

**A Correlational Study of Psychological Stress, Family Support, and Quality of Life  
Among Female Doctors During the Menopause**

***Sadia Sultana,***

*Riphah International University, Lahore, Pakistan.*

[aims.thelifeline@gmail.com](mailto:aims.thelifeline@gmail.com)

***Laraib Fatima,***

*University of Punjab, Lahore, Pakistan.*

[aips.lhr@gmail.com](mailto:aips.lhr@gmail.com)

***Rehma Farooque Jameel,***

*Wilmington University, Delaware, USA.*

[rehma1987@hotmail.com](mailto:rehma1987@hotmail.com)

**Abstract**

A female gets into the menopause when she is 12 months without a period and can no longer have one naturally. Among the 45 and 55 years of age, women are subject to a phenomenon of development that is inevitable: menopause. Menopause may also have a number of physical and psychological symptoms which may severely impact on the overall health of many women affected. Their quality of life, in its turn, is affected by these challenges considerably. It may seem like you are mashing a potato without a potato peeler to make it through menopause without the emotional as well as practical assistance of friends and relatives. It is necessary to open up and communicate menopause-related problems to family members to help one create effective coping mechanisms to reduce discomfort. The research that was currently being conducted was anticipated to find out the correlation between psychological stress, family support and quality of life in menopausal women. The Perceived Stress Scale (PSS), Family Support Scale (FSS), and Quality of Life Scale (QOL) were used to measure female doctors (N = 100) between the ages of 41 and 55 years. Results were significant negative relationships between psychological stress and quality of life ( $r = -.48^{**}$ ), as well as family support ( $r = -.34^{**}$ ), and family support demonstrated a positive relationship with quality of life ( $r = .49^{**}$ ). Altogether, the findings are indicative of the fact that psychological stress associated with menopause has an undesirable influence on the quality of life of female physicians, though, a good domestic care is a crucial factor, which positively impacts their well-being and contributes to successful coping with the menopausal symptoms.

**Key Words:** Psychological stress, Family support, Quality of Life, Menopause, Gynecologist.

## **Introduction**

The cessation of menstruation and the adaptation of a woman to the resulting hormonal, emotional, mental and physical changes mark the menopause which is a normal life process. Characteristic symptoms of this period are stress, heat flashes, and disoriented sleep (George, 2002). Neurotransmitter in the brain, particularly gamma-aminobutyric acid (GABA) and serotonin, are affected significantly by changes in female reproductive hormones. Progesterone conversely elevates monoamine oxidase and could act as an anesthetic in higher doses and decrease the excitability of the brain via the GABA interaction.

Menopause also commonly triggers hot flashes and sleep problems since the depletion of estrogen during menopause is a common phenomenon that can cause mood swings, worry, and panic (Afridi, 2017). The post-menopausal stage now occupies one-third of the women in terms of the length of life. Since production of ovarian hormones is a natural aging effect, the period of reproductive changes to a non-reproductive one in several years. Nevertheless, the comorbid physical and psychological conditions may greatly interfere with the daily performance of many women and general health. Considering the fact that more than 80 percent of the women undergo moderate or severe cases of physical and emotional symptoms during this period, health and quality of life of middle-aged women has consequently become a major global public health issue. (Poomalar & Bupathy, 2013).

Due to the considerable hormonal fluctuations that occur through the menopausal transition, women may experience a various range of symptoms, with the intensity and duration differing from one individual to another. Mood swings, sleep troubles, changes in sexual desire, vaginal and bladder issues, irregular menstrual cycles, and other bodily changes are common symptoms. Menopause is also associated with a number of long-term health hazards, including osteoporosis, which is caused by a loss of bone density, and an increased risk of cardiovascular disease, which is brought on by age-related increases in body weight, blood pressure, and cholesterol. These symptoms can occasionally worsen to the point that they significantly impair women's ability to function in their personal, social, and professional lives, which lowers their general quality of life. (Karmakar, Majumdar, Dasgupta, & Das, 2017).

