

Review Literature on Distress during the Menopausal Transition and Their Impact on the Quality Of Life of Women: What is The Evidence?

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Abstract: Background: The menopause is a time in a woman's life when it is recognized that biological and social changes can influence upon their quality of life. While most women traverse the menopausal transition (MT) with little difficulty, others may undergo significant stress. **Purpose:** The purpose of this review was to assess the literature concerning the menopausal symptoms experienced by women in various countries of the world. **Review Methods:** A database search was conducted in CINAHL, Pub Med, Google Scholar, and Medline for the period of 2007- 2013 using specific term "menopause", "perimenopause", "menopause symptoms", "midlife and quality of life". A total of 15 studies were identified which met the inclusion criteria. **Results:** The results of the 15 studies reveals that the burden of menopausal symptoms on the life of midlife women in different parts of the world. From this review, it is evident that there is great diversity in symptom frequencies across the cultures and ways of coping adopted by these women. **Conclusion:** With appropriate counseling, health information and an understanding of the menopause and its dimensions, menopause can become a time of beginning, rather than an end.

Keywords - Menopause, Menopausal symptoms, Menopausal Transition, Quality of life

I. INTRODUCTION

Menopause is a natural transition encompassing not only the biological changes but also the social and cultural changes associated with the aging process (Hunt, 2000; Schneider, 2002; Zöllner, Acquadro, & Schaefer, 2005). It usually occurs sometime between 40 and 60 years and marks the end of the reproductive phase of a women's life (Mishra & Kuh, 2010). Menopause is defined as the permanent cessation of menses resulting from reduced ovarian hormone secretion that occurs naturally or is induced by surgery, chemotherapy, or radiation. Natural menopause is recognized after 12 months of amenorrhea that is not associated with a pathologic cause (Rahman, Zainudin, and Kar Mun 2010). While most women traverse the menopausal transition with little difficulty, others may undergo significant stress (Pilliteri, 2007). And with increasing age, emerging physical health problems can cause significant changes in the woman's lifestyle, leading to social withdrawal, avoidance and curtailment of physical activity.

According to the definition by the Stages of Reproductive Aging Workshop-2001 (STRAW), the time from beginning of irregular menses through the first 12 months of amenorrhea as perimenopause and the period from the last menses to death as postmenopause; the first 5 postmenopausal years are defined as early postmenopause, which is followed by late postmenopause. During menopause, approximately 85 percent of women report experiencing symptoms of varying type and severity. In longitudinal studies, during the early postmenopausal period the prevalence of vasomotor symptoms among women ranges from 30 to 80 percent, depressed mood occurs in approximately one third, and sleep disturbance in more than 40 percent; diminished sexual function and vaginal dryness are also common (North American Menopause Society; 2010). Clearly, this is a significant period of physiological change, and it can be a challenging time in a woman's life.

Quality of life (QoL) of midlife women may be impacted by adverse physical and mental health changes during the period of menopausal transition (Elavsky, 2009). Especially, it has been found to have the most negative influence on QOL during the perimenopausal and early postmenopausal periods (Jacobs, Hyland, & Ley, 2000; Li, Holm, Gulanick, & Lanuza, 2000; Utian, 2007). Symptoms experienced at menopause are quite variable, and the etiology of the symptoms is multi factorial. Also, menopausal symptoms can affect women's health and wellbeing. As the women's age increases, their health becomes multidimensional issue influenced by factors such as career, changes in domestic life, physical activity, economy, society and the environment. These changes, together with the natural process of ageing and hormonal changes affect the well being of women. (Sievert, 2001; Daley, 2007).

The health care of women during this stage requires special attention to the identification of their health needs in order to provide competent care (Gharaibeh, Al-Obeisat, and Hattab 2010). Although not every woman

experiences symptoms other than cessation of menstruation (Umland, 2008), menopausal symptoms may be an important issue for midlife women because menopause has been associated with impaired quality of life (Kumari, Stafford, & Marmot, 2005; Nappi & Lachowsky, 2009; Utian, 2005) as well as poor physical and mental health (Matthews & Bromberger, 2005; Svartberg, von Mühlen, Kritz-Silverstein, & Barrett-Connor, 2009). Also, women incur significantly more health care costs during their years of menopause than do men in the same age group (Owens, 2008). Menopausal health demands priority in the world scenario due to the increasing life expectancy and growing population of menopausal women. However, the achievements made in terms of longevity stand diminished owing to the lack of specialized health care that addresses the health needs of the aged. These facts illustrate the need to assess the menopausal symptoms of midlife women accurately and to develop successful culturally focused preventive and control strategies for menopausal problems to have an easy and smooth midlife transition and to improve their quality of life.

