Severity of Menopausal Symptoms among Middle-aged Women in Selected Communities of Pokhara

Rita Pathak[1], Ranjita Karmacharya[1]

[1]Pokhara Nursing Campus, Institute of Medicine, Tribhuvan University

ABSTRACT

Introduction: Menopause is one of the most significant stages in the female reproductive life cycle. It brings several physiological and psychological changes that affect women's lives, with 75% of women experiencing menopausal symptoms in some form. The objective of the study was to assess the Frequency and Severity of Menopausal Symptoms among Middle-Aged Women residing in Pokhara Metropolitan City.

Methods: A descriptive cross-sectional study was conducted among 236 respondents aged 45-60 years. Simple random sampling technique was adopted for selecting the wards. A simple random sampling technique using the lottery method was used to select three wards. Data was collected from the eligible respondents from those households of the selected wards on first come first basis by visiting house to house. Data was collected by using a validated tool i.e Menopause Rating Scale (MRS). Data was collected from 16 December 2021 to 13 February 2022. The collected data was coded into the statistical package for Social Science (SPSS) version 16 and analyzed by using descriptive and inferential statistics to measure the frequency of the symptoms and assess the severity of the symptoms respectively.

Results: Findings revealed that almost all (96.6%) of respondents had at least one menopausal symptom. The most prevalent menopausal symptom was joint and muscular discomfort (75.8%) followed by irritability (73.3%) and physical and mental exhaustion (72.4%). Regarding the severity of the symptoms, joint and muscular discomfort symptoms were reported as very severe (2.1%) the most. Likewise, in the sub-domain of menopausal symptoms a higher mean score (4.24±2.91) was found in the psychological domain.

Conclusions: This study concludes that the majority of women experience joint and muscular discomfort as well as irritability during menopause. Therefore, healthcare providers should provide education on the management of physical and psychological symptoms and promote routine screening to facilitate the early identification and management of menopausal symptoms.

Keywords: Menopausal Symptoms, Perimenopause, Postmenopause, Premenopause,

*Correspondance: Rita Pathak, Lecturer, Pokhara Nursing Campus, Institute of Medicine, Tribhuvan University, Email: ritapathak185@gmail.com, Mobile: +977 9856044099

INTRODUCTION

Menopause is the permanent cessation of menstruation. With menopause, women's reproductive functions cease to work and they begin a completely new chapter in their life.[1] The period immediately before the menopause and at least the first year after the menopause is called perimenopause. Premenopause is the whole reproductive period before menopause and after the period of twelve months of spontaneous amenorrhea is called postmenopause.[2]

Menopause is a universal phenomenon and all the physiological changes that come with it are completely normal. However, in some cases, the menopausal symptoms can be extremely severe to the point of hampering women's daily activities. And despite this,

most women remain unaware of the changes that are affecting their body. The main cause of menopausal symptoms is the decrease in women's estrogen levels during that period of time. Women can experience these symptoms not just during the menopausal stage but during the perimenopausal stage as well.[3]

Menopause usually occurs in a woman at the age of late forties or early fifties and lasts until her sixties. During the period of menopause, women gradually experience various physical and psychological symptoms.[4] For most women, these changes are manageable and they tend to adjust with the shift to a non-reproductive stage of life. But sadly, this is not the case for all women. Some develop extreme symptoms during perimenopause.[5]

A study shows that 75% of menopausal women experience menopausal symptoms including hot flushes with the symptoms being severe for 10–20%. The study also showed that women experience muscle and joint ache, cognitive problems, low libido, headache, and insomnia among other symptoms. The symptoms were prevalent 4-5 years before and after the full menopause.[6]

The hormonal and behavioral changes that occur during the menopausal period lead to a high demand for special health care. In developed countries hormone replacement therapy (HRT) is prescribed to alleviate and treat menopausal symptoms. But countries like Nepal give less attention to the problems related to menopause and the effects and treatment of menopausal symptoms. Therefore, this study identified how prevalent and severe the symptoms of menopause are among middle-aged women in Pokhara.

