

Prevalence of Perimenopausal Depression among Women of Age Group 40 to 54 Years

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ABSTRACT

Introduction: Perimenopause is the period indicated immediately before and after the 1st year of menopause where the estrogenic activity is abridged, leading to neurotic and psychotic changes.

Purpose: To assess the prevalence of perimenopausal depression among women of the age group 40 to 54 years.

Method: A descriptive cross-sectional study was conducted in women of age group 40 to 54 years residing at ward no. 11 and 12 of Butwal Sub-Metropolitan City of Rupandehi district. One hundred seventy-three samples were selected using a non-probability purposive sampling technique. A pretested semi-structured interview schedule was used for data collection and data were analyzed by using descriptive and inferential statistics, i.e. frequency, percentage, mean and χ^2 test.

Results: The study finding revealed that the mean age of the respondents was 46 years. The overall prevalence of perimenopausal depression was more than half (56.6%). The majority (16.2%), 15%, 14.4% and minority (11%) of the respondents had mild, moderate, severe and very severe depression respectively. The respondent's level of perimenopausal depression was statistically significant with the

age, type of family, history of sexual abuse, history of depression, relationship issues, adequate social support and loss of family members/peers.

Conclusion: There is a high level of prevalence (more than half) of depression symptoms in perimenopausal among women of age group 40-54 years.

Keywords: Depression, Factors, Perimenopause, Prevalence.

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INTRODUCTION

Development in health system results in moribund in fertility rates because of which the ratio of people beyond 60 years of age is rising.^{1,2} Since the life expectancy of women is 6 to 8 years longer than that of men; hence, women constitute a large proportion of the aging population.¹ Although women are liable to live longer, though they experience more diseases and disabilities during their transitional period in midlife: menopause.²

Moreover, the longer life of women does not always mean to be healthy lives. Though the pregnancy and childbirth are not diseases, these are conditions that only women have to experience and that carry a potential health risk.³ The menopausal transition demarks histronic alterations at the hormonal, physiological and metabolic level.⁴ A stressful lifestyle accompanies these changes, results in more vulnerable to chronic

non-communicable disorder among women.³ Challenging transition time for women's health is mainly at the perimenopausal and menopausal period, and good menopausal health is a vital facet in healthy and successful aging, stentorian substantial societal benefits.^{3,4}

Currently, the concept of 'menopause' has been replaced by a more accurate term: 'perimenopause'. Perimenopause involves three stages: premenopause (consistent menstrual cycles with ≥ 12 menstruations throughout the past 12 months), menopausal transition (numerous menstruations but < 12 during the previous 12 months) and early postmenopause (no menstruations during the former 12 months).^{4,6} Perimenopause is a natural physiological incident that befalls in women and is demarcated by the World Health Organization (WHO) as "the permanent

termination of menstruation and a decrease in the levels of ovarian steroid hormones (estrogen and progesterone) due to the loss of ovarian follicular function". The ending menstrual period is retrospectively allocated after 12 consecutive months of amenorrhea in the absence of other pathological or physiological causes.^{2,7} It usually occurs at the average age of 50 years, with the range between 40 and 60 years.⁷⁻¹⁰

In the midlife women, moving towards menopause is indicated by changes in menstrual bleeding patterns as well other changes like hot flashes, poor sleep, depressed mood and other reported symptoms. It is still not clear that the extent to which symptoms that occur around menopause are directly related with the hormone changes of ovarian aging.¹¹ Changes in genital and sexual dysfunction, vaginal dryness, loss of libido, vaginal atrophy and dyspareunia are some significant physical alters that occur during the perimenopausal period along with other symptoms like urinary frequency, painful urination, uterine prolapsed and stress incontinence etc. Perimenopause is a period preceding menopause that lasts about four years.¹² Although most symptoms commonly associated with the menopausal transition are not life-threatening, they may negatively affect the quality of life and the physical and mental health of perimenopausal women.¹³

