



PREVALENCE AND EFFECTS OF SYMPTOMS ASSOCIATED WITH MENOPAUSE IN DAY-TO-DAY LIFE: A CROSS SECTIONAL STUDY AMONG WOMEN IN SRI LANKA

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INTRODUCTION

All women who live beyond the age of 60 years and many of younger age experience a period of transition from reproductive to the non reproductive stage of life, of which the most striking feature is the cessation of menstruation; menopause. Menopause is the time of a woman's life when reproductive capacity ceases, the ovaries stop functioning and their production of steroid and peptide hormones fall (WHO,1996). Many physiological changes may take place in the body during this time. Some of these are due to the result of the cessation of ovarian function and related menopausal events. Most of the experiences and the symptoms around the time of menopause are self-limiting and not life-threatening, but sometimes disabling. WHO (1996) has emphasized the importance of designing studies to find out the prevalence of menopause related symptoms and their severity, the extent to which they interfere with daily activities of women.

Some foreign studies found in the literature (WHO,1996; Melby *et. al.*, 2005; Margaret *et. al.*, 2002) and two local studies (Fernando *et. al.*, 2011; Rnandeniya *et. al.*,2011) done on prevalence of symptoms associated with menopause have reported hot flashes, night sweats, cold hands and feet, vaginal dryness, insomnia, mood changes - depression, irritability, tension, gain in abdominal fat, backache, lack of energy, difficulty in concentrating, joint pain, fatigue and urinary problems as symptoms related to natural menopause.

Though many research studies on menopause have been done in other countries using large samples, there is no evidence of research done on menopause and symptoms associated with menopause in Sri Lanka, based on population covering all provinces, ethnic groups, socioeconomic classes etc.

This abstract presents results of one objective of a postgraduate study related to the natural menopause of Sri Lankan women: effects of symptoms associated with menopause in the day-to-day life of women in Sri Lanka.

This is a large-scale study covering all provinces. Findings of this study will be useful to improve the quality of life of Sri Lankan women in the post-reproductive stage of life.

METHODOLOGY

All naturally postmenopausal women, who live in Sri Lanka, were the target population in this study. Natural menopause has been defined by the World Health Organization (WHO,1996) as "at least 12 consecutive months of amenorrhea (absence of menstruation) not due to surgery or other obvious cause, such as extreme weight loss" is used to identify a post menopausal woman.

This is a cross sectional community-based study. Ethical clearance for the study was obtained from the Ethical review committee, Faculty of Medicine, University of Sri Jayewardenepura (No 686/12). The study was conducted in Sri Lanka, covering all provinces. Data were collected from 914 post menopausal women who had natural menopause (Western-221, Southern-118, Sabaragamuwa-100, Central-110, North West-119, North Central-60, Uva-60, North-53, Eastern-73) through an interviewer administered questionnaire. The questionnaire was designed in English and translated into Sinhala and Tamil languages.



Data were collected on Age at Natural Menopause (ANM), race, symptoms associated with natural menopause and their effects in day-to-day life. The participants were asked to rank the effects of the symptoms - hot flashes, night sweats, cold hands and feet, vaginal dryness, insomnia, mood changes - depression, irritability, tension, gain in abdominal fat, backache, lack of energy, difficulty in concentrating, joint pain, fatigue and urinary problems - in their day-to-day life activities currently and in the past 3 months according to scale 1 – Not at all, 2 – A little bit, 3 – Quite a bit, 4 – Extremely.

Percentages ($P\% = [\text{Number of women reported the symptom or effect} / \text{Total sample size}] * 100\%$) of prevalence and effects of the symptoms were calculated. Chi square test was used to find the associations between the symptoms (0 – absent, 1 – present) and categorised ANM ($ANM \leq 45$, $45 < ANM \leq 49$, $49 < ANM \leq 51$, $ANM > 51$) based on quartiles of ANM.

RESULTS AND DISCUSSION

The sample consisted of 75.85% Sinhalese 16.28% Tamil and 7.87% of Muslims. 70.79% of sample women lived in the rural sector and 29.21% in the urban sector. The minimum age of the women in the sample was 39 years and the maximum age was 84 years. The range was 45 years. 25% of the women were below 53 years, 25% were in-between 53 years to 58 years, 25% were in between 58 years to 63 years and 25% were above 63 years. Mean ANM of Sri Lankan women is 48.35 years with a standard deviation of 4.15 years.

Table 1 illustrates the prevalence and effect of the post menopausal symptoms in the participants' day-to-day life. According to these results, more than 70% of Sri Lankan women are suffering from backache, 50% - 70% from insomnia and joint pain, 30% - 50% from hot flashes, mood changes - depression, irritability, tension, gain in abdominal fat, lack of energy, difficulty in concentrating, memory impairment and fatigue and 20% - 30% from cold hands and feet, vaginal dryness and urinary problems in their post menopausal life. These results indicate that a considerable fraction of post menopausal women are suffering with post menopausal symptoms.

It was observed that 17% of Sri Lankan post menopausal women are extremely affected by backache and joint pain, 12% are extremely affected by night sweats, 5%-10% are extremely affected by hot flashes, insomnia, lack of energy and memory impairment.

