Assessment of women's awareness and symptoms in menopause: a study with reference to academic women in Sri Lanka

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ABSTRACT: *Menopause is a step of a woman's life when hormonal changes cause menstruation to stop permanently. Menopausal symptoms can be assessed by several tools, and can be influenced by various socio-demographic factors. The main objective of the study is to undergo a survey of the symptoms and awareness associated with menopause among Sri Lankan academic women ranging from the age 25 to 60. By using modified MRS (Menopause Rating Scale) questionnaire, 50 Sri Lankan women aged 25-60 years were interviewed to document of 10 symptoms divided into somatic, psychological and physiological symptoms which are commonly associated with menopause. The mean age of menopause was 52 years (range 47 - 56 years). The most extensive symptoms reported were joint and muscular pains (76%); physical and mental exhaustion (58%); and concentration and sleeping problems (60%) followed by symptoms of hot flushes and night sweating (66%); irritability (64%); itching in private parts (68%); anxiety (92%); depressive mood (80%). Correspond to other studies on Indian women however the prevalence of classical menopausal symptoms of sleeping problems physical and mental exhaustion was lower compared to studies on Sri Lankan women. The prevalence of menopausal symptoms was measured using modified MRS in this study. Very few studies have been undertaken regarding the importance of women's awareness level about the menopause phenomenon in their mental, psychological, and physical health, therefore this research finding will contribute to the available body of knowledge in this area.*

Keywords: Hot flashes, depression, awareness, menopausal symptoms.

The increased life expectancy of women in India is the most remarkable demographic change observed in the new millennium. It is estimated that there will be 130 million elderly women in India, necessitating a substantial degree of care by the end of 2015 (Rossouw JE, 2002). Women are one of the most important parts of the family, society, and community health, which is dependent on provision of the needs of this group. Menopause is one of the most hypercritical stages of life among women (Rossouw JE, 2002). World Health Organization defines the menopause as the end of the menstruation because of the loss of over activity. Menopause is a natural and an unavoidable event, which affects all women. Natural menopause is recognized after 12 months of amenorrhea, which is not associated with a pathologic cause. The average age of menopause in the United States is 51 years, and can vary normally between 40 and 58 years (Rees M). The age at which natural menopause occurs is between the ages of 45 & 55 for women worldwide. Women spend nearly half of their lives in the postmenopausal state. Menopausal transition can span over several years. It often begins with variations in menstrual cycle length in response to rising levels of follicle stimulating hormone (FSH). The mean age of onset of Menopausal transition is 47.5 years and commonly lasts approximately between 4 to 5 years (Rees M). Menopausal symptoms will affect each woman differently and it is not possible to predict the severity and duration of these symptoms. Menopause is the time of a women's life when reproductive capacity ceases. The ovaries stop functioning and their production of steroid and peptide hormone falls.

A variety of physiological changes takes place in the body. Some of these are the result of cessation of ovarian function and related menopausal events while others are a function of the ageing process. Many women experience symptoms around the time of menopause, most of which are self-limiting and not life-threatening, but are none the less unpleasant and sometimes disabling. The consciousness of menopause-related symptoms among women in developing countries is not well known. The most important and the immediate symptoms of the menopause are the effects of hormonal changes on many organ systems of the body.

Review of Literature

Women's awareness of menopause varies based on multiple factors like their age, the number of births, social, economic, cultural, education status, and geographical factors (Leon P, 2007). Most of women reach menopause age without having adequate knowledge about the events of this period and the ways to deal with the phenomenon (Liao K, 1998). Eastern women consider menopause as a natural transition and cling to a positive approach about it (McKinlay JB et.al 1987). Similar studies were conducted in West showing that most of women see menopause positively, regarding it as a natural course of aging (Bonetta C 2001). Women in different cultures have different experiences and attitudes about menopause (Cheng MH, 2005). In the societies where women have high information about menopause, the consequences of the phenomenon are less obvious (Jong LF, 2001).

