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Menopausal status and psychological distress: a cross-sectional survey among middle aged women in an urban slum area of Kolkata, India

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ABSTRACT

Background: Menopausal symptoms and their relationship with the menopause transition vary widely. Although vasomotor symptoms like hot flashes and night sweats cause significant psychological distress, menopausal status could be an independent predictor of psychological distress in middle aged women. A cross sectional survey was thus conducted at the sector clinics of urban health centre of All India Institute of Hygiene and Public Health, Kolkata to determine the magnitude of the problem of psychological distress in relation to menopausal status. **Methods:** Women aged 40-55 years (n = 189) who visited the sector clinics during the study period (March 2011 to August 2011) were interviewed with the help of a pre-designed and pre-tested questionnaire comprising of questions on socio-demographic factors, menstrual cycle and physical symptoms related to menopause. Questions assessing psychological distress were adopted from 12-item general health questionnaire (GHQ-12) after testing for reliability. **Results:** Most common menopausal symptoms were body and joint pain (60.3%), followed by hot flush (36.5%). Around 28.6% of the study subjects had evidence of psychological distress, which was more common among peri-menopausal women (47.8%) Psychological distress was found to be significantly associated with menopausal status ($p = 0.00002$). **Conclusion:** The association between menopausal status and psychological distress indicated towards the need for organizing specific mental health services for middle aged women particularly in relation to menopause. Simple evaluation tool like GHQ-12 might be useful in initial assessment of such psychological distress by physicians and health workers at field level.

Key words: Menopausal status, psychological distress, GHQ-12

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Introduction

An important life event in a middle aged woman, influencing her quality of life, is menopause during which she undergoes social and physiological transition.¹ However for the past few decades, the focus of research concerning physiologic changes associated with menopause has shifted from the study of postmenopausal women to peri-menopausal women.² The clinical manifestations of this transition to menopause are not well understood; however, some symptoms such as hot flashes begin in the peri-menopause and increase as women progress through the menopause.^{3,4} Nonspecific somatic and psychological symptoms, including tiredness, irritability, insomnia,

palpitations, memory or concentration difficulties, and mood swings or depression have been commonly reported.⁵ However, the prevalence of symptoms differs widely and their relationship with the menopause transition varies.^{6,7} In addition, the specific symptoms associated with menopause vary among cultures, race/ethnicity, social groups, and persons.⁸ The degree of symptomatology experienced by an individual woman can be influenced by a number of factors, including age at menopause and psychosocial attitude towards menopause.⁹ Studies of middle-aged, primarily white women have yielded contradictory findings about the prevalence of psychological symptoms and distress during menopause.^{10, 11} Despite the fact that peri-menopausal and post-menopausal vasomotor symptoms,

like hot flashes and night sweats cause significant psychological distress, literature reveals that menopausal status could be an independent predictor of psychological distress in middle aged women.¹² Similar data for middle aged women in India is scarce and the present study was thus conducted with the **objective** to determine the magnitude of the problem psychological distress in relation to menopausal status among women aged 40 – 55 years.

Material and Methods:

After obtaining clearance from the ethical committee of Calcutta National Medical College, a cross-sectional survey was done among women aged 40-55 years attending out-patient department of the sector clinics of the Urban Health Centre (UHC), Chetla run by All India Institute of Hygiene and Public Health (AIIPH), Kolkata, during March 2011 to August 2011. The urban health centre provided services for basic ailments through its out-patient department run on 6 days in a week, and antenatal care for pregnant mothers and immunization services for pregnant mothers and children through its antenatal and immunization clinics respectively. Those general patients with serious illnesses were mostly referred to the nearest government-run higher level facilities. In the present study all the participants were residents of the slum areas adjacent to the UHC.

Inclusion criteria for selection of study subjects:

- a) were not pregnant or not having lactational amenorrhoea at the time of the interview.
- b) had not been confirmed as a case of any gynaecological disorder
- c) had not undergone surgical menopause.
- d) were not taking oral contraceptive pills.
- e) were not suffering from any major illnesses including untreated cases of anaemia, diabetes and hypertension.
- f) had no past history of any neuro-psychiatric disorder
- g) gave informed consent to participate in the study.

