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Original Research Article

Prevalence of gynecological diseases in postmenopausal women in tertiary care hospital in Chengalpattu district

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ABSTRACT

Background: Menopause is a biological event characterized by the complexity of factors. On an average one-third of the women's life consists of the post-menopause years, and health care programs for women do not address concerns beyond reproductive ages. The aim of this study was to describe the magnitude of menopause-related symptoms, the pattern of health care seeking, and associated factors. To assess the prevalence of gynecological disease in post-menopausal women.

Methods: This cross-sectional study was done in Karpaga Vinayaga Institute of Medical Sciences and Research Center - obstetrics and gynecology OPD. Over a period, months in the year 2019. Stages of reproductive aging workshop (STRAW) revised criteria and nomenclature are used for the ascertainment of menopause and inclusion of the women in the study. It provided a comprehensive basis for staging since there were more complexities on ascertainment of menopause explained. The STRAW criteria are considered as the gold standard for assessing menopausal stages.

Results: A total of 600 participants were included in the study. The proportion of women who had at least one menopause-related symptom was 95.95 (95% CI 93.73-97.54) and 58.3% of women had severe symptoms. Severities of symptoms in psychological, physical, vasomotor, and sexual domains were 56.7%, 70.5%, 49.3%, and 10.2% respectively. Premature menopause ($p < 0.016$), induced nature of menopause ($p < 0.031$), dyslipidemia ($p < 0.006$) and other medical condition ($p < 0.003$) were associated with severity of menopausal related symptoms.

Conclusions: A high proportion of women are affected by menopause-related symptoms. Care seeking for all symptoms is not uniform, indicative of a lack of knowledge about the treatable nature of many of these symptoms. Sensitization of both women and the health care system may serve to address this issue of menopause-related symptoms and the possibility of treatment for these.

Keywords: Cardiovascular disease, Diabetes mellitus, Final menstrual period, Green climacteric scale

INTRODUCTION

Menopause is considered to be a marker of biological aging in women (WHO technical Group, 1996). Menopause is one of the most significant stages in the female reproductive life cycle where there is a transition from reproductive to the nonreproductive stage. This

brings in several physiological changes that affect the life of a woman permanently. It sets the stage for aging and accelerates the process of non-communicable disorders.^{1,2} The complexity of various factors such as hormonal, psychological, social, cultural, and aging factors produces a difference in symptoms and long-term health outcomes.³ The hormonal and behavioural changes that

occur during the menopausal period lead to a high demand for special health care. Menopause introduces a major change in the morbidity pattern in the middle life of the woman.⁴ The proportion of women who experience premature menopause either due to biological or otherwise induced reasons has a long duration of exposure to menopause leading to severe symptoms when compared to women who have undergone menopause naturally.⁵ Perimenopausal women reported more psychosomatic symptoms than pre- or postmenopausal women.⁶ Cultural factors influencing women's physical and psychological health varied across societies. Attitudes towards menopause may be related to different cultural practices and it also depends on the social construction of menopause.^{7,8}

METHODS

This cross-sectional study was done in Karpaga Vinayaga Institute of Medical Sciences and Research Center - obstetrics and gynecology OPD. Over a period, months in the year 2019. Stages of reproductive aging workshop (STRAW) revised criteria and nomenclature are used for the ascertainment of menopause and inclusion of the women in the study. It provided a comprehensive basis for staging since there were more complexities on ascertainment of menopause explained. The STRAW criteria are considered as the gold standard for assessing menopausal stages. At the center of the selected wards, the main junction was located and by using the pen rotating method, the first household of the randomly selected road was approached for data collection.

Inclusion criteria

Inclusion criteria of this study were; the women in the age group 35-60 years old who was in menopausal transition or postmenopausal phase and/or attained menopause either naturally or induced were included in the study.

Exclusion criteria

Exclusion criteria of this study were; women who were pregnant or lactating or had recent abortion (within 3 months) or critically ill or currently receiving hormone therapy or oral contraceptives were excluded from the study. Women who were not willing to give consent also excluded from the study.

STRAW revised criteria and nomenclature are used for the ascertainment of menopause and inclusion of the women in the study. It provided a comprehensive basis for staging since there were more complexities on ascertainment of menopause explained. The STRAW criteria are considered as the gold standard for assessing menopausal stages. Data collection was done using a structured questionnaire and the adapted green climacteric scale to assess menopause-related symptoms.

