

# The Role of Sociodemographic Factors on Menopause Symptoms and Quality of Life : A Literature Review

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## Abstract

Menopause is a physiological change when the menstrual period ends due to the ovaries' termination of estrogen and progesterone production. Menopausal women experience several things in their transition phase such as clinical changes. These clinical changes can directly or indirectly affect the quality of life of an individual. Sociodemographic characteristics can also have a role in menopause symptoms. This literature review aimed to see from the previous study regarding the role of sociodemographic factors on menopause symptoms and whether menopause symptoms affect the quality of life. It was found that education, economic status, and occupation play a role in menopause symptoms. It can directly or indirectly affect how an individual perceives menopause and how to cope when symptoms arise.

Keywords : Menopause; Menopause Quality of Life; Sociodemography

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## 1. Introduction

Menopause is a physiological change when the menstrual period ends due to the termination of estrogen and progesterone production in the ovaries. Therefore, the prevalence of menopause is high, considering that menopause is a natural change in women, which is defined as the absence of menses for 12 months without a pathological cause. Although it is a natural occurrence, menopause can affect the adaptation of bodily functions, so women must know the impact of menopause that occurs (1). A woman's hormonal metabolism, particularly estrogen, is significantly altered throughout menopause (2). Less hormone is produced by the ovaries over time, which results in fewer eggs being released. When the final egg is released, menopause occurs and the woman will stop having periods (3). Women undergo progressive follicle loss throughout life. While most of the follicles in an individual woman's ovaries are lost in fetal life, there is progressive, exponential loss of oocytes through a woman's reproductive life span (4). The number of follicles that experience atresia continues to increase until there are no longer enough follicles, followed by a reduction of estrogen production, and no more menstruation occurs (5). In the menopause phase, FSH levels will be high and estradiol levels will be low (6). The hormone imbalance in a woman's body could affect the arousal of menopause symptoms. The symptoms that appear in each individual will differ from one another because they are caused by many influences, such as differences in lifestyle, socio-economic status, and how an individual perceives menopause. There are several symptoms that can be found in menopausal women.

Vasomotor symptoms, vaginal dryness/dyspareunia, and difficulty sleeping/insomnia are the symptoms experienced the most by menopausal women (7). Other than the clinical symptoms, menopausal women can also suffer from mental health issues. Several theories have been proposed to explain the increase in depression during perimenopause. A traditional psychological view is that the 'empty nest syndrome' leads to feelings of loss and sadness (8). More recently, scientists have focused on the biological effects of hormonal fluctuations on mood since this is a time when the ovaries begin to make less estrogen. Estrogen interacts with chemicals in the brain that can affect mood. In some women, the decrease in estrogen during perimenopause may lead to depression (9). Hot flushes and insomnia during this transition may also cause emotional distress. This can also lead to other psychological symptoms such as mood swings, irritability, and anxiety.

## 2. Menopause Symptoms

It was found that women who experienced menopause were found to have a lower quality of life than those who had not experienced menopause (10). The number of menopausal women is affected by the increase in life expectancy (11). With that, more women could experience menopause symptoms. Changes in estrogen and progesterone levels cause the symptoms of menopause. Because the function of the ovaries is reduced, the ovaries produce less estrogen or progesterone and the body reacts. As stated before, there are several symptoms that can be found in menopausal women. These are the symptoms that are often found in menopausal women :

### 2.1. Vasomotor Symptoms

Hot flushes are described as the sudden appearance of a burning sensation in the head, neck, and chest followed by an increasing heart rate and the body feels hot. The skin temperature rises during a hot flush due to peripheral vasodilation, notably in the fingers and toes (12). Sometimes it ended with excessive amounts of sweat. Vasomotor symptoms affect up to 75% of perimenopausal women. The precise cause of a hot flash has yet to be determined. The most widely accepted theory claims that changes in or loss of estrogen production trigger a resetting and narrowing of the thermoregulatory system. Hot flushes were once believed to be primarily caused by estrogen deficiency; however, there is no acute change in serum estradiol during a hot flash. Others have linked hot flushes to fluctuations in estradiol and follicle-stimulating hormone (FSH). Reduced estrogen levels are considered to increase the 5-hydroxytryptamine (serotonin) (5-HT<sub>2A</sub>) receptor across the hypothalamus while decreasing serotonin levels (7). Rather than working activities, vasomotor symptoms had a more significant impact on interfering with daily activities (13).

