Journal of Cardiovascular Disease Research

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 09, 2023

The study of Prevalence of Somatic symptoms, Insomnia and Anxiety in post menopausal Women in Northern India

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Abstract

Background: Menopause in an unavoidable event in women lives. Women during menopause experienced several symptoms of variable severity which affect their quality of life. **Aim and objective:** the Prevalence of Somatic symptoms,insomnia and Anxiety in post menopausal Women in Northern India. **Material and methods:**The frequency of menopausal symptoms was assessed from 300 women attending two primary health centres in Northern India. All subjects were evaluated with the 7-item Generalized Anxiety Disorder (GAD-7) scale, the somatization subscale of the Symptom Checklist 90- Revised (SCL-90-R), and the 7-item Insomnia Severity Index (ISI).**Results:** Mean age of participants was 53.95 ± 6.46. The most prevalent somatic menopausal symptoms among middle aged women in northern India were Joint and muscular disorder (76.67%) which was more among perimenopausal fallowed by postmenopausal women. Also, hot flushes were more common among perimenopousal fallowed by postmenopausal (80%, 46.67.3% correspondingly). On the other hand, 57.7% of postmenopausal women were complaining from physical and mental exhaustion. According to MRS somatic and psychological symptoms were more severe among perimenopausal women while urogenital symptoms were more severe among postmenopausal women. Menopausal symptoms were significantly more severe among illiterate women, working, widowed, paros, non-practicing exercise and previously smoker women.**Conclusion and** Menopausal symptoms were severe among perimenopausal and postmenopausal women in nothern India which was adversely affected their quality of life. Counseling health and social welfare services for postmenopausal women were required to be established.

Key words: Somatic , Isomania, Anxiety, Menopause, Northern India

INTRODUCTION

Menopause is a normal physiological process; according to World Health Organization (WHO) definition ‘is the permanent cessation of menstruation as a result of the loss of ovarian activity[1]. Accordingly, women became menopause when her menstrual cycle was permanently stopped for 12 successive months or more due to cessation of ovarian hormone production[2]. Menopausal women complained from numerous symptoms during this period due to hormonal level fluctuations, some of

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 09, 2023

these symptoms were severe enough to affect the quality of life and the wellbeing of middle aged women[3,4]. These symptoms may be in the form of hot flushes, sleep and mood disturbance, lack of sexual desire, dryness of vagina and locomotors complaints. Multiple geographic, socioeconomic, cultural, environmental factors and the biological variations linked to the changed ovarian hormonal status or deficiency affect the occurrence and severity of menopausal symptoms[5,6]. In fact menopausal symptoms were a common problem as an unavoidable part of every woman's life; about three quarters of women suffer from some problems during menopause[7]. It was found that majority of women spend about one third of their life complaining from menopausal symptoms by various degree[8,9]. Women are suffering without proper counseling and management due to lack of health programs that deal with such health problem[10].

In India, post-menopausal women ageing 45 years and above are yet to be covered in any specific health program, in contrast to their younger counterparts (RCH, ICDS etc). The provision of geriatric health care is largely based on the general health problems of the elderly and not directed specifically to the postmenopausal health problems. There is also issue related to generating valid data of rural people in India, as most of the country resides in such areas only.[11] This holds true because the social and demographic profiles of such women are bound to be different and those have got a significant impact on the perception of the menopausal symptoms.[12] Though there are few studies in India, local context need to be studied well in every part of the country.[13] The present study Prevalence of Somatic symptoms,insomnia and Anxiety in post menopausal Women in Northern India.

MATRIAL AND METHOD

The present study was done in the Department of psychiatric , Rajarshi Dashrath autonomous state medical College, Ayodhya,Up. The study was carried after the approval of Institutional Ethics Committee and the informed consent was taken from the parents of the infant subjects. The desired sample size comes out to be 300.

Study design and participants

The study utilized a multi-stage, cross-sectional study design conducted. The study was designed to recruit women, defined at age 33-55 years to understand their perceptions and attitudes as they approach their last menstrual period. The following eligibility criteria were applied at recruitment: females, current resident in northern India and aged 33-55 years.

