Access this article online

Quick Response Code:

Website: www.pogsjournal.org

DOI: 10.4103/pjog.pjog_19_24

A survey of the quality of life during perimenopause in Filipino women: A community-based study in Paete, Laguna

Romina Jo Opulencia-Banayo[1], Maria Antonia E. Habana[1]

Abstract:

OBJECTIVE: This study aims to determine the prevalence of menopausal symptoms among Filipino perimenopausal women aged 43–48 years in a rural community setting.

METHODS: This is a cross-sectional study conducted in a rural community. A self-administered, validated Women's Health Questionnaire, Filipino version, was given to 232 women aged 43–48 years. Data were analyzed using STATA 16.1/IC.

RESULTS: Nearly 32% of respondents reported a negative impact of symptoms on their quality of life (QOL). The highest was seen in the physical/somatic (PS) domain followed by the vasomotor/menstrual and emotional/anxiety domains. Overall, majority of the scores reflect a good QOL.

CONCLUSION: Filipino women in the rural community remain to have good QOL despite experiencing menopausal symptoms. A minority experience symptoms that negatively influence their QOL and most of these were in the physical/somatic domain. Education regarding awareness, treatment options, and expectations during perimenopause is important. Timely intervention can continue to improve the QOL of these women.

Keywords:

Community-based, perimenopause, quality of life

Introduction

Perimenopause is the transition period to menopause and it is difficult to predict the exact time when a woman enters this period making perimenopausal studies challenging.[1] During this transition, there is a decline in the ovarian production of estrogen that results in a wide range of menopausal symptoms.[2] The World Health Organization (WHO) defined perimenopause as the period immediately before the menopause when the endocrinological, biological, and clinical features of approaching menopause commence and the 1st year after the menopause.[3] In a large prospective cohort study,[4] the Massachusetts Women's Health Study, the duration of the perimenopausal transition period was estimated to be approximately 4 years. The study involved 2570 women aged 45–55 years who were followed up for 5 years. The median age at inception of perimenopause was 47.5 years, and the median age at the last menstrual period was 51.3 years. This finding was consistent with Treolar's study[5] where the mean and median age of menopause was at 50.7 and 49.8 years, respectively. The mean and median age of entry into menopausal transition was 45.1 and 45.5 years, respectively.

In 2001, the Stages of Reproductive Aging Workshop (STRAW)[6] provided a

[1]*Department of Obstetrics and Gynecology, Philippine General Hospital, University of the Philippines Manila, Manila, Philippines*

Address for correspondence:
Dr. Maria Antonia E. Habana, Department of Obstetrics and Gynecology, Philippine General Hospital, University of the Philippines Manila, Taft Avenue, Ermita, Manila, 1000, Philippines.
E-mail: mehabana@up.edu.ph

Submitted: 10-Apr-2024
Accepted: 19-May-2024
Published: 27-Sep-2024

How to cite this article: Opulencia-Banayo RJ, Habana MA. A survey of the quality of life during perimenopause in Filipino women: A community-based study in Paete, Laguna. Philipp J Obstet Gynecol 2024;48:145-50.

nomenclature for female reproductive age. The staging system reviewed the following components: menstrual cycles, endocrine or biochemical factors, fertility, uterine and ovarian anatomy, and other signs and symptoms. The reference point of the staging system was the final menstrual period (FMP) defined retrospectively after 12 months of amenorrhea.

The perimenopause age of inception may be difficult to ascertain and would usually be defined after determining the FMP or age of natural menopause (ANM). In a systematic review and meta-analysis of 46 studies in 24 countries,[7] the ANM was 48.8 years. ANM was found to be lower among African (48.1–48.5), Latin American (46.5–48.5), Asian (46.9–50.1), and Middle Eastern countries (46.9–48.3). The highest ANM was seen in Australia (50.5–52.0), followed by Europe (49.8–51.3) and the USA (48.9–49.6). The differences in ANM in this study were attributed to socioeconomic position and lifestyle factors. Economically more developed countries have higher ANM. In the Asian region, Japan (50.1) and Taiwan (49.8) were reported to have a higher ANM as compared to other Asian (46.7–49.3) countries. In a recent large study[8] conducted among 87,349 postmenopausal women in China, the range of reported ANM was 32.0–58.0 years, with a mean of 48.7 years and a median of 49.0 years.

In Korea, a study[9] reported an increasing trend for ANM. This pattern was attributed to economic growth and improved health status. A study by Mar and Mona[10] also mentioned that Asian women living in rural areas appeared to have an earlier onset of menopause than their urban counterpart.

