

Level of Aggression, Sleep Quality and Resilience During Perimenopause: A Comparative Study Between Women Who Practice Heartfulness Meditation and Those Who Don't

Shivangi Tanwar^{1*}

ABSTRACT

Background- Every woman experiences various changes in her body during the perimenopausal transition. The symptoms are not solely physical. Several psychological symptoms, like irritability, sleep difficulties etc., have seen to hamper the woman's overall wellbeing. It is also seen that women who are more resilient, cope with the challenges associated with perimenopause better than the ones who have lower resilience. Mindfulness based meditative techniques have already established themselves as promising tools to reduce psychological discomfort. Effectiveness of Heartfulness meditation, too, is being scientifically established in increasing sleep quality and overall wellbeing of an individual. **Aim-** To compare the level of aggression, sleep quality and resilience between perimenopausal women who practice Heartfulness meditation and those who don't. **Method-** 85 women (practicing Heartfulness, N= 43 and not practicing meditation, N= 42), belonging to different states of India, participated in the present non-experimental, cross-sectional-comparative research. The age range of the population was 45-55 years (mean age 48.59 years). Aggression Questionnaire, Pittsburgh Sleep Quality Index and Nicholson McBride Resilience Questionnaire were used for the assessment. **Result-** The study found a statistically significant difference in the scores of aggressions, sleep quality and resilience between perimenopausal women who practice Heartfulness meditation and those who don't. **Conclusion-** Findings of the present research can be of use to psychologists and other health professionals in understanding how Heartfulness practice can help women cope with perimenopausal symptoms better. This practice could be an effective non-pharmaceutical tool to reduce psychological discomfort, like increased aggression, irritability and sleep discomfort, and can potentially increasing resilience in women during perimenopause.

Keywords: Heartfulness, Perimenopause, Aggression, Sleep, Resilience

Every woman, generally, reaches the stage of perimenopause during her 40-s or 50-s. This ill-defined period onsets at different ages, embarking the final years of the female reproductive cycle (Santoro, 2016). It is a predetermined natural process of senescence in females. This transition from fertile to non-fertile stage is not only related to

¹M.Sc. Clinical Psychology, Amity University, Haryana, India

*Corresponding Author

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biological changes, but also to psychological, emotional and social alterations (Buckler, 2005). It is reported that 85% of the women experience more than one symptom during perimenopausal period, causing 10% of them to seek professional medical attention. (McKinlay, Brambilla & Posner, 1992).

In one of the earliest epidemiological studies on sleep disorder by Karacan et. al., published in 1967, it was seen that more than 33% of female respondents had troubles with sleep. It was also seen that around 24% of the women had problems sleeping 'sometimes' and 15% had them 'often or all the time'. The prevalence of these problems and use of sleep medications was higher in women who were 40 years or older.

Perimenopause can be roughly divided into two-stages; the menopausal transition, with relatively less interruptions in the menstrual cycle, and the late transition, where the periods are absent for prolonged period (at least 60 days) (McCarthy & Raval, 2020).

Although the modern world is ready to talk about climacteric, the taboos still prevail. These myths are far deeper rooted than we can imagine. Many so-called doctors have performed various surgical and non-surgical procedures in the past to 'reinstall' the menstrual cycle of women (Greer, 2018). With all the dynamic bio-psycho changes, these societal fads lead to increased psychological distress.

During this transition, there is a profound fluctuation in the level of oestrogen and progesterone, and the ovulation becomes irregular. These fluctuations of the female hormones give rise to an array of symptoms, such as, hot flushes, irritability, excess sweating, and vaginal dryness (Mandal, 2019), to name a few.

In research published in 2021, an association between oestrogen fluctuation and irritability in perimenopausal women was observed. The study also delinked irritable mood from depressive symptoms, and suggested that it could be entangled with oestrogen dynamics instead. (Wit et. al., 2021).

Urinary urgency and incontinence are also reported during this period (Toglia, 2019). Perimenopausal women also experience mild cognitive decline and memory problems. It is seen that some women report significant impairment in their cognitive functions (Mitchell & Woods, 2001). Women who have no history of depression are seen to develop perimenopausal depression, and the likelihood is 2 to 4 times higher in this stage (Freeman & Ellen, 2010).

