

# Menopausal Health Status of Women of Kapilvastu District of Nepal

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## ABSTRACT

**Background:** Women face numerous health problems in their post-reproductive and menopausal years, including issues such as pelvic pain, incontinence and obstetric fistula. In Nepal, the importance of these health issues is increasing with the aging of the population, yet women are often unable to access adequate health care due to entrenched gender structures and misconceptions regarding menopause. This study aimed to describe the prevalence of menopause, the associated health problems and their severity amongst women aged 40–60 years in Kapilvastu.

**Methods:** A descriptive study was conducted in Kapilvastu district. Multi stage cluster sampling technique was adopted: Illakas of Kapilvastu were identified, then one Village Development Committee (VDC) from each Illaka of the district, and two wards from each of these VDCs, were selected randomly.

**Results:** The median age of onset of menopause was 47 years (25<sup>th</sup> and 75<sup>th</sup> percentiles = 43 and 50 years), and >90% of women had entered menopause by 54. All symptoms in the Menopause Rating Scale were experienced to some extent by at least 30% of women, even amongst the premenopausal group. The most common problems experienced by menopausal women were: sexual problems (81.7%, 95%CI: 78.0-85.4), physical and mental exhaustion (81.5%, 95%CI: 77.8-85.2) and joint and muscular discomfort (78.5%, 95%CI: 74.6-82.4). The symptoms most frequently deemed “severe” or “very severe” were: sexual problems (40.5%), joint and muscular discomfort (27.4%), and sleep problems (21.0%).

**Conclusions:** Middle-aged women in Kapilvastu experienced menopausal symptoms to a substantial degree. The prevalence and severity of these symptoms increased with the menopausal transition, and with increasing age. Menopause itself did not appear to be the primary risk factor for typical “menopausal” symptoms.

**Keywords:** Health; kapilvastu; menopause; perimenopause; premenopause; women.

## INTRODUCTION

Menopause typically occurs in a woman’s 40s or early 50s and lasts until her 60s.<sup>1,2</sup> While it is a natural change, medical therapy may be appropriate in cases where the physical, mental, and emotional effects are strong enough to disrupt everyday life.<sup>3</sup> Menopausal symptoms can include hot or cold flushes, night sweats, joint pain, vaginal dryness, decreased sexual desire, insomnia and emotional changes.<sup>1,3,4</sup>

Women’s non-reproductive health is becoming an increasingly important public health issue in Nepal due to the aging population and lifestyles changes underway.<sup>5</sup> However, there is little public knowledge

and many taboos regarding menopause and its related problems in Nepal. In particular, the United Nations Development Assistance Framework has highlighted that vulnerable groups of women have particularly poor access to adequate healthcare, and that social inclusion must therefore be improved to a great extent.<sup>6</sup>

This study sought to describe the menopausal symptoms experienced, their severity, and the usual age of menopause in women aged 40-60.

## METHODS

A cross-sectional study employing quantitative research methods was used to obtain information on the

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menopausal health of women. Kapilvastu district was selected purposively from among 23 vulnerable districts identified in the 2011 country report of the United Nations Development Assistance Framework.<sup>6</sup> A multi-stage cluster sampling technique was adopted: Illakas of Kapilvastu were identified, and then one VDC from each Illaka and two wards from each VDC were selected using simple random sampling. All women aged 40-60 years from selected wards who met inclusion criteria and gave informed consent (n=924) were interviewed using a structured questionnaire. The Menopause Rating Scale (MRS), developed by the Berlin Center for Epidemiology and Health Research and translated into Nepali, was used to assess the prevalence of menopausal symptoms as per previous research.<sup>7</sup> The symptoms included in the MRS are: hot flushes, heart discomfort, sleep problems, depressive mood, irritability, anxiety, physical and mental exhaustion, sexual problems, bladder problems, dry vagina, and joint and muscular discomfort. Menopausal status was determined on the basis of the 2011 Stages of Reproductive Aging Workshop guidelines. Perimenopause was defined as either  $\geq 60$  days of amenorrhea, or a persistent change of seven or more days in the length of consecutive menstrual cycles. Menopause was defined as a period of 12 months of amenorrhea following the last menstrual period. The age range of 40-60 years was chosen as the normal menopausal window in this study. Women with cardiovascular diseases, mental disorders, diseases of the kidney and liver, non-residents of Nepal, and those confined to bed because of ill-health were

excluded from the study.