Aims of the study:

The aim of this narrative review is to identify the menopausal symptoms experienced by women in multi-cultural settings in order to provide various coping strategies to improve their Quality of Life(QOL).

II. Methods:

A literature review of abstracts and articles discussing the study aim on menopausal symptoms, written in English, and published between 2007 and 2013 were searched as the reviewers were concerned about the more recent ones. Articles were identified from four data bases using CINAHL, Pub Med, Google Scholar, and Medline with Full Text. Search terms included “menopause”, “perimenopause”, “menopause symptoms”, “midlife and quality of life”.

Inclusion criteria:

- Original research studies
- primary data with full text
- Studies including menopausal women as participants
- Published in English between 2007 and 2013

Exclusion criteria:

- Unpublished manuscripts or doctoral dissertations
- Review or opinion articles about menopausal symptoms

The initial search yielded 2019 articles and with full text online articles were 572 which were reviewed for duplication and we ended with 220. Those articles were reviewed based on titles and abstracts and 100 articles were retrieved. After having common consensus of the 3 reviewers, using a pre agreed inclusion criteria 15 articles were included for our narrative review, but the rest of the articles were utilized for writing background information of the article(ref.fig-1).

Analysis of the findings:

Three authors reviewed the papers and independently selected the articles eligible for the review. If multiple published reports from a same study were available, we included only one with the most detailed information, or published more recently. Data were extracted by two investigators and discrepancies were resolved by discussion with the third investigator.

III. Results:

A total of 15 studies conducted in 13 countries namely USA-3, England Scotland Wales-1, Iran-1, Egypt-1, Bangladesh -1, Malaysia-1, India-1, Columbia-1, Pakistan-1,Srilanka-1,Oman-1, Nigeria-1 and Australia-1 which met the inclusion criteria for this review. The articles were published between the years 2007-2012. Details of all 15 quantitative studies are shown in Table.1. Majority of the studies were cross-sectional studies-9, comparative study-1, population cohort study-1, longitudinal study-1 and narrative analysis-1. Majority of the studies have used MRS (Modified Menopausal Symptom) questionnaire to assess the menopausal symptoms. MENQOL (Menopausal quality of life), WHOQOL (World health organization quality of life), and Self reported menopausal symptom questionnaire has also been used.

Mishra et.al (2012) conducted a nationally representative cohort study among 695 women aged 47 to 54 years in England, Scotland, and Wales. A small proportion of women (10%, n=63) had a severe psychological symptom profile that peaked at or in the year after menopause. For vasomotor symptoms, 14% of women (n=83) had the early severe profile that also peaked around early post menopause and then declined noticeably; 11% (n=67) had the late severe profile of bothersome symptoms that increased rapidly in perimenopause and remained high for four years or more after menopause.

In the cross-sectional study by Kalahroudi et al. (2012) prevalence and severity of menopausal symptoms were assessed among 700 menopausal women aged 40-60 years using Menopause Quality of Life Questionnaire (MENQOL) in Kashan, Iran. The most common symptoms in; vasomotor, psychosocial, physical and sexual domains were; 'night sweats', 'accomplishing less than I used to', 'feeling a lack of energy', and 'change in sexual desire', respectively. Moreover, the most severe symptoms in these domains were; 'night sweats', 'feeling anxious or nervous', 'aching muscles or joints', and 'avoiding intimacy'. There was a statistically significant difference between; the severity of menopausal symptoms and working status ($P = 0.017$), different educational levels ($P = 0.001$), exercise activity ($P = 0.001$), exercise frequency ($P = 0.04$), and duration of menopause ($P = 0.03$).

The cross-sectional study by Shafie et al., (2012) among 472 healthy Omani women between 40 and 60 years in Oman using Menopause Rating Scale was conducted with the aim to analyze the prevalence and severity of climacteric symptoms. The Menopause Rating Scale scoring showed that somatic and psychological symptoms occurred more frequently than did urogenital symptoms. Muscle and joint pain was the most common symptom (73.3%), followed by mental and physical exhaustion (47.2%) and anxiety (46.6%).