When women are well-versed in the symptoms and complications of menopause, they are able to tolerate its complications in a better manner and prevent occurrence of its serious and irreversible consequences through appropriate treatments. Studies have revealed that women void and reduce many adverse emotional and psychological symptoms of menopause by educating themselves about menopause, to better equip them. (Wong LP, 2007). Most women do not need treatment for menopausal symptoms. It is either the symptoms resolve on their own or their level is tolerable (Lees I, 2001; Shanafelt TD, 2002). The treatments, when needed, include medications and lifestyle changes. Hormone replacement therapy (HRT) or hormone therapy (HT) helps to diminish symptoms such as vaginal dryness, itching, and discomfort, urinary problems, bone- density loss, hot flashes and night sweats. However, HRT has risks as well as benefits. Other treatments include: Low-dose oral contraceptives to help stop or reduce hot flashes, vaginal dryness, and moodiness and either over-the-counter or prescription remedies for vaginal discomfort, such as estrogen creams, tablets, or vaginal rings (Porter M, 1996).

It is well renowned that menopausal symptoms experienced by women affect their quality of life (Lees I, 2001; Porter M 1996). Studies show that when compared with peri and post-menopausal, premenopausal women have less menopausal complaints. They were seems to complain significantly more of severe physiological, somatic and psychological symptoms like bladder infections, urinary infections etc. when compared to premenopausal women (Jong LF, 2001; Lori AB, 2003). During menopause, women often experience some symptoms which may affect their daily activities. In recent years, studies have shown that menopausal symptoms may affect health-related quality of life (Lori K 1998; Jong LF 2001). The knowledge, approach and menopausal symptoms observed in were quite similar to other studies that are reported within the country and abroad (Fakhsheena Anjum S 2013). Menopausal women experience significant implications on historical and social construction.

Persistent stereotypes imply that menopause is a time associated with loss of youth and sexuality. Further,

menopause is perceived, understood, and defined largely as a negative experience filled with a variety of undesirable physical and emotional symptoms in terms of medical discipline (Winterich & Umberson, 1999). Unlike menstruation or conception, menopause has not been a major topic of discussion among the public. Very little information has been circulated to the public to increase knowledge on the subject. The mass media has contributed and communicated wrong information against menopause by focusing predominantly on the associated physical and psychological discomforts and challenges. Therefore, the public has a negative impact about this life event (Buchanan et al. 2001, Hvas, 2006).

Thereby, many women face menopause with basic fears, confusion, discouragement, and contradiction, due to a misunderstanding of the changes in their bodies and the options available to them (Aber et al. 1998). Knowing, that menopause is both socially constructed and influenced, it is important to gain an understanding of it not only from a biophysical posture but also in the social context of women's lives (Walter 2000; George 2002). Studies have shown that women's perceptions of Menopausal phase can greatly influence their coping with the associated physical and psychological changes (Bertero, 2003). Based on the previous qualitative research, it was identified that women's expectations, apprehensions, and knowledge about the menopause arise in large part through social relationships between women, especially female relatives and friends (O'Leary Cobb, 1998). In a quantitative study, (Deeks and McCabe, 2004) found that a woman's feelings about changing life-roles (mother, career woman and friend) might also shape and be shaped by the menopause experience, further supporting the need to understand the social context of women's lives when exploring interest during menopause. In accumulation to primary information cause, research has shown that social relationships, especially familial relationships, greatly influence how women cope with menopause (Winterich & Umberson, 1999).

They are also able to cope much more effectively when prepared with accurate information about this experience. However, conventional means of giving such information have been shown to be insufficient in meeting women's needs (Domm et al. 2000; George 2002). Women have also expressed a desire to discuss their concerns and perceptions, with both peers and professionals. They have their experiences validated in a supportive environment (Bueche & Gelser 1997; O'Leary 1998). Although various literatures highlight many key distinctiveness and experiences of menopausal women in general, there is limited information about menopause experiences of women living in rural areas. Living in a rural environment can complicate the

menopause experience for several reasons, including geographical isolation, lack of confidentiality and anonymity, stress from multiple roles, poverty, and limited health care and support services (Davis, 1986 and Leipert & Reutter, 2005). The Centre of Excellence for Women's Health (2003) states that 'rural living affects women's health, not only because of geographic isolation or limited access to health services, but often because of socio-cultural characteristics that influence health-seeking behaviors. In a qualitative study using feminist grounded theory, (Leipert and Reutter, 2005) found that women living in isolated northern areas of Canada were at risk of receiving inadequate care due to a lack of menopause resources.

