
14	decreasing work productivity	2.75	.933	5 th
13	poor memory	2.68	.966	7 th
5	regular night sweats	2.51	1.052	8 th
15	joint stiffness	2.36	.910	8 th
9	regular muscle pain	2.28	.990	10
4	regular sleep disturbance	2.27	.751	10 th
3	unnecessary mood swings	2.20	.882	12 th
8	difficulty in concentrating	1.97	.606	13 th
2	frequent hot flashes	1.93	.616	14 th
11	bladder problems	1.87	.790	15 th

Table provide details on possible health challenges experienced by menopausal women in Ogbomoso using mean scores and rank order.

Hypothesis One: *There is no significant difference in the health challenges of menopausal women in Ogbomoso based on age.*

Table 3: Analysis of Variance showing difference in the health challenges of menopausal Women in Ogbomoso based on age.

Group	Sum of Squares	Df	Mean Square	F	p-value
Between Groups	11.528	3	3.843	.243	.866
Within Groups	4674.819	296	15.793		
Total	4686.347	299			

Table 2 showed the analysis of variance (ANOVA) result on significant difference in the health challenges of menopausal women in Ogbomoso based on age. The F-value of 0.243 with p-value (Sig.) of 0.866 is greater than 0.05 significant level.

Hypothesis Two: *There is no significant difference in the health challenges of menopausal women in Ogbomoso based on educational qualification.*

Table 4: Analysis of Variance showing difference in the health challenges of menopausal Women in Ogbomoso based on educational qualification.

Group	Sum of Squares	Df	Mean Square	F	p-value
Between Groups	5.211	4	1.303	.082	.988
Within Groups	4681.136	295	15.868		
Total	4686.347	299			

The analysis of variance (ANOVA) results provided explanation for the null hypothesis two regarding the health challenges of menopausal women in Ogbomoso based on educational qualification. The F-statistic is 0.082 with a corresponding p-value of 0.988.

4. DISCUSSION

According to the result of this study, out of 300 menopausal women, 31% belonged to 56 years and above and the menopausal women who have spent more than 11 years participated more with a percentage of 56. The majority of the menopausal women possess the Nigerian Certificate in Education (NCE) qualification. The finding of this study showed that menopausal women from Oriire, Surulere, and Ogo-Oluwa LGAs in Ogbomoso, Oyo State experienced the challenges of menopause such as fertility decline, dryness of the vagina, frequent night sweat and fatigue. Diri and Ighedose (2024) reported hot flashes, insomnia and night sweats as menopausal challenges experienced among women. This finding is in line with the findings of research conducted among menopausal women in Ogbomoso. Abodunrin et al. (2017) observed that the challenges of women during menopause comprise vaginal dryness, fatigue and hot flashes. The finding is similar to the challenges of menopause among respondents in Ogbomoso. Ogbah and Omozuwa (2018) found that vagina dryness, decreased sexual libido and joint pain are the challenges experienced by women during menopause.

This finding is in agreement with the responses of menopausal women in Ogbomoso. There is also a similar agreement in the findings of this study and Akindele et al. (2023) who also found that the experiences of menopausal women are internal heat, memory loss and insomnia. The reason for the resemblance in the findings of this study and the earlier researches may likely be the relatively stable cultural, social, and healthcare conditions in the area where this research was conducted. The experiences of menopausal women in rural and semi-urban parts of Oyo State appear to be consistent over time, possibly due to limited changes in health education, service delivery, and societal perceptions regarding menopause. The consistency across studies can also be attributed to the fact that menopause is a **natural, biological transition**

that occurs in all women, typically between the ages of 45-55 years. It is characterized with changes such as hormonal decline, cessation of menstruation, and associated symptoms (e.g., hot flashes, mood swings, and sleep disturbances). The uniformity in the findings can also be traced to predictable hormonal changes. The reduction in the level of oestrogen and progesterone hormones during menopause follows a biologically programmed pathway. This can lead women to experiencing similar symptoms during menopause.

