

A correlation of menopausal symptoms and psychiatric comorbidities in patients with perimenopause. (A hospital-based study)

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INTRODUCTION

According to the current data from literature about 1.5 million women pass through the transition phase of menopause [Alexander MJ, 2008]. The consensual definition for perimenopause is 2-8 years before the onset of menopausal symptoms. Vasomotor symptoms are the predominant feature of menopause that is reported by most women [Avis NE, 2015]. Changes in sleep patterns are often complained about by women in their 40s and may worsen with the transition towards the menopausal phase. [Bromberger JT, 2007] Many other features like adverse mood, poor self-perceived health compromised quality of life, and arthralgia have been seen that contribute to poor sleep patterns. Depressive symptoms have been reported by women in the transition phase of the perimenopausal period [Casper RF, 1979]. The central thermoregulatory mechanism has a pivotal role in a vasomotor system that is located in the hypothalamus resulting in the lowering of core body temperature by 0.2 °C [Dennerstein L, 2000 & Deotale MK, 2015]. The association of vasomotor symptoms has been linked with low estradiol (E2), inhibin levels, and an increase in FSH concentrations in blood [Freeman EW, 2006]. The appearance and severity of perimenopausal symptomatology during the menopausal transition strongly affect the quality of life [Gupta R, 2012]. Literature has

documented studies about transitional effects in women with schizophrenia and bipolarity [Guthrie JR, 1996 & Hamilton AS, 2003]. Psychiatric issues remain a core domain among perimenopausal women. Many studies are focused on the occurrence of psychiatric disorders, but still more is needed to be investigated [Hu LY, 2016].

MATERIALS AND METHODS

AIMS OF THE STUDY:

- To study sociodemographic profile of perimenopausal population.
- To assess pattern of perimenopausal symptoms, psychiatric comorbidities and their correlation.

STUDY AREA/SETTING: The above study was conducted on patients who were in perimenopause period. The patients who were following the Department of Obstetrics and Gynecology of the tertiary care institute were referred to our outpatient department of psychiatry for psychiatric manifestations.

STUDY SUBJECTS: 50 Female study Participants aged 40 years and above were taken for the study with well-informed consent and liberty to withdraw from the study at any point in time. Our study participants were referred by Gynecology and Obstetrics specialists.

STUDY DESIGN: A cross-sectional type of study in which ethical clearance was obtained. Consent was taken prior to enrolment for the study. Privacy and confidentiality were maintained and records were secured. Participants had the liberty to withdraw from the study as per their will.

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convenience-based sampling technique was used after that specially prepared structured Sociodemographic sheet was filled in which sociodemographic status was assessed by the BG prasad scale. This study was conducted between January 2021 to July 2021.

EXCLUSION CRITERIA:

- Patients who were not in perimenopause.
- Not giving consent for the study.
- Patients having past psychiatric disorders.
- Severe neurological illness or medical illness.
- Not being able to understand the questionnaire.
- Patients having other gynecological issues or surgical menopause.

INSTRUMENTS USED: Our study participants were assessed by applying a scale called Modified Mini-screen (MMS). It is a 22-item questionnaire constructed to identify individuals whose present mental state needs a thorough assessment by a mental health professional and is not a diagnostic scale. It is often regarded as a better screening questionnaire for the female population with higher specificity [Jagtap BL, 2016].

Patient Health Questionnaire-15 (PHQ-15) is a self-administered version of the PRIME-MD diagnostic instrument for common mental disorders. It consists of 15 somatic symptoms from the PHQ, each symptom scored from 0 (doesn't bother) to 2 (bothers a lot). PHQ-15 scores of 0-4, 5-8, 9-12, and 13-26, points divide the symptoms into minimal, mild, medium, and high severity. [Kamal Kishor Dewangan, 2020]

Socioeconomic status was assessed with the help of the Modified BG Prasad scale. It contains four classes such as upper, upper middle, lower, lower middle, and middle with a basis on percapita family income [Kravitz HM, 2011].

