

Prevalence and Symptom Profile of Common Psychiatric Morbidities among Perimenopausal Women: A Community-Based Study

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Abstract

Background: The term perimenopause encompasses the period of menopausal transition, during which the first endocrinological, biological, and clinical features of menopause begin to emerge, as well as the first year after menopause. Psychological and mental health problems like depression, anxiety, irritability and mood changes are prevalent during perimenopausal period apart from experiencing well recognized physical symptoms like hot flushes and night sweats. However, the awareness about mental health issues remains low in India. Hence our study was proposed to understand the extent of mental health burden in perimenopausal women.

Methods: The study was a cross-sectional study conducted in a southwest Delhi area from May 2023 to October 2024. A total of 378 women were enrolled in the study using systemic random sampling technique. A validated Mini International Neuropsychiatric Interview (M.I.N.I) version 6.0.0 was administered as a diagnostic tool for the study.

Result: Among the 378 study participants, 129 of them were affected by one or more of the common psychiatric morbidities. The overall prevalence of the psychiatric morbidities was 34.1%, the commonest being suicidality followed by depression. The most commonly reported symptoms among participants diagnosed with depression was low mood with 98.2%.

Conclusion: The present study highlights the substantial burden of mental health problems during perimenopause and the need to increase awareness among general public.

Keywords: Perimenopause, Mental Health, Depression, Anxiety.

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Introduction

The World Health Organization (WHO) defines natural menopause as the permanent cessation of menstruation, brought about by the depletion of ovarian follicular activity. This phase is clinically recognized after 12 consecutive months of amenorrhea, provided there are no other pathological or physiological explanations. The menopausal transition is a significant period in a woman's life, marking the years leading up to the final menstrual period. This phase typically lasts an average of four years and is characterized by increased variability in menstrual cycles as the body gradually prepares for menopause. The term perimenopause encompasses the period of menopausal transition, during which the first endocrinological, biological, and clinical features of menopause begin to emerge, as well as the first year after menopause. During this time, hormonal changes are particularly pronounced, with

fluctuating levels of oestrogen and progesterone and a steady increase in follicle-stimulating hormone (FSH). [1] According to a PAN India survey conducted by the Indian Menopause Society (IMS), the average age of menopause in Indian women is 46.2 years. The average age of perimenopause among Indian women is approximately 44.69 ± 3.79 years. [2] Hormonal fluctuations characteristic of perimenopause can result in a wide range of physical and psychological symptoms. The physical symptoms of perimenopause are well recognized, with vasomotor symptoms such as hot flushes and night sweats being the hallmark features of the menopausal transition. Other common physical symptoms include headaches, weight gain, joint pain, breast tenderness, urinary stress incontinence, vaginal dryness, and skin complaints. In addition to these physical symptoms, psychological

manifestations such as depression, anxiety, irritability, mood changes, and emotional distress are also common during this period. [3] During this phase, women may be particularly vulnerable as they cope with the dual burden of physical and psychological symptoms while simultaneously fulfilling multiple roles and responsibilities within the family, workplace, and society, including caregiving for both children and aging parents.

A systematic review and meta-analysis conducted by Badawy et al. (2024) reported that women in perimenopause are 40% more likely to experience depression than their premenopausal counterparts. [4] Women with major depressive disorders often struggle to perform daily tasks including self-care, leading to disruptions in personal and family life and reduced productivity. Caregivers, often family members, bear the emotional and financial burden of providing support, further compounding the stress on households. Stigma surrounding mental health leads to delayed diagnosis and treatment. Despite these challenges, awareness of mental health issues remains low in India.

The treatment gap for depression is as high as 85%, driven by stigma, lack of awareness, and limited access to affordable care. [5] Addressing these barriers is crucial for improving mental health outcomes among perimenopausal women. Therefore, the present study was undertaken to assess the prevalence and symptom profile of common psychiatric morbidities among perimenopausal women.

Materials and Methods

The present study was a cross-sectional study conducted in a southwest Delhi area from May 2023 to October 2024. The inclusion criteria of the study were all women 41 years of age and above whose last menstrual cycle was within last 12 months at the time of the study. Women who were unable to communicate at the time of study and post-menopausal women were excluded from the study. The study included a total of 378 women and the sample size was calculated using the formula [6] $N = Z^2 \cdot p \cdot q / d^2$ taking into consideration the prevalence of common psychiatric morbidity of 45% in Indian population [7] at 95% confidence level, 6% absolute error, non-response rate of 10% and design effect as 1.3. Systematic random sampling technique was adopted as the sampling technique. A self-designed and semi structured questionnaire was used to collect the socio demographic profile, menstrual, obstetric and other relevant clinical history. A well-validated Mini International Neuropsychiatric Interview (M.I.N.I.) version 6.0.0 [8] was administered as a diagnostic tool to assess the prevalence and symptoms of depression, suicidality, panic disorder, agoraphobia, social phobia and generalized anxiety disorder.