Women are also at risk of developing endometrial polyps (Reslová et. al.), low bone density and osteoporosis (Neer, 2011), and cardiovascular diseases (Matthews, Kuller, Sutton-Tyrrell, & Chang, 2001). Menopausal transition also makes some women prone to cerebral ischemia and Alzheimer's disease (McCarthy & Raval, 2020).

Oestrogen fluctuation causes other hormones (like serotonin and oxytocin) to fluctuate too, leading to hormonal imbalance. This excessive hormonal change leads to mood swings, irritability and increased aggression in females (Marloff, 2020). Various definitions in psychology and social sciences also suggest that aggression is a response shown by an individual to cause mental or physical harm to someone (Buss, 1961). Aggression could be of various forms, such as, physical aggression, verbal aggression, anger (irritability,

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frustration etc.), hostility, or indirect aggression (avoiding direct confrontation) (Buss and Warren, 2000).

Sleep disturbances also develop during this phase of life (Kravitz & Joffe, 2011). Sleepless nights are generally linked to hot flashes, leading to interruption in the sleep cycle. Poor sleep quality leads to sleep deprivation, affecting women's mental and physical functioning. It can negatively affect short-term and long-term memory, concentration, mood, immune system and heart health. It can also lead to high blood pressure, low sex drive, weight gain and put them at a risk of diabetes.

Continued sleep disturbances could cause hallucinations, mania, bipolar disorder, impulsive behaviour, anxiety, depression, paranoia (Watson and Cherney, 2020). Adult population in Indian urban area, especially females, suffer more from poor quality of sleep than rural population. The pervasiveness of poor sleep quality in urban adult population is 42.58% (Mondal, Mondal & Baidya, 2018).

In a study done by Ciano et. al. (2017), it was seen that perimenopausal women are at a higher risk of developing symptoms of sleep disorder. It was also inferred that insomnia is linked to negative cardio metabolic outcomes.

Various medical and non-medical procedures are performed in order to treat the symptoms. Some medical treatments are prescription of birth control pills or insertion of progesterone IUDs to control heavy bleeding, prescription of iron supplements, minimal invasive surgery like endometrial ablation etc. (Toglia, 2019).

Yoga and meditation-based therapies have been seen beneficial for women in perimenopause (Innes, Selfe & Vishnu, 2010). Various psychotherapeutic interventions, such as cognitive behaviour therapy (CBT) have also seen to be effective in reducing menopausal symptoms like hot flushes and nightmares. (Norton, Chicot & Hunter, 2014). Mindfulness and Heartfulness meditation techniques also lead to substantial enhancement in quality of sleep (Black et. al. 2015), (Thimmapuram et. al. 2020).

Meditation is the process of focusing on one object, thought or activity for a long period of time (Walsh and Shapiro, 2006). It is used as method of reducing stress, anxiety, depression and pain, and increasing peace, perception, self-concept, and well-being (Goyal et. al., 2014). It is seen that psychological resilience is more pronounced in people practising mindfulness. (Bajaj & Pande, 2015).

Heartfulness aims to achieve an equilibrium within ourselves by focusing on our hearts (Thimmapuram et. al. 2020). It is a type of open-monitoring meditative technique. Heartfulness meditation and relaxation procedures have been studied and proven to be effective in lowering stress and anxiety, improving sleep quality, increasing emotional intelligence and exploring the heights and depths of human consciousness.

Depressed mood is correlated with lower resilience and severe menopausal symptoms (Pérez-López et. al., 2014). Resilience strengthens coping mechanism to deal with stress and adversity better. (Walker et. al. 2017). Although the definition keeps evolving, resilience can be understood as the positive adaptation or a person's ability to maintain mental health in spite of experiencing a misfortune. (Herrman et. al., 2011). By increasing the resilience, it

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seems possible to decrease the severity of psychological symptoms related to perimenopause. Some researchers have been conducted to see if resilience is affected by meditation. Meditation causes instant enhancement in resilience which is sustained (Kwak et. al. 2019).

Cejudo et. al. (2019), in their research, showed that Mindfulness Based Intervention (MBI) could be an effective non-pharmacological tool in promoting subjective wellbeing, emotional intelligence, mental health, and resilience.