A total of 300 women aged 33-55 years were identified as eligible for an interview and 300 women consented and participated. In this paper, we included a sub-study of the total participants. We specifically restricted our analysis to women that experienced perimenopause or postmenopause and excluded those premenopause. This sub-analysis allowed us to focus on women actively or recently experiencing menopause. Our analysis consisted of 150 perimenopausal and 150 postmenopausal women aged 33-55 years.

Sample size calculation

The study sample size was estimated using a single population proportion formula, which was calculated with the following assumptions: 95% confidence level, 5% margin of error, and 10.4% expected prevalence of loss of interest in sex as a reported

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 09, 2023

menopause symptom among perimenopausal women (based on a similar study finding among perimenopausal women in Singapore) [14]. Given these assumptions, the required sample size was determined to be 150. Considering a conservative design effect of 1.5 for complex sampling and a nonresponse rate of 5%, the final estimate was 300. Since the larger study included other research objectives, the overall study sample size recruited 300 women aged 33- 55. The results in this article were based on the subsample of 150 perimenopausal and postmenopausal women.

Data collection instruments and procedures

Data were collected using a pre-tested, interviewerадministered questionnaire. The study questionnaire was adapted from northern India graphic and Health Survey 2011 questionnaire [15], a previous menopausal study, and items from relevant literature reviews [16, 17]. Socio-demographic characteristics, menopausal status, and an 11-item Menopause Rating Scale (MRS) were collected from participants [20]. The MRS is a self-reported subjective scale that has been used in different international populations and validated in clinical and epidemiological studies on menopause symptoms [18]. The MRS is organized with multiple items ranked from 0 (not present) to 4 (very severe) on three main areas: (a) Somatic: hot flushes, heart discomfort, sleeping problems (b) Psychological: depressive mood, irritability, anxiety, and physical or mental exhaustion. Scores are calculated forindividual women as sums of each graded item, each sub scale, and overall total. Scores equal to or above 9 (somatic), 7 (psychological),), and 13 (total) were defined as severe [19, 20].

Statistical analysis

The data were entered using the software Epi Info version 7.1.4.0 (CDC, Atlanta, GA, USA). Data were then exported to SPSS version 23.0 (IBM, Armonk, NY, USA) for further processing. Variable recoding and transformations were completed before the final data analysis. Descriptive analyses were performed on all data collected. Chi-Square ($\chi 2$) tests of independence were used to examine the association between menopausal status of women and their background information.

RESULTS

A total of 300 perimenopausal and postmenopausal women aged 33-55 years were included in the study.

Table 1 Characteristics of the study participants by menopause status

	Peritmenopause (n=150)	**Postmenopause (n=150)**	**All (n=300)**	**P-value**
Age (year)	39±3.18	52.2±5.83		<0.000
EDUCATION				
Illiterature	45(30)	60(40)	105(35)	
Primery school	55(36.67)	40(26.67)	95(31.67)	
Secondary school	30(20)	41(27.33)	71(26.37)	
Higher school	20(13.33)	9(6)	29(9.67)	
OCCUPATION				
House wife	120(80)	90(60)	210(70)	>0.05
Working	25(16.67)	45(30)	70(23.33)	
Retired	5(3.33)	15(10)	20(6.67)	
PHYSICAL				

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EXERSICE				
NON	60(40)	45(30)	105(35)	>0.05
Regular	75(50)	80(53.33)	155(51.67)	
Non regular	15(10)	25(16.67)	40(13.33)	
SMOKING				
No smoking	145(96.37)	140(93.33)	285(95)	<0.05
Previous smoking	5(3.33)	10(6.67)	15(5)	

Table 1 shown the mean age was 39 years (SD ±3.18) for perimenopausal and 52.2 years (SD ±5.83) for postmenopausal women. Socio-demographic factors of participants included: 105 (35%) completed Illiterature, 210 (70%) house wife, 70 (23.33%) working employees, 20 (6.67%) retired, 155 (51.67%) physical exersice regular, 285 (95%) non smoking. Details of the background characteristics of study participants by menopause status are given in Table 1.