### 2.2. Vaginal Atrophy

Low estrogen levels are associated with symptomatic vulvovaginal atrophy, which is characterized by thin, pale, and dry vaginal and vulvar surfaces. The vaginal wall will be thinner and flattened rugae, and could lead to dyspareunia (14). Loss of fibrous layer on the surface epithelium of the vagina is characterized by the decrease in the ratio of basal cells to superficial cells. The lactobacilli could not keep the vaginal epithelial pH in the range of 3.8 to 4.5, which causing vaginal dryness (15). Dryness of vagina could cause pain during sexual intercourse, which disturbs the quality of life of a woman (16).

### 2.3. Psychological Changes

Most women experienced emotional changes during the period of perimenopause because low estrogen levels are strongly associated with emotional changes. Production of serotonin is influenced by estrogen. Serotonin is a mood regulator and pleasure enhancer. Emotions could seem out of balance if the body generates less estrogen. After the body adjusts to the decrease in estrogen, emotions should become more stable. Because of this condition, they likely develop significant depressive symptoms caused by hormonal changes and vasomotor symptoms (17). From research conducted using the MENQOL (Menopause-Specific Quality of Life) questionnaire showed that emotional exhaustion was positively and highly correlated with menopausal symptoms despite other variables such as workability and age (18).

### 2.4. Sleep Disturbance

Women are more likely to have sleep disorders, including insomnia due to significant hormonal fluctuation and aging (19). This causes menopausal women to experience insomnia and encounter difficulty sleeping. Insomnia is defined by the presence of an individual's report of problem with sleep (20). A lack of good quality sleep can harm a person's quality of life. Estrogens affect sleep quality, and estrogen receptors in the brain regulate sleep (21). Some women experience serious sleep issues that affect their ability to function throughout the day and their quality of life and might have long-term effects on their mental and physical health (22). However, another research also found that menopause is not a strong predictor for sleep problems because sleep disorders are common in healthy middle-aged women (23). Thus making the association between sleep disorders and menopause is not clear whether it is caused by aging, hormone, etc (23).

## 3. Sociodemography Factors

Based on the research result at Puskesmas Kabanjahe, Karo district, in Medan, Indonesia, it was found that menopausal women at Kabanjahe Health Center showed a significant relationship between education and the quality of life of menopausal women (24). It was found that women with higher levels of education had a better quality of life. With a high level of education, an individual can be more critical when one of the symptoms appears, and they can also know what to do. Highly educated people will give a more rational response to the information regarding menopause that comes and will think to what extent the benefits they might get from the idea (25). They will also be more aware of the situation. The onset of menopause occurred one-third of a year later in women with a middle education level compared with a low education level and two-thirds of a year later in women with a high education level (26). A study in Shiraz, Iran, showed that a good improvement in quality of life is caused by educational intervention because education could decrease the problems or symptoms of the menopause stage and lower their intensity (27). A high risk factor for vasomotor symptoms was considered to be low educational status (28). Economic status also plays a role in the onset of menopause, which will undoubtedly affect their quality of life. Lower income patients who overcome financial barriers to get preventive care to relieve their symptoms receive a lower quality of care than higher income patients (29). Better overall health and less menopausal symptoms were reported by those with higher income levels, whereas more menopausal symptoms were reported by those with usually lower income levels (30). Compared to women from high socioeconomic strata, women from low socioeconomic strata are more likely to have vasomotor symptoms that are more severe (31). In the

current study, it was shown that women from higher socioeconomic classes had better QOL than women from lower classes (32). Women's daily activities can also affect their quality of life. Women who work as a housewife, their level of knowledge tend not to change much. Meanwhile, a woman who has social activities will get more good information because they could get many information from friends at work or other social activities (33). However, a study conducted in Pune, India, stated that the symptoms experienced by unemployed women were lesser than employed women, this may be due to the burden of multiple tasks that working women had to fulfill on a daily basis (34). According to research done in Egypt, sleep disruptions, exhaustion, and anxiety were found to have the most effects on quality of life (35).

#### 4. Conclusion

It was found from previous studies that there are a few factors that could affect the symptoms that arise in menopause women, one of which is sociodemographic factors. Women with higher education levels tend to be more critical on perceiving and accepting menopause and how to cope with the symptoms. Those with higher income levels have the privilege to overcome the symptoms better than the lower income knowing they have more access to adequate facilities. Occupation also plays a role in reducing or increasing menopause symptoms. Women who work could get many information regarding menopause from friends at work or social activities. It is concluded from the literature that the role of sociodemographic factors is important to increase the awareness of menopause symptoms which eventually will increase the quality of life of menopausal women. However, this result does not determine a definite relationship between menopause symptoms and sociodemographic factors, and it is necessary to do more research in this regard.

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