Quality of life (QOL) is defined by the WHO as "an individual's perception of their position in life in the context of the culture and value systems in which they live."[11] The Women's Health Questionnaire (WHQ)[12] was designed to determine the extent of physical and emotional symptoms as perceived by women in the middle age group. Majority of women experience somatic, vasomotor, sexual, and psychological symptoms during the perimenopausal period that can have an impact on their QOL. About 50%–80% of these women report experiencing hot flashes, night sweats, sleep disturbances, tiredness, and depression.[13] In a survey[14] conducted on climacteric Filipino women, 83% experienced menopausal symptoms. Of these symptoms, 63% had vasomotor and 79% psychological symptoms.

On a review of the literature,[15] psychologic symptoms, specifically feeling anxious or nervous, were present in 94% of the women studied in a rural area in India. In contrast, another study[16] noted that more rural women experienced physical symptoms such as backache (79%) and muscle or joint pains (77.2%). Meanwhile, Nayak *et al*.[17] mentioned in their study that more women reported physical and psychosocial symptoms. In a comparative study[18] among menopausal women in India, more women in the rural setting were noted to manifest somatic, psychological, and urogenital symptoms. These women also perceived these experiences as more disturbing, compared to their urban counterparts. A similar finding was noted in a study[19] in Poland, citing that women in rural areas have poorer QOL than women living in urban locations. Rural women can be affected by socioeconomic factors such as low educational level, problems with finances and employment, lack of access to health care, and more personal health risks. In Iran, Haghi *et al*.[20] reported that physical functioning, general health, and vitality were higher in rural women. Meanwhile, urban women have better outcomes in terms of lower bodily pain, social functioning, and role limitations due to emotional problems. This was attributed to the lifestyle differences, access to resources, and opportunities.

In the Philippines, little attention is given in addressing menopausal symptoms. Furthermore, only a few local studies on menopause have been done. Sun-Cua[21] looked into the QOL of Filipino perimenopausal women aged 43–48 years. She translated into Filipino and validated the WHQ. Questionnaires were sent to the outpatient clinic patients, watchers, and employees in a hospital in Metro Manila. Results of the study showed that most women, despite experiencing menopausal symptoms in the physical, vasomotor, and emotional domains, remained to have a good QOL.

Given the scarcity of studies with regard to perimenopause especially in a rural setting, it is important to determine the extent of menopausal symptoms and its impact on the QOL of Filipino women. It is hoped that the results will elucidate QOL issues to allow better understanding and thus counseling of changes during the menopause transition period and offer treatment options among women suffering from menopausal symptoms.

Methods

Study setting

The study was conducted in Paete, Laguna, a fourth-class municipality in terms of annual income falling in the range of 490,000–686,000 USD. The economy depends on sculpting or carving and agricultural industry such as farming, poultry, and fishing. Paete is composed of 9 barangays and has a population of 25,096 with a female population estimated at 12,206. Approximately 10% of women fall under the perimenopausal years.[22]

Study design

This is a cross-sectional study. A list of households was obtained from the municipal office through the data given by the health workers assigned to all 9 barangays in Paete. The list was compiled and the selection of women aged 43–48 years was done through systematic random sampling. The basis for women's age selection was based on the mean age of menopause in the local study[14] which is 48 years. The FMP was at 47 years based on the STRAW[6] criteria. Using the study by McKinlay *et al*.,[4] the perimenopause age of inception was 4 years before the FMP (43 years). Those who were taking hormonal treatment or had taken hormonal therapy within the last 6 months or had undergone surgical menopause were excluded from the study. Informed consent was taken before handing out the self-administered, validated WHQ Filipino version questionnaire. The research team was present during the administration Demographic data was collected. The study protocol was approved by the institutional ethics review board.

The study sample size was calculated using the Cochran formula to estimate the prevalence. The prevalence of menopausal symptoms was set to 51.4% based on the study of Chim *et al*.[23] that 51.4% experience low back pain. The resulting sample size was calculated at 196 with a margin of error set to 7% and a level of confidence at 95%. Adjusting for nonresponders at 15%, the minimum required sample size was 225, which was fulfilled by the study.