Meditation is one technique that is seen to be effective in reducing aggression and frustration in people. Its positive effects have also been seen on sleep quality and resilience. Heartfulness practice has also focused on improving a person's quality of life. The practice consists of doing open-monitoring meditation (which is focused on the heart), cleaning (or rejuvenation), induced self-relaxation, and a prayer.

Objective

The aim of the study was to compare the level of aggression, sleep quality and resilience between perimenopausal women who practice Heartfulness meditation and those who don't. People practicing Heartfulness have experienced tremendous positive impact in their lives. The present topic was selected to see if this meditative technique could be a useful tool in elevating the psychological distress faced by women during perimenopause. This research aims to check if this practice can be used as non-pharmaceutical tool to help women cope with perimenopause better.

METHODOLOGY

Hypotheses

In the present, research it is hypothesized that:

- H1- There is a significant difference in the level of aggression of perimenopausal women who practice Heartfulness meditation and those who don't.
- H2- There is a significant difference in sleep quality of perimenopausal women who practice Heartfulness meditation and those who don't.
- H3- There is a significant difference in resilience of perimenopausal women who practice Heartfulness meditation and those who don't.

Research design

The investigation of the present research is based on non-experimental, cross-sectional-comparative research design. The study is an empirical type study which is quantitative in nature. Since the researcher wishes to know the difference between the scores of female participants in their perimenopause who practice Heartfulness meditation and those who don't, on level of aggression, sleep quality and resilience, comparative research design made most sense.

Sample

The data for the study was collected from 85 women from different states of India; out of which 43 practiced Heartfulness meditation, and 42 did not practice any form of meditation. The sample was collected through purposive snowball sampling. The age range of the present study was 45-55 years (mean age was 48.59 years).

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Selection criteria for the research

Inclusion criteria- For the study, 45 to 55 years old women, who regularly practiced Heartfulness meditation and those who don't practice any kind of meditation were selected.

Exclusion criteria- Men, children, adolescents and women who don't fall between 45-55 years of age were excluded from the studies. Women who practiced Heartfulness for less than 8 weeks, practiced focused meditation, or had serious mental and physical disorders, were also excluded. Women who were taking any medication or Hormonal Replacement Therapy (HRT) to deal with menopausal symptoms were excluded too. Participants who scored more than 4 in INC Index of Aggression Questionnaire were not included. The inclusion and exclusion criteria of the sample were decided after review of literature.

Instruments

Buss and Warren Aggression Questionnaire- Aggression Questionnaire is an updated version of the Buss-Durkee Hostility Inventory (1957). This tool was developed by Buss and Warren in 2000, to assess the level anger and aggression. There are 34 items and 5 subscales. The respondents have to choose from a 5-point Likert-type scale. The subscales check physical aggression, verbal aggression, anger, hostility, and indirect aggression. For the scales, there is no cut-off point. Raw scores range from 34 to 136. Level of aggression is assessed according to the t-scores obtained in each subscale and for overall raw score.

The reliability and validity of the questionnaire was checked by Can (2002). According to him, the scale's internal consistency is very reliable and the Cronbach's alpha internal consistency coefficient turned out to be 0.95. In the test-retest reliability analysis, the correlation coefficient value was reported to be $r = 0.48- 0.76$

Pittsburgh Sleep Quality Index- This scale was developed by Dr. Daniel Buysse in 1988, and analysis of its reliability and validity was conducted by Ağargün et al. in 1996. PSQI has 19 items which are to be self-rated. It assesses sleep quality and disturbances faced by test-takers over a period 1-month. Each item is scored on a scale of 0 to 3. The scale consists of 7 subscales evaluating: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction.

The total of the 7 subscale scores are added to get the global PSQI score which ranges from 0 to 21. A global PSQI score greater than 5 is indicative of a diagnostic sensitivity of 89.6% and specificity of 86.5%. This also denotes that the individual has poor sleep quality, and that there are at least 2 serious or 3 medium level disturbances in the areas mentioned above.

