



# The Prevalence of Sleep Disorders at Menopause

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## Abstract

Sleep disorders general problem which is experienced by many people in their life. Several reviews have documented that women are more prone to have sleep disorders compared men. Hormonal changes and weight gain during menopause are two major areas of concern leading to sleep disorder. Fat around the neck can cause obstructive sleep apnea leading to interruption in respiration during sleep, uneasy breathing and snoring. The present research study reports that insomnia was the highest experienced sleep disorder among menopausal women. It is noteworthy that during menopausal age many women experience nocturnal awakenings, hot flashes, early awakenings and over sweating at night. Obstructive sleep apnea was also found in many women.

**Keywords:** - Sleep Disorders, Insomnia, Obstructive Sleep Apnea and Menopause.

## Introduction

Menopause is a natural and important process among ageing females. It occurs around fifty one years and is a result of ovarian follicle depletion. During this time period approximately 40-60 percent females face sleep problems. Many longitudinal and cross-sectional research studies have revealed that sleep disturbances are at hike at menopausal transition (**Kathryn, 2018**).

Sleep disorders were reported by most of the women during the specific certain time period of women's life like-menstrual onset, menstrual disturbances, pregnancy and menopause (**Landis and Moe, 2004**).

Menopause refers to a condition where females around one year are elapsed from the last menstrual cycle, the bodily hormones change few years before menopause, because of the increase in luteinising follicle stimulating hormones. As a result of hormonal changes women go through various physical and physiological changes like anxiety, stress, mood swings, forgetfulness and sexual dysfunction. Most of the women complain of sleep disorders during this period (**Sang and Kim et. al, 2016**).

There is a frequent decrease in progesterone and oestrogen hormone levels as a result many symptoms can be seen in the women during menopause like fatigue, headache, sleep disturbances, mood swings, sleep disorders and night sweats (**Freedman, 2005**) Sleep disturbances or disorders are the most common complain during menopause and certain problems like nocturnal awakenings, sudden waking up, daytime sleepiness and fatigue etc. increases (**Matthews et al., 2012**).

The short term effect of sleep disorders in menopause is drowsiness, anxiety, cognitive and memory impairment and stressed relationships. The long-term effects are stroke, depression, mood disorders, and high blood pressure. Sleep disorders are reported to be high among women compared to men. Women who already suffer from sleep disorders; their condition is more vulnerable and worsen during menopause (**Arakane and Castillo, 2011**). Research studies have shown that the prevalence and severity of obstructive sleep disorders is much higher in menopause. The menopausal women are highly prone to sleep apnea

because of weight gain during this age and decreased progesterone and oestrogen levels (**Eichling and Sahni, 2005**).

Oestrogen is important for healthy sleep. The decrease in oestrogen levels causes longer sleep latency and shorter REM sleep which lead to tiredness after awakening. The characteristics of sleep disorders are increased to hot flashes and sweat during menopause because of changing hormone pattern. Over sweating and hot flashes can disturb sleep. (**Joffe and Massler, 2010**).

The prevalence of sleep disorders is higher in menopause phase than before (**XU et. al, 2014**). At the time of pre and post menopause the quality and quantity of sleep worsens. Women frequently experience obstructive sleep apnea, restless leg syndrome and insomnia. Insomnia is to be the most frequent sleep disorder experienced during menopause. Mood disorders, anxiety, depression and physical problems are also the symptoms of sleep disorders (**Bruyneel, 2015**).

Menopause is a time of physical, psychological and hormonal change in women but symptoms vary from women to women. During the premenopausal, women's ovaries decrease the production of oestrogen and progesterone. Normally a woman reaches in menopause at the age around of 50 years. From the period of pre menopause to post menopause women are more prone to have sleep disorders. Sleep disorders are sometimes associated with anxiety and depression; other symptoms are – mood disorders, hot flashes and obstructive sleep apnea (**Sleep Foundation. org, 2020**).

Generally women those in post menopausal phase 61% were reported for insomnia symptoms. Snoring is also found very common and severe in post menopausal stage. Snoring with pauses in breathing is the sign of obstructive sleep apnea and it was also found high in menopausal phase (**National Sleep Foundation, 2020**). Getting enough sleep is key to a good night's rest. For adults between the ages of 18 and 64, seven to nine hours per night sleep is recommend. People who are 65 and older should make sure they're sleeping seven to eight hours a night.