Although most women do not experience depression, though some women are vulnerable during this transition period to perimenopause. Some studies put forward that the risk of a new onset of depression is twofold or more in those women who have no history of depression. Specific patient characteristics and factors related with an augmented risk, such as vasomotor symptoms, mood changes and sleep disturbance are commonly seen in gynecologic practice and women at perimenopausal phase are seeking medical treatment due to vasomotor symptom and depression.¹⁴

Depression, affecting approximately 350 million people, is the utmost common illness global; besides, the burden of depression has continued to rise globally.¹⁵ It can have adverse effects on a person's relationships, aptitude to work in or outside the home, financial status as well a risk of self-harm and suicide. Furthermore, to the impact on the psychosocial wellbeing, depression has solemn insinuation for physical health. One diagnosed with concurrent depression are at high risk for morbidity and mortality allied with ischaemic heart disease, and cancer.^{16,17}

Consequences of studies exploring the relationship between perimenopause and depressive emotional state are conflicting. While some studies report the occurrence of depression, anxiety and other psychiatric syndromes to upsurge in the perimenopause period, studies counting huge sampling groups have reported contradictory results.¹⁸⁻²¹ Therefore, an intrinsic link between depression and perimenopausal syndrome needs clarification. Besides, except for the investigation by Terauchi et al.,²² few studies have focused on the relationship between anxiety and perimenopausal syndrome. They were factors precisely what we want to elucidate.

In this study, we aimed to investigate the prevalence and severity of the perimenopausal syndrome and depression symptoms, analyze the relationships between perimenopausal syndrome and depression symptoms and reveal risk factors for perimenopausal syndrome and depression symptoms. This research would serve

as a baseline and provide a guideline to health planners, policymakers and community health workers to formulate plans, policies and strategies in future.

MATERIALS AND METHODS

Survey Population

This study is a descriptive cross-sectional study which is used to identify the prevalence of perimenopausal depression among women of age group 40 to 54 years residing at Butwal Sub-Metropolitan City of Rupandehi district, Province 5, Nepal. Simple random sampling technique (lottery method) was used to select the wards, and non-probability purposive sampling techniques were used to select the respondents from two wards of Butwal Sub-Metropolitan city of Rupandehi District.

Estimation of Sample Size

We used following simple formula for calculating the adequate sample size in prevalence study: Sample size²³ $(n) = z^2 p(1-p)/d^2$ Where, z is the statistic corresponding to the level of confidence, p is expected prevalence (that can be obtained from same studies or a pilot study conducted by the researchers), and d is precision (corresponding to effect size).

Data from preceding research recommended that <50% of women aged 45–64 years agonize from the perimenopausal syndrome.²⁴ We set parameters confidence intervals at 95%, incidence at 49.6% and precision at 7.44%. Thus, the projected sample size was 173.

Methods

Our research was accepted and obtained the ethical clearance from the chairman of ward no. 11 & 12 of Butwal Sub-Metropolitan city of Rupandehi District, Province 5 in June 2019. The survey was marshalled between June 2019 and July 2019. All researchers have undergone a training course and were acquainted with questionnaire content. The data was collected by the researchers themselves by visiting the community through the use of a semi-structured interview schedule. The informed consent was obtained from each participant and was assured about the confidentiality of the information and allowed to refuse to participate in the study according to their interest at any time during the investigation. The code number was assigned for maintaining anonymity.

Questionnaire

In order to measure research variables, we designed a self-administrated questionnaire which was divided into two parts: Part I (Questionnaire related to socio-demographic information of the respondents) and Part II (Hamilton Depression Rating Scale²⁵ was adapted to evaluate the prevalence level of perimenopausal depression). These questionnaires were developed in simple, understandable language in both English and Nepali.

Statistical Analysis

In the same day of data collection, the collected raw data were coded and checked for the accuracy, utility and completeness. Any errors, incompleteness and inconsistencies in the data that affected the result were removed. SPSS16.0 was used for statistical analysis. The data were analyzed by using descriptive statistical tools such as frequency, percentage and mean and inferential statistical tool, i.e. χ^2 test and presented in different tables. A p-value of <0.05 was regarded as statistically significant in the regression models with 95% confidence interval to test the level of significance.

Table 1: Socio-Demographic Characteristics of the Study Population.