The result of hypothesis one showed that there was no significant difference in the challenges experienced by menopausal women based on age ($p > 0.05$). This indicates that the challenges encountered during menopause are relatively consistent across different age groups among the respondents in the three LGAs. This finding corroborates Ogbah and Omozuwa (2018) which showed that no significant difference was found in the challenges faced by menopausal women on the basis of age. This suggests that menopause may present a broadly similar experience irrespective of age. This could be traced to the uniform nature of menopausal symptoms as well as similar socioeconomic conditions among women in the LGAs. The result of hypothesis two finds no significant difference based on educational level ($p > 0.05$). This finding differs from those of Khandehroo, Tehrani, Mahdizadeh, & Peyman (2022), which have shown that increase in education resulted in reduced complications. The discrepancy may be due to the cultural and contextual factors that are unique to Ogbomoso where the study was conducted. These factors might play a more influential role than educational level.

3.1 Implication for Family Life Counselling

Counselling is a professional helping process that involves providing guidance, support, and education to individuals facing personal, emotional, or psychological challenges. Counselling becomes especially crucial as it addresses the multifaceted health challenges that arise during the significant menopausal phase. The psychological challenges of menopause which include depression, mood swings, anxiety; and also the physiological challenges that comprise night sweats, hot flashes and sleeplessness are detrimental to the well-being of menopausal women. Therefore, comprehensive

family counselling is greatly essential to improve their well-being. The family life counselling approach is encompassing; it involves the integration of emotional support, social education, and effective management strategies to relief menopausal women of the challenges facing them. Cognitive Behavioural Therapy (CBT) has been proved to be effective in the management of anxiety disorder and mood swings.

The techniques of CBT can be employed by family life counsellors to reframe negative thoughts disturbing menopausal women and develop positive emotional responses. Family life counsellors can also engage in group counselling with menopausal women; this provides emotional support. The group counselling would also provide ample opportunity for menopausal women to express their problems and share experiences among peers. These experiences help reduce feelings of anxiety and equally lessen the stigma usually related to menopause. In addition, family life counsellor would also give healthy and accurate information to menopausal women to dispel the myths associated with menopause. The counsellor would also encourage menopausal women to regularly seek medical advice, adopt healthy life style, engage in physical exercise, adopt good nutrition and practice good hygiene. The intervention of family life counsellor would considerably provide psychological balance, and assist menopausal women navigate the challenges of menopause with great confidence.

3.2 Limitations of the Study

The study relied on self-reported data collected through a questionnaire. This may introduce response bias due to social desirability and cultural sensitivities. The study excluded non-literate women who may have unique menopausal challenges. This may affect the generalizability of the findings. The absence of qualitative data may limit the depth of insight into lived experiences of menopausal women.

5. RECOMMENDATIONS

Health care providers should create enabling environment to support women by enlightening them to understand the interconnectedness of different life

stages, ensuring their health and well-being from adolescence through the post-reproductive years. This approach helps create a population of women who are healthier, more informed, and empowered. Health care providers should regularly organize public awareness forum for women approaching menopause to keep them aware of menopausal symptoms and appropriate coping mechanisms to adopt. Counsellors should create awareness on the emotional and psychological impacts of menopausal symptoms; social media platforms are avenues for counsellors to interact with women globally. Healthcare providers should encourage interactive sessions with women approaching menopause and those that have experienced the stage. It creates safe space for women to share experiences, and it promotes social connections and offers emotional support. The awareness campaign should also be extended to family members; this will help to reduce social isolation and promote emotional acceptance during the transitional period. Advocacy efforts should be planned to increase funding, provide facilities and specialists to cater to the needs of menopausal women in health centres and hospitals.