Table 2 Proportion of menopausal symptoms among participants according to menopausal status

Subscale (menopausal symptoms)	**Peritmenopause (n=150)**	**Postmenopause (n=150)**	**All (n=300)**
Somatic			
Hot flushes	70(46.67)	120(80)	210(40)
Heart discomfort	21(14)	60(40)	81(27)
Difficulty of falling asleep	60(40)	105(70)	205(68.33)
Muscle and joint problems	100(66.67)	130(86.67)	230(76.67)
Psychological			
Depressive mood	60(40)	98(65.3)	158(52.67)
Irritability	55(36.67)	98(65.3)	153(51)
Anxiety	45(30)	88 (58.7)	133(44.33)
Physical and sexual exhaustion	36(24)	86(57.3)	122(40.67)

Table 2 : Overall, the five most commonly reported menopause symptoms experienced as assessed by the MRS included: Hot flushes (65.9% (95% confidence interval [CI]: 59.4%–72.1%)), difficulty falling asleep (49.6% (95% CI: 42.9%-56.3%)), depressivemood (46.0%(95% CI: 39.4%-52.8%)), irritability (45.1% (95% CI: 38.5%-51.9%)) and anxiety (39.8% (95% CI: 33.4%- 46.5%)).

Table 3: Prevalence (in percentages) of various symptoms/signs, among the post-menopausal respondents (N=150)

Symptoms/Signs	**Frequency (%)**
Isomania	85(56.67)
Anxiety	88 (58.7)
Tiredness/Easy Fatigue	131(87.33)

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Headache	112(74.67)
Pallor	85(56.67)
Night sweats	5838.67()
Hot Flushes	120(80)
Palpitation	55(36.67)
Lack of concentration	50(33.33)
Dental caries	45(30)
Joint pain /Stiffness	130(86.67)
Irritability	98(65.3)
Depressive episodes	98(65.3)
Urinary incontinence	5(3.33)
Parasthesia	5(3.33)

The table 3 shows the distribution of symptoms/signs among the respondents. It shows that the women experienced all the three types of menopausal health problems –anxiety , isomania and Somatic. The study showed that somatic symptoms like tiredness and headache was experienced by majority of the respondents (87.33% and 74.67%). Among the psychiatric problems, depressive episodes were experienced by 65.3% (n=98) of the subjects. On the other hand, the percentages of subjects who experienced symptoms of anxiety irritability and insomnia were 58.7% (n=88), 65.33% (n=98) and 56.67% (n=85), respectively.

DISCUSSION

The present study was conducted in Northern India to estimate the occurrence of menopausal symptoms and explore factors affects its severity among women above 33.55 years old.

Somatic symptoms in the present study, joint and muscular disorders were the most highly prevalent symptoms 186.67% and mainly among perimenopausal fallowed by postmenopausal women. This result consistent with Al-Musa H M, et al study in Saudi Arabia and Khatoon F et al study in Northen India [21]. Also, in another Indian study joint and muscular disorders most common somatic symptom but with lesser proportion (77.77%)[22]. In comparison to a study in China 34.43%, of postmenopausal women were complaining from joint and muscular disorders[23]. On another hand, according to a systematic review study about prevalence of menopausal symptoms in Asian midlife women, the prevalence of joint and muscle pain among perimenopausal women was between 28.8% and 91.4%, and fluctuated from 15.8% to 90.2% among postmenopausal women [24]. The high prevalence of joint and muscular disorders that reported in the current study may be related to lifestyle pattern of participants in current study setting and slight exposure to sunlight.

In the current study hot flushes was significantly more common among perimenopousal fallowed by postmenopausal (46.67%, 80% correspondingly). Similar results were found in Hunter M et al study in Britten[5], Al-Musa H M et al study in Saudi Arabia[7], and Abedzadeh-Kalahroudi M et al study in Iran [25]. Likewise, North American Menopause Society (NAMS) reported higher prevalence of current vasomotor symptoms (79%) was among perimenopausal fallowed by 65% among postmenopausal women [26]. While, Yisma E et al study in Ethiopia[9] reported a comparable prevalence of hot flushes and sweeting but it was more sever among

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 09, 2023

postmenopausal than perimenopausal. However, lower proportions were reported in Du L et al study in China[23], Leena AJ and Varghese AP study[7], Patil SD and Deshmukh JS study[22], and Khatoon F et al study in India[21]. The differences in the prevalence of hot flushes and sweating may be due to different regional variation between western and East Asian countries or dietary factors as phytoestrogens reduce the frequency of hot flushes among Asians[27].