A semi-structured questionnaire was prepared comprising of two parts. "Part A" contained questions on socio-demographic factors, menstrual cycle and physical symptoms related to menopause and "Part B" included questions to assess psychological distress, adopted from 12-item general health questionnaire (GHQ-12)¹³. This questionnaire (attached in annexure 1) was then translated into Bengali from which the "Part B" containing GHQ-12 questions was retranslated back to English. A pilot survey was then done using the two sets of GHQ-12 questionnaire (using the original and the retranslated version with a gap of seven days) on 15 male and 15 female M.B.B.S. students who were conversant in English and reliability and internal consistency was assessed by Cronbach's alpha

coefficient which was found to be 0.83, which thereby indicated the appropriateness of the Bengali translation. The survey was then conducted on the study subjects allowing a recall period of 2 weeks. All women aged 40 -55 years who visited the sector clinic during the study period and who met the inclusion criteria, were interviewed by the present researchers after they were examined by the attending physicians. Informed consent was obtained from all the participants before they were interviewed. Altogether 189 women of the aforementioned age group and who met the inclusion criteria participated in the study. Those presenting with evidence of psychological distress were referred to the Department of Neuropsychiatry of the nearby SSKM medical college and hospital.

Definitions used:

Pre-menopause: menstrual period in the past 3 months and no decreased predictability. Peri-menopause: menstrual period in the past 3 months but less predictability in the preceding 12 months or menstrual bleeding in the past 12 months but not in the past 3 months.¹² Post-menopause: amenorrhoea for the past 12 months and no hysterectomy.¹²

General Health Questionnaire Scoring: ¹³ The General Health Questionnaire (GHQ) screens for non-psychotic psychiatric disorders. The shortened version, GHQ-12 scale asks whether the respondent has experienced a particular symptom or behavior recently. Each item is rated on a four-point scale (less than usual, no more than usual, rather more than usual, or much more than usual) with Likert scoring styles (0-1-2-3).

Score 0 – 14: no psychological distress

Score 15 – 20: evidence of psychological distress

Score >20: severe problems and psychological distress

Statistical analysis: Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 10 and were expressed in simple proportions. Chi-square test was applied to find out the association between menopausal status and psychological distress.

In the present study no case scored greater than twenty (indicating severe problems and psychological distress). Hence during analysis, only presence or absence of psychological distress was considered.

Results:

It was found that among the study population, around 19.1% (36/189), 36.5% (69/189) and 44.4% (84/189) were pre-menopausal, peri-menopausal and post-menopausal respectively.

Symptoms related to menopausal status most commonly found was body and joint pain [60.3% (114/189)], followed by hot flush/flash [36.5% (69/189)], tingling and numbness [17.4% (33/189)],

Table 1: Distribution of the study population according to different symptoms related to menopausal status (n = 189)* †

Physical Symptoms	Pre-menopausal	Peri-menopausal	Post-menopausal	Total
Hot flush/flash	-	48 (25.4)	21 (11.1)	69 (36.5)
Night sweats	-	15 (7.9)	12 (6.3)	27 (14.2)
Palpitation	9 (4.8)	9 (4.8)	6 (3.2)	24 (12.7)
Body and joint pain	18 (9.6)	45 (23.8)	51 (26.9)	114 (60.3)
Breast pain	6 (3.2)	-	-	6 (3.2)
Pain in the back of skull or neck	-	15 (7.9)	9 (4.8)	24 (12.7)
Crawling sensation in the body	-	-	3 (1.7)	3 (1.7)
Tingling and numbness	9 (4.8)	12 (6.3)	12 (6.3)	33 (17.4)
No symptoms	15 (7.9)	-	9 (4.8)	24 (12.7)

* Multiple responses, † Figure in parentheses indicate percentage

Table 2: Distribution of the study population according to menopausal status and psychological distress (n = 189) *

Menopausal status	Psychological distress		Total
	Present	Absent	
Pre-menopausal	3 (8.3)	33 (91.7)	36 (100)
Peri-menopausal	33 (47.8)	36 (52.2)	69 (100)
Post-menopausal	18 (21.4)	66 (78.6)	84 (100)
Total	54 (28.6)	135 (71.4)	189 (100)
Chi-Square Test	$\chi^2 = 21.86$ df = 2 p = 0.00002		

*Figures in parentheses indicate percentage

Table 3: Distribution of the study population according to different socio-demographic factors and psychological distress (n = 189) *