Various studies suggest that the sleep of males and females is different across lifespan and this is because of the effect of gonadotropin hormone on sleep. In comparison of men, women complaints more for sleep disorders due to the hormonal during life span developmental stages. **(Kravitz and Joffe, 2011)**.

The symptoms of menopause are hot flashes, over sweating at night and irregular menstruation cycle and few other biological and behavioural changes like stress, anxiety, mood swings and sleep disorders **(Weber, et. al., 2013)**. Many women experience a very few or no symptoms of menopause, so they don't need any kind of medical treatment. Sleep problems are more experienced by women than men. The chances of having insomnia are increases when a woman is going through the process of menopause (Roth, 2001).

Menopause is usually characterised by a noticeable decrease in the secretion of female sex hormone especially oestrogen, it results in vasomotor symptoms like – over sweating at night and hot flashes. Prevalence of insomnia increases during pre and post menopause and during the stage of menopause. It is more than three times as likely of sleep disorders as in pre - menopause or post menopause **(Kravitz and Zhao et. al., 2008)**. The reason for insomnia in post menopausal women are – hormonal changes, anxiety disorder, climacteric syndrome, depression and psychiatric disorder **(Moline, M., L. Broch, 2004)**.

The most prevalent sleep disorders among menopausal women are-Insomnia, Obstructive sleep apnea, Restless leg syndrome, depression and anxiety. Twenty five to fifty percent of menopausal women reported sleep difficulties. Many research studies also suggested that the menopausal women are 3.4 times more likely to experience sleep disorders **(Health Engine, 2012)**. Sleep is a vital state of life and sleep disturbances are related to fatigue, impaired function and low quality of life. Sleep disturbances are the most common and important symptom which is observed during menopause **(Mousavi and Tavabi et. al., 2012)**.

## Objective

The present research work was taken up to understand the prevalence of sleep disorders in menopausal women in Jaipur city.

## Participants

This research study was conducted in Jaipur city. Eighty women who reported menopause or Amenorrhea since last one year through 'Basic Profile Information' were selected for the study. The average age was around 55 years. The selected participants were screened with 'Pittsburg Sleep Quality Index (PSQI)'. Those who reported poor sleep quality were again administered with the 'Types of Sleep Disorder Screening Questionnaire' to identify the types of sleep disorders. This measure was developed by the investigator.

