

## CLIMACTERIC SYMPTOMS AMONG POSTMENOPAUSAL WOMEN RESIDING IN A RURAL AREA OF BANGLADESH: A CROSS-SECTIONAL STUDY

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### ABSTRACT

Menopausal symptoms concern the majority of women, but their expression varies greatly between different populations. E.g., the incidence of hot flashes/vasomotor symptoms (VMS, hot flashes, sweating, palpitations) may reach 80% in western peri-menopausal women. A cross-sectional study was conducted among 213 postmenopausal women in Bogra Sadar from January 2017 to December 2017 to find out the prevalence of climacteric symptoms among them. Data was collected by semi-structured questionnaire after taking written consent. Data processing and analysis was done using SPSS (Statistical Package for Social Sciences) version 20. About 66.2% were in the age group 45-50 years among 213 respondents from nuclear family. Maximum age of the respondents was 60 year and minimum age of respondents was 45 year. Total 64 (30%) were illiterate. More than half 59.2% suffer from hot flush, 33.8% has sleeping disorder, 60.1% has joint problem or muscle pain, 46.0% has problem during intercourse frequently and 39.4% feel less desirable in family or society sometimes. According to confident about ability to handle personal problem after menopause majority 56.8% were sometimes confident. This study therefore, concludes that almost all post-menopausal women experience climacteric symptoms but the classical presentation of menopausal symptoms like hot flush, several joint problems, sexual problems were higher in comparison to another cross sectional study.

**KEYWORDS:** Climacteric Symptoms, postmenopausal women.

### INTRODUCTION

Menopause is considered as an emerging health issue of midlife women, where there is gradual shift from reproductive to non-reproductive roles. Menopause is, permanent cessation of menstruation (monthly cycles) due to less production of female sex hormones estrogen and progesterone. When cycles do not occur for 12 consecutive month's menopause is considered complete.<sup>[1]</sup> Age of menopause is genetically predetermined. It is not related to age of menarche, age of last pregnancy, number of pregnancy, lactation, use of oral pill, socioeconomic condition, race, height or weight. Cigarette smoking and severe malnutrition may lead to early menopause.<sup>[2]</sup> When menopause occurs earlier than age 40, it is referred to as premature menopause. There is also induced menopause where the ovaries are removed surgically.<sup>[3]</sup> Menopause occurs due to a complex series of hormonal changes. Associated

with the menopause is a decline in the number of functioning eggs within the ovaries. At the time of birth, most females have about 1 to 3 million eggs, which are gradually lost throughout a woman's life. By the time of a girl's first menstrual period, she has an average of about 400,000 eggs. By the time of menopause, a woman may have fewer than 10,000 eggs. A small percentage of these eggs are lost through normal ovulation (the monthly cycle). Most eggs die off through a process called atresia that is degeneration and subsequent resorption of immature ovarian follicles fluid filled cysts that contain the eggs.

FSH (follicle-stimulating hormone) is the substance responsible for the growth of ovarian follicles (eggs) during the first half of a woman's menstrual cycle. As menopause approaches, the remaining eggs become more resistant to FSH, and the ovaries dramatically reduce

their production of estrogen. Estrogen affects many parts of the body, including the blood vessels, heart, bone, breasts, uterus, urinary system, skin, and brain. Loss of estrogen is believed to be the cause of many of the

symptoms associated with menopause. At the time of menopause, the ovaries also decrease their production of testosterone, a hormone involved in libido, or sexual drive.<sup>[2]</sup>

Symptoms and related psychosocial impairment during the menopausal transition.<sup>[4]</sup>

▪ Hot flushes	
▪ Night sweats	
▪ Sleep disturbances	<ul style="list-style-type: none"> <li>• Insomnia</li> <li>• Sleep apnea</li> </ul>
▪ Mood swings	<ul style="list-style-type: none"> <li>• Irritability</li> <li>• Sadness</li> <li>• Tension</li> </ul>
▪ Cognitive deficits	<ul style="list-style-type: none"> <li>• Poor concentration</li> <li>• Verbal memory problems</li> </ul>
▪ Social impairment	<ul style="list-style-type: none"> <li>• Disruption of family relationships</li> <li>• Social isolation</li> </ul>
▪ Work-related difficulties	<ul style="list-style-type: none"> <li>• Reduced productivity</li> </ul>
▪ Other Quality-of-life impairment	<ul style="list-style-type: none"> <li>• Embarrassment</li> <li>• Anxiety</li> <li>• Fatigue</li> </ul>

Studies demonstrated that main reasons of this mood change is due to changes in levels of estradiol and relation of level of serum estrogen with the monoamine oxidase levels of platelets (Platelet MAO) which is a marker of adrenergic and serotonergic function.<sup>[5]</sup> According to some studies, it was estimated that 26% of women experienced the first depression attack of their life during menopause. Several other studies had shown that risk of depression increases during the transition to the menopausal periods.<sup>[6]</sup>

