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Assessment of depression and quality of life in women during menopause

Menopoz dönemindeki kadınlarda depresyon ve yaşam kalitesi değerlendirilmesi

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Özet

Giriş: Günümüzde, beklenen yaşam süresinin artmasıyla birlikte kadınların menopozda geçirdikleri süre de artmıştır. Bu dönemde kadınları anlamak ve yaşadıkları semptomları belirlemek çok önemlidir. Çalışmanın temel amacı birinci basamağa başvuran menopoz dönemindeki kadın hastalarda hangi semptomların daha sık görüldüğünü tespit etmek ve bu semptomların kadınların depresyon durumlarına ve yaşam kalitesi üzerine etkisini belirlemektir..

Yöntem: Bu Araştırma, 01 Ocak 2023, 31 Mayıs 2023 tarihleri arasında Adana İli'ndeki Aile Sağlığı Merkezlerine başvuran menopoz dönemindeki kadın hastalardan çalışmaya katılmayı kabul eden 400 birey üzerinde internet aracılığıyla ve yüz yüze olarak gerçekleştirilmiştir. Katılımcılara; Sosyodemografik Veri Formu, SF-36 Yaşam Kalitesi Ölçeği, Beck Depresyon Ölçeği (BDÖ), Menopoz Semptomları Değerlendirme Ölçeği (MSDÖ) uygulanmıştır

Bulgular: Çalışmaya katılan 400 katılımcının ortanca yaş değeri 54 idi. Katılımcıların en sık menopoz semptomları sıcak basması, terlemeler ve sinirlilik; en az görülen semptomları ise kalp rahatsızlıkları ve cinsel sorunlar idi. Medeni durum, çocuk sahibi olma durumu, birlikte yaşadığı kişi, sigara kullanma durumu ve menopoza girme şekli açısından kullandığımız ölçeklerle anlamlı bir farklılık saptanmadı. Kronik hastalığa sahip olması ile BDÖ ve MSDÖ puanları arasında pozitif yönde ilişki, SF-36 Yaşam Kalitesi arasında negatif yönde ilişki vardı. Menopozdan sonra eşiyle cinsel ilişkisi etkilenmiş olanların BDÖ puanları ve MSDÖ puanları daha yüksek, SF-36 Yaşam Kalitesi puanları ise daha düşüktü. BDÖ ile MSDÖ pozitif yönde ilişkili, SF-36 Yaşam Kalitesi ile BDÖ negatif yönde ilişkiliydi. SF-36 Yaşam Kalitesi ile MSDÖ ise negatif yönde ilişkiliydi.

Sonuç: Menopoz döneminde görülen semptomlar kadınların yaşam kalitesini, beden ve ruh sağlığını olumsuz etkilemektedir. Kişiye biyopsikososyal açıdan yaklaşması gereken aile hekimlerine kadın sağlığı için sağlık hizmeti sunumunda öncelikli alanların belirlenmesinde ve yönetiminde önemli rol düşmektedir.

Anahtar Kelimeler: *Depresyon, menopoz dönemi, menopoz semptomları, yaşam kalitesi*

Abstract

Introduction: With the increase in life expectancy today, the duration of time women spend in menopause has also extended. Understanding women's experiences and identifying the symptoms they encounter are crucial during this period. The main objective of this study was to identify which symptoms are more frequently observed in menopausal women presenting to primary care and to determine the impact of these symptoms on women's depression levels and quality of life.

Methods: This study was conducted online and face-to-face with 400 menopausal women who voluntarily agreed to participate. Data were collected from Family Health Centers in Adana Province between January 1, 2023, and May 31, 2023. Participants were administered the Sociodemographic Data Form, the SF-36 Quality of Life Scale, the Beck Depression Scale (BDS), and the Menopause Rating Scale (MRS).

Results: The median age of the 400 participants was 54. The most common menopausal symptoms reported were hot flashes, sweating, and irritability, whereas the least common were heart problems and sexual issues. No statistically significant differences were found in the scale scores regarding marital status, having children, living arrangements, smoking status, or the type of menopause onset. The presence of a chronic illness was positively correlated with BDS and MRS scores, and negatively correlated with SF-36 scores. Women whose sexual relationships with their spouses were negatively affected post-menopause exhibited higher BDI and MRS scores, alongside lower SF-36 scores. Furthermore, a significant positive correlation was found between BDS and MRS scores, while SF-36 scores were negatively correlated with both BDS and MRS scores.