Statistical analysis

The data was entered in Epi data and analyzed by IBM SPSS version 21 software. The data has been presented using descriptive statistics for the prevalence of menopause-related symptoms, health-seeking behavior, and other variables. Bivariate analyses have been done to examine the relationship between predictor and outcome variables.

RESULTS

Table 1: Profile of the participants by health-related characteristics.

Variables	N=600 (100%)
Physical activity	
Sedentary	34 (8.1%)
Mild Physical activity	183 (43.6%)
Moderate	184 (43.8%)
Severe physical activity	19 (4.5%)
Dietary choice	
Vegetarian	28 (6.7%)
Nonvegetarian	392 (93.3%)
Diet control	
Have control in consuming fat and sugar	169 (40.2%)
Do not have control of fat and sugar	233 (55.5%)
Have control over fat or sugar in the diet	18 (4.3%)
Previous menstrual irregularity	
Have menstrual irregularity	63 (15%)
Did not have menstrual irregularity	357 (85%)
Number of pregnancies	
No pregnancy yet	18 (4.3%)
One	46 (11%)
Two	234 (55.7%)
Three	91 (21.7%)
Four and more	31 (7.3%)
Number of deliveries	
One	42 (10%)
Two	245 (58.3%)
Three	83 (19.8%)
Four and more	32 (7.6%)
Not applicable	18 (4.3%)
Normal vaginal delivery	
One	50 (11.9%)
Two	186 (44.3%)
Three	70 (16.7%)
Four	26 (6.2%)
Five and more	3 (0.7%)
Not applicable	85 (20.2%)
Caesarean section delivery	
One	48 (11.4%)
Two	57 (13.6%)
Three	2 (0.5%)
Not applicable	313 (74.5%)
Complication during delivery	
Had any complication	39 (9.3%)
Did not had any complication	365 (86.9%)

In Table 1, nearly half of the women had either mild to sedentary in terms of physical activity (51.7%). Quite a significant number of women reported a moderate level of physical activity (43.8%). Almost all were non-vegetarians (93.3%) and close to three-fifths of them had no control over either sugar or fat or both in their diet.

Only 15% of the women experienced menstrual irregularities. Fertility was near-universal; just less than five percent (4.3%) were nulliparous. The majority of the women had one or two children (66.7%). One out of four women in the study had undergone at least one c-section if not two. Close to 10 percent of the women (9.3%) had experienced some form of complication (other than that requiring c-section) during delivery. Nearly one out of 20 women in the study had experienced gynecological morbidity (18.9%). There was nearly 1.4 percent with some form of gynecological cancers, including breast cancer, ovarian cancer, and cervical cancer. The prevalence of self-reported high blood pressure, type 2 diabetes mellitus, and high cholesterol in the sample population was 38.8%, 26.7%, and 35% respectively. There were 14.5% of women with other medical conditions in the study. The presence of central obesity measured by waist circumference indicates that around 46% of the women in the study had a waist circumference of more than 80 cm.

In Table 2 a total 80 participants had a history of diagnosis of gynecological morbidity. Treatment seeking for these and other health conditions is described in table 4.3. Around 52% of them sought treatment in private secondary or tertiary hospitals. One woman who had a condition of gynecological morbidity sought care both in

public and a private health care facility. There were 268 participants among 600 who were reported to have at least one of the chronic medical conditions such as hypertension, diabetes mellitus, high cholesterol, or other medical conditions including cancers. Among the 268 women, 32.1% sought care in private clinics, and 22.4% sought care in public primary health centers.

Table 2: Clinical profile of patients related to comorbid conditions.

Variable	N=600 (100%)
Contraceptive history	
Ever used	230 (54.8%)
Never used	175 (41.5%)
Not applicable	15 (3.7%)
Gynecological morbidity	
Ever diagnosed as having a gynecological morbidity	80 (18.9%)
Did not have a diagnosis of gynecological morbidity	340 (81.1%)
Gynecological cancers	
Breast cancer	3 (0.7%)
Ovarian cancer	2 (0.5%)
Cervical cancer	1 (0.2%)
Other chronic conditions and risk factors	
High blood pressure	163 (38.8%)
Type 2 DM	112 (26.7%)
High cholesterol	147 (35.0%)
Other medical conditions	61 (14.5%)
Waist circumference >80 cm/central obesity (N=600)	189 (46.4%)

Table 3: Prevalence of menopause related symptoms by domains of the green climacteric scale.