The study's general objective was the assessment of the frequency and severity of middle-aged women's menopausal symptoms in the selected communities of Pokhara. The specific objectives were to identify the frequency of middle-aged women's menopausal symptoms and to assess the severity of those symptoms.

Menopause is an unspoken, unattended, reality of life. Menopausal symptoms could even be well tolerated by some women, but it will be very dreadful for others. If severe symptoms persist, it will compromise the overall quality of life of the women who were for those experiencing the symptoms. Therefore, the findings of this study has the potential to be helpful to the concerned authority of Pokhara Municipality to conduct awareness programmes by giving health education and also help women to early recognize the menopausal symptoms, which ultimately help in reduction of discomfort and fears.

METHODS

The study population was women between the age group of 45-60 years residing in Pokhara metropolitan city for at least six months. The sample size was calculated based on "Menopausal Health Status of Women of Kapilvastu District of Nepal" with prevalence 80.8% by using the following formula of sample size calculation (Sample size (n) $=Z^2pq/d^2$).[7]

Among the 33 wards in this metropolitan city, the population of middle aged women was 43,983 according to the Statistics Office, Kaski (2011 A.D). Three Wards (No. 9, 12 and 19) were selected through Simple random sampling. Then sample of three wards was taken using the formula Sample per Cluster=Total Sample Size/Number of Cluster. Therefore, sample from ward no. 9 was 79, ward no. 12 was 79 and ward no. 19 was 79.

The houses were visited on a first come first served basis. The structured interview schedule used for data collection. The instrument was divided into two parts. The content validity of Part- I was established by extensively reviewed literature, seeking opinions from subject experts.

Part I included socio-demographic, lifestyle, and obstetric-related questions characteristics which the principal investigator developed using literature review. Part II consisted of the freely available Menopause Rating Scale (MRS).[8] This scale was translated into Nepali and was used to assess how severe the menopausal symptoms were.

The MRS has a total of eleven symptoms listed under three subscales of symptoms. This includes psychological, somato-vegetative, and uro-genital symptoms. These symptoms were measured using a five-point severity scale with the severity ranging from none to very severe. The total severity scores were calculated by adding the scores for all eleven symptoms. On the basis of literature review, the total score ≤ 11, 12-35, and ≥ 36 were considered asymptomatic, mild to moderate and severe to very severe, respectively.

The questionnaire was pre-tested in Ward 9 of Pokhara Metropolitan City with a sample size of 10%. Since it showed a high internal consistency with 0.879 Cronbach's alpha coefficient, no modification to the questionnaire after the pre-test was required.

After the institutional permission, ethical clearance (REF 200 6-11) was obtained from TU, IOM Institutional Review Committee. Participation of the respondents was voluntary and written/verbal informed consent was obtained prior to data collection. The researcher collected the data herself and the method of data collection was a structured interview schedule. Data was collected in the participant's own household in their free time. Anonymity was maintained by using code number instead of name. The rights and welfare of the respondents was prioritized during the whole course of the study. The respondents' privacy was preserved during the interview process. The average time was 25-30 minutes for each respondent. The respondents were allowed to withdraw at any point during the data collection process without needing to provide any reason for doing so.

After examining the data for incomplete and incorrect data points, the data was coded and entered into SPSS software for analysis. The analysis and interpretation of the data was done based on the study's objective. Descriptive statistics were used to chronicle background characteristics whereas the continuous variables were expressed in the form of mean and standard deviations. The confidence interval for the analysis was 95% and the significance level was set at $p < 0.05$.

RESULTS

Table 1 : Demographic Characteristics of the Respondents (n=236)

Characteristics	Number	Percentage
Age in Years		
45-50	130	55.1
51-55	51	21.6
56-60	55	23.3
Mean ± SD (51.23± 4.92) Min-Max (42-60)		
Religion		
Hindu	202	85.6
Buddhism	24	10.2
Christian	8	3.4
Muslim	2	0.8
Ethnicity		
Brahmin/Chhetri	104	44.1
Jana Jati	95	40.2
Dalit	37	15.7
Marital Status		
Married	207	87.7
Widow	14	5.9
Separate	12	5.1
Unmarried	3	1.3
Educational status		