Elsabagh and Allah (2012) conducted a descriptive cross-sectional study to investigate the impact of the menopausal symptoms on the quality of life of 78 post menopausal women from rural area, Zagazig city, Egypt using Menopause Rating Scale (MRS) and quality of life Brief (WHOQOL Brief). The highest mean scores of menopausal symptoms were somatic symptoms and specifically urogenital domains (10.46 ± 6.28 , 9.96 ± 5.26). There was the significant negative correlation between MRS scores and WHOQOL Brief scores in social, environmental domains, and over all mean score of quality of life.

Rahman et al. (2011) aimed to document the menopausal-related symptoms among middle age women of Kushtia region of Bangladesh. The data was collected from 509 women aged 40-70 years in the community. The most prevalent symptoms reported include, feeling tired (92.9%); headache (88.8%); joint and muscular discomfort (76.2%); physical and mental exhaustion (60.9%) and sleeplessness (54.4%) which are followed by depressive mood (37.30%); irritability (36%); dryness of vagina (36%); hot flushes and sweating (35.8%); anxiety (34.2%). However, noted less frequent symptoms were sexual problem (31.2%); cardiac discomfort (19.1%) and bladder problem (12.8%).

Ethnic differences in symptoms experienced during the menopausal transition among four major ethnic groups in the United States were explored by Im et al. (2010). This study was done via a cross-sectional Internet survey among 512 midlife women (160 Non Hispanic Whites, 120 Hispanics, 121 NH African Americans, and 111 NH Asians) using the Midlife Women's Symptom Index and Suinn-Lew Asian Self-Identity Acculturation Scale. Across the ethnic groups, feeling hot or cold was the most frequently reported symptom, and forgetfulness was the second most frequently reported symptom. The most frequently experienced menopausal symptom among NH Whites, Hispanics, and NH African Americans was feeling hot or cold; among NH Asians, it was decreased sexual interest. Forgetfulness was among the top 10 most frequently reported symptoms for all the ethnic groups, and hot flush was one of the top 10 most frequently reported symptoms for all the ethnic groups except NH Asians. Urination at night was reported as one of the top 10 frequently experienced symptoms only among NH Whites and NH African Americans. Muscle and joint stiffness was reported only among NH Whites and NH Asians. Decreased sexual interest was reported only among Hispanics and NH Asians. There was a statistically significant ethnic difference in the total number of symptoms experienced during the menopausal transition ($F = 7.98$, $p < .01$), that of physical symptoms ($F = 8.25$, $p < .01$), that of psychological symptoms ($F = 7.10$, $p < .01$), and that of psychosomatic symptoms ($F = 11.20$, $p < .01$).

Rahman et al. (2010) conducted a cross-sectional study to determine the commonly reported menopausal symptoms among Sarawakian women using a modified Menopause Rating Scale (MRS). 356 Sarawakian women aged 40-65 years who visited the government health centres under the Ministry of health, Malaysia were interviewed. The most prevalent symptoms reported were joint and muscular discomfort (80.1%); physical and mental exhaustion (67.1%); and sleeping problems (52.2%). Followed by symptoms of hot flushes and sweating (41.6%); irritability (37.9%); dryness of vagina (37.9%); anxiety (36.5%); depressive mood (32.6%). Other complaints noted were sexual problem (30.9%); bladder problem (13.8%) and heart discomfort (18.3%).

Green et al. (2009) studied a total of 419 Hispanic subgroups, aged 42-52 years, Central American ($n = 29$) or South American ($n = 106$), Puerto Rican ($n = 56$), Dominican ($n = 42$), Cuban ($n = 44$) and non-Hispanic Caucasian ($n = 142$). Hispanic women reported vasomotor symptoms (34.1-72.4% vs. 38.3% among non-Hispanic Caucasians; $p = 0.0293$) and vaginal dryness (17.9-58.6% vs. 21.1% among non-Hispanic Caucasians, $p = 0.0287$). Among Hispanics, more CA women reported vasomotor symptoms than D, Cu, SA, or PR women (72.4% vs. 45.2%, 34.1%, 50.9%, and 51.8%, respectively). More CA (58.6%) and D women (38.1%) reported vaginal dryness than PR (17.9%), Cu (25.0%) and SA (31.4%) women. More PR and D women reported trouble in sleeping (66.1 and 64.3%, respectively) compared to CA (51.7%), Cu (36.4%), and SA (45.3%) women.

Gupta and Ray (2009) compared the Menopausal symptoms of 180 Post-menopausal women 40-60 years from rural and urban areas of West Bengal, India using Menopausal symptom questionnaire. The study confirmed

rural-urban differences in reporting of menopausal problems like hot flushes and night sweats 2.5 times higher in rural women. Psychosomatic symptoms such as giddiness, rapid heartbeat, numbness of the extremities, feeling of tiredness, head ache and breast pain were significantly 2-3 times higher among rural women.

