

## An overview of Somatic Symptoms among the two Menopausal Groups

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**Abstract.** *Present study aims to find out the prevalence of somatic symptoms and the factors influencing the onset of symptoms among the Bengali speaking Hindu menopausal women of Eastern India. A total number of 371 women (30-55 years) were selected as study participants and they were divided into two groups on the basis of their age of attainment of menopause. Results showed that barring the dizzyiness and faint, rest of the somatic symptoms has frequently reported by both the menopausal groups. Multivariate analysis showed that socio-demographic and reproductive variables seemed to be the significant factors of menopausal symptoms.*

### Introduction

Menopause is an inevitable milestone in the reproductive life of women during their mid age. Natural menopause coincides with the final menstrual period (FMP), and this cannot be determined until there have been 12 months of amenorrhea [World Health Organisation (WHO) 1996, vii + 107 pages].

During menopause women have reported number of health problems (Odell & Burger 2001, 2153–62.) which can be classified according to hormone-related and non-hormone groups. The non-hormone related symptoms consist of a large variety of somatic symptoms such as irritability, nervousness, general fluctuation in mood and insomnia. Studies have shown that the prevalence of these symptoms varies in different socio-cultural groups and number of factors such as marital status, parity, occupation, education and income status has an influence on somatic symptoms (Van Keep et al. 1981, 19–28).

Indian women attained menopause at 48–49 years with 11% reached it before 40 (IIPS & ORC Macro, 2007). WHO report shows that during the last decade of the 20th century, 40% of postmenopausal women lived in the world's industrialised regions while 60% lived in developing countries. Thus, growing number of these women can expect to live for several decades after menopause. With increase in size of older population, the government needs to plan the future health infrastructure and allocation of resources.

It would therefore be beneficial to know the prevalence of somatic symptoms and if there are any socio-demographic factors that may influence its onset. Thus, we attempted to get an overview of the prevalence of somatic symptoms and study the factors influencing the onset in Eastern India.

### Material and methods

The present study was conducted in West Bengal, a state located in the eastern part of India. A total number of 371 Bengali speaking Hindu women were divided into two groups on the basis of their age of attainment of menopause— early menopausal group (30 to 39 years) (n= 157) and late menopausal group (50 to 55 years) (n= 214). Postmenopausal status and age at menopause of the participants were assigned following World Health Organisation (WHO: 1996). The data was collected during the period from April 2010 to May 2012.

A structured schedule was prepared by the researcher to collect data on socio-demographic variables (present age, area of living, working status), reproductive variables (age at menarche, age at marriage, age at menopause and parity) and diet (consumption of animal protein, veg protein, black tea and tobacco). Data on diet were

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obtained in terms of frequency in a week.

Determination of age at menarche was done by recall method. A section of the participants couldn't recall their exact age at menarche. In those cases, the researcher had to provide certain clues (like referring to some landmark event in their life and/ or of the nation). Data on menopausal symptoms were collected with a recall period of two weeks preceding the date of the survey. Somatic symptom list was assessed by Thai checklist (Sukwatana et al. 1991, 217-28; Chompootweep et al. 1993, 63-71). Weight (kg) and standing height (cm.) were obtained using standard techniques (Lohman et al. 1988) to calculate body mass index (BMI) ( $\text{kg}/\text{m}^2$ ).

Prior to data collection, these schedules were canvassed on a small group of women who had fulfilled the research criteria to test its aptness for this study that is presently aged between 30 and 55 years, still in wedlock, have at least one child, and without any history of hysterectomy or other major gynaecological problems and have cessation of menstruation in the last twelve consecutive months.

Statistical analysis was done using the software SPSS 16.0. Binary logistic regression (using enter method) analyses (earlymenopausal and latemenopausal groups combined) (table 3) were done to find out the factors significantly associated with menopausal problems. In these analyses, the categorical variables which were used as references for comparison were as follows: residential status (rural), working status (non working), menopausal status (early menopausal). The rest of the variables such as, intake of animal protein, veg protein, black tea and tobacco at least once a week, BMI, age at menarche, age at marriage and parity were treated as continuous variables.