Although menopause is not usually thought of as a time when mental health issues are more likely to occur, many women may experience severe psychological stress during this time. Even in the premenopausal stage, some people may start to exhibit emotional or psychological problems. Since modest emotional disturbances are typical after menopause, it is important to assess whether these symptoms are severe enough and persistent enough to be classified as panic disorder, major depression, or generalized anxiety disorder. Sleep difficulties during this time are frequently linked to psychological discomfort and can result from menopausal

symptoms midlife psychosocial stressors (George, 2002). Mood swings, sadness, depression, frustration, lack of interest or motivation, decreased energy, hopelessness, trouble focusing or making decisions, irritability, emotional intolerance, nervousness, anxiety, and low self-esteem are common psychological symptoms associated with menopause (Azizi, Fooladi, Abdollahi, & Elyas, 2018).

Cardiovascular diseases, which are regarded as significant psychosomatic ailments, are intimately associated with psychological stress. Increased adrenergic activity brought on by stress raises cortisol and adrenaline levels, which strain the heart and raise blood pressure. An overabundance of adrenaline makes cardiac arrest. Stress is a strong predictor of hypertension and coronary heart disease in both men and women, according to research. It can lead to electrical instability in the heart's conduction system, coronary artery spasms, and an increase in oxygen demand (Sharma, 2018).

They deal with a variety of challenges, including the pain of hot flashes, nocturnal sweats, and dry vagina. Every woman experience menopause differently; she may exhibit all symptoms or none. While some women barely notice the difference, others find that it transforms their lives. Caring for symptomatic postmenopausal women requires an understanding of how menopause impacts quality of life. One important outcome metric of health care is quality of life. It is believed that menopause symptoms, particularly classic vasomotor disorders and specific physical symptoms like dyspareunia or

palpitations affect quality of life. The deterioration in quality of life that comes with menopause is not significantly influenced by age or other sociodemographic characteristics. Women who have menopausal symptoms may have significantly reduced quality of life, while those who undergo hormone replacement treatment appear to have significantly improved quality of life. (Moustafa, Ali, Saied &Taha, 2010).

Women's quality of life (QOL) is considerably diminished through menopausal symptoms. Physical, psychological, vasomotor, and sensual issues affect 40–60% of women going through menopause, according to epidemiological studies, which also demonstrate a substantial positive link between menopausal changes and a lesser quality of life. Even though there are a number of therapeutic alternatives available, many women choose not to seek medical attention and instead suffer in silence, which jeopardizes their health even more. The subjective effects of menopause on women's over-all well-being and the variety of symptom patterns are frequently disregarded by medical specialists. However, little study has looked at how menopausal symptoms impact Indian women's health-related quality of life. Accordingly, the purpose of this study was to evaluate how menopausal symptoms affected health-related quality of life in the post-reproductive period and how these symptoms linked to sociodemographic characteristics (Ganapathy & Furaikh, 2018).

Among postmenopausal women, a majority (70.4%) reported experiencing extremely high levels of stress, while 44% indicated a very poor quality of life (QOL), and 46% expressed significant dissatisfaction with their current health status. Physical, psychological, social, and environmental categories had the lowest mean ratings. Stress and QOL were found to be moderately negatively correlated, indicating that women who experience higher levels of stress typically have lower quality of life.

Recent literature highlights that the work environment plays a significant role in shaping menopausal women's psychological well-being and overall quality of life. A study by Kusherbaeva et al. (2023) found that menopausal physicians experience a higher frequency of symptoms such as reduced productivity, psychological distress, and vasomotor discomfort compared to nurses, with managerial responsibilities further intensifying these symptoms. The researchers emphasized that factors such as workload, job role, and working hours can exacerbate psychological stress and negatively influence quality of life during menopause. These findings support the importance of examining both individual and contextual factors, such as family support and professional demands, when assessing the quality of life of female doctors undergoing menopause.