6. REFERENCES

- Abodunrin Olugbemiga, L., Elias Risqat, O., Adebimpe Wasiu, O., Sabageh Adedayo, O., Ilori Oluwatosin, R. & Temitayo-Obor Abiola, A. (2017) 'Challenges and coping strategies adopted by menopausal women in a local government of South-Western State, Nigeria', *European Journal of Pharmaceutical and Medical Research*, 4(17), pp. 864–870.
- Adleman, L.M. (2024) 'Darwin turing dawkins: Building a general theory of evolution', *arXiv preprint arXiv:2402.10393*.
- Agbor, I.M. (2020) 'Access to reproductive health-care services and its impact on the health of women in Guma Local Government Area, Benue State, Nigeria', *Journal of Social and Political Sciences*, 3(2).
- Akindele, R.A., Omopariola, S.O., Adeyemo, A.T., Afolabi, B.A., Folami, E.O. & Bello, N.O. (2023) 'Prevalence of menopausal symptoms in Osogbo, South West, Nigeria', *Nigerian Journal of Medicine*, 32(2), pp. 155–160.
- Alam, M.M., Ahmed, S., Dipti, R.K. & Hawlader, M.D.H. (2020) 'The prevalence and associated factors of depression during pre-, peri-, and post-menopausal period among the middle-aged women of Dhaka city', *Asian Journal of Psychiatry*, 54, 102312.
- Chilaka, V.N., Ajayi, O. & Elshamy, T. (2021) 'Urogynaecology', in *Contemporary Obstetrics and Gynecology for Developing Countries*. Cham: Springer International Publishing, pp. 507–523.
- Cook, R.J. (2020) 'International human rights and women's reproductive health', in *Women, Medicine, Ethics and the Law*, pp. 37–50.
- Cyriac, S.L., Viswanath, L. & Thurkkada, A.P. (2024) 'Menopausal problems and related health promotion behaviours among post-menopausal women', *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 13(7), pp. 1812–1817.
- Davis, S.R., Lambrinoudaki, I., Lumsden, M., Mishra, G.D., Pal, L., Rees, M. & Baber, R.J. (2015) 'Menopause', *Nature Reviews Disease Primers*, 1(1), pp. 1–19. <https://doi.org/10.1038/nrdp.2015.4>
- Delanerolle, G., Cavalini, H., Taylor, J., Hinchliff, S., Talaulikar, V., Zingela, Z. & Phiri, P. (2023) 'An exploration of the mental health impact among menopausal women: The MARIE Project Protocol (International Arm)', *medRxiv*, 2023–11.
- Diri, E.G. & Ighedose, O.L. (2024) 'Awareness level and the challenges of menopause in women in Yenagoa Metropolis of Bayelsa, Nigeria', *Acta Scientific Medical Sciences*, 8(7).
- Engel, G.L. (1977) 'The need for a new medical model: A challenge for biomedicine', *Science*, 196(4286), pp. 129–136. <https://doi.org/10.1126/science.847460>
- Fisher, J.S., Rezk, A., Nwefo, E., Masterson, J. & Ramasamy, R. (2020) 'Sexual health in the elderly population', *Current Sexual Health Reports*, 12, pp. 381–388.