As a result, there is often a developed resilience and hardiness, which might be a byproduct of both cultural and rural influences. Women experiences menopause differently, there are distinct considerations for addressing the health of women living in rural areas. Furthermore, the socio-cultural context in which menopause is experienced must be taken into consideration when designing support and information services for women in rural environments. When comparing menopause studies in Asian countries, the studies relating to menopause in Sri Lanka was very less and with reference to a particular industry was close to nil therefore the present study concentrates on the women of academia. The current study aimed at evaluating the general opinion and symptoms of pre, peri and post-menopausal women of Sri Lankan Academics towards the menopause.

Menopause

The word menopause literally means the "end of monthly cycles". Menopause is defined as the permanent cessation of menstruation brought on by ovarian failure (Rees et al. 2009). Menopause is a natural and unavoidable event affecting all women. Menopausal symptoms will affect each woman differently. It is not possible to predict the severity and duration of these symptoms. Life expectancy is increasing and women may live about 30 years in the post-menopausal state. It is therefore important that health, even in the deficiency of symptoms, and quality of life is optimized during this time. The average age for menopause is 51 years, but the peri-menopause commences at the age of 46 years (Rees et al. 2009). The age at which the menopause occurs is determined by genetics, environmental factors such as smoking, and surgery (oophorectomy), chemotherapy or radiotherapy (Rees et al. 2009). A study by The University of Nottingham found that the menopause is still treated as a 'taboo' subject in many workplaces. So, much more needs to be done to support women and help

them cope with symptoms such as fatigue, poor concentration, hot flushes, and depression.

The History of Menopause

Menstruation was a way for the body to get rid of impurities. So when menstruation ceased during menopause, the blood started to remain within the body, clotting and stagnating. On those days (i.e) in the year 1700's, the logical solution was the application of leeches to a woman's genitalia or to the nape of her neck. Finally, with lot of difficulties they try and remove this excess blood. Most women were thought to be caused by evil "humors" or body fluids. Along with leeches, plant extracts called emmenagogues may have been prescribed or periodic bloodletting from the arm. In the year 1812, the term 'menopause' was first used by the French physician named de Gardanne After, then throughout the 1800's growing interest in anatomy led to a search for the causes of disease not in bodily fluids, but in particular organs. For women, the reproductive organs play a vital role for bearing children.

Disorders of the reproductive system were blamed on devoting too much energy to non-reproductive pursuits. On those days, doctors also strongly advice against sexual activity during and after menopause. Early 1900 have brought the rising popularity of psychoanalysts, who interpreted the depressive symptoms of menopause as misery for the loss of reproduction and femininity. Scientists were extracting chemical agents from certain tissues and organs which could be shown to have an effect on other parts of the body. These powerful chemicals were called hormones. During the last century of 1900 menopause and death occurred at roughly the same ages. Now the average woman who reaches menopause will live 30 more years. Finally, in 1990 there were an estimated 467 million women aged 50 years and over in the world. Now at present this number is expected to increase to 1200 million by the year 2030. Although life expectancy at birth varies significantly across countries, for women who reach the age of 50 years, life expectancy is remarkably similar throughout the world (Lee I 2001).

Phases of Menopause

Pre-menopause: The time up to the beginning of the peri-menopause, but is also used to define the time up to the last menstrual period.
Peri-menopause: The time around menopause during which menstrual cycle and endocrine changes are occurring but 12 months of amenorrhea has not yet occurred

Post-menopause: begins at the time of the last menstrual period, although not recognized until after 12 months of amenorrhea.