A descriptive cross-sectional, community-based study conducted by Olaolorun and Lawoyin (2009) to determine the prevalence and distribution of menopausal symptoms among 1189 women aged 40 to 60 years in Ibadan, Nigeria using the Menopause Rating Scale (MRS). Prevalence of any menopausal symptom was 84.5%. Joint and muscular discomfort was the most common reported symptom among all women in this study (59.0%), followed by physical and mental exhaustion (43.0%), sexual problems (40.4%), and hot flashes (39.0%).

A community-based, cross-sectional study was conducted on 683 women ages 45 to 60 years living in the district of Colombo, Sri Lanka by Waidyasekera; Wijewardena; Lindmark; Naessen(2009) using Menopause Rating Scale and the Short Form 36 health survey was used to assess the health-related quality of life. Of the sample, 59.4% were postmenopausal and 18.4% were perimenopausal; 90% of the sample had one or more menopausal symptoms. The most prevalent menopausal symptoms were joint and muscular discomfort (74.7%), physical and mental exhaustion (53.9%), and hot flushes (39.1%). Hot flushes sleep problems, and joint/muscular discomfort showed an increase in prevalence from the premenopausal category to the postmenopausal category ($P < 0.05$ for all). Chronic illness in the women was significantly associated with the presence of menopausal symptoms ($P < 0.01$). Women with menopausal symptoms had significantly lower ($P < 0.05$) quality-of-life scores in most of the domains of the Short Form 36 compared with women without symptoms.

Monterrosa et al.,(2008) conducted a cross-sectional study among 578, 201 Afro and 377 non-Afro-Colombian women aged 40–59 years in Columbia using the Menopause Rating Scale (MRS) to compare frequency and severity of menopausal symptoms. Intensity of menopausal symptoms was found to be significantly higher among Afro-columbian women (10.6 versus 7.5, $p=0.0001$). The frequency of somatic symptoms, heart discomfort, muscle and joint problems was found to be higher among non-Afro-Colombian women (38.8% vs 26.8% and 77.1% vs 43.5% respectively, $p<0.05$). After adjusting for confounding factors, it was determined that black race increased the risk for higher total MRS Scorings (OR: 2.31; CI 95%; 1.55-3.45, $p=0.0001$).

Nisar and Sohoo (2008) assessed the menopause related symptoms and the impact of these symptoms on the quality of life of menopausal women. It was a cross sectional hospital based survey conducted at the department of Obstetrics and Gynecology Isra University Hyderabad Sindh Pakistan from two hundred and two women of age 40–60 years. Menopause specific quality of life questionnaire (MENQOL) was used to assess the frequency and severity of symptoms. Most prevalent symptom within study subjects was body ache 165 (81.7%). Frequencies of some classical symptoms were 134 (66.3%) reported "hot flushes", 139 (68.8%) and 134 (66.3%) reported "lack of energy" and decrease in "physical strengths" respectively. The less frequently reported symptom was increase in facial hair 20 (9.9%). Scores of Physical domain were significantly more in postmenopausal group $P < 0.002$ while the scores of psychological domain were significantly high in menopause transition group $P < 0.003$.

Williams et.al (2008) used the Menopause-Specific Quality of Life Questionnaire (MENQOL) to assess the impact of menopausal symptoms of 2703 women aged 40–65 years on health-related quality of life in a large US population-based study. Scores for each domain were: vasomotor: 3.2 ± 2.2 ; psycho-social: 3.3 ± 1.8 ; physical: 3.5 ± 1.5 ; sexual: 2.9 ± 2.1 . Hot flashes affected work (46.0%), social activities (44.4%), leisure activities (47.6%), sleep (82.0%), mood (68.6%), concentration (69.0%), sexual activity (40.9%), total energy level (63.3%) and overall quality of life (69.3%).

Liu and Eden (2007) investigated the prevalence of menopausal symptoms of 310 Chinese women aged 45–65 years living in Sydney by a cross-sectional survey using menopause specific quality of life (MENQOL) questionnaire. Only 34% of women reported hot flushes, and 27% reported night sweats. Chinese women in Sydney more commonly reported psychological symptoms such as poor memory and physical symptoms such as dry skin, aching in muscles and joints and decreased physical strength. Changes in sexual desire and vaginal dryness were significantly different in perimenopausal women, compared with premenopausal and postmenopausal women.