The Chi square tests of association showed that prevalence of night sweats ($p\text{-value} = 0.010$), vaginal dryness ($p\text{-value} = 0.002$), backache ($p\text{-value} = 0.021$) and lack of energy ($p\text{-value} = 0.036$) have statistically significant associations with ANM. Memory impairment ($p\text{-value} = 0.070$) showed marginal associations with categorised ANM. The above associated symptoms with the ANM may have direct or indirect effect of the factors (Siriwardana *et. al.*, 2014) which are associated with the ANM of Sri Lankan women (race, bleeding patterns, number of still births and/or abortions, education level and BMI).

Table 2 and Figure 1 illustrate the prevalence of post menopausal symptoms according to ANM. According to Table 2 and Figure 1 there is an indication that prevalence of the lack of energy, backache and vaginal dryness among the women whose $ANM \leq 45$, is less than the women whose $ANM > 45$. Prevalence of night sweats among the women whose $ANM \geq 51$ is less than the women whose ANM is < 51

The study was based on self reported data.

CONCLUSIONS/RECOMMENDATIONS

A considerable proportion of Sri Lankan postmenopausal women are severely suffering with postmenopausal symptoms such as backache and joint pain. Measures would need to be taken to address these menopausal symptoms to have better quality of life among these groups of women.

Some postmenopausal symptoms (night sweats, vaginal dryness, backache, lack of energy, memory impairment) showed associations with ANM. These associations suggest that night sweats, vaginal dryness, backache, lack of energy and memory impairment may have a direct



or indirect effect of the factors (race, bleeding patterns, number of still births and/or abortions, education level, BMI) that are associated with ANM of Sri Lankan women. This suggestion opens a door to another research question for further study.

Symptom	Present%	Not at all%	Effects of the symptom in day-to-day life		
			A little bit%	Quite a bit%	Extremely%
Hot flashes	44.53	55.47	26.59	10.94	7.00
Night sweats	57.003	43.00	31.40	13.79	11.82
Cold hands and feet	23.413	76.57	17.83	4.16	1.42
Vaginal dryness	26.48	73.52	21.23	4.16	1.09
Insomnia	53.28	46.72	31.29	14.55	7.44
Mood changes -- depression, irritability, tension	41.03	58.97	34.14	4.49	2.41
Gain in abdominal fat	39.17	60.83	25.93	9.85	3.39
Backache	74.07	25.93	35.68	20.68	17.72
Lack of energy	39.82	60.18	26.70	8.42	4.70
Difficulty in concentrating	33.04	66.96	27.79	3.94	1.31
Joint pain	67.72	32.28	28.77	21.88	17.07
Memory impairment	45.62	54.38	29.98	10.61	5.03
Fatigue	32.71	67.29	26.59	5.03	1.09
Urinary problems	21.15	78.88	18.93	1.53	0.66
Numb in hand	0.88	99.12	0.33	0.44	0.12

Table 1: Prevalence and effect of post menopausal symptoms

Category(ANM)	Memory impairment%	Lack of energy%	Backache%	Vagina dryness%	Night sweats%
1: ANM ≤ 45	47.47	34.85	67.17	17.17	60.1
2: 45 < ANM ≤ 49	38.49	39.21	79.14	27.34	55.4
3: 49 < ANM ≤ 51	52.56	47.44	76.07	33.76	63.68
4: 51 < ANM	45.59	36.76	71.57	25.98	48.53

Table 2: Prevalence of post menopausal symptoms according to ANM

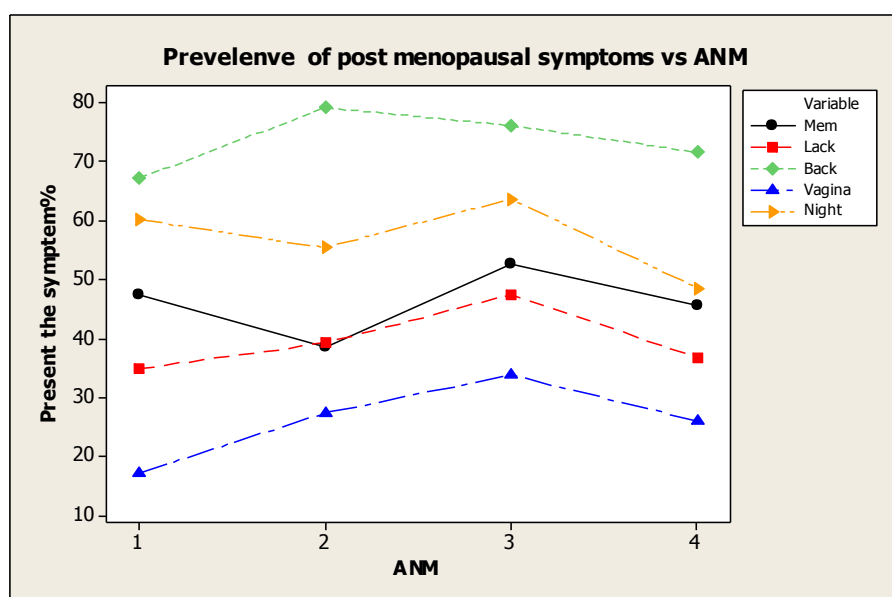


Figure 1: Prevalence of post menopausal symptoms according to ANM



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