DATA MANAGEMENT AND ANALYSIS: Data has been analyzed using IBM SPSS statistics 24.0. Frequencies and percentages were calculated for qualitative and quantitative variables, and correlation bivariate analysis was performed between perimenopausal symptoms and psychiatric symptoms of different disorders.

RESULTS

As depicted in (Table 1) indicates the study participants 30.0% belonged from urban, N=31(62.0%) were from rural areas and 8.0% were from semi-urban background. 100% of the study participants were Muslim. About 80.0% were illiterate, 4.0% had primary education, 6.0% had studied up to middle school and N=5(10.0%) had education up to high school. N=40(80.0%) were house makers and N=10 (20.0%) were skilled. N=33(66.0%) had poor social support. 28.0% had good social support. N=4(8.05%) were from upper socioeconomic status, 30.0% from the upper middle, 4% lower, 22.0% from lower and N=18(36.0%) from upper lower economic strata. 74% had nuclear family, N=3(6.0%) AND 20.0% had joint type of family. 6% had only 1 child, 10% had 3 children, 36% had 3 children, 18% had 4, 16% had 5 children, 6% had six 4% had 7 and N=2(4%) had 8 children (Table 2).

Above in the table 2 is evident that the majority of 66.0% were from 40-45 years of age and N=17(34.0%) and the mean age was 44.2 with s standard deviation of 2.96 for participants, mean age of menarche was found to be 13.04 years and with standard deviation of 1.38 and majority of study population were from the age group 14 years with 48%, 6% had menarche at the age of 10 years and 11 years, 26% had at the age of 12 years, 10% at 13 years and N=2(4%) had menarche. The mean age of onset of menopause was 42.28 with S.D 4.15 and the majority 44% had menopause 41-44 years. The mean age of marriage was found to be 20.56 with a standard deviation of 2.97 and the majority 62.0% N=31 had married at the age of 20-26 years (Table 3).

Above TABLE 3 indicates that in our study participants, Hypertension was seen in =3(6%), Hypertension with dyslipidemia in 4% (8.0%), and Hypertension with Hypothyroidism was seen in 3(6%). Hypothyroidism in N=7(14%) ,Hypothyroidism with diabetes mellitus in 2(4.0%) and N=3(6%) had migraine and 28% had no medical comorbidities. In menopausal symptoms, the prevalence of headache was 68%, weakness at 78%, lethargy at 54%, irritability at 62%, body aches at 80%, joint pains at 62%, pain abdomen at 22%, hot flushes 94% sleep disturbances in 64%, urogenital problems in 32% and palpitations were 68%. The frequency of psychiatric symptoms was depressive disorder at 56%, panic disorder at 56%, social phobia at

Table 1.
Sociodemographic variables of perimenopausal women.

Variable	N	%
Residence		
Urban	15	30.00%
Rural	31	62.00%
Semi-urban	4	8.00%
Religion Muslim	50	100%
Education		
Illiterate	40	80.00%

Primary school	2	4.00%
Middle school	3	6.00%
High school	5	10.00%
Occupation		
Skilled	10	20.00%
Homemaker	40	80.00%
Social Support		
Poor	33	66.00%
Good	14	28.00%
Fair	3	6.00%
Socio Economic Support		
Upper	4	8.05
Upper middle	15	30.00%
Lower	2	4.00%
Lower middle	11	22.00%
Upper lower	18	36.00%
Family Type		
Nuclear	37	74.00%
Extended	3	6.00%
Joint	10	20.00%
No. of Children		
1	3	6%
2	5	10%
3	18	36%
4	9	18%
5	8	16%
6	3	6%
7	2	4%
8	2	4%

Table 2.

Shows mean Age, Age of menarch, Age at menopause and Age of marriage with standard deviations.