IV. Discussion:

Historically menopause has been a topic of curiosity, although it was rarely discussed in social realm. This topic continues to be an area of interest and ongoing research since it affects all women and constitutes a significant health burden for middle aged women all over the world. A challenge in the study of distress during the menopause transition is that distress may mean different things to different people, including women and scientists. The symptoms of menopause are an indicator of imbalance in estrogen, testosterone and progesterone

that cause 34 common menopausal symptoms such as hot flashes, irritability, mood swings, etc experienced by all women in varying degrees and have many associated effects that might disrupt the quality of life.

The results of these 15 studies reveal the burden of menopausal symptoms on the life of midlife women in different parts of the world, although a large proportion of women go through this period uneventfully. From the reviewed studies, it is evident that there is great diversity in symptom frequencies across the cultures and ways of coping adopted by these women.

In western countries, menopausal symptoms such as hot flashes, night sweats and vaginal dryness are considered as the main climacteric complaints (Mishra et al., 2012; Green et al., 2009; William et al., 2008; Liu & Eden, 2007). These may be reported more frequently in modern culture because women are aware that these symptoms are associated with menopause. And many studies have supported this finding confirmed that this has affected their quality of life. (Gold, Colvin & Avis, 2006; Oldenhave et al., 1993). In most women, hot flashes related to menopause will resolve over time without any intervention (North American Menopause Society, 2004). There are numerous approaches to menopausal symptom management which are simple, effective and inexpensive. Dietary/lifestyle changes, including adopting a vegetable-based diet is associated with less frequent, milder hot flashes. Avoiding any dietary triggers include alcohol, caffeine, smoking, hot rooms and spicy foods. Women who walk daily for exercise report having fewer hot flashes and frequently describe sleeping better (Lowdog, 2010). Black cohosh is an herbal remedy considered to be a reliable alternative to hormone replacement therapy (HRT) for the control of hot flashes, night sweats and mood disturbances, and it's often tried as first-line therapy for symptom control. A small study by the Mayo Clinic indicates flaxseed may be effective in treating hot flashes. The women in the study also reported improved mood; FDA-approved bioidentical hormone replacement therapy (BHRT) where hormones used for replacement are molecularly identical to human endogenous hormones can also be prescribed. These hormones are plant-derived and generally well-tolerated (Files & Pruthi, 2011). Hence alternative strategies building on the self-care measures of menopausal women and reinforcing positive practices is essential in order to help them cope with menopausal symptoms.

The findings reported in this article supported significant ethnic differences in the total number and total severity of the physical, psychological, and psychosomatic symptoms (Im et al., 2010). Interestingly, the intensity of menopausal symptoms was found to be significantly higher among Afro Columbian women specifically vasomotor symptoms than non Afro Columbian women who experienced somatic symptoms (Monterrosa et al., 2008). Symptoms associated with menopause among Hispanic women differed by country of origin but not acculturation (Green et al., 2009). Studies on menopausal symptoms have reported inconsistent findings on ethnic differences in menopausal symptoms, especially vasomotor symptoms; some reported significant ethnic differences (Gold et al., 2000; National Health and Nutrition Examination Survey [NHANES], 2003), whereas others reported non-significant ethnic differences (Brown et al., 2001; Pham, Grisso, & Freeman, 1997). The findings reported in this article agree with the former. Previous studies also have reported that black, non-Hispanic women have more severe hot flashes compared to other races (Gold, Sternfeld & Kelsey, 2007). More in-depth cultural studies on the relationships between contextual factors and menopausal symptoms would help health care providers and researchers understand the reasons for the existence of ethnic differences in menopausal symptom experience.

African and Asian women reported more of somatic symptoms like fatigue, head ache and joint pains (Kalahroudi et al., 2012; Shafie et al., 2012; Rahman et al., 2011 & 2010; Olaolorun & Lawoyin, 2009). This is similar to several studies which demonstrated reduced frequencies of menopausal symptoms among Asian women (Appling, Peaz & Allen, 2007; Gold et al., 2006; Green & Santro, 2009; Thurston et al., 2008). Physical symptoms such as hot flashes were relatively uncommon in many studies of Asian populations. This has been attributed to a diet high in phytoestrogens (Zeserson, 2001). Traditional Asians complained less of menopausal symptoms because they remained physically active caring for elderly parents and reported that they were too busy to notice menopausal symptoms or complain about them. Suffering from menopause was considered a luxury for those who had time for themselves (Im & Meleis, 2000; Zeserson, 2001). As stated by Krishna and Shah (2004) according to Prof. Won-Whe Kim, Pusan National University, Korea, peri-menopausal symptoms vary considerably region wise. In South-east Asian countries dominant symptoms in this group are: shoulder stiffness (Japan), hand joint pain (Korea), backache and tiredness (Taiwan) and headache (Philippines).