- Freeman, E.W., Sammel, M.D., Lin, H. & Nelson, D.B. (2014) 'Associations of hormones and menopausal status with depressed mood in women with no history of depression', *Archives of General Psychiatry*, 63(4), pp. 375–382. <https://doi.org/10.1001/archpsyc.63.4.375>
- George, A.E., Pathan, U.H.A., Alexander, J. & Nair, P.C. (2022) 'Knowledge, attitude and practice in middle-aged women regarding menopausal symptoms and hormone replacement therapy: A survey', *Journal of Xi'an Shiyou University, Natural Science Edition*, 18(8), pp. 241–263.
- Hunter, M.S. & Rendall, M. (2007) 'Bio-psycho-socio-cultural perspectives on menopause', *Best Practice & Research Clinical Obstetrics & Gynaecology*, 21(2), pp. 261–274. <https://doi.org/10.1016/j.bpobgyn.2006.11.005>
- Ishak, N.N.M., Jamani, N.A., Arifin, S.R.M., Hadi, A.A. & Abd Aziz, K.H. (2021) 'Exploring women's perceptions and experiences of menopause among East Coast Malaysian women', *Malaysian Family Physician: The Official Journal of the Academy of Family Physicians of Malaysia*, 16(1), p. 84.
- Khandehroo, M., Tehrani, H., Mahdyzadeh, M. & Peyman, N. (2022) 'The effect of menopause on women's health: A systematic review'. DOI: 10.21203/rs.3.rs-1118042/v1
- McCarthy, M. & Raval, A.P. (2020) 'The perimenopause in a woman's life: a systemic inflammatory phase that enables later neurodegenerative disease', *Journal of Neuroinflammation*, 17, pp. 1–14.
- Mishra, G.D. & Kuh, D. (2006) 'Health symptoms during midlife in relation to menopausal transition: British prospective cohort study', *BMJ*, 332(7545), pp. 961–965. <https://doi.org/10.1136/bmj.332.7545.961>
- Myint, M.H., Ravi, Y. & Abdalqader, M.A. (2021) 'Health seeking behaviour of women with menopausal symptoms in Tampin, Negeri Sembilan, Malaysia', *Annals of the Romanian Society for Cell Biology*, pp. 4965–4974.
- Nappi, R.E. & Cucinella, L. (2020) 'Long-term consequences of menopause', *Female Reproductive Dysfunction*, pp. 1–13.
- Nappi, R.E., Chedraui, P., Lambrinoudaki, I. & Simoncini, T. (2022) 'Menopause: A cardiometabolic transition', *The Lancet Diabetes & Endocrinology*, 10(6), pp. 442–456.
- Nateri, N.S., Beigi, M., Kazemi, A. & Shirinkam, F. (2017) 'Women coping strategies towards menopause and its relationship with sexual dysfunction', *Iranian Journal of Nursing and Midwifery Research*, 22(5), pp. 343–347.
- Ogbah, J. & Omozuwa, M.O. (2018) 'Challenges and coping strategies of menopausal women in Oredo Local Government Area of Edo State, Nigeria', *Prestige Journal of Counselling Psychology*, 1(1), pp. 1–12.
- Ohamaeme, M.C., Egwurugwu, J.N., Ezeala, G.C., Ohamaeme, C.R. & Ebuonyi, M.C. (2017) 'Assessment of the knowledge and awareness of menopausal coping strategies among women in Umuowa Community, Orlu Local Government Area, Imo State Nigeria', *Journal of Dental and Medical Sciences*, 16(6), pp. 113–117.
- Olowokere, A.E. & Atandero, M.O. (2024) 'Male menopause: Concept challenges and coping strategies', *International Journal of Public Health, Pharmacy and Pharmacology*, 9(2), pp. 1–9.
- Oyelekan, A., Ogunsemi, O., Afe, T., Ayoade, B., Nwokoro, C., Oluyemi, O. & Adeleye, O. (2020) 'Sleep quality and lower urinary tract symptoms among patients with prostatic diseases', *Annals of African Surgery*, 17(2), pp. 69–71.
- Santoro, N. & Epperson, C.N. (2015) 'Matrices of menopausal symptoms: Depression and cognition', *Endocrinology and Metabolism Clinics of North America*, 44(3), pp. 457–466. <https://doi.org/10.1016/j.ecl.2015.05.006>
- Sathiyaseelan, A., Patangia, B. & Hainary, P. (2024) 'Meaning in life in menopause: A narrative literature review on how menopausal women make sense of their

life', *Indian Journal of Psychiatric Nursing*, 21(1), pp. 66–73.

Simona, D., Rani, S. & Raj, M.A. (2023) 'Biopsychosocial problems faced by women during menopause', *Education and Society*, 47(1), p. 191.

Sophia, C.M., Marngar, J., Mol, S., D'Souza, V. & Frank, R.W. (2022) 'Menopausal symptoms and coping strategies among menopausal women in selected hospital at Mangaluru', *Indian Journal of Continuing Nursing Education*, 23(1), pp. 102–105.

Usman, H.B. (2021) *Contraceptive use among Northern Nigerian women ages 15 to 49 years*. Doctoral dissertation, Walden University.

Vizheh, M., Muhidin, S., Behboodi-Moghadam, Z. & Zareian, A. (2021) 'Women empowerment in reproductive health: A systematic review of measurement properties', *BMC Women's Health*, 21, pp. 1–13.

Yong, E.L. & Logan, S. (2021) 'Menopausal osteoporosis: Screening, prevention and treatment', *Singapore Medical Journal*, 62(4), pp. 159.