Variable	N	%	Mean with SD
Age 40-45 years	33	66.00%	44.2+1-2.96
45-50years	17	34.0%	
Age of Menarche			
10years	3	6.00%	13.04+1-138
11years	3	6.00%	
12years	13	26.00%	
13years	5	10.00%	
14 years	24	48.00%	
16 years	2	4.0%	
Age at Menopause			
35-40years	15	30.00%	42.28+1-4.15
41-44 years	22	44.0%	
45-49years	13	26.00%	
Age at marriage			
16-19years	19	38.00%	20.56+1-2.97
20-26 years	31	62.00%	

56%, obsessions at 12%, compulsions 6% post traumatic stress disorder symptoms seen at 28%, adjustment disorder at 4%, and psychosis was seen in none. The correlation coefficient was seen between perimenopausal symptoms and psychiatric symptoms in which a p-value of >0.05 was seen with depressive symptoms, social phobia, obsessions,

compulsions, and adjustment disorder symptoms which were not significant, however, it was significantly less than 0.05 with panic symptoms, posttraumatic stress disorder and somatic symptoms. In the PHQ-15 scoring N=29(58%) mild severity, 20% had moderate severity and 22% had severe somatic symptoms.

Table 3.

Frequency of psychiatric symptoms, medical comorbidities perimenopausal symptoms, and correlation of perimenopausal with psychiatric symptoms.

Medical comorbidities	N%	%
Hypertension	3	6.00%
Hypertension with Dyslipidemia	4	8.00%
Hypertension with Hypothyroidism	3	6.00%
Hypothyroidism	7	14.00%
Hypothyroidism with Diabetes milliteus	2	4.00%
Migraine	3	6.00%
Peri -Menopausal symptoms		
Headache	34	68%
Weakness	39	78%
Lethargy	27	54%
Irritability	31	62%
Body aches	40	80%
Joint pain	31	62%
Pain abdomen	11	22%
Hot flushes	47	94%
Sleep disturbances	32	64%
Palpitations	35	70%
Urogenital problems	16	32%
Psychiatric disorders		
Depressive disorder.	28	56%
Panic disorder.	28	56%
Social phobia	28	56%
Obsessions	6	12%
Compulsions	3	6%
Posttraumatic stress disorder	14	28%
Adjustment disorder	2	4%
Psychosis	0	0
Menopausal symptoms vs	P value	Significance <0.05
Depressive disorder.	0.991	>0.05
Social phobia	0.991	
Obsessions	0.159	
Compulsions	0.858	
Adjustment disorder	0.391	
Panic disorder.	0	
Posttraumatic stress disorder	0.03	<0.05
Somatic symptoms	0.03	
Phq-15 severity	N	%
0-4 Minimal	0	0
5-8 Mild	29	58
9-12 Moderate	10	20
13-26 High	11	22

DISCUSSION

Psychiatric disorders are more common during perimenopause or in the transition to menopause [Kroenke K, 2002] Menopausal health remains a dominant issue that needs planning, imparting education about menopausal symptoms to women at larger extent will help in the early detection of symptoms, reduction in distress and apprehensions, thus giving them a chance to seek medical advice [Kumari M, 2005]. As per the sociodemographic profile of our study majority of patients were in the age group of 40-45 years with a mean of 44 years, the results

of which were quite similar to the study by Biswajit et al [Li RX, 2016]. The majority of participants in our study at menarche at the age of 14 with a standard deviation of 1.3 and a mean of 13 years, as a result of our study was echoed by an international study that concluded the higher the age of menarche the more psychiatric disorders are observed [Lin HL,2013]. sociodemographic details of our study had a mean age of 42.28+ 4.15 and the majority of women had menopause at 41-44 years of age group, results of which were quite similar to systemic review by Prasad et al [Mahawar P,2017].higher parity was echoed by study