Results

Among the 378 study participants, 129 of them were affected by one or more of the common psychiatric morbidities under study, resulting in an overall prevalence of 34.1%.

Table 1: Distribution of common psychiatric morbidities among study participants (n=129) *

Common psychiatric morbidities	No. of study participants (%)
Depression	57 (44.2)
Suicidality	74 (57.4)
Panic disorder	16 (12.4)
Agoraphobia	9 (7.0)
Social phobia	9 (7.0)
Generalized anxiety disorder	42 (32.6)

***multiple response table**

Table 1 shows the distribution of different psychiatric morbidities among the affected participants. Among the 129 study participants who were diagnosed with psychiatric morbidity, the commonest psychiatric morbidity was found to be

suicidality (57.4%) followed by depression (44.2%). Generalized anxiety disorder was also significant affecting 32.6%. Among anxiety related disorders panic disorder was affecting 12.4%, while agoraphobia and social phobia each affected 7%.

Table 2: Clinical presentation of depression among study participants as per Mini International Neuropsychiatric Interview (M.I.N.I.) version 6.0.0 (n=57)

Clinical Presentation of depression	No. of participants having the presentation (%)
Low mood	56 (98.2)
Anhedonia	46 (80.7)
Decreased or increased appetite; or loss or gain of weight	47 (82.5)
Difficulty sleeping or sleeping excessively	51 (89.5)
Restlessness/fidgety or talking or moving slowly than normal	51 (89.5)
Tiredness/exhaustion	54 (94.7)
Feel worthless or guilty	45 (78.9)
Difficulty in concentration or making decision	43 (75.4)
Suicidal thoughts	38 (66.7)

Table 2 highlights the multifaceted clinical presentations of depression.

Among the participants who were diagnosed with depression during the study, the most commonly reported symptoms were low mood (98.2%), tiredness or exhaustion (94.7%) and sleep difficulties and restlessness or talking or moving

slowly than normal (89.5% each). Other common symptoms included change of appetite or change of weight (82.5%), anhedonia (80.7%), and feelings of worthlessness or guilt (78.9%).

Difficulty in concentration or making decision making (75.4%) and suicidal thoughts (66.7%) were also reported by significant proportion.

Table 3: Clinical presentation of suicidality among study participants as per Mini International Neuropsychiatric Interview (M.I.N.I.) version 6.0.0 (n=74)

Clinical Presentation of suicidality	No. of participants having the presentation (%)
Hopelessness	44 (59.5)
Thinking they would be better off dead or wish they were dead	48 (64.9)
Want to harm themselves or hurt or injure themselves	11 (14.9)
Think about suicide	3 (4.1)
Ever made suicide attempt in lifetime	11 (14.9)

Table 3 shows the different presentations of suicidality. Among those participants who were experiencing suicidality, the feeling that they were better off dead (64.9%) was the most common experience followed by hopelessness (59.5%). Additionally, 14.9% reported urges of self-harm, and 4.1% thought about suicide. Notably, more than one-tenth (14.9%) had made a suicide attempt at some point in their lives.

Table 4: Clinical presentation of panic disorder among study participants as per Mini International Neuropsychiatric Interview (M.I.N.I.) version 6.0.0 (n=16)

Clinical presentation of panic disorder	No. of participants with the presentation (%)
Sudden episodes of intense fear or discomfort which peak in 10 minutes of starting	16 (100)
Persistent fear of having another attack	14 (87.5)
Skiping /racing / pounding of heart	15 (93.8)
Sweating or clammy hands	10 (62.5)
Trembling/shaking	13 (81.3)
Shortness of breath / difficulty breathing	12 (75.0)
Choking sensation / lump in throat	8 (50.0)
Chest pain/ pressure/ discomfort	13 (81.3)
Nausea/ stomach problems/ sudden diarrhea	12 (75.0)
Feeling dizzy/ unsteady/ lightheaded/ faint	15 (93.8)
Feel strange, unreal, detached or unfamiliar, or feel outside of or detached from part or all of the body	12 (75.0)
Fear of losing control or going crazy	14 (87.5)
Fear of dying	13 (81.3)
Tingling/ numbness	13 (81.3)
Hot flushes/ chills	13 (81.3)