Study tool

Women's Health Questionnaire, Filipino version

In 2008, Sun-Cua[21] conducted a study on perimenopausal women's QOL using the WHQ.[12] The original WHQ, with nine scales, was translated to Filipino and back translated to English. Three final domains were formed: physical/somatic (PS), vasomotor/menstrual (VM), and emotional/anxiety (EA). Scoring was the same with the original WHQ. The four-point scales were merged and reduced to binary options (yes definitely and yes sometimes = 1, no not much, and no not at all = 0) as specified in the WHQ tool scoring. The subscale items were added and divided by the number of items in each subscale. The scoring was reversed for positive items. Each domain has a score ranging from 0 to 1. A score closer to one is reflective of more symptoms or difficulties being experienced by a woman. This validated tool was used in this study.

Statistical analysis

The point and interval estimates for prevalence of symptoms were reported with 95% confidence intervals while the QOL was described with mean with standard deviations. These analyses were done using the statistical program STATA (version 16.1/IC, College Station, Texas: StataCorp LLC).

Results

A total of 232 participants were recruited for the study. Most of the participants were married (78.0%), finished high school (55.2%), with 3–5 children (62.1%), had 3–5 relatives/companions living in the same house (53.9%), and had no regular income (45.7%). Majority (83.6%) of them had no medical comorbidities and were nonsmokers (90.5%). Most (80.2%) had their last menses <1 month ago and 5.6% had their last menses 1 year ago.

Overall, only 31.9% reported a negative impact of symptoms on their QOL. The highest was seen in the PS domain at 43.4%, followed by the VM domain at 29.6% and the EA domain at 22.7%. Table 1 shows the percentage distribution of perimenopausal women according to menopausal symptoms in the different domains. In the PS domain, a lot of women reported having headache (67.0%). The other common symptoms were backache or limb pain (55.4%) followed by waking up early and sleeping badly the rest of the night (51.5%). Other women experienced feeling more tired than usual (50.6%) and had urinary frequency (47.6%). Feeling of discomfort from sexual intercourse as a result of vaginal dryness (25.8%) was the least reported symptom. However, 55 of the participants (23.7%) chose not to answer the item.

In the VM domain, more than half of the women reported experiencing heavy period (54.1%) followed by stomach bloatedness (33.9%) and hot flashes (25.3%). Majority of women said that they did not experience breast tenderness or discomfort.

In the EA domain, the most reported negative symptoms were poor memory (62.7%) followed by loss of interest in sexual activity (45.7%) and feeling irritable more than usual (44.2%). Some women encountered difficulties in getting off to sleep (38.6%) and concentrating (36.2%). For the positive symptoms, more than 90% had good appetite (92.3%) and felt lively and excitable (91.9%). Majority of women also reported favorable feelings of well-being (87.1%), still enjoy the things they used to do (86.7%), feel physically attractive (84.1%) and are still satisfied with their current sexual relationship (29.8%). Nevertheless, 45 participants (19.4%) did not respond to the question concerning satisfaction with current sexual relationship.

The four-point scales were further reduced to binary options to simplify scoring. The mean score of women in each domain showed a low score reflecting a low frequency of negative symptoms affecting QOL. Table 2 shows the mean score was highest in PS domain, 0.434 (±0.241), followed by VM, 0.296 (±0.239), and EA, 0.227 (±0.154).

Table 1: Prevalence of symptoms among perimenopausal women in Paete, Laguna, *n*=232

	Prevalence (95% CI)
PS symptoms	
I have a headache	66.95% (60.63–72.72)
I feel more tired than usual	50.64% (44.22–57.05)
I have dizzy spells	35.19% (29.30–41.57)
I suffer from backache or pain in my limbs	55.36% (48.89–61.66)
I often notice pins and needles in my hands and feet	46.78% (40.43–53.24)
I get very frightened or panicky for apparently no reason at all	28.76% (23.28–34.93)
I get palpitations or a sensation of "butterflies" in my stomach or chest	40.77% (34.61–47.23)
I wake up early and sleep badly the rest of the night	51.50% (45.06–57.89)
As a result of vaginal dryness, sexual intercourse has become uncomfortable	25.84% (19.91–32.82)
I need to pass urine/water more frequently than usual	47.64% (41.27–54.09)
VM symptoms	
I have hot flushes	25.32% (20.12–31.33)
I suffer from night sweats	22.32% (17.40–28.15)
My breasts feel tender or uncomfortable	18.88% (14.34–24.46)
I have abdominal cramps or discomfort	22.75% (17.79–28.60)
I have heavy periods	54.11% (47.62–60.47)
My stomach feels bloated	33.91% (28.09–40.26)
EA symptoms	
I feel miserable and sad	16.74% (12.45–22.12)
I have lost interest in things	21.03% (16.25–26.77)
I have lost interest in sexual activity	45.65% (39.29–52.16)
I have good appetite	92.27% (88.05–95.09)
I feel that life is not worth living	17.17% (12.83–22.59)
I feel sick and nauseous	18.45% (13.96–23.99)
I am more clumsy than usual	19.74% (15.10–25.38)
I feel anxious when I go out of the house on my own	11.12% (7.69–15.91)
I am restless and can't keep still	16.31% (12.08–21.65)
I have difficulty getting off to sleep	38.63% (32.56–45.07)
I have difficulty concentrating	36.21% (30.25–42.62)
I feel tense or "wound up"	19.31% (14.72–24.92)
I am more irritable than usual	44.21% (37.93–50.68)
I feel physically attractive	84.12% (78.82–88.29)
I have feelings of well-being	87.12% (82.15–90.87)
My memory is poor	62.66% (56.24–68.67)
I still enjoy the things I used to	86.70% (81.67–90.50)
I am satisfied with my current sexual relationship	29.78% (63.25–76.35)
I feel rather lively and excitable	91.85% (87.54–94.75)
I worry about growing old	27.90% (22.49–34.03)