GCS domain	Mild n (%)	Moderate n (%)	Severe n (%)	Total (100%)	Prevalence (%) with 95% CI
GCS total	52 (12.4%)	106 (25.2%)	245 (58.3%)	420	95.95 (93.73-97.54)
Psychological symptoms	31 (7.4%)	96 (22.9%)	238 (56.7%)	420	86.90 (83.42-89.88)
Physical symptoms	7 (1.7%)	49 (11.7%)	296 (70.5%)	420	89.28 (86.05-91.98)
Vasomotor symptoms	5 (1.2%)	23 (5.5%)	207 (49.3%)	420	55.95 (51.17-60.65)
Sexual dysfunction score	79 (26.9%)	84 (28.6%)	30 (10.2%)	294*	65.64 (60.08-70.91)

*Not applicable/refused to answer/missing value omitted from the analysis.

In Table 3 menopause related symptoms were assessed using the green climacteric scale (GCS) which has four domains such as psychological symptoms, physical or somatic symptoms, vasomotor symptoms, and sexual dysfunction. There were 21 questions distributed among the four domains of the scale with an option of 4 potential responses, not at all, mild, moderate to severe. Among 420 participants 56.7% of the women had severe psychological symptoms, 70.5% has severe physical symptoms, and 49.3% has severe vasomotor symptoms. Among those who could report on their menopause

symptoms (294 women), 28.6% had moderate sexual dysfunction. On the whole, 58.3% of the women were severely affected by menopause-related symptoms.

In Table 4 severity of menopause-related symptoms by the specific menopausal stage and domains of the GCS were assessed nearly two-thirds of the women (65.3%) in the postmenopausal stage were having severe psychological symptoms. There was no variation in physical or vasomotor symptoms among three menopausal stages. There was a sharp increase in the

percentage of women reporting severe sexual dysfunction symptoms from those in menopause transition to early

and late menopause stages from 3.5 to 11.4% and 13.7% respectively.

Table 4: Severity of menopause related symptoms by menopause status and domains of the green climacteric scale.

GCS domain	Severity	Menopause transition	Early post menopause	Late post menopause	Chi-square p value
Psychological severe		49 (47.6%)	46 (46.9%)	143 (65.3%)	0.001
Total (%)		103 (100%)	98 (100%)	219 (100%)	420 (100%)
Physical severe	Severe	76 (73.8%)	65 (66.3%)	155 (70.8%)	0.506
Total (%)		103 (100%)	98 (100%)	219 (100%)	420 (100%)
Vasomotor severe	Severe	55 (53.4%)	53 (54.1%)	99 (45.2%)	0.217
Total (%)		103 (100%)	98 (100%)	219 (100%)	420 (100%)
Sexual dysfunction	Severe	3 (3.5%)	8 (11.4%)	19 (13.7%)	0.048*
Total (%)		85 (100%)	70 (100%)	139 (100%)	294 (100%)

*One cell value is less than 5.

Table 5: Menopause related symptoms-average scores using green climacteric scale.

Domain	Average score mean (SD)	Observed range	Expected range
Psychological-anxiety	6.67 (4.92)	0-18	0-18
Psychological-depression	4.56 (3.51)	0-14	0-15
Physical symptoms	7.61 (4.86)	0-21	0-21
Vasomotor symptoms	2.74 (2.66)	0-6	0-6
Sexual dysfunctional score	1.14 (1.01)	0-3	0-3
Total score-GCS	22.39 (11.90)	0-52	0-63

Table 6: Distribution of women with menopause related symptoms and lifestyle factors, reproductive health history, other medical history.