Table 4 shows the multifaceted presentations of panic disorder. Among those participants who were diagnosed with panic disorder all of them had experienced sudden episodes of intense fear (100%) and majority experienced persistent fear of another attack (87.5%). Physical symptoms of panic disorder among the participants included skipping/ racing/ pounding heart (93.8%), sweating/clammy hands (62.5%), trembling/shaking (81.3%), shortness of breath/difficulty

breathing (75%), choking sensation/ lump in throat (50%), chest pain/ pressure/ discomfort (81.3%), feeling dizzy/ unsteady (93.8%), tingling/ numbness (81.3%), hot flashes/ chills (81.3%) and nausea/ stomach problems/ sudden diarrhoea (75%). Cognitive Symptoms of panic disorder included feeling unreal, detached, or unfamiliar/ feel outside of or detached from part or all of the body (75%), fear of losing control/going crazy (87.5%), fear of dying (81.3%).

Table 5: Clinical presentation of generalized anxiety disorder among study participants as per Mini International Neuropsychiatric Interview (M.I.N.I.) version 6.0.0 (n=42)

Clinical presentation of generalized anxiety disorder	No. of participants having the presentation (%)
Excessively anxious or worry about several routine things most days	42 (100.0)
Difficult controlling the worries	42 (100.0)
Restlessness	41 (97.6)
Muscle tension	35 (83.3)
Tiredness or exhaustion	42 (100.0)
Difficulty in concentration or mind going blank	39 (92.9)
Irritable	40 (95.2)
Sleep difficulty or sleeping excessively	39 (92.9)

Table 5 shows the different presentations of Generalized Anxiety Disorder (GAD). All the participants who were diagnosed with GAD experienced excessive anxiety or worrying about routine things (100%) and had difficulty controlling the worries (100%). Physical symptoms of GAD included restlessness (97.6%), muscle tension (83.3%) and tiredness or exhaustion (100%). Cognitive and emotional symptoms included difficulty concentrating or mind going blank (92.9%) and irritability (95.2%). Sleep-related issues were troubled sleep or sleeping excessively (92.9%).

All the participants who were diagnosed with agoraphobia felt anxious or uneasy in places or situations where help might not be available or escape might be difficult, like being in a crowd, standing in a line, being away from home alone, or alone at home, or when crossing a bridge, or travelling in a bus, train or car. They avoided the situations or suffer through those situations that might trigger the anxiety or needed a companion to face them.

All the participants who were diagnosed with social phobia experienced excessive and persistent fear of social situations. They had fear of being watched, being the focus of attention, or being humiliated or embarrassed. They avoided the situations or suffered through those situations that might trigger anxiety.

Discussion

The overall prevalence of psychiatric morbidities (depression, suicidality, panic disorder, agoraphobia, social phobia and generalized anxiety

disorder) among peri-menopausal women in the study was 34.1%. In a study in Maharashtra conducted by Aziz et al. [9], psychiatric conditions, including depression and anxiety were observed in 41% of peri-menopausal women. Similar study by Dar et al. [10] found a prevalence of psychiatric morbidities in 49% of perimenopausal women in Kashmir. Another study in Maharashtra by Jagtap et al. [7] found a prevalence of psychiatric morbidities in 44.44% of perimenopausal women. The prevalence in these studies was slightly higher than our study with a prevalence of 34.1%. This may be because of the difference in the settings of these studies, our study was community based and these studies were hospital-based studies. The differences in geopolitical conditions of these regions could be another factor contributing to the variation in prevalence.

The most common psychiatric conditions in our study included suicidality (57.4%), depression (44.2%), and generalized anxiety disorder (32.6%). Among anxiety related disorders, panic disorder affected 12.4%, while agoraphobia and social phobia each had a prevalence of 7%.

Suicidality: The most common psychiatric condition in our study was suicidality (57.4%). Martin et al. [11] reported that suicidality is common during perimenopause, often linked to hormonal fluctuations and the psychological stresses of this life stage. Usall et al. [12] found that women in their peri-menopause had increased risk of suicide ideation compared with women in their pre- or post-menopause and men and the finding was independent of mood and anxiety disorders. Among participants who were diagnosed with

suicidality, hopelessness (59.5%) and thoughts of being better off dead (64.9%) were common. Eleven participants (14.9%) had urges of self-harm and 3 (4.1%) had thought about suicide, and 14.9% had attempted suicide at least once in their lifetime.