The next prevalent symptoms among the menopausal women are the Vaginal symptoms such as dryness, discomfort, itching, dyspareunia and Urologic symptoms like urgency, frequency, dysuria and incontinence and similar findings were reported in the previous studies (Peeyananjarssri et al., 2006; Harvey et al., 2002; Dhillion et al., 2006). Declining ovarian function has also been reported to cause frequency of micturition, urge incontinence, dysuria and recurrent urinary tract infections (Iosif & Bekassy, 1984). Although hormone replacement therapy (HRT) was once hailed as the "cure-all" for menopausal symptoms, researchers, clinicians, and women now carefully evaluate the relative risks and benefits. Interest in nonhormonal therapies has increased (Barton & Loprinzi, 2004). Resistant and Aerobic exercises were found to have positive impact on

menopausal symptoms, psychological health depression and the quality of life especially pelvic-floor exercises (Agil et al., 2009; Tchou et al., 2006).

The studies done among post-menopausal women from Pakistan, Egypt, Srilanka and Chinese women living in Australia concluded that menopausal symptoms had a negative impact on their Quality of Life (Elsabagh & Allah, 2012; Waidyasekara et al., 2009; Nissar & Soho, 2008). This is similar to Study of Women's Health Across The Nation (SWAN-2011) analyses where menopausal symptoms have been strongly associated with reduced health related quality of life, negative mood and sleep problems. Improved quality of life in modern menopausal women was associated with being married and having lower levels of perceived stress (Avis, Assmann, Kravitz, Ganz, & Ory, 2004). Sherman (2005) explains that the impact of menopause on quality of life is not limited to middle age. The sequel may also contribute to the chronic diseases of aging like Osteoporosis and Heart disease. High-level wellness is a process in which women are actively engaged in moving toward their potential health. Culturally competent and holistic health care enables and empowers women to reach optimal health (Salkovskis, Wroe, & Rees, 2004; Theroux & Taylor, 2003).

In India, differences existed between rural and urban women in experiencing menopausal symptoms like vasomotor and psychological symptoms which were 2-3 times higher in incidence among rural women (Gupta & Ray, 2009). This is similar to the findings of the study conducted in Madrid and Mexico (Bernis & Reher, 2007). It is generally believed that menopause is welcomed as a favorable event among rural women in India unlike in the West. This is attributed to the many perceived benefits of menopause such as freedom from cultural restrictions imposed on younger women and the burden of childbirth as well as the discomforts associated with menstruation. Postmenopausal women in India are said to enjoy a higher social status assigned to ageing women (WHO Scientific Group, 1996). Further research is needed to examine these variations related to their lifestyle variables, nutritional status and their perceptions of menopause.

The current review can help provide a clearer understanding of women's experiences at menopause. Indicators of a healthy transition are subjective well-being, a sense of mastery, healthy relationships, and effective symptom management (Im & Meleis, 1999). As collaborative health professionals, nurses can help women navigate their menopausal transition and make appropriate healthcare decisions based on their individual needs and preferences.

Implications:

Though menopause is a normal biological process, it is a physical, psychological and cultural experience of women, which is influenced by multiple factors. It is challenging healthcare professionals to appreciate the symptoms experienced by women during menopause and the ways to manage the same. Even in developed countries, there is limited focus on menopausal related research and hence it is challenging to meet the demands of the menopausal women.

The importance of research in the area of women's health has to be emphasized to identify the awareness on menopause, the symptoms experience and appropriate interventions to manage the same. Awareness needs to be created among women on menopause and self-care management for menopausal related health problems to maintain optimal QOL. There is a need to explore the current perceptions of menopause among women; evaluate the prevalence of menopausal symptoms and identify the coping strategies adopted by them to consider women's individual health values. Based on these values, the healthcare professionals can use different approaches to educate and treat women with menopausal symptoms and concerns that are culturally relevant.