PS: Physical/somatic, VM: Vasomotor/menstrual, EA: Emotional/anxiety, CI: Confidence interval

Table 2: Quality of life per domain among perimenopausal women in Paete, Laguna, *n*=232

QOL domain	Mean±SD
Somatic	0.434±0.241
Vasomotor	0.296±0.239
Emotional	0.227±0.154

QOL: Quality of life, SD: Standard deviation

Discussion

Women in the rural community experienced a wide range of menopausal symptoms, especially in the PS domain. Headache and back and limb pain were the most common symptoms reported. These findings were comparable with the local study of Sun-Cua[21] which was done in a hospital setting. More than half of the women also experienced headache. Feeling tired and urinary frequency were the other more prevalent symptoms experienced. The findings in our study were similar to other Asian studies[16-18] wherein physical or somatic symptoms were the most common complaint of women living in rural areas, with joint and muscle pain and backaches being the most frequently reported problems. These symptoms may also be attributed to other factors such as health problems, aging, or nature of work. In one study,[16] it was mentioned that lack of education and awareness among rural women may result in poor health-seeking behavior. Majority of the women were unemployed and had poor access to health care.

The least reported symptom was sexual intercourse discomfort due to vaginal dryness. However, 55 women (23.7%) did not respond to this question which may be due to embarrassment or fear of disclosure to other people. This may be the same reason why 45 (19.4%) and 3 (1.3%) women did not respond to the question on being satisfied with their current sexual relationship and loss of interest in sexual activity, respectively, in the EA domain.

For the VM domain, the most reported symptoms were heavy period and stomach bloatedness. These were also the most prevalent symptoms in the local study of Sun-Cua.[21] Menstrual changes, particularly heavy menstrual bleeding, is a usual symptom in the majority of perimenopausal women.[1] In a multiethnic study,[24] prolonged bleeding (10+ days) was commonly reported among women in the menopausal transition. Hot flushes and night sweats have a lower frequency in our study as compared with Caucasian women. In the largest study[25] in the United Kingdom, majority of women experienced hot flushes (86%) and night sweats (78%) or both (89.6%). In another study,[26] combined hot flushes and night sweats were more prevalent among African-Americans (46%), followed by Hispanics (35%), Caucasians (31%), Chinese (21%), and Japanese (18%) women. Melby *et al*.[27] mentioned in her research that hot flushes and night sweats were less reported in Asian studies as compared with North American and European populations. Obermeyer[28] stated that women in North American and European countries experienced more hot flushes as compared with Asians. One contributing factor may be due to foods rich in phytoestrogen found in the Asian diet.[26] Another interesting point mentioned

by Freeman[26] was that women living in geographic regions with warmer climates tend to report fewer hot flushes. This may be due to decreased sensitivity to high temperatures, thereby attributing the warm sensation of hot flushes to the warm climate.