Cannot read and write	49	20.8
Informal Education	43	18.2
Primary Level	87	36.9
Secondary Level	43	18.2
Higher Secondary	12	5.1
Bachelor Level and above	2	0.8
Occupation		
Housemaker	99	41.9
Agriculture	90	38.1
Self-employment	24	10.2
Non-government Employment	4	1.7
Government Employment	3	1.3
Labor	16	6.8

Table 1 shows that half of the respondents (55.1 %) were between the age group of 45-50 years. The religion with highest followers was Hinduism (85.6%) and (87.7%) of the women were married. As for ethnicity, the highest percentage (44.1%) of women were Brahmin/Chhetri. The highest percentage of respondents could not read and write (20.8%) and were housemakers (41.9%).

Table 2 : Obstetric and Gynecological Information of the Respondents (n=236)

Characteristics	Number	Percent
Age of Menarche		
10-12 years	55	23.3
13-14 Years	90	38.1
15-16 Years	85	36.0
17-18 Years	6	2.5

Pregnancy History		
No pregnancy	7	3.0
1-2 times	71	30.1
3-5 times	137	58.1
6-8 times	21	8.9
Complication during delivery(n=229)		
Yes	19	8.2
No	210	91.7
Menopausal Status		
Premenopausal	88	37.3
Peri-Menopausal	29	12.3
Post-Menopausal	119	50.4
Types Of Menopause		
Natural	144	61.0
Irregular having menstruation	4	1.7
Still Having Menstruation	88	37.3
Past History of Regular Periods	199	84.3
Days of Menstrual flow		
3 days	66	28.0
4 days	110	46.6
5 days	41	17.4
6 days	14	5.9
7 days	4	1.7
8 days	1	.4

Table 2 shows that the age of menarche of the majority (38.1%) respondents was at 13-14 years. 36% of respondents started their menstruation at 15-16 years of age, 23.3% at the age of 10-12 years, and 2.5% of respondents at age 17-18 years. The majority (50.4%) of respondents were postmenopausal.

Table 3 : Severity of Menopausal subscale among Respondents (n=236)

Symptoms	None (%)	Mild (%)	Moderate (%)	Severe (%)
Perceived level of menopausal symptoms	8 (3.4)	133 (56.4)	88 (37.3)	7 (3.0)
Somatic-vegetative	18 (7.6)	137 (58.1)	66 (28.0)	15 (6.4)
Psychological	27 (11.4)	113 (47.9)	74 (31.4)	21 (8.9)
Urogenital	82 (34.7)	102 (43.2)	42 (17.8)	10 (4.2)

Table 3 shows that 3.4% of respondents perceived no menopausal symptoms, 56.4% of respondents perceived mild level and 37.3% perceived moderate level and only 3% perceived severe level of menopausal symptoms. Regarding the subdomain of menopausal symptoms, 8.9% perceived severe psychological symptoms, 6.4% of respondents perceived severe somatic symptoms and 4.2% perceived urogenital symptoms.

Table 4 : Mean of Menopausal Symptom among the Respondents (n=236)

Domain	Premenopausal Mean ± SD	Perimenopausal Mean ± SD	Postmenopausal Mean ± SD	Total Mean ± SD
Physical	3.84±2.45	4.34±2.56	3.92±2.70	3.94±2.59
Psychological	4.22±3.35	4.79±2.80	4.11±2.58	4.24±2.91
Uro-Genital	1.90±2.07	2.37±1.80	1.83±2.17	1.92±2.59

Table 4 shows that higher mean menopausal symptoms were in the psychological domain (4.24±2.91) whereas a lower mean menopausal score was seen in uro-genital domain (1.92±2.59). In all subdomains, higher mean scores were seen among perimenopausal women groups.