Recent evidence shows a strong association between the severity of menopausal symptoms and reduced quality of life among employed women. In a 2024 cross-

sectional study of 93 working women, Ramyashree et al. (2024) found that vasomotor, psychological, and somatic symptoms were significantly linked to declines in daily functioning and emotional well-being. Using standardized tools such as the Menopause Rating Scale and MENQOL, the study reported a strong positive correlation ( $r = 0.71$ ,  $p = 0.001$ ) between symptom severity and impaired quality of life, highlighting that women experiencing more intense symptoms also reported higher stress and lower life satisfaction. The authors emphasized that the dual burden of occupational responsibilities and menopausal discomfort can heighten psychological strain and negatively influence productivity, suggesting that menopause may be particularly challenging for working women who must balance physical changes with workplace demands (Ramyashree et al., 2024).

Further insight comes from a 2025 study conducted among female healthcare professionals in Türkiye, which examined how menopausal symptoms affect work functioning. Palaz and Yavaş (2025) found that more than half of the participants experienced moderate to severe menopausal symptoms, particularly psychological and vasomotor difficulties, as measured by the MENQOL instrument. These symptoms were shown to interfere with concentration, decision-making, motivation, and overall work engagement, leading to noticeable reductions in job performance. The authors noted that healthcare workers face unique pressures such as long shifts, emotional labor, and

high patient responsibility, which may intensify menopausal stress and diminish quality of life. Their findings highlight the importance of workplace support, flexible scheduling, and institutional awareness to ensure that menopausal women—especially those in demanding medical roles—maintain well-being and professional effectiveness (Palaz & Yavaş, 2025).

Such findings are in line with those of Chen et al. (2008) who examined the effect of menopause, age and other variables on the quality of life of healthy Chinese women aged 35 to 64 years. Data was obtained by means of a Chinese version of the menopause-specific QOL questionnaire. Their study has found that the quality of life of women was decreasing slowly as they experienced the premenopausal, perimenopausal and postmenopausal stages. Particularly, perimenopausal and postmenopausal women showed significant declines in QOL in the vasomotor and physical domains, whereas postmenopausal women mostly showed declines in the psychosocial and sexual domains. Additionally, the lowest QOL in vasomotor, psychosocial, and physical aspects was seen in early postmenopausal women. Overall, a progressive decline in sexual quality of life was linked to the progression of menopause (Jayabharathi, 2016). Family members and friends should educate themselves on menopause because the changes that take place at this time can be more than just uncomfortable, and they can better understand and support the women they care about. Even while menopause can be difficult and upsetting

time, it can also be a powerful one. Women going through menopause can optimistically look to the future because this time of life can be just as productive and enjoyable as any other. (Garnepudi, 2008).

Support from other family members is referred to as family support. The majority of people are born, grow, mature, and age in their families. Families are where most people receive their primary socialization. Family plays an important role in many people's life and affects the possibilities and risks they encounter. In most families, parents serve as the primary caregivers for their children, while many also take on the responsibility of caring for their elderly parents. The health and well-being of older adults often rely heavily on family support, making reliable tools for assessing this support system essential (Uddin & Bhuiyan, 2019).

The feeling of being loved, respected, and taken care of within a web of reciprocal responsibilities and relationships is referred to as social support. A partner, family, friends, coworkers, community organizations, or even the company of a pet might be the source of it (Taylor, 2011). Social support is essential for improving the well-being of people with chronic or life-threatening illnesses. It can be official or informal, structured through institutions or unstructured through personal relationships (Yoo et al., 2010). Specifically, a person's subjective sense of being supported and cared for by friends, family, and important others is reflected in their perceived social

support. (Najafabadi et al., 2015; Nülüfer & Mehtap, 2018).

More attention should be given to the health of menopausal women due to the increasing life expectancy and the increasing number of menopausal women in the world. Nevertheless, the lack of special healthcare that looks into the needs of the aging women is often a factor that negates the gains of longevity. This highlights the importance of proper diagnosis of symptoms of menopause and development of culturally sensitive management and prevention strategies to ensure a relatively smooth midlife transition and enhance the overall quality of life of women. (Natarajan, Seshan, & Muliira, 2013).

This study also aims to explore the impact of psychological stress and how it relates to the quality of life and support of family for menopausal women in this context. The association between these factors will be specifically investigated in order to bolster the idea that enhancing quality of life could benefit female physicians. Therefore, this study aims to fill in the gaps in the literature by examining new facets of the relationship between psychological stress, family support, and quality of life among female doctors.