Nicholson McBride Resilience Questionnaire- Nicholson McBride Resilience Questionnaire (NMRQ) is 12 items measure on resilience, created by McBride (2010). It is measured on a five-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'. Examples of test items include "I do not take criticism personally". Scores 0-37 indicate a developing level of resilience, scores 38-43 indicate an established level of resilience, scores 44-48 indicate a strong level of resilience and scores 49-60 indicate an exceptional level of resilience. Reliability for this measure in the current study was Cronbach's Alpha = .76.

Procedure

All the participants were asked to complete three questionnaires which were administered online through Google Forms. Participants are also asked to provide their basic demographic

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details, such as, their name, age, marital status, the state they were living in, profession and whether they practiced Heartfulness meditation or not. Consent for this research was also taken through the same form.

The instructions for filling each questionnaire were written in the Google Form. Researcher's e-mail id and phone number was provided in the form. If the participants had any doubts or questions regarding the questionnaire and research, they were asked to contact the researcher. When the participants completed the questionnaire, they were thanked for the valuable participation.

Ethical Considerations

- The consent was taken of each participant before collecting the sample.
- The researcher personally approached each participant to explain the study and requested his or her participation.
- All participants were informed that participation in the study was voluntary and they were free to withdraw.
- Participants had the opportunity to ask questions regarding their participation and had additional opportunities to ask questions during the time of filling form.

Statistical Analysis

SPSS version 20.0 was used for analysis of the data. Parametric statistics were employed. For the purpose of data analysis independent t-test was used to compare the two groups.

RESULT

Table 1. Descriptive statics and comparison between the two groups

Variables	Group	Mean	Standard Deviation	Std. error of mean	Std. error of difference	T	P value
Level of Aggression	Heartfulness	62.19	23.230	3.543	5.492	-2.745	0.007
	Not meditating	77.26	27.290	4.211	5.503	-2.740	0.008
Sleep Quality	Heartfulness	3.28	2.667	0.407	0.933	-4.116	0.000
	Not meditating	7.12	5.491	0.847	0.940	-4.086	0.000
Resilience	Heartfulness	43.93	9.528	1.453	2.195	2.419	0.018
	Not meditating	38.62	10.691	1.650	2.198	2.416	0.018

According to Table 1, the mean difference and standard deviation for women practicing heartfulness and for women who do not practice meditation on their level of aggression came out to be 62.19 ± 23.23 and 77.26 ± 27.29 , respectively. Standard errors of mean for both the group were 3.54 and 4.21. The standard error of difference was 5.49. The result shows that there is significant difference in level of aggression between women who practice Heartfulness meditation and those who do not meditate ($t = -2.74$, $p = 0.00$). This means that H1, i.e., there is a significant difference in the level of aggression of perimenopausal women who practice heartfulness meditation and those who don't, has been supported. It can be inferred that the alternate hypothesis is accepted.

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For the second variable, sleep quality, the mean difference and standard deviation for women practicing Heartfulness and for women who do not practice meditation came out to be 3.28 ± 2.66 and 7.12 ± 5.49 , respectively. Standard errors of mean for both the group were 0.40 and 0.847. The standard error of difference was 0.93. The result shows that there is significant difference in sleep quality between women who practice Heartfulness meditation and those who do not meditate ($t = -4.11$, $p = 0.00$). This means that H₂, i.e., there is a significant difference in sleep quality of perimenopausal women who practice Heartfulness meditation and those who don't. Hence, the alternate hypothesis is proven current and accepted.

Lastly, the mean difference and standard deviation for women practicing Heartfulness and for women who do not practice meditation on resilience came out to be 43.93 ± 9.52 and 38.62 ± 10.69 , respectively. Standard errors of mean for both the group were 1.45 and 1.65. The standard error of difference was 2.19. The result shows that there is significant difference in resilience between women who practice Heartfulness meditation and those who do not meditate ($t = 2.41$, $p = 0.01$). This means that H₃, i.e., there is a significant difference in resilience of perimenopausal women who practice Heartfulness meditation and those who don't. Hence, the alternate hypothesis has been accepted.

DISCUSSION

The primary goal of the present research was to study some factors that affect women during their perimenopausal years. Three variables, namely; level of aggression, sleep quality and resilience were selected as they are one of the most prominent and vital aspects of perimenopause. As the woman's body changes physically during senescence, event psychological problems also arise. It is, hence, important to study how the perimenopausal symptoms can be reduced. This study provides evidence that one way to reduce irritability and sleep disturbances, and increase resilience in perimenopause is by practicing Heartfulness meditation.