Table 5 : Menopausal Symptoms and Severity According to Menopausal Rating (n=236)

Symptoms	Percentage with symptoms	None (%)	Mild (%)	Moderate (%)	Severe (%)	Very Severe (%)
Somatic						
Hot Flushes, Sweating	142(60.1)	94 (39.8)	87 (36.9)	41(17.4)	12(5.1)	2(0.8)
Heart discomfort	105 (44.4)	131(55.5)	64 (27.1)	35 (14.8)	4(1.7)	2(0.8)
Sleep Problem	155 (65.6)	81 (34.3)	93 (39.4)	43 (18.2)	18 (7.6)	1(0.4)
Joint and muscular discomfort	179 (75.8)	57 (24.2)	71 (30.1)	71 (30.1)	32 (13.6)	5 (2.1)
Psychological						
Depressive mood	139 (58.8)	97 (41.1)	90 (38.1)	36 (15.3)	12 (5.1)	1 (0.4)
Irritability	173 (73.3)	63 (26.7)	96 (40.7)	59 (25.0)	17(7.2)	1 (0.4)
Anxiety	169 (71.6)	67 (28.4)	101 (42.8)	45 (19.1)	19 (8.1)	4 (1.7)

Physical and Mental exhaustion	171 (72.4)	65 (27.5)	94(39.8)	64 (27.1)	13 (5.5)	-
Urogenital Sexual					
Sexual Problem	83 (35.1)	153(64.8)	47 (19.9)	26 (11.0)	7 (3.0)	3 (1.3)
Bladder Problem	96 (40.6)	140(59.3)	64 (27.1)	24 (10.2)	6 (2.5)	2 (0.8)
Dryness of Vagina	123 (52.1)	113(47.9)	73 (30.9)	38 (16.1)	12 (5.1)	-

According to Table 5, joint and muscular discomfort was the most common symptom with 75.8% of the respondents suffering from it. This was followed by irritability (73.3%), physical and mental exhaustion (72.4%), anxiety (71.6%), sleep problems (65.6%), hot flushes (60.1%), depressive moods (58.8%), dryness of vagina (52.1%), and heat discomfort (44.44%) respectively. Regarding how severe the symptoms were, joint and muscular discomfort was reported to be very severe (2.1%), severe (13.6%) and moderate (30.1%) by the highest number of respondents. Anxiety was reported to be mild by the highest number of respondents at 42.8%. Other symptoms that were reported to be mild the most were irritability (40.7%), depressive mood (38.1%), and hot flushes and sweating (36.9%)

DISCUSSION

The study aimed to assess how prevalent and severe middle-aged women's menopausal symptoms were in selected wards of Pokhara. Menopause is the permanent cessation of menstruation. During menopause, women experience physical, urogenital, and psychological problems. While these symptoms might not be life-threatening, they still might decrease the quality of life of many women.

This study shows that the average age of menopause was 47.89, which was supported by Rajbhandari et.at.[9], where the average menopausal age for women in Nepal was 48.7 years.

The socio-demographic characteristics of this study revealed that 55.1% of respondents were between the age group of 45-50 years with mean and standard deviation of age being 51.23± 4.92 years.

The present study reveals that 96.6% of respondents have at least one prevalent menopausal symptom rated at any degree. This finding is greater than the prevalence found in the multinational study of Latin America.[10] Contradictory to these studies, only 15.7% of middle-aged Chinese women experienced adverse menopausal symptoms. In this study, the most frequently reported symptoms were joint and muscular discomfort (75.8%). It is similar to the findings of a 2011 research conducted in Nepal.[11]

The other prevalent symptoms were irritability (73.3%), physical and mental exhaustion (72.4%), sleep problems (65.6%), hot flushes and sweating (60.1%), vaginal dryness (52.1%), and sexual problems (35.1%). Similar symptoms were seen in a study conducted in Bangladesh where joint and muscular discomfort (76.2%) was the prevailing problem among the perimenopausal group.[12]

In this study, depressive moods were prevalent among 58.8% of respondents which is comparable with the findings of an earlier study carried out in Nepal. According to that study, depressive moods was the most reported mild form of menopausal symptom with a prevalence of 52.4%.14 In this study, 52.1% of women reported dryness of vagina. This statistic is relatively lower than the findings of Sharma et.al.[13]

This study shows that higher mean menopausal symptoms were in the psychological domain

(4.24 ±2.91) whereas lower mean menopausal scores were seen on Uro-Genital domain (1.92±2.59). In all subdomains, higher mean scores were seen among perimenopausal women groups.