### **Hypotheses**

**It was hypothesized that:**

- Quality of life and Psychological stress in female doctors during menopause will have a significant negative correlation.
- Female doctors experiencing menopause, family support, and

psychological stress will be significantly negatively related.

- Among female doctors experiencing menopause, family support and quality of life will have a significant positive correlation.

### **Research Methodology**

The current study employed a correlational research design in order to examine the relationship between psychological stress, family support, and quality of life in female doctors experiencing menopause.

### **Participants**

The sample of study comprised of women doctors aged 41 to 55 who worked in various medical institutions in District Lahore and experienced menopause. The primary goal of the study was to analyze the impact of psychological stress and associated with quality of life and consider its effect under the influence of family support. The demographic data, including age, gender, education, socioeconomic level, medical institution name, and work experience were collected with the help of a demographic questionnaire. All respondents were given an information sheet and a consent form before they participated.

### **Demographic Sheet**

A demographic sheet was developed to obtain specific information for the participant. The sheet included information about age, gender, education level designation, marital status.

### **Perceived Stress Scale**

The Perceived Stress Scale (PSS), which is a scale created by Cohen, Kamarck, and Mermelstein in 1983, is a psychological stress measure that is popular in measuring stress. This self-report survey is meant to establish the stressfulness of certain situations in their lives by the people. The PSS items are used to measure how unpredictable, uncontrolled, and overburdened the lives of the respondents were during the last month. The questions are not narrow but general and rather not based on particular events or interactions. The original PSS-14 version has a 5-point Likert scale, rating the 14 items, seven of which are positively formulated and seven of which are negatively formulated. Reports indicate that the reliability of the scale is  $\alpha = 0.70$ .

### **The Quality of Life Scale**

The Quality of Life Scale (QOLS) was developed by American psychologist John Flanagan in the 1970s and has since been adapted for use with individuals who suffer from chronic illnesses. Numerous tests have shown its construct validity, content, and dependability, and it has been translated into multiple languages. Despite its low to moderate correlations with measures of physical health and disease, content validity tests show that the QOLS accurately reflects the categories that individuals with chronic illnesses consider essential to their quality of life. Viewed as a practical and culturally adaptable instrument, it differs conceptually from health status or other causal measures of quality of life. Originally created as a 15-

Item test, the Quality-of-Life Scale (QOLS) was intended to evaluate five major aspects of quality of life: (1) material and physical well-being; (2) interpersonal relationships; (3) civic, social, and community activities; (4) personal growth and fulfillment; and (5) leisure. The scale's Cronbach's alpha values, which range from 0.82 to 0.92, show that it is very reliable.

### **The Family Support Scale**

The 20-item Family Support Scale (FSS) was created by Leder et al. (2007) and Kelley et al. (2011) to measure the degree of family support that people feel in many facets of everyday life. Love, respect, daily life, religious involvement, information, emotional support, decision-making, personal needs, social gatherings, help with problem-solving, health, treatment, relationships with significant others, financial aid, food, rest, companionship, happiness, and general satisfaction are some of these areas. A total score between 0 and 60 is obtained by rating each item on a 4-point Likert scale that goes from 0 (no support) to 3 (excellent support). Higher scores indicate better perceived familial support. The FSS's reported Cronbach's alpha of 0.94 indicates that it has excellent internal consistency (Dunst, Jenkins, & Trivette, 1984).

### **Inclusion and Exclusion criteria**

Female doctors at the menopause stage age ranged between 40-55 years, married, having self-reported menopause, had menstruation stopped at least from 12 consecutive months were included in the study.

Those female doctors who had attained menopause surgically, who were on hormonal replacement therapy (HRT), who had surgical or chemotherapy, Unmarried female doctors were not considered for the respective study.