Data were entered into EpiData 3.1 then cleaned and analysed using SPSS v16.0 and Microsoft Excel. Means, medians, proportions and 95% confidence intervals (CIs) were calculated, and contingency tables used to display distribution information.

Ethical approval was obtained from the Ethical Review Board of the Nepal Health Research Council (NHRC), and permission was granted by concerned district authorities and health facilities of the selected VDCs. Prior to interview, informed consent was obtained from all participants. Privacy and confidentiality of the data were maintained.

## RESULTS

A total of 924 women aged 40-60 years from Kapilvastu were interviewed about their age, menopausal status (either premenopausal, perimenopausal or menopausal), and their experience of symptoms listed in the Menopause Rating Scale (MRS). The mean and median ages of onset of menopause were 46.3 and 47 years respectively (25<sup>th</sup> and 75<sup>th</sup> percentiles = 43 and 50 years; SD = 4.74). Amongst the menopausal cohort 7.5% (n=32/430) was prematurely menopausal, defined as a cessation of menstruation by the age of 40. Figure 1 shows how the proportion of each menopausal group changes with age.

**Table 1. Age group-wise distribution of menopausal status (n=833).**

Age of respondents	N	Menopausal Status					
		Pre-menopause		Peri-menopause		Menopause	
		%	95% CI	%	95% CI	%	95% CI
40-44	233	63.5	57.3 - 69.7	24.5	19.0 - 30.0	12.0	7.8 - 16.2
45-49	243	39.5	33.4 - 45.6	27.6	22.0 - 33.2	32.9	27.0 - 38.8
50-54	155	7.7	3.5 - 11.9	12.3	7.1 - 17.5	80.0	73.7 - 86.3
55-60	202	1.0	0 - 2.4	2.5	0.3 - 4.7	96.5	94.0 - 99.0
Total	833	31.0	27.9 - 34.1	17.8	15.2 - 20.4	51.3	47.9 - 54.7

Table 2 summarises, for each menopausal group, what proportion of women reported experiencing the various MRS symptoms (n=833). The 'Total' column includes 91 women who had either had a hysterectomy, were using the contraceptive Depo-Provera, or did not provide information about their cycle, as they could not be assigned to a menopausal group.

While all symptoms were widespread across all menopausal groups, prevalence increased with advancing

menopausal status. The most common symptom was sexual problems, with an overall prevalence of 80.8% (95%CI: 78.3-83.3%). Table 3 depicts the prevalence of menopausal symptoms by age group.

The difference in prevalence of MRS symptoms between the premenopausal and menopausal groups was calculated, as well as between the youngest and oldest age groups (Table 4).

**Table 2. Menopausal symptoms experienced by menopausal status (n=833).**

Menopausal Symptoms	Menopausal Status of the Respondents							
	Pre-menopause		Peri-menopause		Menopause		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Hot flushes	31.4	25.7-37.1	34.5	26.8-42.2	42.4	37.7-47.1	37.6	34.5 - 40.7
Heart Discomfort	41.1	35.1-47.1	45.9	37.9-53.9	53.6	48.9-58.3	48.1	44.9 - 51.3
Sleep Problems	48.8	42.7-54.9	52.7	44.7-60.7	69.3	64.9-73.7	58.8	55.6 - 62.0
Depressive Mood	55.4	49.3-61.5	50.7	42.6-58.8	63.7	59.1-68.3	58.7	55.5 - 61.9
Irritability	65.5	59.7-71.3	65.5	57.8-73.2	66.0	61.5-70.5	64.7	61.6 - 67.8
Anxiety	43.0	37.0-49.0	37.8	30.0-45.6	46.1	41.4-50.8	43.6	40.4 - 46.8
Physical and Mental Exhaust	69.4	63.8-75.0	76.4	69.6-83.2	81.5	77.8-85.2	76.3	73.6 - 79.0
Sexual Problems	78.3	73.3-83.3	86.5	81.0-92.0	81.7	78.0-85.4	80.8	78.3 - 83.3
Bladder Problems	38.0	32.1-43.9	54.1	46.1-62.1	51.1	46.4-55.8	47.1	43.9 - 50.3
Dryness of Vagina	56.2	50.1-62.3	56.8	48.8-64.8	69.6	65.2-74.0	62.6	59.5 - 65.7
Joint and Muscular Discomfort	62.8	56.9-68.7	65.5	57.8-73.2	78.5	74.6-82.4	71.3	68.4 - 74.2