There are several potential limitations in our study. First, this community-based study was conducted in only 3 wards of Pokhara Metropolitan City out of 33 wards. Therefore, the result may not be generalized outside the setting. Second, in this study the number of different stages of menopausal women was not the same in number so it may affect the result.

CONCLUSIONS

Based on the findings, this study concludes that each person experiences menopausal symptoms and their severity level differently. Among the menopausal women group symptoms were more prevalent among premenopausal women. These symptoms can have an impact on the quality of life of postmenopausal women. Healthcare providers and policymakers should be aware of this issue. They also need to educate the public, including spouses and family members of menopausal women, about these symptoms and give them necessary support and treatment including, in severe cases, Hormone Replacement Therapy.

ACKNOWLEDGMENT

CONFLICT OF INTEREST : None declared

REFERENCES

1. Marahatta RK. Study of menopausal symptoms among peri and postmenopausal women attending NMCTH. *Nepal Med Coll J*. 2012;14(3):251-5.

2. World Health Organization. Research on menopause in the 1990s: report of a WHO Scientific Group. *World Health Organ Tech Rep Ser*. 1996;866:1-107.

3. Sushmitha V, Shettian N. A study on the modified menopause rating scale as a tool in the assessment of prevalence of menopausal symptoms in women of Dakshina Kannada district: a cross-sectional study. *Int J Reprod Contracept Obstet Gynecol*. 2020;10(1):138-44. doi:10.18203/2320-1770.ijrcog20205758.

4. Baral G. Menopause Rating Scale: validation and applicability in Nepalese women. *J Nepal Health Res Counc*. 2019 Apr 28;17(1):9-14. PMID: 31110369.

5. Willi J, Süss H, Ehlert U. The Swiss Perimenopause Study–study protocol of a longitudinal prospective study in perimenopausal women. *Womens Midlife Health*. 2020;6(1):1-13. doi:10.1186/s40695-020-00052-1.

6. Lund KS, Siersma VD, Christensen KB, et al. Measuring bothersome menopausal symptoms: development and validation of the MenoScores questionnaire. *Health Qual Life Outcomes*. 2018;16:97. doi:10.1186/s12955-018-0927-6.

7. Ghimire N, Dhakal P, Norrish D, Dangal G, Sharma D, Dhimal M, et al. Menopausal health status of women of Kapilvastu district of Nepal. *J Nepal Health Res Counc*. 2015 Sep-Dec;13(31):182-7. PMID: 27005709.

8. Hauser GA, Huber IC, Keller PJ, Lauritzen C, Schneider HPG. Evaluation der klinischen Beschwerden (Menopause Rating Scale). *Zentralbl Gynakol.* 1994;116(1):16-23.

9. Rajbhandari S, Subedi RK, Dangal G, Phuyal A, Vaidya A, Karki A, et al. Menopausal health status of Nepalese women. *J Nepal Med Assoc.* 2017;56(205):107-11. PMID: 28598445.

10. Blümel JE, Chedraui P, Baron G, Belzares E, Bencosme A, Calle A, et al. Menopausal symptoms appear before menopause and persist 5 years beyond: a detailed analysis of a multinational study. *Climacteric.* 2012;15(6):542-51. doi:10.31 09/13697137.2012.658462.

11. Chuni N, Sreeramareddy CT. Frequency of symptoms, determinants of severe symptoms, validity of and cut-off score for Menopause Rating Scale (MRS) as a screening tool: a cross-sectional survey among midlife Nepalese women. *BMC Womens Health.* 2011;11:30. doi:10.1186/1472-6874-11-30.

12. Rahman S, Salehin F, Iqbal A. Menopausal symptoms assessment among middle-age women in Kushtia, Bangladesh. *BMC Res Notes.* 2011;4:188. doi:10.1186/1756-0500-4-188.

13. Sharma S, Adhikari L, Karmacharya I, Kaphle M. Menopausal symptoms among postmenopausal women of a selected municipality: a cross-sectional survey. *J Nepal Med Assoc.* 2021 Nov 15;59(243):1155-60. doi:10.31729/ jnma.7052. PMID: 35199750; PMCID: PMC9124345.