Symptoms of Menopause

Totally, women face 34 different symptoms of menopause. They are classified as physiological and psychological in nature. All are frustrating and debilitating. To better understand how these symptoms affect women, here is a categorical breakdown:

Vascular Instability – Most of the women suffer a lot based on this kind of symptom because the hormonal imbalances caused by menopause create vascular instability, which means your body struggles to regulate its own internal temperature. The most common symptoms associated with vascular instability are hot flashes and night sweats.

Urogenital Atrophy – These symptoms are most commonly associated with dryness in private parts, it can lead to bleeding, itchiness and incontinence.

Skeletal Pain – Normally women suffering from menopause claim to have back or joint problems, and it's widely recognized that menopause can lead to osteoporosis.

Psychological Damage – Arguably the worst side effect of menopause is the depression, mental fatigue, memory loss, insomnia, etc. that can debilitate one's personal and professional life.

Sexual Stagnation – In addition to dryness in private parts, menopause has been known to cause loss of libido.

It's worth reiterating that while there are 34 recognized symptoms of menopause, not every woman reacts to aging the same way. Some may experience more symptoms than others and some more severely than others. It usually comes down to your personal habits and heritage. Below is the full list of menopausal symptoms and problems.

Objective of the Study

The main aim of the study is to identify the symptoms and awareness associated with menopause among Sri Lankan academic women.

Methodology
The study is cross-sectional in nature and was carried out among women academicians of Sri Lanka. The data

is primary in nature and was collected from 50 women fulltime Universities Faculties. The sample size was restricted to 50 because of the population as there were very few women full time faculties in Sri Lankan Universities. The data were collected from two major Universities of Sri Lanka (University of Colombo and University of Jaffna) due to representation of Sinhalese and Tamilians populations and the study period was between May to June 2014.   The instrument used for data collection was a Questionnaire which was divided into four parts Section1 is about Socio-demographic factors of the women, Section 2 is about menstrual cycle questions like number of days of periods, etc. Section 3 deals with the opinion about menopause and Section 4 are on symptoms of menopausal on a Menopause Rating Scale (MRS). MRS is a self-administered instrument which has been widely used and validated and has been used in many clinical and epidemiological studies, and in research on the etiology of menopausal symptoms to assess the severity of menopausal symptoms (Heinemann LAJ, 2003).

It consists of 10 items like hot flushes, sweating, fast heart beats, sleeping problems, muscle problems, joint problems, depressive mood, irritability, anxiety, itching in private parts, physical and mental exhaustion on a Five point Likert's scale ranging from "1" (Strongly disagree) to "5" (Strongly agree). The analysis section has been divided into Part A on symptoms and Part B on Awareness. Correlation analysis was performed on the data to check for the relationship and OLS for finding out the influence of Independent variables and their quantum. The predictor variables for the study are women's age ranging from 25-60 years, marital status, educational qualification, number of children, right menstrual cycle, first menstrual period, and number of days for periods.

TABLE 1: SYMPTOMS

TABLE 1(a): MODEL SUMMARY				
R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.918	.842	.816	.55849	1.857

TABLE 1 (b): ANOVA					
Model	Sum of Squares	df	Mean Square	F value	Sig.
Regression	69.761	7	9.966	31.951	0.000
Residual	13.100	42	.312		
Total	82.862	49			

TABLE 1 (c): COEFFICIENTS					
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t value	Sig.
(Constant)	-3.285	1.017		-3.230	0.002
Marital Status	-.543	0.174	-.241	-3.122	0.003
Educational qualification	-.162	0.145	-.083	-1.115	0.271
What is your current age	0.086	0.012	.594	6.882	0.000
No. of Children	-.112	0.091	-.093	-1.230	0.225
I am on the right menstrual cycle always	-.273	0.203	-.102	-1.343	0.187
Age at first menstrual period	0.297	0.059	.355	5.052	0.000
Normally, how many days does your periods last	0.279	0.064	.316	4.389	0.000