## Result

Table 1 shows the socio-demographic variables of the study participants. Majority of the women from both menopausal groups were from rural area. However, the frequency was higher among late menopausal group (53.3%) compared to the early menopausal group (51.6%). An overwhelming number of participants from both the menopausal groups were non working, that they were home maker and the frequencies were same (75.2%) in case of both the groups. The frequency of the consumption of animal protein, veg protein and black tea within a week were similar in both the early ( $6.07 \pm 0.4$ ,  $1.31 \pm 0.4$  and  $15.70 \pm 0.9$  respectively) and late ( $6.91 \pm 0.6$ ,  $1.32 \pm 0.1$  and  $15.93 \pm 0.7$  respectively) menopausal groups. BMI of the early and late menopausal groups were  $23.38 \pm 5.4$  and  $23.73 \pm 5.3$  respectively. Reproductive variables like mean age at menarche, mean age at marriage and parity of the early ( $13.31 \pm 1.5$  years,  $18.06 \pm 4.1$  years and  $2.7 \pm 1.7$  respectively) and late ( $13.97 \pm 1.7$  years,  $18.98 \pm 4.6$  years and  $2.8 \pm 1.6$  respectively) menopausal groups were similar. Age at menopause of early menopausal group was  $36.55 \pm 3.2$  years whereas in case of late menopausal group, mean age at menopause was  $50.84 \pm 1.1$  years.

Table 2 shows that early menopausal group more frequently reported the problems like dizziness, rapid heart beat, irritability, sleep disturbance and faint than their late menopausal counterpart. On the other hand the prevalence of numbness of extremities and tiredness were more in the late menopausal group than the early menopausal one.

Table 3 shows the factors associated with somatic symptoms. Early age at menarche, marriage and rural living significantly associated with the prevalence of dizziness. Rapid heart beat associated with more number of parity, intake of tobacco and early age at menarche. Prevalence of numbness of extremities associated with intake of black tea and tobacco. Tiredness and irritability both are associated with rural area of living. On the other hand sleep disturbance was associated with intake of tobacco and early age at marriage. Faint was highly associated with higher BMI followed by rural area of living.

## Discussion

The study confirmed differences in socio-demographic (area of living, working status and diet) and reproductive variables (age at menopause and parity) in both menopausal age and reporting of menopausal problems (dizziness, rapid heart beat, irritability, sleep disturbance, faint, numbness of extremities and tiredness). The results from the binary logistic regression revealed that age at menarche, marriage and area of living were the factors of dizziness. Parity, intake of tobacco and age at menarche were the factors of rapid heart beat. Only area of living was the significant predictor of tiredness and irritability. Intake of black tea and tobacco were the factors of numbness of extremities. On the other hand intake of tobacco and age at marriage were the factors of sleep disturbance and BMI, area of living were the factors of faint.

The decline in estrogen concentration during menopause impinges on health consequences (Jacobsen et al.2003: 923-929). A wide range of somatic problems have been attributed to menopause, the most important are

headaches, insomnia, backache palpitations, lack of energy, fluid retention and difficulty in concentration. (WHO 1996). Referring to the various problems faced during menopause, women from Gujarat, India have reported different problems like backache (100%), headache (92%), uneasiness (89%), profuse perspiration (84%), pain in joints (83%), etc (Nagar & Dave 2005:173-75). On the other hand, the symptoms associated with menopause in Punjab, India were insomnia (53.12%), headache and body-aches (38.28%), fatigue (42.18%), irritability (35.15%), perspiration (34.76%), palpitation (22.26%) and short breath (20.31%) (Sidhu et al.2005: 49-51). Symptoms reported from different regions of Pakistan were also different, commonest symptoms were backache (75%), body ache (66.7%) and insomnia (63.4%) (Nusrat et al. 2008: 56-59), while symptoms experienced by mid-aged Thai women were dizziness, tiredness, headache, joint aches/pain & backache (Punyahotra et al.1997: 1-7). In our study rapid heart beat (62.5%), numbness of extremities (63.1%), tiredness (76.3%), irritability (74.7%) and sleep disturbance (59.6%) were most frequently reported by the present study group.