Depression

The prevalence of depression in our study was 44.2%. Prevalence of depression in various studies in India ranges from 28% - 84.69%. [7,10,13,14,15] This wide variation can be due to several factors, including the use of different assessment tools, some studies used screening tools, while others applied diagnostic tools.

Additionally, the studies were conducted in diverse settings, such as urban slums and different regions, each with unique geographic, socioeconomic, and political conditions, contributing to the wide variation in reported prevalence. In China [16,17,18] prevalence of depression ranged from 23.9%-25.99% in perimenopausal women. In a study in the USA [19] prevalence of depression was 14.9%. In Poland²⁰ prevalence was found to be 25.5% and in Australia [21] it was 11.5%. The prevalence in these countries was lower than our study which found 44.2% were affected by depression. The lower prevalence of depression in countries like China, Poland, the USA, and Australia compared to India may be explained by several factors, including the higher Human Development Index (HDI) in these nations. A higher HDI reflects better overall living conditions, health care, education, and economic stability, all of which contribute to better mental health outcomes.

The most frequently reported symptoms were low mood (98.2%), tiredness or exhaustion (94.7%), and sleep difficulties and restlessness or talking or moving slowly than normal (89.5% each). Other prevalent symptoms included change in appetite or weight (82.5%), anhedonia (80.7%), feelings of worthlessness or guilt (78.9%), concentration difficulties or difficulty in decision making (75.4%), and suicidal thoughts (66.7%). Archana et al. [22], showed similar findings. Kalhan et al. [23] reported physical and mental exhaustion (71.5%) and sleep problems (61.2%) in their study. Opperman et al. [24] reported fatigue in 81% perimenopausal women. Yadav et al. [25], Alvaro et al. [26] and Freeman et al. [27] found that poor sleep played significant role in developing depression.

Generalized Anxiety Disorder (GAD): The prevalence of GAD in our study was 32.6%. Studies [7,10,14,15] in India show a wide range of prevalence of anxiety. It was as low as 7% in a study and as high as 83% in another study. Just like other disorder like depression, this wide variation may result from several factors, including the use

of different assessment tools - some employed screening tools, while others utilized diagnostic tools. Furthermore, the studies were conducted across diverse settings, such as in hospital or community, urban slums and various regions, each characterized by distinct geographic, socioeconomic, and political conditions, further contributing to the wide variation in reported prevalence of GAD. Studies in China [16,18] show prevalence of 12.62-18%, which were lower than our study. Studies in Brazil²⁸ and Poland²⁰ found prevalence of 39.3% and 40.6% respectively which were slightly higher than our study.

Key symptoms included excessive worry (100%), difficulty controlling worries (100%), restlessness (97.6%), muscle tension (83.3%), tiredness (100%), and sleep disturbances (92.9%). Cognitive symptoms like difficulty concentrating (92.9%) and emotional symptoms like irritability (95.2%) were also significant. Alvaro et al. [26] found that poor sleep can lead to anxiety. Opperman et al. [24] found that irritability was associated with psychiatric disorders such as depression and anxiety. In a study by Khatak et al. [29] sleeplessness was found to be strongly associated with anxiety.

Anxiety related disorders: panic disorder, agoraphobia and social phobia

Panic disorder affected 12.4%, while agoraphobia and social phobia each had a prevalence of 7% among the study participants. Dar et al. [13] found higher prevalences of panic disorder and social phobia (56%). The wide variation in the prevalence may be due to use of different assessment tools. In our study, we used a diagnostic tool and Dar et al. [13] used a screening tool which generally reports higher prevalence.

Panic Disorder: Primary symptoms included intense fear episodes (100%) and fear of another attack (87.5%). Physical symptoms ranged from heart palpitations (93.8%), sweating/clammy hands (62.5%), trembling/shaking (81.3%), shortness of breath/difficulty breathing (75%), choking sensation/ lump in throat (50%), chest pain/pressure/discomfort (81.3%), feeling dizzy/unsteady (93.8%), tingling/ numbness (81.3%), hot flashes/ chills (81.3%) and nausea/stomach problems/ sudden diarrhoea (75%). Cognitive symptoms included fear of losing control (87.5%) and fear of dying (81.3%), feeling unreal, detached, or unfamiliar/ feel outside of or detached from part or all of the body (75%). Grant et al. [30] found similar findings about panic disorder.