Characteristics	Cases (n=173)	Percentage (%)
Age (In Years)		
40-44	63	36.4
45-49	58	33.5
50-54	52	30.1
Marital Status		
Unmarried	3	1.7
Married	160	92.5
Divorced/Separated	3	1.7
Widow	7	4
Family Type		
Nuclear	82	47.4
Joint	91	52.6
Number of Children		
No children	4	2.3
1	20	11.6
2	65	37.6
3	37	21.4
More than 3	47	27.2
Educational Level		
Illiterate	33	19.1
Primary	47	27.3
Secondary	21	12.1
Higher secondary	57	32.9
Bachelor or above	15	8.7
Occupation Status		
Housewife	84	48.6
Service	22	12.7
Agriculture	18	10.4
Business	43	24.9
Labour	6	3.5

Table 2: Prevalence of Perimenopausal Depression Level

Prevalence Level	Cases (n=173)	Percentage (%)
Normal	75	43.4
Mild Depression	28	16.2
Moderate Depression	26	15
Severe Depression	25	14.4
Very severe Depression	19	11

Table 3: Biological Factors Associated with Perimenopausal Depression.

Characteristics	Cases (n=173)	Percentage (%)
BIOLOGICAL FACTORS		
Presence of Disease		
Yes	76	43.9
No	97	56.1
If Yes, Existing Diseases (Multiple Response)		
Joint pain/ Back pain	26	34.2
Gastritis	15	19.7
Allergy	6	7.9
High Blood pressure	11	14.5
Low Blood pressure	5	6.6
Diabetes	10	13.2
Thyroid Problem	8	10.5
Piles	3	3.9
Stomach Ulcer	2	2.6
Urinary Problem	1	1.3
Severe Headache	2	2.6
Ear Problem	2	2.6

RESULTS**Socio-demographic Characteristics**

Table-1 represented the socio-demographic characteristics of the respondents in the study out of 173 participants. Majority of the respondents were at age group 40-44 years (36.4%) followed by 33.5% of age group 45-49 years where the mean age was 46 years, regarding the marital status, maximum respondents were married (92.5%) whereas widow, divorced and unmarried were 4%, 1.7% and 1.7% respectively. Most of the respondents belonged to the joint family (52.6%), and the majority (37.6%) had two children and the slightest (2.3%) had no children at all. Their education levels were in the order of higher secondary (32.9%), primary (27.3%), secondary (12.1%) and bachelor or higher levels of education were 8.7% whereas 19.1% were illiterate. Predominance (48.6%) of participants stayed at home as housewife and least, 3.5% of them worked as the labour.

Prevalence of perimenopausal depression level of participants

Table-2 revealed that the overall prevalence of perimenopausal depression was more than half (56.6%). The majority (16.2%) of the respondents had mild depression followed by moderate depression (15%), whereas 14.4% of the respondents had severe depression and marginal 11% respondents had very severe depression.

Biological, psychosocial and behavioural factors associated with perimenopausal depression

Table-3 illustrated that more than one-third (43.9%) of the respondents were suffering from one or more diseases among

them the joint pain (34.2%) was in highest occurrence and least to that of the urinary problem (1.3%). In contrast to, high percentages (56.1%) of participants were free from diseases.

Table-4 demonstrated 22% of the respondents stated that they were sexually abused, while 32.9% had a history of depression, 28.3% were facing relationship issues, 57.2% were not receiving adequate social support and more than half percentage experienced loss of their family members/peers. Nearly 16.2% were current alcohol users, whereas around 12.7% were current smokers as well as study stated that only 20.8% were involved in a high level of physical activity.

Association between Prevalence Level of Perimenopausal Depression and Several Characteristics

The inferential statistics, i.e. χ^2 test was used to analyze the association between prevalence level of perimenopausal depression and several characteristics of the respondents. Age ($\chi^2= 16.601$, $p=0.035$) and type of family ($\chi^2= 16.166$, $p=0.003$) were significantly interrelated with a prevalence level of perimenopausal depression. In contrast, presence of disease and level of physical activity had no significant relationship with a prevalence level of perimenopausal depression, as shown in table 5. Whereas table 5 also revealed that history of sexual abuse ($\chi^2= 37.186$, $p<0.001$), history of depression ($\chi^2= 47.678$, $p<0.001$), relationship issues ($\chi^2= 29.248$, $p<0.001$), social support ($\chi^2= 22.153$, $p<0.001$) and past event negatively affecting life, i.e. loss of family members or peers ($\chi^2= 26.542$, $p<0.001$) were all psychosocial factors significantly associated with a prevalence level of perimenopausal depression.