### **Procedure of the Study**

The institution provided an authority letter to start the study, confirming the researcher's name and the subject of the investigation. The relevant institutions from whom the data were gathered were shown this letter and the specifics of the study. The participants received a thorough explanation of the study's objectives as well

as the inclusion and exclusion criteria. The researcher made sure that every piece of information gathered was kept completely private. Female physicians between the ages of 41 and 55 who worked in the emergency rooms and gynecological departments of different government hospitals in Lahore provided the data. Every ethical guideline was rigorously followed. The Statistical Package for the Social Sciences (SPSS) Version 21.0 (IBM SPSS Statistics, Armonk, NY, USA) was used to examine the data that was gathered.

### **Results**

SPSS was used to analyze the data and make the study's conclusions. Using Cronbach's alpha reliability analysis, the assessment measures' internal consistency was assessed. The Pearson Product-Moment Correlation analysis was performed on the data gathered to look at the connections between the study variables.

**Table 1**

*Descriptive analysis of participants demographics (N=100)*

Variables	Frequency	Percentage
Age		
40-45	64	64
45-50	32	32
50-55	4	4
Female	100	100
Qualification		
MBBS	84	84
FCPS	16	16
Birth Order		



1 <sup>st</sup>	4	4
2 <sup>nd</sup>	56	56
3 <sup>rd</sup>	30	30
4 <sup>th</sup>	8	8
5 <sup>th</sup>	2	2
Family System		
Joint	23	23
Nuclear	77	77
Marital Status		
Married	96	96
Divorced	4	4
No. Of Family Member		
1	2	2
2	35	35
3	28	28
4	26	26
5	9	9
No. of Children		
1	18	18
2	33	33
3	34	34
4	13	13
5	2	2
No. of Siblings		
1	8	8
2	20	20
3	45	45
4	23	23
5	4	4
Family Background		

Rural	8	8
Urban	92	92

**Table 2**

*Reliability of Assessment Measures (N=100)*

Variables	K	M	SD	Cronbach's $\alpha$
<b>PSS Scale</b>	14	49.63	4.97	.81
<b>FSS Scale</b>	20	51.34	5.76	.82
<b>QOL Scale</b>	16	70.68	6.55	.83

*Note: PSS stands for Perceived Stress Scale, FSS for Family Support Scale, QOL for Quality-of-Life Scale, K for Mean, SD for Standard Deviation, and  $\alpha$  for Reliability Co-efficient.*

The reliability analysis showed that the scale of the study, which was the Quality of

**Table 3**

*Product Pearson's Correlation analysis between Psychological Stress, Family Support and Quality of life among female Doctors. (N=100)*

Variables	PSS	FSS	QOL	M	SD
PSS	-	-.34	-.48**	49.63	4.97
FSS	-	-	.49**	51.34	5.76
QOL	-	-	-	70.68	6.55

*Note: PS Psychological Stress, FS=Family Support, QOL = Quality of Life.*

**\*\* Correlation is significant at the 0.01 level (2-tailed)**

The Pearson correlation coefficients between the study variables are shown in

Life Scale (QOLS), the Family Support Scale (FSS), and the Perceived Stress Scale (PSS), had high internal consistency with Cronberg alpha of .81, .82, and .83, respectively. This shows that the tools that were employed to measure the relevant variables in this sample were reliable.

Also, the results revealed a significant positive relationship between family support and quality of life and strong negative relationship between psychological stress and quality of life. Specifically, the negative relationship between psychological stress and the quality of life ( $r = -.48, p = .01$ ) and the positive relationship between family support and the quality of life were significant. ( $r = .49, p < .01$ ).

Table 3's results. The results showed that psychological stress and quality of life were

significantly correlated negatively, while family support and quality of life were significantly correlated positively. In particular, there was a substantial negative correlation between psychological stress and quality of life ( $r = -.48$ ,  $p < .01$ ) and a strong positive correlation between family support and quality of life ( $r = .49$ ,  $p < .01$ ). Also, psychological stress was negatively correlated with family support ( $r = -.34$ ,  $p < .01$ ), which indicates that in male doctors with menopause, the lower the family support, the less the psychological stress.