Independent variable	Category	Menopause related symptoms		Total N (100%)	Chi-square p-value
		Severe	Not severe		
Complication during delivery	Yes	23 (60.5%)	15 (39.5%)	38 (100%)	0.862
	No	215 (59.1%)	149 (40.9%)	364 (100%)	
Gynecological morbidity	Ever had	59 (73.8%)	21 (26.3%)	80 (100%)	0.002
	Never had	186 (54.7%)	154 (45.3%)	340 (100%)	
Gynecological surgery	Underwent	48 (70.6%)	20 (29.4%)	68 (100%)	NA*
	Never underwent	10 (83.3%)	2 (16.7%)	12 (100%)	
Other health condition and menopause-related symptoms					
High blood pressure	Yes	105 (64.4%)	58 (35.6%)	163 (100%)	0.044
	No	140 (54.5%)	117 (45.5%)	257 (100%)	
Diabetes mellitus	Yes	68 (60.7%)	44 (39.3%)	112 (100%)	0.551
	No	177 (57.5%)	131 (42.5%)	308 (100%)	
High cholesterol	Yes	99 (67.3%)	48 (32.7%)	147 (100%)	0.006
	No	146 (53.5%)	127 (46.5%)	273 (100%)	
Other medical conditions	Yes	46 (75.4%)	15 (24.6%)	61 (100%)	0.003
	No	199 (55.4%)	160 (44.6%)	359 (100%)	
Central obesity	Waist circumference <80 cm	124 (56.9%)	94 (43.1%)	218 (100%)	0.530
	Waist circumference >80 cm	121 (59.9%)	81 (40.1%)	202 (100%)	

Table 5, shows the GCS scale scores by domain were computed and this has been tabulated along with the observed and expected ranges in table 4.7. The average score for the psychological anxiety subscale and

depression subscale was 6.67 with a standard deviation of 4.9 and 46 with a standard deviation of 3.5 respectively. The average score for physical symptoms was 7.61 with a standard deviation of 4.86. The average score for vasomotor symptoms is 2.7 with a standard deviation of

2.7. The mean score for sexual dysfunction was 1.1 with a standard deviation of 1.0. The domains of distress concerning menopause-related symptoms seem to be related to psychological-anxiety related and also physical symptoms.

Table 6, pattern of health care seeking by the women who experienced menopause-related symptoms has been examined by categorizing care-seeking into those who sought care at least once sought care for any symptoms and those who never sought care for any symptoms. This enabled the identification of key factors associated with health care seeking for MRS.

DISCUSSION

The common severe psychological symptoms were psychological anxiety with subdomains of the heart beating quickly or strongly (61.1%) and difficulties in sleeping (55.95%). The psychological symptom which was the most frequent was feeling tired or lacking energy (68.09%) and it was severe for 48.3% of the women and the most common mild psychological symptom was crying spells (65.4%) and it was present in 37.1% of women. Physical symptoms were assessed using a seven-symptom scale and the most frequently reported physical symptom was muscle and joint pain (73.3%) and 62 percent of women have severe muscle and joint pain.¹⁰ Vasomotor symptoms were hot flushes and night sweats. Hot flush was present in 54.5% of the women and it was severe for 62% of those with such symptoms. Night sweats were present in 55.2% of the women and it was severe in 61.2% of them.¹¹ The study findings were muscle and joint pain 95% ($p<0.0001$), parts of the body feeling numb or tingling 93.3% ($p<0.0001$), difficulty in sleeping 86.5% ($p<0.0001$), irritability 85.8% ($p<0.0001$) and these rates were significantly higher than those reported in the current study, but the prevalence of muscle and joint pain ($p<0.14$) were similar to the study findings vasomotor symptoms like hot flushes 46.7% ($p<0.0013$) and night sweats 50% ($p<0.032$) reported from the study based.^{12,13} The study findings concur with Global and Asian study findings regarding more prevailing symptoms as physical than vasomotor symptoms Kulkarni et al women in late menopause, who had induced menopause and premature menopause was affected by severe symptoms. There was a significant positive correlation between postmenopausal symptoms and age.¹⁴ The participants who reported having ever been diagnosed with gynecological morbidity, high blood pressure, high cholesterol, and other medical conditions are more likely to have severe symptoms.¹⁵ The present study findings of correlates of menopause-related symptom severity are in correspondence with existing knowledge in terms of low economic status, less family support, and presence of chronic diseases. Multivariate analysis indicated that family support is a significant correlate of the severity of menopause-related symptoms after controlling for other factors.¹⁶

CONCLUSION

The factors associated with the severity of menopause-related symptoms are a type of menopause, age at menopause, education, economic status, and family support. Family support tends to mitigate against severe symptoms. The study participants sought care mainly for physical symptoms rather than any other menopause-related symptoms. They did not seek care for sexual dysfunction even though many women reported these symptoms. Health seeking behaviour was not associated with the nature of menopause or any of the socio-demographic or economic factors; but it was associated with the history of previous menstrual history, gynecological morbidity, type 2 diabetes mellitus and other medical conditions. This indicates a lack of knowledge regarding treatable menopause-related symptoms.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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