In the EA domain, there were few negative symptoms that had an impact on their QOL. Majority of the respondents had a positive view of their life. Majority reported experiencing good appetite (92.2%), feeling lively and excitable (91.8%), with favorable feelings of well-being (87.1%), enjoys the things they used to do (86.6%) and feels physically attractive (84.1%). Yazdkhasti *et al*.[25] mentioned that Eastern women perceive menopause as a natural process and approach it in a more positive light as compared with Westerners. The positive well-being attitude may be influenced by psychosocial factors such as stress, symptoms, work, life events, exercise, loneliness, and attitude toward aging and menopause.[29] Freeman[26] also mentioned that "medicalization" of menopause may influence the prevalence of menopausal symptoms in the Western countries. Poor memory (62.7%) was the most prevalent negative symptom reported in the EA domain. According to Santoro *et al*.,[30] majority of perimenopausal women report cognitive function symptoms, particularly problems with memory. Although decline in cognitive function may be age-related, some evidence showed that estrogen plays an important role.[28]

The mean scores in each domain were low which is reflective of a lower frequency of reported negative symptoms by women in this study which were comparable with the local urban study.[21] The highest score was seen in the PS (0.434) followed by the VM (0.296) and EA domain (0.227). Although some studies[18,19] reported that women living in the rural community experience more symptoms and lower QOL, the findings in our study suggest otherwise. Women in the rural and urban communities in the Philippines have almost the same symptom experience. In addition, both groups of women reported more difficulties in the PS area. In the study conducted in the urban community, the population sample was hospital-based. It is possible that these women were symptomatic and sought medical consultation. This factor can be ruled out in our study since the women were randomly selected from the community. In general, majority of the Filipino women in this study were satisfied with their life as reflected in the low mean scores in each domain symptomatology. This is most apparent in the EA domain. Despite experiencing symptoms associated with the perimenopause, Filipino women remain to have a good QOL. A study[31] on Filipino elders showed that those who have high psychological resilience, self-rated health, and perceived social support were reported to have a higher level of subjective well-being. Interestingly, in difficult situations, Filipinos are known to be patient and can endure suffering which may be attributed to their religious values.[32] Furthermore, Filipinos have a high regard for family. Some of the common values that can be observed are family-centeredness, child-centric, close ties by reciprocity, and large family size.[32] Bandana[33] mentioned in his local study that social resources such as family and relatives may play a supportive role in providing better perceptions about the aging process among Filipino elders. Moreover, their unique life experiences contribute to their views in aging and outlook in life.

Other factors may be taken into consideration in the future research. These include perceived social support, nutrition, body mass index, occupation, and religion. These factors may have an influence in the symptom profile and QOL in these women.

Conclusion

The study showed that a wide range of menopausal symptoms are experienced during the perimenopause that may affect women's QOL. Nevertheless, Filipino women in the rural community remain to have good QOL as reflective in the low scores in the WHQ. Only a minority experience negative symptoms with most of these in the PS domain. Patients may not discuss these symptoms with their doctors unless specifically asked. It is thus important to provide awareness and offer counseling regarding expectations during the perimenopause.

Acknowledgments
The authors would like to thank the local government and the barangay health workers of Paete Laguna for supporting the study and helping in the process of data collection.

Authorship contributions
Romina Jo Opulencia-Banayo - Involved in the conceptualization, methodology, data curation, writing of the original draft, review and editing.

Maria Antonia E. Habana - Involved in the conceptualization, methodology, review and editing.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

References

1. Cheung AM, Chaudhry R, Kapral M, Jackevicius C, Robinson G. Perimenopausal and postmenopausal health. BMC Womens Health 2004;4 Suppl 1:S23.