Through the obtained results describes in the previous section it is clear that all three hypotheses have assembled support statistically. These results suggest much promise for the practice of Heartfulness meditation as a way to promote resilience and sleep quality, and reduce aggression. Although not much research has been done on the effects Heartfulness meditation, the few researches done on this meditation procedure over the past few years have highlighted how this could be a beneficial non-pharmaceutical technique in helping people elevating various psychological and physiological disturbances.

Evidence has been gathered through various studies that Mindfulness and Mindfulness based techniques can reduce aggression in people. Wupperman et. al. (2011) conducted a study along the same lines. According to them, Mindfulness based therapy could be an acceptable tool for reducing dysregulated behaviours, like aggression, in women. Similarly, in the present study, a statistically significant difference was seen in the level of aggression between women who practiced Heartfulness and those who did not.

Thimmapuram et. al. (2020), in their study, proved that Heartfulness meditation can improve sleep quality in patients suffering with chronic insomnia. The study shows that 8 weeks of Heartfulness can reduce sleep disturbances.

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Other mindfulness-based techniques are becoming extremely popular in the contemporary times. Many studies have been done to prove the effectiveness of these techniques for perimenopausal women. Xiao, Mou & Zhou (2019) published research on effect of mindfulness meditation on sleep quality, anxiety and depression in perimenopausal women. Women who took mindfulness meditation training showed increased sleep quality, and reduced symptoms of anxiety and depression.

Women who are resilient, cope with the reproductive transition better than the ones who are not. Interestingly, people who practice meditation have higher resilience than the ones who don't. Kwak et. al. (2019) carried out a 4-day meditation intervention which proved that it causes immediate and sustained increase in resilience. The present study, too, indicates that women who engage Heartfulness meditation have significantly higher resilience than the women who don't engage in meditation practices.

According to Süss & Ehlert (2020) resilience factors (such as, core resilience, spirituality, control, optimism, emotion and self-related resilience) are linked with a better adaptation to climacteric symptoms, lesser physical symptoms, more satisfaction and better well-being, less stress and depressive symptoms.

From the evidence obtained in this study, it is clear that Heartfulness meditation can be an effective tool to reduce level of aggression and sleep disturbances, and increase resilience to help women cope with the transition of perimenopause. However, not all the symptoms can be managed by practicing heartfulness alone. Sometimes professional medical attention is necessary. Heartfulness meditation can surely be an aid to reduce the discomforts associated with perimenopause, and make this reproductive transition easier for women. It can also be practiced by women who are seeing medical attention; such as HRT, surgery, or other medications.

CONCLUSION

Heartfulness meditation is an excellent tool to lower the level of aggression and sleep discomfort, and increase resilience in perimenopausal women. As a statistically significant difference in the scores of aggression level, sleep quality, and resilience was established between women who practice Heartfulness meditation and those who don't, it can be concluded that this meditation practice could be an effective non-pharmaceutical technique to alleviate the symptoms of perimenopause in women. There have been some researches done along the same lines, but a very few researches have been done to prove the effectiveness of Heartfulness. This research is one of its kind, proving the usefulness of Heartfulness practice for perimenopausal women.

Limitations and future directions

The present research has established an overall positive attitude towards Heartfulness practice. As participants who practice Heartfulness have significantly lower aggression and sleep problems, and more resilience, it's effect can be studied further and used as an effective tool to reduce various perimenopausal discomforts.

This study could be relevant to psychologists, medical practitioners and doctors (especially gynaecologists), and other therapists who can use this tool to help women deal with perimenopausal problems.

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Although, the researcher has tried to keep all biases at bay, there could be some confounding factors influencing the results of this study.

All psycho-diagnostic assessments were administered online via Google forms due to the ongoing Covid-19 pandemic. The interaction between the researcher and the participants, hence, was limited.

As 45-55 is a rough demarcation of perimenopause, some women enter this transition sooner and later too. If someone wishes carry this research forward, selection of participants could be done based on their hormone level to ensure if they are experiencing the transition or not.

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Conflict of Interest

The author(s) declared no conflict of interest.

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