Two-thirds of the women reported hot flushes, and in terms of severity 11% suffered from severe hot flushes. More than two thirds suffer from sleep disorders, and more than two thirds experience depressive episodes.<sup>[7]</sup> The severity of the manifest symptoms shows varying distribution. The subjects reported a high severity of joint and muscle symptoms and sleep disorders, followed by irritability and anxiety, reduced sexuality, depressive moods, hot flushes, and general decrease in performance and memory. The values for the symptom of decreased vaginal lubrication were lower. The 35% of the subjects that suffered from this symptom reported mainly a moderate severity. The lowest severity was reported for heart symptoms and symptoms of the urinary tract.<sup>[7]</sup>

**MATERIALS AND METHODS**

A cross-sectional study was conducted to find out the prevalence of climacteric symptoms among rural postmenopausal women. (The women whose age group between 45 to 60 years and were in menopause for more than one year was taken as the study participant) and exclusion criteria (The women who had attained menopause surgically, the women who were severely ill, physically and/or mentally, Menopausal women who

were not willing to participate in the study). Total study period was one year from 1<sup>st</sup> January 2017 to 31<sup>st</sup> December 2017. The study focused on post-menopausal women of selected area of Bogra district, Rajshahi Division. The estimated final sample size was 213. Households were selected by convenient sampling. Participants were selected in the community by knocking at the door and collecting the information about the availability of post-menopausal women. If more than two post-menopausal women were present youngest one was selected. Pre testing was done before data collection. Data were collected by face-to-face interview. Interview was taken at home of the participant ensuring the privacy and confidentiality as far as possible. Before the interview, the detail of the study was explained to each eligible respondent and written informed consent was taken.

**RESULT**

Most of respondents i.e. 141 (66.2%) belonged to age group 45-50 years, 63 (29.6%) were age group 51-55 and only 9 (4.2%) were in the age group 55-60 years.

Maximum age of the respondents was 60 year and minimum age of respondents was 45 year. Mean age of respondents was 50.16 and SD ( $\pm 3.725$ ) years. Among 213 respondents 120 (56.3%) were primarily educated, 64 (30%) were illiterate. The rest of the respondents 29 (13.6%) were Secondary or above level of education. Among the 213 respondents 198 (93%) were married, 4 (1.9%) were divorced and 11 (5.2%) were widow. Majority of respondents 175 (82.2%) were housewives and rest of the respondents 38(17.8%) were service holder. Total 150 (70.4%) were from nuclear family and 63 (29.6%) from joint family. According to the income

of family of post-menopausal women where monthly family income was ranged up to > 30000 & it was found that 91(42.7%) family were in the income group 0-10000

TK& 76 (35.7%) family were in the income group of 11000-29000 TK and only 46 (21.6%) family were in the income group >30000 Tk.

**Table 01: Socio-demographic Characteristics.**

Characteristics	Frequency	Percent	
<b>Age (Years)</b>			Mean: 50.16±3.725 years Maximum 60 years Minimum 45 years
45-50	141	66.2	
51-55	63	29.6	
56-60	9	4.2	
<b>Level of Education</b>			
Illiterate	64	30.0	
Primary	120	56.3	
Secondary	29	13.6	
<b>Marital Status</b>			
Married	198	93	
Divorced	4	1.9	
Widow	11	5.2	
<b>Occupation of respondent</b>			
House wife	175	82.2	
Service	38	17.8	
<b>Type of family</b>			
Nuclear	150	70.4	
Joint	63	29.6	
<b>Family Income</b>			
0-10000	91	42.7	
11000-29000	76	35.7	
>30000	46	21.6	

About 126 (59.2%) frequently faced hot flush, 42(19.7%) always, 35(16.4%) sometimes and 10(4.7%) never faced hot flush. Total 72 (33.8%) frequently face sleeping disorder, 66 (31.0%) sometimes, 40 (18.8%) always and 35(16.4%) never Sleeping disorder after menopause. About 128 (60.1%) frequently faced joint problem or muscle pain, 46 (21.6%) sometimes, 28 (13.1%) always and 11 (5.2%) never. Out of 213

respondent 98 (46.0%) frequently faced problem during intercourse, 97 (45.5%) sometimes, 9 (4.2%) always and 9(4.2%) never. Majority of respondents 111 (52.1%) were fairly often felt nervous or stressed after menopause, 62 (29.1%) were sometimes, 28 (13.1%) were very often, 9 (4.2%) were never and only 3 (1.4%) were almost never felt nervous or stressed after menopause.

**Table 2: Distribution of respondents according to problem.**

Characteristics (Problem face after menopause)	Frequency	Percent
<b>Hot flush</b>		
Never	10	4.7
Sometimes	35	16.4
Frequently	126	59.2
Always	42	19.7
<b>Sleeping disorder</b>		
Never	35	16.4
Sometimes	66	31.0
Frequently	72	33.8
Always	40	18.8
<b>Joint problem or muscle pain</b>		
Never	11	5.2
Sometimes	46	21.6
Frequently	128	60.1
Always	28	13.1
<b>Problem during intercourse</b>		
Never	9	4.2

Sometimes	97	45.5
Frequently	98	46.0
Always	9	4.2
<b>Felt nervous or stressed</b>		
Never	9	4.2
Almost never	3	1.4
Sometimes	62	29.1
Fairly often	111	52.1
Very often	28	13.1

Out of 213 respondents majority 121 (56.8%) were sometimes confident, 63 (29.6%) were almost never, 17 (8.0%) fairly often, 11 (5.2%) were never and only 1 (.5%) very often confident about ability to handle personal problem after menopause.