Agoraphobia: All participants reported anxiety in situations where escape felt difficult or help seemed unavailable, such as crowds, public transport, or being alone. They either avoided these

situations or relied on a companion. A study by Otte et al. [31] also supports these findings, noting that avoidance behaviour and the presence of a companion in stressful situations are core features of agoraphobia.

Social Phobia: All participants experienced excessive fear of social situations, including being watched or embarrassed. Avoidance of triggering situations was universal. A study by Otte et al. [31] supports these findings.

Limitation: Cross-sectional study design limits the ability to infer causality or track the progression of psychiatric morbidities over time. The study relied on self-reported data, which may introduce bias due to recall bias or social desirability bias.

Conclusion

The present study found that common psychiatric morbidities are prevalent among women in perimenopausal age, with varying distributions and symptom profiles. The findings highlight the substantial burden of mental health problems during the perimenopause and underscore the importance of recognizing their diverse clinical presentations.

Recommendations: The findings of this study highlight the need to increase awareness regarding mental health problems during perimenopause among women, their families, general population and healthcare providers. Routine screening for common psychiatric morbidities should be incorporated into primary health care and women's health services to facilitate early identification, appropriate management, and timely referral. Further research is recommended to strengthen the scientific evidence and guide effective interventions in this population.

References

1. World Health Organization. Research on the menopause in the 1990s: report of a WHO scientific group. Geneva: World Health Organization; 1996. (WHO Technical Report Series, No. 866).
2. Ahuja M. Age of menopause and determinants of menopause age: A PAN India survey by IMS. *Journal of mid-life health*. 2016 Jul 1;7(3):126-31.
3. Malhotra N, Malhotra J, Saxena R, Bora NM. Jeffcoate's principles of gynaecology. JP Medical Ltd; 2018 Aug 16.
4. Badawy Y, Spector A, Lee Z, Desai R. The risk of depression in the menopausal stages: A systematic review and meta-analysis. *Journal of Affective Disorders*. 2024 Apr 18.
5. Institute of Mental Health and Neuro Sciences (NIMHANS). National Mental Health Survey of India, 2015-16: Summary. Bengaluru: Ministry of Health and Family Welfare, Government of India; 2016.
6. Bhalwar R, editor. A Textbook of Public Health and Community Medicine. 1st ed. Pune: Department of Community Medicine, Armed Forces Medical College; 2009 p. 252.
7. Jagtap BL, Prasad BS, Chaudhury S. Psychiatric morbidity in perimenopausal women. *Industrial Psychiatry Journal*. 2016 Jan 1;25(1):86-92.
8. Lecrubier Y, Sheehan DV, Weiller E, Amorim P, Bonora I, Sheehan KH, et al. The Mini International Neuropsychiatric Interview (mini). A short diagnostic structured interview: Reliability and validity according to the CIDI. *European Psychiatry*. 1997;12(5):224-31
9. Sadaf Aziz, Parisha Kelkar, Suprakash Chaudhury, and Daniel Saldanha. Prevalence of Psychiatric Morbidity and Somatic Symptoms in Perimenopausal Women. *Medical Journal of Dr. D.Y. Patil Vidyapeeth*. May 2024; 17(3):580-586
10. Dar SA, Wani ZA, Bhat BA, Sheikh S, Nabi J, Khanam A, et al. Anxiety and depression in menopausal transition: A hospital-based study from Kashmir. *Medical Journal of Dr. DY Patil University*. 2020 Jan 1;13(1):37-42.
11. Martin-Key NA, Funnell EL, Barker EJ, Bahn S. Examining suicidality in relation to the menopause: a systematic review. *PLOS Mental Health*. 2024 Nov 13;1(6): e0000161.
12. Usall J, Pinto-Meza A, Fernández A, de Graaf R, Demyttenaere K, Alonso J, et al. Suicide ideation across reproductive life cycle of women Results from a European epidemiological study. *Journal of affective disorders*. 2009 Jul 1;116(1-2):144-7.
13. Dar N, Gania AM, Bhat AM, Sharma V. A correlation of menopausal symptoms and psychiatric comorbidities in patients with perimenopause: A hospital-based study. *International Journal of Emergency Mental Health and Human Resilience*. 2023; 25(5):197-203.
14. Siddiqui MB, Parveen GP, Singh R. Psychological health problems and associated factors among perimenopausal women in rural Prayagraj. *Int. J. Community Med. Public Health*. 2023 Sep; 10:3295-302.
15. Dewangan KK, Pattanaik S, Patnaik L, Sahu T. Prevalence of morbidities among perimenopausal and postmenopausal women in selected urban slums of Eastern India. *Int J Curr Res Rev*. 2020 Sep;12(18):55-60.
16. Wang X, Zhao G, Di J, Wang L, Zhang X. Prevalence and risk factors for depressive and anxiety symptoms in middle-aged Chinese women: a community-based cross-sectional study. *BMC women's health*. 2022 Jul 29; 22(1):319.