Studies showed that although biological changes attributed to menopause are universal, yet the variation in the subjective experience of menopause seems to be explained by the socio demographic (age, working status, area of living) and reproductive (menopausal status, parity, age at menarche, marriage) factors and culturally influenced behaviour (like, diet) is found to be responsible for the impairment of menopausal experiences of middle aged women (Malacara et al. 2002:11-19, Greendale & Gold 2005. 2005: 148-154, Progetto Menopausa Italia Study Group. 2005:181-189). Thus symptoms at menopause are result from the interaction of biological factors and attitude of women towards menopause, derived from socio-cultural influences. The influence of cultural factors is suggested by the association of somatic symptoms with area of living and dietary habit of the participants. Menopausal status seems not to be associated with any kind of somatic symptoms. Apart from this, the prevalence of symptoms did not vary widely between menopausal groups. BMI was strongly associated with faint while we are not in a position to probe further in to this matter. Thus we conclude that further studies are needed to determine the possible role of social and cultural factors on somatic symptoms of menopause.

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**Table 1: Socio-demographic and reproductive variables**

	<b>Early menopausal group (n=157)</b>	<b>Late menopausal group (n=214)</b>
<b>Area of living</b>		
Rural	81(51.6)	114(53.3)
Urban	76(48.4)	100(46.7)
<b>Working status</b>		
Working	39(24.8)	53(24.8)
Non-working	118(75.2)	161(75.2)
<b>Diet (mean±se)</b>		
Consumption of animal protein	6.07±0.4	6.91±0.6
Consumption of veg protein	1.31±0.4	1.32±0.1
Consumption of black tea	15.70±0.9	15.93±0.7
Consumption of tobacco	4.90±0.9	5.50±0.9
<b>BMI</b>	23.38±5.4	23.73±5.3
<b>Age at menarche (yrs) (mean±sd)</b>	13.31±1.5	13.97±1.7
<b>Age at marriage (yrs) (mean±sd)</b>	18.06±4.1	18.98±4.6
<b>Age at menopause (yrs) (mean±sd)</b>	36.55±3.2	50.84±1.1
<b>Parity</b>	2.7±1.7	2.8±1.6

**Table 2: Frequency of somatic symptoms**

	<b>Early menopausal group (n=157)</b>	<b>Late menopausal group (n=214)</b>
Dizziness	73(46.5)	89(41.6)
Rapid heart beat	104(66.2)	138(64.5)
Numbness of extremities	94(59.9)	140(65.4)
Tiredness	116(73.9)	167(78.0)
Irritability	122(77.7)	155(72.4)
Sleep disturbance	97(61.8)	124(57.9)
Faint	6(3.8)	7(3.3)

**Table 3: Factors associated with somatic symptoms analyzed by binary logistic regression analyses**

	<b>Exp (B)</b>	<b>95% CI</b>	<b>P value</b>
<b>Dizziness</b>			
Area of living	0.514	0.315-0.840	0.008
Age at menarche	0.898	0.836-0.965	0.003
Age at marriage	0.956	0.926-0.987	0.006
<b>Rapid heart beat</b>			
Intake of tobacco	1.029	1.006-1.054	0.015
Parity	1.181	1.066-1.308	0.001
Age at menarche	0.921	0.857-0.989	0.025
<b>Numbness of extremities</b>			
Intake of black tea	1.039	1.014-1.065	0.002
Intake of tobacco	1.027	1.004-1.051	0.022
<b>Tiredness</b>			
Area of living	0.521	0.293-0.926	0.026
<b>Irritability</b>			
Area of living	0.420	0.237-0.745	0.003
<b>Sleep disturbance</b>			
Intake of tobacco	1.045	1.020-1.071	0.000
Age at marriage	0.953	0.924-0.983	0.002
<b>Faint</b>			
Area of living	0.095	0.018-0.507	0.006
BMI	1.107	1.011-1.212	0.027

p≤0.05