**Table 3: Distribution of respondents according to confident about ability to handle personal problem after Menopause.**

Confident	Frequency	Percent %
Very often	1	0.5
Fairly often	17	8.0
Sometimes	121	56.8
Almost never	63	29.6
Never	11	5.2

**DISCUSSION**

In a study which was conducted among 50 post-menopausal women at selected community health center at Sahnewal, Ludhiana majority 26(52%) were age group 45-50 years.<sup>[8]</sup> In another study which was conducted among 100 post-menopausal women in Srinagar found about 63% of post-menopausal women were in the age group of 40-50 years.<sup>[9]</sup> A study which was conducted in Kushtia, Bangladesh found that among five hundred and nine women mean age of respondents was 54.50 with SD=±5.70.<sup>[10]</sup> In this study symptoms and problems were measured by semi-structured questionnaire. Menopause of most of the respondents 115 (54%) started at 38-44 years, followed by 76 (35.7%) started at 45-49 years and 22 (10.3%) started at 50-55 years. Mean age of menopause was 44.37 ± 3.699 (SD) years. Another cross sectional study among 100 respondents 44 (88%) started menopause at 45-50 years.<sup>[11]</sup> Among 356 respondents Mean age of respondent was 51.3 years (range 47-56 years).<sup>[12]</sup> The study found most common problems after menopause were hot flush where frequently 59.2%, always 19.7%, and sometimes 16.4% only 4.7% never experienced hot flush. Sleeping disorder where 33.8% frequently, 31.0% sometimes, 18.8% always and only 16.4% had no sleeping disorder. Joint problem or muscle pain where 60.1% experienced frequently, 21.6% sometime, 13.1% always and only 5.2% had no joint problem or muscle pain. Problem during intercourse due to dryness of vagina where 46% frequently, 45.6% sometimes, 4.2% always, only 4.2% never experience this problem. Less desirable in the family or society where 39.4% sometimes, 36.2% frequently, 1.4% always and 23% never felt less desirable. These classical presentation of menopausal symptoms; hot flush, sleeping disorder, sexual problems were higher in

comparison to another cross sectional study where hot flush 35.8%, sleeping disorder (54.4%), sexual problem (31.2%) but quite similar is joint muscular problem (76.2%).<sup>[13]</sup> In this study certain factors related to mental stress, such as upset, which among 213 respondents 122 (57.3%) suffered fairly often, 70 (32.9%) sometimes, 6 (2.8%) very often, 3 (1.4%) almost never and 12 (5.6%) never was upset. Another factor was unable to control important things of life after menopause, which in this study 118 (55.4%) were fairly often, 81 (38.0%) were sometimes , 5 (2.3%) were never, 5 (2.3%) were very often and only 4 (1.9%) were almost never unable to control things after menopause. Another important factor was confident about ability to handle personal problem after menopause. Out of 213 respondents 121 (56.8%) were sometimes, 63 (29.6%) were almost never, 17 (8.0%) fairly often, 11 (5.2%) were never and only 1 (.5%) very often were confident about ability to handle personal problem after menopause. Another factor felt that things were on their way, most of respondents 150 (70.4%) were sometimes<sup>[14-18]</sup>, 44 (20.7%) were almost never, 15 (7%) fairly often and 4(1.9%) never felt that things were on their way. In this study there is no significant association of hot flush (P= 0.07), joint problem or muscle pain (P= 0.197), sleeping disorder (P= 0.592), problem during intercourse ( $\chi^2=6.610$ , P=0.326), less desirable in family or society (P=0.187) with mental stress.<sup>[19-26]</sup>

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**DECLARATIONS**

**Funding:** This research protocol was self-funded.

**Conflict of Interest:** No competing interests relevant to this study to disclose for all authors. Full forms submitted and on file for all authors.

**Ethical Approval:** The objectives and importance of the research were explained to all participants prior to recruitment. Participation in the study was voluntary. The confidentiality of the participants was maintained, and written informed consent as well as ascent was obtained from all participants. The study was approved

by the Institutional Review Board (IRB) of the National Institute of Preventive and Social Medicine (NIPSOM) and obtained an ethical clearance waiver from same source

## CONCLUSION

Menopause is inevitable phenomenon. The main aim of this study was to examine the prevalence of menopausal symptoms among postmenopausal women of Bogra sadder and compare the effects of their socio-demographic characteristics on their experience of symptoms. The study result shows that among the respondents majority are from the age group of 4th decade, educational background is primary and are from nuclear family. The study therefore, concludes that almost all post-menopausal women of this study experience climacteric symptoms but the classical presentation of menopausal symptoms; hot flush, Joint problem, sexual problems were higher in comparison to another cross sectional study.

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