Socio-demographic factors		Psychological distress		Chi-square test
		Present	Absent	
Marital status	Married (n = 135)	40 (29.6)	95 (70.4)	$\chi^2 = 0.26$ df = 1 p = 0.611
	Single (n = 54)	14 (25.9)	40 (74.1)	
Educational status	Illiterate (n = 51)	18 (35.3)	33 (64.7)	$\chi^2 = 1.55$ df = 1 p = 0.213
	Literate (n = 138)	36 (26.1)	102 (73.9)	
Occupational status	Home maker (n = 135)	42 (31.1)	93 (68.9)	$\chi^2 = 1.49$ df = 1 p = 0.223
	Employed (n = 54)	12 (22.2)	42 (77.8)	
Type of family	Nuclear (n = 108)	30 (27.8)	78 (72.2)	$\chi^2 = 0.08$ df = 1 p = 0.780
	Joint (n = 81)	24 (29.6)	57 (70.4)	
Per capita monthly income (in Rupees)	< 1000 (n = 63)	15 (23.8)	48 (76.2)	$\chi^2 = 1.05$ df = 1 p = 0.305
	≥ 1000 (n = 126)	39 (30.9)	87 (69.1)	

*Figures in parentheses indicate percentage

night sweats [14.2% (27/189)], palpitation [12.7% (24/189)] and pain in the back of skull and neck [12.7% (24/189)]. However, the most common symptom among peri-menopausal women was hot flush [25.4% (48/189)], followed by body and joint pain [23.8% (45/189)]. The latter symptom was found to be the most common one [26.9% (51/189)] in case of post menopausal women (Table 1).

Around 28.6% (54/189) of the study population had evidence of psychological distress and it was most commonly present in peri-menopausal women [47.8% (33/69)], followed by post-menopausal women [21.4% (18/84)], and least common among pre-menopausal women [8.3% (3/36)] (Table 2). Psychological distress was found to be significantly associated with menopausal status ($\chi^2 = 21.86$ df = 2 p = 0.00002).

No significant association was found between any socio-demographic factor and presence of psychological distress (Table 3).

Discussion:

As mentioned earlier, among the present study population about 19.1% was pre-menopausal, 36.5% was peri-menopausal and 44.4% was post-menopausal. In a study by Sidhu S et al (2005) conducted to determine median age at menopause and frequency of various related clinical symptoms among educated women aged 40 – 50 years (n = 539) of Amritsar district of Punjab, it was found that 52.5% of the study population were peri-menopausal 47.5% were postmenopausal.⁹ In a cross-sectional self-report survey of 342 women aged 40 to 55 years in U.S.A. it was seen that among 251 women without surgical menopause, 133 (53.0%) were pre-menopausal, 72 (28.7%) were peri-menopausal, and 46 (18.3%) were post-menopausal.⁸ In the present study, physical symptom most commonly found was body and joint pain (60.3%), followed by hot flash/flush (36.5). In the Amritsar study, the most common clinical symptoms associated with menopause were hot flushes and night sweats (55.1%), insomnia (53.1%), and fatigue (42.2%).⁹ In the present study, overall 28.6% of the study population had psychological distress. Around 8.3% of the pre-menopausal women, 47.8% of peri-menopausal women and 21.4% of the post-menopausal women had psychological distress. Psychological distress was found to be significantly associated with menopausal status ($p=0.00002$). In a study by Bromberger JT et al. conducted to find the association between psychological distress and natural menopause, it was found that psychological distress were highest in early peri-menopause (28.9%) and lowest in pre-menopause (20.9%) and post-menopause (22.0%).¹² Menopausal status was found to be significantly associated with psychological distress ($p < 0.001$) in this study.¹² This study also revealed that psychological distress was significantly associated with marital, educational and socioeconomic status ($p < 0.001$).¹² However, in the present study no such association was found between any socio-demographic factor and psychological distress. This apparent lack of association was most probably due to the fact that majority of the participants presented with more or less same socio-demographic profile. A larger population with varying socio-demographic background might have shown a different result.

The limitations of the study were small number of subjects and cross-sectional nature of the survey which did not allow for proper follow-up for psychiatric evaluation of the cases with evidence of psychological distress. However the researchers observed that GHQ-

12 questionnaire was quite suitable for a rapid survey of similar nature and might be very useful in case of a community based study.

Conclusion: The association between menopausal status and psychological distress indicated towards the need for organizing specific mental health services for middle aged women particularly in relation to menopause. Simple evaluation tool like GHQ-12 might be useful in initial assessment of such psychological distress by physicians and health workers at field level.

Ethical considerations:

Ethical issues (including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors. Ethical clearance to conduct the study was obtained from the ethical committee of Calcutta National Medical College.

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