a study [Marsh WK, 2012]. The majority of participants in our study had undergone marriage at the age of 20-26 years, as according to the mate choice theory effect on menopause, later the marriage delayed will menopause, our study findings were quite similar to the study [Min SH, 2022]. Our study participants were mainly from rural areas results of which were in resonance with other studies by Priyanka et. al [Morton RA, 2013]. The patient population belonged to the Muslim religion which is echoed by a census report [Mozumdar A, 2015]. our study had a major part of the participants illiterate (Oasas, 1450). That were quite similar to two national studies and an international study [Panda SK, 2018]. The majority of patients in our study were homemakers which was in accordance with the study [Pandey VK, 2019], though different studies have supported the fact that occupation in relation to peri menopause needs further investigation. In the sociodemographic profile, the majority of patients had poor social support as evident from the studies of international origin that patients having good social support had fewer perimenopausal symptoms [Polissen AF, 2009].

The upper-lower study participants in economic status outnumbered which was in contrast to the study done by [Pradhan GP, 2003]. likely reason might be that the upper-lower participants of economic status might be anxious about the symptoms, perceive them with greater severity, and seek psychiatric consultation. As per the sociodemographic profile, the majority of the participants had multiparity which was in resonance with other studies [Prasad JB, 2021]. In family type the majority was attained by nuclear families which was quite similar to the study by [Priyanka Malhotra, 2019]. our study had participants with different medical comorbidities, of which the majority was attained by hypothyroidism in relation to climacteric symptoms, possible relation is explained by the study [Raglan GB, 2020]. Hot flushes were more frequently reported by the participants with other symptoms that are quite similar to the study of international repo Mahawatr et. al and Kamal et al [Robinson GE, 2001]. The frequency of sleep disturbance is in agreement with the study [Sharma S, 2007]. The frequency of vasomotor symptoms and somatic symptoms in our sample was not dissimilar to that obtained in other perimenopausal women of Western countries [Slopien R, 2020]. In our study frequency of depressive symptoms is higher and the correlation of perimenopausal symptoms with depression was insignificant as the discrepancy has been also reported by many studies [Tataryn IV, 1980]. The reason might be the measuring tool variation with respect to other tools and recall bias. our study has agreeing facts with the study that anxiety symptoms are quite frequent and there is a significant correlation between perimenopausal symptoms and anxiety [Terauchi M, 2013]. The reasons might be our study participants had hypothyroidism, the second being that there might be hormonal disbalance during the transition phase, as hormonal assay was not done,

third being that due to distress caused by symptoms and near the end of reproductive age of the woman. In our study, there was a significant correlation between perimenopausal symptoms and posttraumatic disorder which could not be seen in the extensive literature review. The reason could be high political discourse in the state. One of the most likely reasons for Significant correlations between perimenopausal symptoms and posttraumatic disorder-like symptoms could be reproductive hormonal imbalance and higher levels of stress hormones in such patients, however, to confirm these explanations further studies are needed with a focus on hormonal assays [Zhao D, 2013].

IMPLICATIONS

- Patients having premenopausal stages should be screened for early perimenopausal symptoms that may interfere with their quality of life.
- Early intervention at the multidisciplinary front will provide an opportunity for early diagnosis, treatment, and rehabilitative measure
- Psychotherapeutic interventions may be planned to decrease the burden of different stressors and will limit the severity of symptoms.
- Perimenopausal women should be screened for Psychiatric comorbidities and Medical comorbidities so that early intervention may be planned.

LIMITATIONS

The limitation of the study is that the sample size was small, a larger sample size is needed to see the correlation between postmenopausal symptoms and psychiatric morbidity. The Sample from periphery health centers was not taken and people from one community were in the sample. Hormonal analysis was not done as it could play an important role both in the appearance and pattern of perimenopausal symptoms and psychiatric comorbidities. This could further strengthen the link between the severity, type of postmenopausal symptoms, and development of psychiatric morbidity.

STRENGTHS OF THE STUDY

Our study has examined the different sociodemographic variables, The medical, and psychiatric comorbidities, and the pattern of perimenopausal symptoms. The correlation of perimenopausal symptoms with psychiatric disorders was analysed and the severity of somatic symptoms was also obtained.

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