Table 4: Psychosocial and Behavioral Factors Associated with Perimenopausal Depression

Characteristics	Cases (n=173)	Percentage (%)
PSYCHOSOCIAL FACTORS		
History of Sexual Abuse		
Yes	38	22
No	135	78
History of Depression		
Yes	57	32.9
No	116	67.1
Relationship Issues		
Yes	49	28.3
No	124	71.7
Adequate Social Support		
Yes	74	42.8
No	99	57.2
Loss of Family Members/Peers		
Yes	96	55.5
No	77	44.5
BEHAVIORAL FACTORS		
Smoking Cigarette		
Never	140	80.9
Quitter	11	6.4
Smoker	22	12.7
Drinking Alcohol		
Never	138	79.8
Quitter	7	4
Drinker	28	16.2
Level of Physical Activity		
Low	70	40.5
Medium	67	38.7
High	36	20.8

Table 5: Association between Prevalence Level of Perimenopausal Depression and Several Characteristics of Respondents.

Characteristics	Level of Depression (%)					χ^2 value	p Value
	Normal	Mild	Moderate	Severe	Very Severe		
Age (In Years)							
40-44	34.9	23.8	23.8	6.3	11.1		
45-49	43.1	12.1	10.3	22.4	12.1	16.601	0.035*
50-54	53.8	11.5	9.6	15.4	9.6		
Family Type							
Nuclear	34.1	25.6	17.1	17.1	6.1	16.166	0.003*
Joint	51.6	7.7	13.2	12.1	15.4		
Presence of Disease							
Yes	38.2	15.8	15.8	14.5	15.8	3.761	0.439
No	47.4	16.5	14.4	14.4	7.2		
Level of Physical Activity							
Low	40	24.3	12.9	10	12.9	7.884	0.445
Medium	47.8	10.4	16.4	16.4	9		
High	41.7	11.1	16.7	19.4	11.1		
History of Sexual Abuse							
Yes	2.6	18.4	31.6	28.9	18.4	37.186	<0.001*
No	54.8	15.6	10.4	10.4	8.9		
History of Depression							
Yes	7	28.1	24.6	19.3	21.1	47.678	<0.001*
No	61.2	10.3	10.3	12.1	6		
Relationship Issues							
Yes	14.3	16.3	28.6	26.5	14.3	29.248	<0.001*
No	54.8	16.1	9.7	9.7	9.7		
Adequate Social Support							
Yes	59.5	20.3	8.1	6.8	5.4	22.153	<0.001*
No	31.3	13.1	20.2	20.2	15.2		
Loss of Family Members							
Yes	28.1	19.8	14.6	22.9	14.6	26.542	<0.001*
No	62.3	11.7	15.6	3.9	6.5		

*Statistical significance at 5% ($p < 0.05$)

DISCUSSION

The principle of the study on perimenopausal depression was to assess the prevalence of perimenopausal depression among women of the age group 40 to 54 years residing at ward no. 11 and 12 of Butwal Sub-Metropolitan City of Rupandehi district. This study provides a brief scenario on the socio-demographic status, prevalence and factors associated with perimenopausal depression among women of the age group 40 to 54 years. It also includes information on how different characteristics of women act as the catalyst to perimenopausal depression.