## Measures

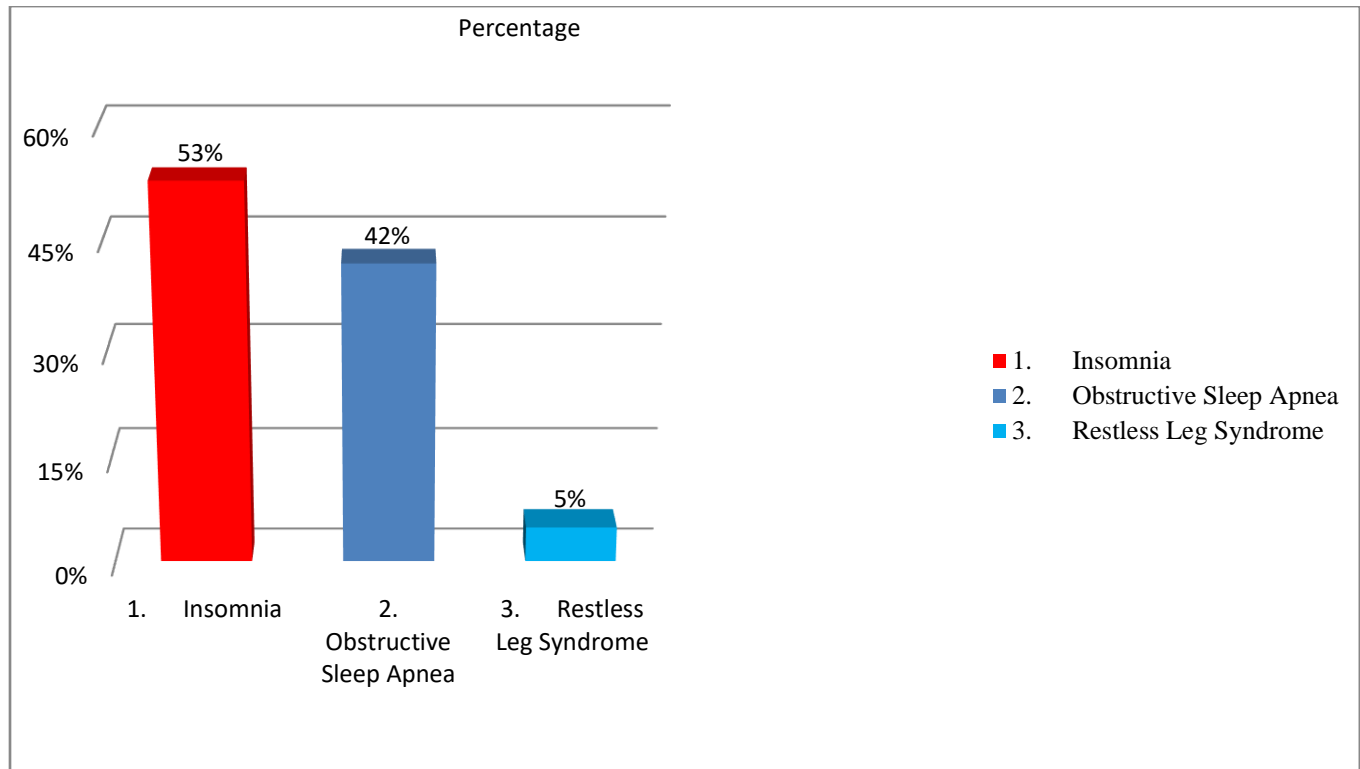
1. Basic Profile Information – This inventory was prepared by the investigator to get basic information of the participants.
2. Pittsburgh Sleep Quality Index (PSQI) – this measure was used to examine sleep problems in menopausal women.
3. Types of Sleep Disorder Screening Questionnaire (Self-made) – This measure were developed by the investigator. It is a close-ended questionnaire which consists of 34 items. The items cover four types of commonly found sleep disorders- Insomnia, Sleep Apnea, Restless Leg Syndrome and Narcolepsy. The reliability of the measure was calculated. The Cronbach's alpha value was 0.854 and Guttman Split-half coefficient was 0.725.

## Statistical Analysis

The data was collected and tabulated on excel data- sheet. The data was statistically analysed and frequency and percentage was calculated.

## Results

### Sleep disorders found among menopausal women



The above figure shows the data on sleep disorders found among menopausal women. It was observed that insomnia was found to be the highest sleep disorder among menopausal women. Those women who were passing through the phase of menopause were usually experience nocturnal awakening, sleep latency, over sweating and hot flashes, because of these issues they can't sleep properly. In this research 53 percent menopausal women were having insomnia. Many of them were experiencing snoring and interrupted respiration. When they were screened with "The type of sleep disorders" measure, it was found that they were suffering from obstructive sleep apnea. In this age (after 55 years) increased weight is one of the important factor which is responsible for sleep disorder. The deposition of fat around the neck can interrupt sleep. Forty-two percent women were having obstructive sleep apnea in this study. A very least number of women were having restless leg syndrome (5%).

Insomnia is a common disorder in menopausal women with the prevalence of 28–63% based on different studies. Many women, during the menopause, achieve less than 6 h of sleep on a regular basis, becoming at higher risk for short-term and long-term problems (**Hachul and Bittencourt, 2009**).

Studies have shown that the prevalence and severity of sleep apnea increases during menopause. Menopausal women are prone to higher prevalence of obstructive sleep apnea due to weight gain and decrease in estrogen and progesterone levels (**Eichling and Sahni, 2005**).

## Conclusion

Many menopausal women are suffering from sleep disorders. Menopause is a critical stage in women's life when several hormonal changes take place. Due to hormonal changes, problems like anxiety and stress, sleep disorders, mood swings etc. is usually experienced by women. The maximum numbers of participants were suffering from insomnia. Studies also conferred that women are more prone to have insomnia, especially in pregnancy, menses and menopause. Due to weight gain in this age, fat around the neck can cause snoring, uneasy breathing and obstructive sleep apnea. Restless leg syndrome was also observed in some participants. Many research studies suggested that yoga and meditation is very helpful to combat sleep disorders. So, those who are suffering from sleep disorders can include yoga and meditation, daily exercise, walking and nutritious diet. These small practices are helpful to overcome sleep disorders.

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