### **Discussion**

The aim of the current study was to observe the correlation between psychological stress, family support, and quality of life in females doctors who were in menopause. In line with the initial hypothesis, the psychological stress was observed to have negative relationship with quality of life. This observation is consistent with the available literature, among them the study by Abdelrahman and Abushaikh (2013), who have found the negative relationship between perceived stress and purpose in life significant among menopausal women ( $r = -0.49$ ,  $p = 0.01$ ). Likewise, in Kishan, Moodithaya, and Mirajkar (2017), symptomatic menopausal women had significantly more levels of psychological stress than other populations, where stress was closely related to the falling levels of serum estrogen. Vasomotor symptoms, mood disturbances, anxiety and depression were also related to these hormonal changes, which underscores the physiological basis of stress, during menopausal transition.

To support the second hypothesis, the results showed that there was a positive correlation between family support and quality of life (Leder, Buse, and Grabe, 2007). In the group of female physicians, greater perceived family support demonstrated fewer psychological stresses and improved the overall well-being. These results highlight the importance of social factors in the mediating role of the menopausal experience. More specifically, family support as a protective buffer in the Pakistani cultural specifics of collectivist cultural values, close family relationships, solidarity, and interdependence in the context of a significant life transition is facilitated by providing emotional comfort, practical support, and feeling of belonging.

Religiously, these findings are echoed upon Islamic teachings, which stress upon empathy, compassion, and community between family members. Quran and Hadith promote care, respect and the safeguard of the female dignity especially in time when they are in a vulnerable condition physically or emotionally. Emotional resilience, minimization of psychological distress and quality of life among menopausal women can be achieved through family support reflected in values like sabr (patience) and rahma (mercy).

Although these are the religious and cultural requirements, menopause is a taboo subject in Pakistani society, which is commonly viewed as the sign of aging, loss of femininity, or lack of social worth. This cultural silence can only add stress to the psychology of such women particularly professional women such as doctors who

have work related commitments to meet in addition to their family commitments. With medical information on the menopause, such women can still be challenged emotionally because of the societal demands and stress at work. Thus, the family support and empathy play the fundamental role in alleviating stress and enhancing positive quality of life in this transitional phase.

Another psychosocial functional area of family interactions during menopause is also brought out in the study. Family members who are supportive can redefine menopause as a normal life experience rather than a stigmatized or secretive one by recognizing the experiences of women and sharing of practical tasks. This appreciation raises self-esteem, generates less anxiety, and makes the general well-being better. In its turn, the negative correlation of psychological stress and family support suggests that lack of empathy, family communication deficiency, or emotional neglect may increase distress and decrease life satisfaction among menopausal women.

All in all, the results allude to the possibility that family support is not only a cultural but also a psychological resource that can boost the well-being of Pakistani women in the stage of menopause considerably. Education of families, sociocultural awareness and religious values can be the methods of reducing stigma, creating favorable environments and enhancing the overall quality of life. In this case especially among female doctors, having good family support networks will allow them to

balance their work and personal life, thus leading to improved well-being, productivity, and job satisfaction.

### **Conclusion**

The current research underlines the significance of proper control of menopausal symptoms. These symptoms may be controlled once women obtain appropriate family support, and the quality of life will be improved as well as the process of transition at this stage will be more comfortable and positive.

### **Limitations and Recommendations.**

- Only the female doctors in Lahore were used in the data collection and this limits the extent to which the findings can be generalized. To enhance the representativeness, further research ought to employ larger and more diverse samples across various geographical regions.
- The study used a purposive sampling of Lahore hospitals because of time and budget constraints. In a bid to ensure broader coverage, subsequent studies should involve other cities and allocate more resources.
- The research constrained the situational comprehension of the events since it focused primarily on personal factors. To explore it more in-depth, the next research needs to consider the effects of psychological stress, family assistance, and life quality as an individual and organizational level.