17. Wang XY, Wang LH, Di JL, Zhang XS, Zhao GL. Association of menopausal status and symptoms with depressive symptoms in middle-aged Chinese women. *Climacteric*. 2022 Sep 3; 25(5):453-9.
18. Li RX, Ma M, Xiao XR, Xu Y, Chen XY, Li B. Perimenopausal syndrome and mood disorders in perimenopause: prevalence, severity, relationships, and risk factors. *Medicine*. 2016 Aug 1;95(32): e4466.
19. Joffe H, Hall JE, Soares CN, Hennen J, Reilly CJ, Carlson K, et al. Vasomotor symptoms are associated with depression in perimenopausal women seeking primary care. *Menopause*. 2002 Nov 1;9(6):392-8.
20. Grochans E, Szkup M, Kotwas A, Kopeć J, Karakiewicz B, Jurczak A. Analysis of sociodemographic, psychological, and genetic factors contributing to depressive symptoms in pre, peri-and postmenopausal women. *International Journal of Environmental Research and Public Health*. 2018 Apr; 15(4):712.
21. Almeida OP, Marsh K, Flicker L, Hickey M, Sim M, Ford A. Depressive symptoms in midlife: the role of reproductive stage. *Menopause*. 2016 Jun 1;23(6):669-75.
22. Archana PS, Das S, Philip S, Philip RR, Joseph J, Punnoose VP, et al. Prevalence of depression among middle aged women in the rural area of Kerala. *Asian journal of psychiatry*. 2017 Oct 1; 29:154-9.
23. Kalhan M, Singhania K, Choudhary P, Verma S, Kaushal P, Singh T. Prevalence of menopausal symptoms and its effect on quality of life among rural middle aged women (40–60 Years) of Haryana, India. *International Journal of Applied and Basic Medical Research*. 2020 Jul 1;10(3):183-8.
24. Oppermann K, Fuchs SC, Donato G, Bastos CA, Spritzer PM. Physical, psychological, and menopause-related symptoms and minor psychiatric disorders in a community-based sample of Brazilian premenopausal, perimenopausal, and postmenopausal women. *Menopause*. 2012 Mar 1;19(3):355-60.
25. Yadav V, Jain A, Dabar D, Goel AD, Sood A, Joshi A, et al. A meta-analysis on the prevalence of depression in perimenopausal and postmenopausal women in India. *Asian Journal of Psychiatry*. 2021 Mar 1; 57:102581.
26. Alvaro PK, Roberts RM, Harris JK. A systematic review assessing bidirectionality between sleep disturbances, anxiety, and depression. *Sleep*. 2013 Jul 1;36(7):1059-68.
27. Freeman EW, Sammel MD, Liu L, Gracia CR, Nelson DB, Hollander L. Hormones and menopausal status as predictors of depression in women in transition to menopause. *Archives of general psychiatry*. 2004 Jan 1;61(1):62-70.
28. Jaeger MD, Miná CS, Alves S, Schuh GJ, Wender MC, Manfro GG. Negative affect symptoms, anxiety sensitivity, and vasomotor symptoms during perimenopause. *Brazilian Journal of Psychiatry*. 2020 Oct 9; 43:277-84.
29. Khatak S, Gupta M, Grover S, Aggarwal N. Depression among peri-and post-menopausal women during COVID-19 pandemic in Chandigarh, North India: A study from community. *Journal of mid-life health*. 2022 Jul 1;13(3):233-40.
30. Grant BF, Hasin DS, Stinson FS, Dawson DA, Goldstein RB, Smith S, et al. The epidemiology of DSM-IV panic disorder and agoraphobia in the United States: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry*. 2006 Mar 1;67(3):363-74.
31. Otte C. Cognitive behavioral therapy in anxiety disorders: current state of the evidence. *Dialogues in clinical neuroscience*. 2011 Dec 31;13(4):413-21.