Concerning psychological symptoms in the present study physical and mental exhaustion were experienced among 57.3% of study population particularly among postmenopausal women. Similarly, high proportion of women (50%) were feeling a lack of energy' according to Abedzadeh-Kalahroudi M et al study in Iran[25]. Also, 83.7% of women were complaining of physical and mental exhaustion in Nisar N et al study in Pakistan[28]. While, in an Egyptian study, physical and mental exhaustion was prevalent among 69.6% of postmenopausal women[29]. In contrast lower proportion was reported in Saudi and an Indian study by (60%), (64.7%) respectively[22].

Somatic symptoms in the current study were highly significant more severe among perimenopausal women (mean=8.11) according to MRS. Also, psychological symptom was more rigorous among perimenopausal (mean=7.4). On another hand overall MRS in our study was severe in both perimenopausal women (mean=17.22) and postmenopausal (mean=19.32). Correspondingly, El Hajj A et al [30]reported that perimenopausal women were highly suffer from climacteric symptoms while postmenopausal women suffer from failure of their sexual life. In contrast, in Al-Musa H M et al [7] study the higher menopausal score (17.95) was for postmenopausal women for the three domain somatic symptoms, psychological symptoms and urogenital symptoms. Likewise, Rathnayake N et al [31] study showed more severe symptoms among postmenopausal women. Besides, menopausal symptoms were reported a highly severe among postmenopausal women in Yisma E et al study [32]. According to Woods and Mitchell[33], the severity of symptoms increase from late menopausal transition to the postmenopausal stage which is consistent with results of the current study.

Regarding the relationship of various factors with severity of menopausal symptoms in existing study it was found that menopausal symptoms were significantly more severe among illiterate women, working, widowed, paros, non-practicing exercise and previously smoker women. Various factors were reported to be associated with the severity of menopausal symptoms in different studies. For instance, Al-Musa H M et al[7] found more severe symptoms were prevalent among marred women, paros, those with lower education level, lack of exercise and chronic disease. Whereas, Abedzadeh-Kalahroudi M et al [25] found lesser severe symptoms were among employed women, highly educated, practicing regular exercise and those with more than 5 years' menopause. Likewise, Capistrano EJM et al [34]study reported higher severe symptoms among Brazilian women who were smokers, unemployed or housewives, and less severe symptoms among women with more than 10 years since menopause. Also, Khatoon F et al [21]reported that severity of menopausal symptoms inversely proportional to educational level. On other hand, Metintas S et al [35] study in Turkey depicted more severe symptoms were among women with chronic illnesses. While, in El Hajj A et al[30]study, lesser severe symptoms were found among women who were physically more active. According to Lalo R et al [36]there were significant

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 09, 2023

diversity in the frequency and severity of physical, psychological, and urogenital symptoms related to ethnic differences, cultural and the way by which women adapted to copy with the symptoms.

CONCLUSION

This study revealed that the most prevalent somatic menopausal symptoms among middle aged women in northern India were joint and muscular disorder, hot flushes. While physical and mental exhaustion was the most common psychological symptoms. On other hand, sexual and bladder problems were more prevailing among postmenopausal women. According to MRS somatic and psychological symptoms were more severe among perimenopausal women while urogenital symptoms were more severe among postmenopausal women. On other hand, overall menopausal symptoms were severe in both perimenopausal and postmenopausal women. Menopausal symptoms were significantly more severe among illiterate women, working, widowed, paros, non-practicing exercise and previously smoker women.

It is recommended to establish a counseling health and social welfare centers to provide management and health educational services to promote healthy lifestyle to middle aged women. As well as enhancement of women empowerment and their collaboration in improving their health through counseling and effective interaction with health care provider.

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