2. Li S, Holm K, Gulanick M, Lanuza D. Perimenopause and the quality of life. Clin Nurs Res 2000;9:6-23.
3. WHO Scientific Group on Research on the Menopause in the 1990s. WHO Technical Report Series Geneva, Switzerland: WHO; 1996. Available from: https://www.apps.who.int/iris/handle/10665/41841. [Last accessed on 2017 Jun 07].
4. McKinlay SM, Brambilla DJ, Posner JG. The normal menopause transition. Maturitas 2008;61:4-16.
5. Treloar AE. Menstrual cyclicity and the pre-menopause. Maturitas 1981;3:249-64.
6. Soules MR, Sherman S, Parrott E, Rebar R, Santoro N, Utian W, *et al.* Executive summary: Stages of Reproductive Aging Workshop (STRAW). Climacteric 2001;4:267-72.
7. Schoenaker DA, Jackson CA, Rowlands JV, Mishra GD. Socioeconomic position, lifestyle factors and age at natural menopause: A systematic review and meta-analyses of studies across six continents. Int J Epidemiol 2014;43:1542-62.
8. Wang M, Kartsonaki C, Guo Y, Lv J, Gan W, Chen ZM, *et al.* Factors related to age at natural menopause in China: Results from the China Kadoorie Biobank. Menopause 2021;28:1130-42.
9. Park CY, Lim JY, Park HY. Age at natural menopause in Koreans: Secular trends and influences thereon. Menopause 2018;25:423-9.
10. Mar OS, Mona R. Rural-urban difference in natural menopausal age and the correlating factors. Int J Womens Health Reprod Sci 2020;8:112-8.
11. The WHOQOL Group. The World Health Organization quality of life assessment (WHOQOL): Development and general psychometric properties. Soc Sci Med 1998;46:1569-85.
12. Hunter M. The women's health questionnaire: A measure of mid-aged women's perceptions of their emotional and physical health. Psychol Health 1992;7:45-54.
13. Jenabi E, Shobeiri F, Hazavehei SM, Roshanaei G. Assessment of questionnaire measuring quality of life in menopausal women: A systematic review. Oman Med J 2015;30:151-6.
14. Ramoso-Jalbuena J. Climacteric Filipino women: A preliminary survey in the Philippines. Maturitas 1994;19:183-90.
15. Karmakar N, Majumdar S, Dasgupta A, Das S. Quality of life among menopausal women: A community-based study in a rural area of West Bengal. J Midlife Health 2017;8:21-7.
16. Poomalar GK, Arounassalame B. The quality of life during and after menopause among rural women. J Clin Diagn Res 2013;7:135-9.
17. Nayak G, Kamath A, Kumar P, Rao A. A study of quality of life among perimenopausal women in selected coastal areas of Karnataka, India. J Midlife Health 2012;3:71-5.
18. Sharma S, Mahajan N. Menopausal symptoms and its effect on quality of life in urban versus rural women: A cross-sectional study. J Midlife Health 2015;6:16-20.
19. Żołnierczuk-Kieliszek D, Kulik TB, Jarosz MJ, Stefanowicz A, Pacian A, Pacian J, *et al.* Quality of life in peri- and post-menopausal Polish women living in Lublin Province – Differences between urban and rural dwellers. Ann Agric Environ Med 2012;19:129-33.
20. Haghi HB, Hakimi S, Mirghafourvand M, Charandabi S, Farahbakhsh M. Comparison of quality of life between urban and rural menopause women and its predictors: A population base study. Int J Womens Health Reprod Sci 2017;5:137-42.
21. Sun-Cua AM. The Transition Years: Perimenopause in Filipino Women. University of San Agustin Publishing House; 2008. ISBN-13: 9789710381166.
22. Population of Paete, Laguna. Available from: https://www.citypopulation.de/en/philippines/luzon/admin/laguna/043418_paete/. [Last accessed on 2017 Jun 07].
23. Chim H, Tan BH, Ang CC, Chew EM, Chong YS, Saw SM. The prevalence of menopausal symptoms in a community in Singapore. Maturitas. 2002 Apr 25;41:275-82.
24. Paramsothy P, Harlow SD, Greendale GA, Gold EB, Crawford SL, Elliott MR, *et al.* Bleeding patterns during the menopausal transition in the multi-ethnic Study of Women's Health Across the Nation (SWAN): A prospective cohort study. BJOG 2014;121:1564-73.
25. Yazdkhasti M, Simbar M, Abdi F. Empowerment and coping strategies in menopause women: A review. Iran Red Crescent Med J 2015;17:e18944.
26. Freeman EW, Sherif K. Prevalence of hot flushes and night sweats around the world: A systematic review. Climacteric 2007;10:197-214.
27. Melby MK, Lock M, Kaufert P. Culture and symptom reporting at menopause. Hum Reprod Update 2005;11:495-512.
28. Obermeyer CM. Menopause across cultures: A review of the evidence. Menopause 2000;7:184-92.
29. Brown L, Bryant C, Judd FK. Positive well-being during the menopausal transition: A systematic review. Climacteric 2015;18:456-69.
30. Santoro N, Epperson CN, Mathews SB. Menopausal symptoms and their management. Endocrinol Metab Clin North Am 2015;44:497-515.
31. Carandang RR, Shibanuma A, Asis E, Chavez DC, Tuliao MT, Jimba M. "Are filipinos aging well?" Determinants of subjective well-being among senior citizens of the community-based ENGAGE study. Int J Environ Res Public Health 2020;17:7636.
32. Miralao VA. The family, traditional values and the sodocultural transformation of Philippine society. Philippine sociological review. JSTOR 1997;45:189-215. Available from: https://www.jstor.org/stable/41853694. [Last accessed on 2021 Feb 01].
33. Badana AN, Andel R. Aging in the Philippines. Gerontologist 2018;58:212-8.