Our reflection revealed that the average age of the respondents was 46 periods which was similar to the preceding study conducted in Palpa, Nepal reportable that the typical age of the women in the rumination assemblage was 45.4 years. The early research conducted in Palpa also demonstrated that number (99.3%) of the respondents were married and only (0.7%) were single which was subsidized by the submit acquire expressed that figure (92.5%) of the participants were married, (4%) were widow followed by 1.7% divorced and 1.7% unmarried.²¹

Regarding the educational status of the respondents, writer than four-fifth (80.9%) of the respondents were literate and remaining (19.1%) of the respondents were illiterate. This find was opposing with the previous study conducted in Rupandehi, Nepal reportable that most of the respondents were uneducated (82.3%) and only (17.7%) of the respondents were literate. The preceding document

of Rupandehi also reported that much than half (56.3%) of the respondents were housewife whereas exclusive (43.7%) were involved in the certain occupation which was in line with our contemplate accounted that nearly half (48.6%) of the respondents were housewife followed by (24.9%) participating in business, (12.7%) occupied in service, (10.4%) involved in agriculture and exclusive (3.5%) engaged in labor.²⁶

Work conducted in Turkey demonstrated that overall figure of depressive symptoms among perimenopausal women was (41.8%) which was supported by the current ponder recovered that global occurrence of depression symptoms amid perimenopausal women was (56.6%).²⁷ The verdict of the underway study was steady with the study reported that the prevalence of depressive mood, about (46%).²⁸ The discovery of the modern study was opposed by the cogitate reportable that the frequency of onset of major or minor depression in the menopausal transition was (26%).²⁹

The result of the study illustrated that the general health problems of the respondents were joint pain/back pain(34.2%), gastritis (19.7%), allergy (7.9%), high blood pressure (14.5%), low blood pressure (6.6%), diabetes (13.2%), thyroid problems (10.5%), piles (3.9%), stomach ulcer (2.6%), urinary problem (1.3%), severe headache (2.6%) and ear problem (2.6%). This finding was in line with the previous outcome reported that general health

problems of the respondents were gastritis (38.3%), headache (33.3%), eye problems (32%), urinary problems (30.7%), musculoskeletal problems (27.3%), hypertension (19%), and diabetes (17.7%) respectively.²⁶

The old speculate performed in Turkey exemplified that there was a remarkable relationship between age and depression ($P < 0.001$), which was supported by our study as well. The previous acquire conducted in Turkey also referenced that the significant association was planted between chronic medical illness and depression prevalence ($P < 0.001$) which was obstinate to the allocate reflection documented that there was no portentous relation between proximity of disease and depression prevalence ($P > 0.05$).²⁷ The women at menopause transition point were twice as probable to see from depressive symptoms which are underslung by meditating conducted in Pennsylvania and so do our study.³⁰ Compared with old data from a sexually abused (at childhood) women's sample that exhibited a prevalence of depressive symptoms of 52%, our women's sample also showed significant depressive symptoms.¹⁵

The study revealed that there was operative relation between the events negatively affecting life (loss of family members/peers and relationship issues) and prevalence of perimenopausal depression ($P < 0.001$) which was reconciled to the previous thoughtfulness revealed that there was momentous relation between the events negatively affecting life and prevalence of perimenopausal depression ($P < 0.001$). This rumination also revealed that physical exercise was not statistically operative to the prevalence of perimenopausal depression ($P > 0.005$). Moreover, this discovery was akin to our result that was not statistically considerable to the figure of perimenopausal depression ($P > 0.005$).²⁷

Strength of this study was the use of the combination of both opened and closed-ended questions to determine the prevalence of symptoms. To date, no study or report has been conducted on the prevalence of perimenopausal depression in Nepal.

CONCLUSION

In ending, the allocate work provides sure and past message regarding the prevalence of perimenopausal depression and different associated factors among the women's universe between age 40-54 years in a Butwal sub-metropolitan city, Province 5, Nepal. The study findings concluded that the average age of the respondent was 46 years. It was constituted that the overall figure of perimenopausal depression among women of age radical 40-54 years was solon than half. In constituent, the age type of family, history of sexual abuse, history of depression, relation issues, social support and loss of family members or peers have remained to be significant factors for mounting depression development.

Aimed at this ground, it is indorsed that essential gains withstand to be made in the health of middle-aged women and women in the perimenopausal period be checked, cautionary approaches, equal consultancy and training for risk groups be formulated. Researchers, policymakers, academicians, civil association and other concerned authorities can use this take as the line data for boost steps ahead in this area at the national level.

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