With appropriate counseling, health information and an understanding of the menopause and its dimensions, menopause can become a time of beginning, rather than an end. Caring for menopause entails more than providing medication. Successful strategies for coping with menopause across cultures are self-care practices, role models and education, privileges and rewards, having an accepting and positive attitude toward life transitions, and medication including herbs. The Preparation, Care and Acceptance (PCA) for menopausal women is a model of intervention for the signs and symptoms of menopause with the aim of improving the Quality Of Life of women during menopausal period (ref.fig-2). It is the responsibility of the nurse to prepare, give care and teach the client the importance of acceptance in promoting and improving the quality of life of menopausal women.

V. Conclusion

Managing menopausal health is more than an issue of understanding aging or hormonal imbalance. It requires an ongoing effort to keep up-to-date with the options and benefits available to menopausal women. Hence, it is important for health care providers to help women to think about menopause as a time to evaluate their health and lifestyle practices. An assumption is often made that biological changes associated with menopause are universal and that variation in the subjective experience of menopause is based on culturally shaped expectations about the menopausal transition, and more generally by concerns about aging and

associated changes in social roles. Differences in symptoms reporting among women may be suggested differences in symptoms sensitivity or a tendency to under-report due to lack of education or embarrassment. Hence, researchers should explore areas of menopause using various research methodologies to develop cultural based nursing intervention for menopausal symptoms.

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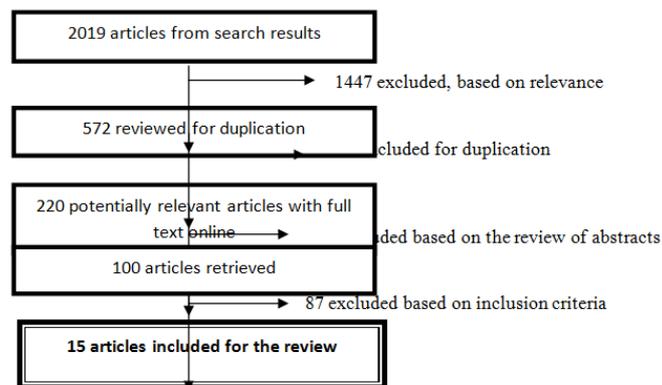


Figure 1: Methodological flow chart:



Figure 2: PCA Model:

Table.1. Summary of the reviewed Articles

SL. NO	Author and Year	Participants (no), Age, Country and Instrument	Study purpose	Main findings
1	Mishra et al., (2012)	695 women from age 47 to 54 years Nationally representative cohort study. England, Scotland, and Wales Checklist of health symptoms developed by researcher.	To characterize symptoms experienced by women during the transition into natural menopause	❖ Findings revealed that five symptoms such as trouble sleeping, aches and pains in joints, hot flushes, vaginal dryness and difficulties with sexual intercourse showed increased prevalence
2	Kalahroudi et al., (2012)	700 menopausal women aged 40-60 years cross-sectional study Iran. Menopause Quality of Life Questionnaire (MENQOL)	To determine the prevalence and severity of menopausal symptoms and related factors.	❖ The most common prevalent menopausal symptoms were night sweats, 'accomplishing less than I used to', 'feeling anxious or nervous', 'feeling a lack of energy', and change in sexual desire.
3	Shafie et al., (2012)	472 healthy Omani women between 40 and 60 years Cross-sectional study Oman Menopause Rating Scale.	The aim of this study was to analyze the prevalence and severity of climacteric symptoms among a cohort of healthy, middle-aged Omani women.	❖ The Menopause Rating Scale scoring showed that somatic and psychological symptoms occurred more frequently than did urogenital symptoms. ❖ Muscle and joint pain was the most common symptom (73.3%), followed by mental and physical exhaustion (47.2%) and anxiety (46.6%).
4	Elsabagh and Allah (2012)	78 post menopausal women Descriptive cross-sectional study Egypt Menopause Rating Scale (MRS) and WHO Quality of life Brief scale (WHOQOL Brief).	To investigate the impact of the menopausal symptoms on the quality of life.	❖ The highest mean scores of menopausal symptoms were somatic symptoms and specifically urogenital domain. There was the significant negative correlation between MRS scores and WHOQOLBrief scores in social, environmental domains, and over all mean score of quality of life.
5	Rahman et al., (2011)	509 women aged 40-70 years cross-sectional study. Bangladesh Modified MRS questionnaire.	This study was aimed to document the menopausal-related symptoms among middle age women	❖ The most prevalent symptoms reported include, feeling tired (92.90%), headache (88.80%), joint and muscular discomfort (76.20%), physical and mental exhaustion (60.90%) and sleeplessness (54.40%).
6	Im, et al., (2010)	512 midlife women aged 40-60 years Cross-sectional Internet survey USA Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA) Midlife Women's Symptom Index (MSI)	To explore ethnic differences in Symptoms experienced during the menopausal transition among four major ethnic groups.	❖ Significant ethnic differences were found in the total number and severity of the symptoms. Among all participants, age, employment, income level, ethnicity (being Asians), smoking status, general health status, BMI, and menopausal status were significant predictors of the total severity of total symptoms.
7	Rahman et al., (2010)	356 Sarawakian women aged 40-65 years cross-sectional descriptive study Malaysia Modified Menopausal rating scale (MRS) questionnaire	To determine the commonly reported menopausal symptoms among Sarawakian women.	❖ The prevalence of menopausal symptoms using modified MRS in this study correspond to other studies on Asian women, the prevalence of classical menopausal symptoms of hot flushes, sweating was lower compared to studies on Caucasian women.
8	Green et al.,(2009)	419 women aged 42-52 years Longitudinal study USA Assessed vasomotor symptoms, vaginal dryness and trouble in sleeping.	To test the hypothesis that menopausal symptoms would differ among Hispanic women.	❖ Symptoms associated with menopause among Hispanic women differed by country of origin but not acculturation. Central American women appear to be at greatest risk for both vasomotor symptoms and vaginal dryness.
9	Gupta and Ray (2009)	180 Post-menopausal women 40-60 years. Comparative study West Bengal, India Interview Menopausal symptom questionnaire	To examine variations in menopausal characteristics between rural and urban women.	❖ The study confirmed rural-urban differences in both menopausal age and reporting of menopausal problems like hot flushes and night sweats higher in rural women.
10	Olaolurun and Lawoyin (2009)	1189 women aged 40 to 60 years A descriptive cross-sectional, community-based study Nigeria Menopausal rating scale	To determine the prevalence and distribution of menopausal symptoms	❖ Prevalence of any menopausal symptom was 84.5%. Joint and muscular discomfort was the most common reported symptom among all women in this study (59.0%), followed by physical and mental exhaustion (43.0%), sexual problems (40.4%), and hot flushes (39.0%).
11	Waidyasekera et al.,(2009)	683 women ages 45 to 60 years A community-based, cross-sectional study Colombo, Sri Lanka Menopausal rating scale and Short form-36 health survey.	To assess the prevalence of menopausal symptoms in a population of Sri Lankan women and the relationship with their health-related quality of life.	❖ The most prevalent menopausal symptoms were joint and muscular discomfort (74.7%), physical and mental exhaustion (53.9%), and hot flushes (39.1%). ❖ Women with menopausal symptoms had significantly lower ($P < 0.05$) quality-of-life scores in most of the domains

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12	Monterrosa et al., (2008).	578 Afro and non-Afro-Colombian women aged 40–59 years cross-sectional study Columbia Menopause Rating Scale (MRS) questionnaire	Compare frequency and severity of menopausal symptoms among Afro and non-Afro Hispanic Colombian women.	❖ Afro-Colombian women exhibited more impaired quality of life (QoL) when compared to non-Afro-Colombian ones, due to a higher rate and severity of menopausal somatic and psychological symptoms.
13	Nisar and Sohoo (2008)	202 women of age 40-60 years. cross sectional hospital based survey Pakistan Menopause specific quality of life questionnaire (MENQOL)	To assess the menopause related symptoms and to determine the impact of these symptoms on the quality of life.	❖ The most prevalent symptom reported was body ache (82%) Menopausal symptoms of physical domain had negative effect on the quality of life.
14	R.E.William et al., (2008)	4402 women aged 40-65 years Cross-sectional survey USA Semi-structured questionnaire focusing on Menopausal symptoms.	To assess the impact of menopausal symptoms on health-related quality of life.	❖ There are many (65%) post-menopausal women with frequent and severe vasomotor symptoms like hot flushes and night sweats. Symptoms experienced during menopause and socio-demographic characteristics affect the quality of life in postmenopausal women. Hot flashes impact the daily activities of most postmenopausal women, especially those with more frequent/severe symptoms.
15	Liu , and Eden (2007)	310 Chinese women aged 45 - 65 years. Cross-sectional survey Sydney, Australia Menopause specific quality of life (MENQOL) questionnaire	To investigate the menopausal experience of Chinese women living in Sydney .	❖ Chinese women living in Sydney reported fewer vasomotor symptoms compared with Caucasian women. Menopause was still experienced negatively, especially in its impact on sexual function and muscular–skeletal symptoms.