



# Prevalence and Associated Social-Reproductive Determinants of Menopausal Symptoms among Pre and Postmenopausal Women in Galle, Sri Lanka

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## 1 INTRODUCTION

Physical, psychological and urogenital symptoms experienced by women before, during and after menopause have a significant impact on their lives. Symptoms experienced at menopause, their nature, frequency and severity (the intensity of the symptoms) of symptoms vary among individual women from mild to very severe stages due to various confounding effects of different factors (Elsabagh and Abd Allah, 2012). To date, few studies have been carried out in Sri Lanka about menopausal symptoms and their severity (Goonaratna *et al.*, 1999; Waidyasekera *et al.*, 2009) and therefore, this study aims to determine the prevalence and severity of menopausal symptoms and to evaluate the associated social and reproductive determinants among pre and postmenopausal women in Galle, Sri Lanka

## 2 METHODOLOGY

A descriptive cross sectional study was carried out with 184 premenopausal and 166 postmenopausal community dwelling women in Bope- Poddala MOH area,

Galle, aged between 30-60 years who were selected by multi-stage cluster sampling. The lower age limit of 30 years was considered because the bone and muscle maturity of women is completed at this age (at the end of accelerated growth) and also women after 30 years are free of adolescence and pre-adolescence hormonal influences. In the same way, the upper age limit of 60 years was considered to avoid bodily changes that are attributable to advancing age and many diseases that are prevalent in old age. Postmenopausal women younger than 60 years would provide an opportunity to study changes that are mostly attributable to the effects of menopause. Ethical clearance for this study was obtained from Ethical Review Committee, Faculty of Medicine, and University of Ruhuna. Written informed consent was obtained from each participant who wished to take part in the study before administering the questionnaire. A self-administered questionnaire including demographic questionnaire and Menopause Rating Scale (MRS) was applied. MRS evaluate Eleven (11) symptoms under 3 subscales of symptoms as psychological symptoms (PS), somato - vegetative symptoms (SVS), and urogenital symptoms (UGS) in a severity scale as none, mild, moderate, severe and very



severe. MRS score was generated by summing the scores given for 11 symptoms. SPSS 20.0 version was used in the data analysis process. Chi square test, Pearson correlation coefficient, Independent sample t test and one way ANOVA test were applied where necessary. P value <0.05 was considered as statistically significant.

### 3 RESULTS AND DISCUSSION

Majority of the participants were Sinhalese, non-employed and were married in both pre and postmenopausal groups. The mean (SD) age of pre and postmenopausal women was 42.48 (6.02) years and 55.83 (3.80) years respectively. The prevalence of at least a single menopausal symptoms among pre and postmenopausal women was 90.8% (167) and 96.4% (160) respectively ( $\chi^2=4.49$ ,  $p=0.00$ ). Concordant findings were observed in previous studies carried out in Sri Lankan locality which were about >91% among pre, peri and postmenopausal women and 87.1% (Goonaratna *et al.*, 1999) among perimenopausal women while the different other geographical communities also reported approximately equal prevalence figures (Dennerstein *et al.*, 2000).

Both prevalence and severity of all the symptoms were higher among the postmenopausal women. The most frequently reported menopausal symptoms among premenopausal women were physical and mental exhaustion (49.5%), joint and muscular discomforts (48.4%) and irritability (41.3%) in mild to moderate severity. Physical and mental exhaustion (53.0%), irritability (48.2%), depressive mood (43.4%) and hot flushes/sweating (42.2%) in mild to moderate severity were reported more frequently among postmenopausal women while the 47.5% reported joint and muscular complaints in severe to very severe degree (Table 01).

The frequencies of reporting severe to very severe symptoms among postmenopausal women were higher when compared with the premenopausal women. Presence of hot flushes or sweating, sleep disturbances, anxiety, physical and mental exhaustion, sexual problems, bladder problems, dryness of vagina, joint and muscular discomforts were significantly associated with postmenopausal status ( $p<0.001$ ) (Table 1). High prevalence of joint pain among postmenopausal women (55.8%) have been reported by Goonaratna *et al.*, 1999). Although most of the western women report hot flushes as the most common menopausal symptom (Dennerstein *et al.*, 2000), it was not common in current study sample and other studies reported in Sri Lanka (Goonaratna *et al.*, 1999; Waidyasekera *et al.*, 2009).

Mean(SD) overall and subscales of symptoms scores were significantly higher among postmenopausal women [overall:10.98(6.90), PSV:4.04(3.22), SVS:5.17(3.01), UGS:1.78(2.21)] compared to premenopausal women [Overall:6.90(6.20), PSV:2.79(3.10), PSV:3.15(2.68), SVS:3.15(2.68), UGS:0.97(1.72)] ( $p<0.001$ ).