### References

- Abdelrahman, R. Y., & Abushaikha, L. (2013). Purpose in life and perceived stress among menopausal women. *International Journal of Women's Health*, 5(4), 443–450.
- Afridi, I. (2017). Psychological and social aspects of menopause. In *Menopause: A multidisciplinary look at* (p. 49). Islamabad: Health Education Press.
- Azizi, M., Fooladi, E., Abdollahi, M., & Elyas, A. (2018). Psychological symptoms of menopause among women in Iran. *Iranian Journal of Psychiatry and Behavioral Sciences*, 12(3), e9935.
- B, J. (2016). Evaluation of stress and its influence on quality of life in postmenopausal women. *Asian Journal of Pharmaceutical and Clinical Research*, 9(8), 199–201.  
<https://doi.org/10.22159/ajpcr.2016.v9s2.13539>
- Coban, A., Arslan, H., & Ergin, F. (2008). Marital adjustment and menopausal symptoms among Turkish women. *Health and Social Care in the Community*, 16(6), 666–674.  
<https://doi.org/10.1111/j.1365-2524.2008.00785.x>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385–396.  
<https://doi.org/10.2307/2136404>
- Dunst, C. J., Jenkins, V., & Trivette, C. M. (1984). The Family Support Scale: Reliability and validity. *Journal of Individual, Family, and Community Wellness*, 1(4), 45–52.
- Erbil, N., & Gümüsay, M. (2018). Relationship between perceived social support and attitudes towards menopause among women and affecting factors. *Middle Black Sea Journal of Health Science*, 4(2), 7–18.
- Falconi, A. M., Gold, E. B., & Janssen, I. (2016). The longitudinal relation of stress during

the menopausal transition to fibrinogen concentrations: Results from the Study of Women's Health Across the Nation. *Menopause*, 23(5), 518–527.

<https://doi.org/10.1097/GME.0000000000000579>

Ganapathy, T., & Al Furaikh, S. S. (2018). Health-related quality of life among menopausal women. *Archives of Medicine and Health Sciences*, 6(1), 16–23.

Garnepudi, R. (2008). Understanding menopause: A guide for women and families.

Hyderabad: Lotus Publications.

Jayabharathi, B. (2016). Evaluation of stress and its influence on quality of life in postmenopausal women. *Asian Journal of Pharmaceutical and Clinical Research*, 9(8), 199–201.

Karmakar, N., Majumdar, S., Dasgupta, A., & Das, S. (2017). Quality of life among menopausal women: A community-based study in a rural area of West Bengal. *Journal of Mid-Life Health*, 8(1), 21–27. [https://doi.org/10.4103/jmh.JMH\\_66\\_16](https://doi.org/10.4103/jmh.JMH_66_16)

Kelley, S. J., Whitley, D. M., Sipe, T. A., & Yorke, S. (2011). Psychometric properties of the Family Support Scale in caregivers of children with chronic illness. *Journal of Pediatric Nursing*, 26(5), 427–435.

Kishan, N., Moodithaya, S., & Mirajkar, A. M. (2017). Correlation between serum estrogen levels and psychological stress during menopause. *National Journal of Physiology, Pharmacy and Pharmacology*, 7(10), 1041–1045.

Kumari, M., Stafford, M., & Marmot, M. (2005). The menopausal transition was associated with depressed mood in middle-aged women: Results from the Whitehall II study. *Journal of Epidemiology & Community Health*, 59(10), 893–898.

<https://doi.org/10.1136/jech.2005.034819>

Lee, E. H. (2012). Review of the psychometric evidence of the perceived stress scale. *Asian Nursing Research*, 6(4), 121–127. <https://doi.org/10.1016/j.anr.2012.08.004>

Leder, S., Moses, M., & Nori, D. (2007). Validation of the Family Support Scale among elderly populations. *Journal of Family Nursing*, 13(4), 452–469.

Matthews, K. A., & Bromberger, J. T. (2005). Does the menopausal transition affect health-related quality of life? *American Journal of Medicine*, 118(12 Suppl 2), 25–36.

Moustafa, M. F., Ali, A., Saied, S. M., & Taha, A. M. (2010). Impact of menopause on quality of life among Egyptian women. *Menopause International*, 16(2), 54–58.

<https://doi.org/10.1258/mi.2010.010015>

Najafabadi, M. M., Hashemi, S. A., Shakiba, M., & Khosravi, Z. (2015). Perceived social support and depression in Iranian postmenopausal women. *Iranian Journal of Nursing and Midwifery Research*, 20(2), 243–249.