From Table 1(a) it can be seen that the R square and adjusted R square values are more than 0.75 signaling the Regression Line fits the data well and all the Independent variables put together are able to explain more than 80% of the change in the Dependent variable. The result of ANOVA in Table 1 (b) states that all the Betas in the equation are not equal to zero as the significance of F is less than 0.05. From Table 1 (c) it can be understood that Marital status, Current age, Age of puberty and Number of days of Normal period are the influencing variables as their significance for the t value are less than 0.05. Probing further into the results in Table 1 (c) it can be understood that single women are more prone to symptoms of menopause, as the coefficient is negative and significant. Moving on to age, older the person on reaching the menopause more are the symptoms as the coefficient is positive and significant. Age of puberty, later the years in attaining the first period more are the symptoms as the coefficient is positive and significant. The other variable that influences symptoms is Number of days of period more the number of days of regular period, more are the symptoms of menopause.

Symptoms = -3.285 -.543 marital status +.086 current age +.297 first menstrual period +.279 number of days for periods.

TABLE 2: AWARENESS/OPINION

TABLE 2 (a): MODEL SUMMARY				
R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.598	.358	.251	2.04124	2.080

TABLE 2(b): ANOVA					
Model	Sum of Squares	df	Mean Square	F value	Sig.
Regression	97.501	7	13.929	3.343	0.006
Residual	174.999	42	4.167		
Total	272.500	49			

TABLE 2(c): COEFFICIENTS					
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t value	Sig.
(Constant)	24.903	3.717		6.699	0.000
What is your current age	0.007	.045	0.026	0.150	0.882
Marital Status	-1.775	.636	-.434	-2.791	0.008
Educational qualification	-.013	.531	-.004	-.025	0.980
No. of Children	-.272	.331	-.126	-.822	0.416
I am on the right menstrual cycle always	1.198	.744	0.246	1.611	0.115
Age at first menstrual period	-.006	.215	-.004	-.030	0.976
Normally, how many days does your periods last	.537	.232	0.335	2.310	0.026

From Table 2(a) it can be seen that the R square and adjusted R square values are around 0.25. As the explained variance is just 25% the regression model does not fit the data well. All the independent variables put together are able to explain only 25% of the change in the dependent variable. The result of ANOVA in Table 2 (b) states that all the betas in the equation are not equal to zero as the significance of F is less than 0.05. From Table 2 (c) it can be understood that marital status and Number of days of Normal period are the influencing variables as their significance for the t value is less than 0.05. Moving further into the results in Table 2 (c), the remaining independent variables show insignificant values and their respective co-efficient are positive and also negative inferring that there is no influence of these variables on awareness among young women and older women (i.e) they all agree to the statements asked in the questionnaire.

Women's awareness = 24.903 -1.775 marital status +.537number of days for periods.

Discussion

From the tables it is inferred that with respect to symptoms and awareness the independent variables like marital status and number of days of normal period show a significant values in both the tables signaling marriage and number of days of period plays a very important role in awareness and symptoms. The number of days of normal period differs for 5 days to 8 days and as the person reaches the stoppage of menstruation number of days of period increases so are the awareness and symptoms. Married women seem to be more aware and face less symptoms then the unmarried one, which may be due to the coping mechanism involved in family life style. The remaining independent variables like educational qualification, number of children, right menstrual cycle show insignificant values indicating that with respect to symptoms and awareness (dependent variables). The severity of symptoms was more distressing in peri and post-menopausal women than pre-menopausal women (Lindh Astrand et.al. 2004). Only women of peri-menopausal (40-55 years) and post-menopausal (after 55 years) undergo the symptoms of menopause. Studies say that there is evidence that health education and information provision can help to reduce symptoms (Towey et al. 2006).

Suggestions

The exercise program for peri and post-menopausal women should include endurance exercise (aerobic), strength exercise, and balance exercise. Out of these aerobics, weight bearing, and resistance exercises are all effective in increasing the bone mineral density of the spine in postmenopausal women (Bonaiuti D 2002). An effective exercise prescription may be resistance and weight bearing exercise three days a week (on alternate days). Care should be taken to do the exercise for all the muscle groups by rotation preferably with a trainer. Brisk walking at the speed of five to six kilometers per hour is a must for all women but especially it is very good for menopause women a lot. Cycling, treadmill, gardening or dancing may be done on the remaining days of the week. Warming up beforehand can help to reduce exercise related injuries and pain following exercise. One should aim for two hours and 30 minutes of moderate aerobic activity each week. Other deep breathing, yoga, and stretching exercises can help to manage the stress of life and menopause-related symptoms.