**Table 3. Menopausal symptoms experienced by age group (n=924).**

Menopausal symptoms	Age Group of Respondents							
	40-44		45-49		50-54		55-60	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Hot flushes	31.7	26.2 - 37.7	33.8	28.0 - 39.6	44.3	36.7 - 51.9	44.4	37.8 - 51.0
Heart Discomfort	44.5	38.6 - 50.4	41.5	35.5 - 47.5	52.1	44.5 - 59.7	57.4	50.8 - 64.0
Sleep Problems	47.7	41.8 - 53.6	54.2	48.1 - 60.3	67.1	59.9 - 74.3	72.2	66.2 - 78.2
Depressive Mood	53.4	47.5 - 59.3	56.2	50.1 - 62.3	61.7	54.3 - 69.1	66.2	59.9 - 72.5
Irritability	65.5	59.9 - 71.1	65.0	59.2 - 70.8	55.7	48.1 - 63.3	70.4	64.3 - 76.5
Anxiety	42.7	36.9 - 48.5	42.3	36.3 - 48.3	40.1	32.6 - 47.6	49.1	42.4 - 55.8
Physical and Mental Exhaust	71.2	65.9 - 76.5	73.5	68.1 - 78.9	77.2	70.8 - 83.6	85.6	80.9 - 90.3
Sexual Problems	76.9	71.9 - 81.9	82.3	77.6 - 87.0	80.2	74.1 - 86.3	84.7	79.9 - 89.5
Bladder Problems	39.5	33.7 - 45.3	44.2	38.1 - 50.3	50.9	43.2 - 58.6	57.4	50.8 - 64.0
Dryness of Vagina	52.7	46.8 - 58.6	60.0	54.0 - 66.0	69.5	62.5 - 76.5	73.1	67.2 - 79.0
Joint and Muscular Discomfort	61.9	56.2 - 67.6	71.5	66.0 - 77.0	74.3	67.6 - 81.0	81.0	75.8 - 86.2

**Table 4. Difference in prevalence of menopausal symptoms between menopausal groups and other age groups (n=833 & 924).**

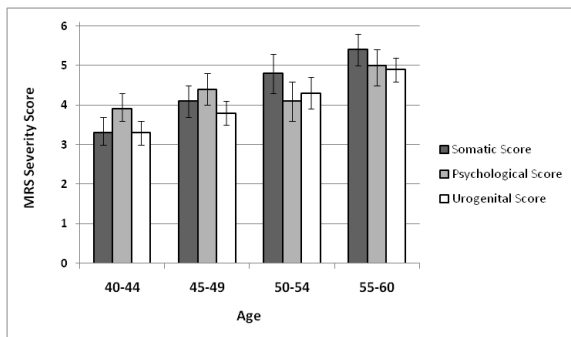
	Percentage Increase in Prevalence from:	
	Premenopausal to menopausal status	40-44 years to 55-60 years age groups
Hot Flushes	11.0%	12.7%
Heart Discomfort	12.5%	12.9%
Sleep Problems	20.5%	24.5%

Depressive Mood	8.3%	12.8%
Irritability	0.5%	4.9%
Anxiety	3.1%	6.4%
Physical and Mental Exhaust	12.1%	14.4%
Sexual Problems	3.4%	7.8%
Bladder Problems	13.1%	17.9%
Dryness of Vagina	13.4%	20.4%
Joint and Muscular Discomfort	15.7%	19.1%

For each MRS symptom, advanced age was associated with a larger increase in prevalence than advanced

menopausal status. Sleep problems were experienced by 20% more women in the menopausal group, representing the greatest increase associated with menopause; while bladder problems, dryness of vagina, and joint and muscular discomfort were all at least 13% more common in the menopausal group. These figures were even more pronounced when considering age groups.