Namazi, M., Sadeghi, R., & Behboodi Moghadam, Z. (2019). Social determinants of health in menopause: An integrative review. *International Journal of Women's Health*, 11, 637–647. <https://doi.org/10.2147/IJWH.S228594>

Natarajan, J., Seshan, V., & Muliira, J. K. (2013). Menopausal symptoms and quality of life among women in India: Need for culturally focused preventive care. *BMC Women's Health*, 13(1), 47. <https://doi.org/10.1186/1472-6874-13-47>

Norozi, E., Mostafavi, F., Hasanzadeh, A., Moodi, M., & Sharifirad, G. (2013). Factors affecting quality of life in postmenopausal women, Isfahan, 2011. *Journal of Education and Health Promotion*, 2(58). <https://doi.org/10.4103/2277-9531.120871>

- Nülüfer, G., & Mehtap, D. (2018). Perceived social support and menopausal attitudes among Turkish women. *Middle Black Sea Journal of Health Science*, 4(2), 7–18.
- Owens, W. F. (2008). Gender differences in healthcare utilization during menopause: Comparative review. *Health Services Review*, 12(3), 120–128.
- Poomalar, G. K., & Bupathy, A. (2013). The quality of life during and after menopause among rural women. *Journal of Clinical and Diagnostic Research*, 7(1), 135–139.  
<https://doi.org/10.7860/JCDR/2012/4910.2688>
- Rao, S. G., Dere, S. S., & Ajinkya, S. A. (n.d.). Psychological distress and health-related quality of life in women who have attained natural menopause versus induced menopause: A comparative study. *Indian Journal of Psychological Medicine*, 38(4), 324–329.
- Sharma, P. (2018). Physiology of stress and its management. *Medical and Surgical Research*, 1(1), 1–5. <https://doi.org/10.24966/MSR-5657/100001>
- Svartberg, J., von Mühlen, D., Kritz-Silverstein, D., & Barrett-Connor, E. (2009). Menopause and mental health outcomes: Findings from a community study. *Menopause*, 16(2), 242–249.
- Taskin, L. (2015). The effect of social support on menopausal attitudes. *International Journal of Women's Health*, 7, 247–254. <https://doi.org/10.2147/IJWH.S82633>
- Taylor, S. E. (2011). Social support: A review. *Health psychology* (8th ed.). New York: McGraw Hill.
- Uddin, M. A., & Bhuiyan, A. J. (2019). Development of the Family Support Scale (FSS) for elderly people. *MOJ Gerontology & Geriatrics*, 4(1), 17–20.  
<https://doi.org/10.15406/mojgg.2019.04.00170>



- Umland, E. M. (2008). Menopause: Clinical management and patient education. *American Journal of Nursing*, 108(12), 40–48.
- Utian, W. H. (2005). Psychosocial and socioeconomic burden of vasomotor symptoms in menopause: A comprehensive review. *Health and Quality of Life Outcomes*, 3(47), 1–10.
- Whiteley, J., DiBonaventura, M. d., Wagner, J. S., Alvir, J., & Shah, S. (2013). The impact of menopausal symptoms on quality of life, productivity, and economic outcomes. *Journal of Women's Health*, 22(11), 983–990. <https://doi.org/10.1089/jwh.2012.3719>
- World Health Organization. (1996). *WHOQOL-BREF: Introduction, administration, scoring and generic version of the assessment*. Geneva: WHO.
- World Health Organization. (1994). *Definition of quality of life: The WHOQOL Group*. Geneva: WHO.
- Yoo, H., Kim, J., Lee, H., & Park, S. (2010). Social support and well-being among women with chronic illness. *International Journal of Nursing Studies*, 47(4), 427–436.
- Zhang, X., Wang, Z., Li, X., & Xu, Q. (2016). Social support and menopause perception among middle-aged women. *Journal of Women's Health*, 25(10), 1034–1041.
- Zhao, D., Liu, C., Feng, X., Hou, F., Xu, X., & Li, P. (2019). Menopausal symptoms in different substages of perimenopause and their relationships with social support and resilience. *Menopause*, 26(3), 233–239.