How to treat with Menopause? A Stepwise approach for Treatment:

Step1: Hormone Replacement Therapy (HRT): HRT is possibly the most popular and effective treatment for menopausal symptoms but it is also recognized as the most dangerous. HRT refers to the injection of processed hormones into a woman's body via pill, patch, gel, cream, sin spray, subcutaneous implants, etc. However, recent studies show that while they're highly beneficial for fighting symptoms of menopause long-term use of HRTs is associated with adverse side effects such as increased chances of breast cancer, cardiovascular disease and blood clots.

Step 2: Alternative medicine: The term "alternative medicine" covers a broad range of menopausal treatments. This could be anything from an herbal remedy to acupuncture. One common form of alternative medicine is phytoestrogens botanical source that mimics the effects of human steroidal estrogen. Acupuncture has been highly regarded as being able to subdue hot flashes, but is also questioned in its validity to treat other

symptoms of menopause. Meditation and yoga are also known to help.

Step3: Supplements: Supplements are considered a form of alternative medicine but for the sake of clarity. There is a separate category for women here below are a list of supplements commonly consumed to fight symptoms of menopause. (Rees, 2009)

Actea Racemosa (Black Cohosh)	Ginseng
Flaxseed	St John's Wort
Red Clover	Sage
Vitamin D	Angelica Sinensis (Dong Quai)
Wild Yams	Soy

Actea Racemosa (Black Cohosh)-This root is apparently great at fighting hot flashes. Flaxseed-known for alleviating mild cases of hot flashes and night sweats. Red clover- the natural estrogen in this plant is thought to help alleviate symptoms of menopause. Vitamin D- its primary function is to maintain bone density. Wild Yams- They has natural compounds resembling estrogen and progesterone. Ginseng is popular for improving mood and sleep but has no signs of alleviating hot flashes. St John's Wort- It is a well-known remedy for depression. Sage has the power to increase estrogen in menopausal women. Angelica Sinensis (Dong Quai)- This root has been a popular ingredient in Chinese medicine for thousands of years. Soy is apparently great at reducing hot flashes.

Step 4: Exercise: Regular exercise at least 30 minutes a day, 3 times a week can significantly reduce symptoms of menopause especially combating weight gain and bone density loss. Furthermore, not exercising can increase symptomatic stress so the benefits of working out are compounded.

Step 5: Take Right Foods: Avoid caffeine alcohol spicy food and sugar. Anything that raises blood sugar can mess with your stress hormones and increase your hot flashes. An unhealthy diet may also amplify the weight gain associated with menopause. Eat a balanced diet with plenty of leafy greens as plant food can help naturally balance your body's hormones. Also, make sure you get adequate amounts of calcium and vitamin D to help stave off osteoporosis. In addition to medical treatment and lifestyle changes, there is an often-overlooked way to help cope with your symptoms. Society say menopause is too taboo to talk about but society as a whole does not feel your pain. Therefore, as always consult your doctor before taking any medication for your menopause symptoms. Moreover, whatever solution you and your doctor agree upon, always carry out in healthy living.

Conclusion

Menopause may affect women differently. Each woman reacts differently to different symptoms. Symptoms may be minor or severe and may affect lifestyle and relationships. Lindh-Astrand et.al 2004 says that women who assist in regular physical activity and have a good diet tend to cope better with their symptoms. In this study, women need counseling activities and decision aids in menopausal transition to their satisfaction and for a healthy living. Women need clarity and problem solving solutions in reducing menopausal symptoms. Women need to be aware of menopausal symptoms in before so that they would be cautious on certain situations. Hence, women who undergo menopause have to be aware of how to reduce the symptoms so as to cope up with it.

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