Among the premenopausal women, PS were significantly correlate with age at menarche ( $r=+0.18$ ,  $p=0.01$ ) and women with high parity (children 4-7)( $p=0.01$ ), SVS were associated with civil status(married)( $p=0.04$ ) and high parity( $p<0.001$ ), UGS were associated with age ( $r=+0.16$ ,  $p=0.02$ ), duration of breast feeding ( $r=+0.15$ ,  $p=0.03$ ), civil status (married)( $p<0.001$ ) and high parity ( $p=0.001$ ) and overall menopausal symptom score only associated with the high parity( $p=0.04$ ). Among the postmenopausal women, PS and SVS were not correlate/associate with any evaluated factor. However, UGS were associated with age at menarche( $r=0.16$ ,  $p=0.03$ ), associated with unemployed status ( $p=0.02$ ) and married status ( $p=0.01$ ). Overall menopausal symptoms



score was associated only with ethnicity (high in non-Sinhala women) ( $p=0.04$ ). Both similarities and discrepancies with previous studies have been reported. Decreased severity of menopausal symptoms was associated with more time spent in education, an employed status, a history of pregnancy, longer

postmenopausal duration and increased severity of menopausal symptoms was associated with absence of a partner among Korean women (Lee *et al.*, 2010). Low educational level and early age at menarche were associated with presence of menopausal symptoms among Iranian women (Delavar and Hajiahmadi, 2011).

**Table 1:** Prevalence and severity of menopausal symptoms among pre and postmenopausal women

Menopausal symptom	Premenopausal women (n=184)			Postmenopausal women (n=166)			Chi square test	
	None (%)	M-M (%)	S-VS (%)	None (%)	M-M (%)	S-VS (%)	X <sup>2</sup> value	P value
Hot flushes, sweating	113 (61.4)	65 (35.3)	6 (3.3)	75 (45.2)	70 (42.2)	21 (12.7)	15.31	0.00
Heart discomfort	132 (71.7)	47 (25.5)	5 (2.7)	104 (62.1)	53 (15.9)	9 (5.4)	3.91	0.14
Sleep problems	129 (70.1)	46 (25.0)	9 (4.9)	69 (41.6)	65 (39.2)	32 (19.3)	33.49	0.00
Depressive mood	104 (56.5)	69 (37.5)	11 (6.0)	80 (48.2)	72 (43.4)	14 (8.4)	2.63	0.26
Irritability	101 (54.9)	76 (41.3)	7 (3.8)	77 (46.4)	80 (48.2)	9 (5.4)	2.67	0.26
Anxiety	114 (62.0)	61 (33.2)	9 (4.9)	80 (48.2)	74 (44.6)	12 (7.2)	6.73	0.03
Physical and mental exhaustion	82 (44.6)	91 (49.5)	11 (6.0)	45 (27.1)	88 (53.0)	33 (19.9)	20.96	0.00
Sexual problems	149 (42.6)	31 (16.8)	4 (2.2)	115 (32.9)	43 (25.9)	8 (4.8)	6.75	0.03
Bladder problems	151 (82.1)	27 (14.7)	6 (3.3)	97 (58.4)	56 (33.7)	13 (7.8)	23.60	0.00
Dryness of vagina	144 (78.3)	36 (19.6)	4 (2.2)	111 (66.9)	45 (27.1)	10 (6.0)	6.93	0.00
Joint and muscular discomfort	40 (21.7)	89 (48.4)	55 (29.9)	20 (12.0)	67 (40.4)	79 (47.6)	13.17	0.00

(M-M = mild to moderate, S-VS = severe to very severe, X<sup>2</sup> = chi square value)

## 4 CONCLUSIONS

This cross sectional survey found high prevalence of menopausal symptoms among both pre and postmenopausal women, while higher prevalence and severity observed in postmenopausal women than premenopausal women. The most frequently reported menopausal symptoms among premenopausal women were physical and mental exhaustion, joint and muscular discomforts and irritability. Among postmenopausal women, physical and mental exhaustion, irritability, depressive mood, hot flushes/sweating and joint and muscular complaints were reported frequently. Among the premenopausal women, PS were affected by age at menarche, parity, SVS were affected by civil status and parity, UGS were affected by age, duration of breast feeding, civil status and parity and overall menopausal symptom score only associated with parity. Among the postmenopausal women, UGS were affected by age at menarche, unemployed status and married status. Overall menopausal symptoms score was associated only with ethnicity. As most of the pre and postmenopausal women reported non-specific symptoms which are not related to the ovarian dysfunction, non-specific therapies such as lifestyle modifications, psychological counseling and usage of approved herbal remedies need to be emphasized among the women for better coping with menopausal symptoms.

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