Conversely, irritability, anxiety and sexual problems were not strongly associated with menopausal status, varying by only 0.5-3.4% between the premenopausal to menopausal groups.



**Figure 1. Mean severity score of menopausal symptoms among different age groups (n=924).**

Finally, MRS severity scores were calculated by grouping symptoms into the categories of somatic, urogenital or psychological, then assigning values for each respondent based on how severely they experienced all symptoms. Figure 1 shows that when average severity scores are calculated, a trend is observed of severity increasing with age.

## DISCUSSION

Menopause, despite being a natural change, can be a stressful and psychologically challenging event, and is associated with a range of difficult physical symptoms. Globally, the natural age at menopause is 45 to 55 years.<sup>5</sup> In this study, women reached menopause by a median age of 48 years. This result is consistent with other studies conducted within Nepal, which have reported age ranges of 45-50 years.<sup>7-10</sup> This is the first study to report on the prevalence of premature menopause in Nepal. The rate we observed of 7.5% (n=32/430) is substantially higher than the rates of 1-2% typically seen in developed countries.<sup>11,12</sup> Since no gynaecological causes were assessed, recall bias on the number of years since final menstruation cannot be ruled out. Another potential bias is that menopausal symptoms were self-assessed rather than medically diagnosed. The geographical restriction to Kapilvastu district may also

limit the generalisability of results.

Reliable information on the prevalence of menopausal symptoms among Asian women is still limited; however, studies from India, Pakistan and Bangladesh have shown menopausal symptoms to be widespread throughout the region.<sup>2,13,14</sup> In this study, 98% of women aged 40-60 years reported experiencing at least one symptom listed in the MRS. All three categories of menopausal symptoms (somatic, urogenital and psychological) were common.

In contrast to several recent Asian-based studies, the most frequently reported symptom was sexual problems (n=747, 80.8%).<sup>8,13,15</sup> Sexual issues remain largely undiscussed in many Asian cultures, so this figure may be indicative of underreporting in earlier studies. Additionally, the high incidence of dry vagina in this study may be a contributor to sexual problems (n=578, 62.6%).

Psychological symptoms affected a wide range of women, varying from 44% (n=403) for anxiety to 77% (n=705) for physical and mental exhaustion. This is consistent with rates seen in other regional studies, which ranged from 46%-93%.<sup>13,17</sup> Psychological symptoms are not generally a consequence of menopause alone,<sup>5</sup> and may be influenced by general life distress<sup>17</sup>, a prior history of psychiatric disorder<sup>18</sup>, self-perceived health status, and the use of hormone replacement therapy.<sup>19</sup> It is therefore likely that the prevalence of psychological symptoms seen here is a reflection of all these factors in the lives of Kapilvastu women.

Hot flush, the characteristic symptom of menopause amongst European women, was reported by only 38% of women in this study, in line with several other reports from Asian countries.<sup>14,16</sup>

Previous studies in Nepal found sleep problems to be the most widespread menopausal symptom.<sup>7,15</sup> While sleep problems were reported by only 58.8% of women overall in this study, it was the symptom whose prevalence increased most markedly across the menopausal transition, affecting 20.5% more menopausal than premenopausal women. Conversely, sexual problems, despite having the highest prevalence in this study, increased only marginally with the menopausal transition, from 78.3% to 81.7%. The average increase of all symptoms across the menopausal transition was only 10.3%, suggesting a relatively minor impact of menopause on health. Indeed, age served as an equally robust predictor of health outcomes as menopausal status.

Finally, average severity of all MRS symptoms increased steadily with both age and menopausal progression. The symptoms most frequently rated “very severe” were sexual problems (11.9%), joint and muscular discomfort (9.5%) and sleep problems (3.6%).

## CONCLUSIONS

Women of Kapilvastu district aged 40-60 years experienced menopause-related symptoms to a substantial degree, with all symptoms being reported by 30-80% of the population, depending on age group and menopausal status. The prevalence and severity of these symptoms increased both across the menopausal transition as well as with increasing age, though only by around 10% on average. These data suggest that substantial gains stand to be made in the health of middle-aged women in locations such as Kapilvastu, particularly in strategic areas such as sexual and psychological wellbeing. Menopausal status does not appear to be a particularly effective metric for targeting health interventions.

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