Conclusion: The symptoms experienced during menopause negatively impact women's quality of life, physical and mental health. Family physicians, who need to approach individuals from a biopsychosocial perspective, play an important role in identifying and managing priority areas for the delivery of healthcare services for women's health.

Keywords: *Depression, menopause, menopause symptoms, quality of life, sexual relationship*

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Introduction

Menopause is defined as the permanent cessation of menstruation resulting from the decline and eventual loss of ovarian function, leading to the end of reproductive capacity in women. Menopause is diagnosed retrospectively after the last menstrual period, following a period of twelve months without bleeding.[1] Scientific studies show that the natural menopausal age in most societies is between 45 and 55 years old. Early menopause is considered to be before the age of 45, and late menopause is considered to be any age after the age of 55.[2] Menopause can be triggered by follicular depletion, which is referred to as natural menopause, as well as iatrogenic causes, bilateral oophorectomy, or radiation exposure to the ovaries.[1] As a result of hormonal changes during menopause, symptoms such as vasomotor symptoms, sleep disturbances, urogenital symptoms, psychological effects, and cardiovascular symptoms can be observed.[1] Although most of these symptoms are the result of estrogen deficiency, it is thought that many factors play a role because not everyone experiences the same symptoms or experiences them with the same intensity. These factors include dietary patterns, exercise habits, reproductive history, socioeconomic status, body mass index (BMI), mood changes, individual and cultural attitudes, and the climate of the region where the women live.[2]

During menopause, women undergo substantial biological and psychological changes that may contribute to the development of depressive symptoms. Factors associated with an increased risk of depression during menopause include severe menopausal symptoms, hormonal fluctuations, a history of depression, chronic diseases, and significant psychosocial stressors. Negative attitudes toward menopause and aging, marital difficulties, and loneliness have also been reported as important contributors to depressive symptomatology.[3] Recent evidence suggests that depression is a common health problem among menopausal women. A systematic review and meta-analysis conducted by Jia et al. reported that the prevalence of depression among menopausal women exceeds 35%.[4] Likewise, women undergoing the menopausal transition have been shown to be at a greater risk of developing depressive symptoms compared with premenopausal women, particularly in the presence of vasomotor symptoms and sleep disturbances.[3]

The impact of menopause on women's quality of life has also attracted considerable research attention in recent years. Menopausal symptoms can adversely affect not only physical health but also psychological, social, and sexual well-being. A large-scale study conducted among Chinese women demonstrated that the increasing severity of menopausal symptoms was significantly associated with poorer health-related quality of

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life.[5] Similarly, studies conducted in different populations have shown that hot flashes, night sweats, sleep disturbances, fatigue, and urogenital symptoms negatively affect both the physical and psychological dimensions of quality of life.[6]

Depression has been identified as one of the most important determinants of quality of life during menopause. A recent study involving perimenopausal and postmenopausal women found that higher levels of depression were significantly associated with poorer outcomes across all domains of quality of life.[7] Furthermore, the adverse effects of depression on sleep quality, social functioning, and activities of daily living may further exacerbate reductions in quality of life.[7] A study conducted in Türkiye similarly demonstrated that increasing severity of menopausal symptoms was associated with lower quality of life scores, with psychological symptoms exerting a particularly strong negative impact.[8]

However, the relationship between menopausal symptoms, depression, and quality of life may vary according to cultural characteristics, socioeconomic conditions, and access to healthcare services.[5,8] Women's perceptions of menopause, educational attainment, family support, and living conditions are among the key factors influencing their menopausal experiences. Therefore, investigating the effects of menopausal symptoms on depression and quality of life in different populations remains crucial.

Advances in medical technology and healthcare, together with increasing life expectancy, have resulted in women spending a greater proportion of their lives in the postmenopausal period. Consequently, menopause has become an increasingly important issue in women's health and healthcare delivery. Understanding the factors that affect quality of life during menopause is essential for supporting women in managing this transition in a healthier and more positive manner. Although several studies have examined the relationship between menopausal symptoms, depression, and quality of life, further evidence is needed to clarify this relationship in populations with different sociocultural characteristics. Therefore, the aim of this study was to identify the most prevalent menopausal symptoms and to evaluate their impact on depression levels and quality of life among menopausal women.

Methods

This cross-sectional study was conducted with menopausal participants who visited Family Health Centers in Adana Province between January and May 2023 and agreed to participate in the study. Written informed consent was obtained from all participants. Although face-to-face interviews were conducted with the participants, the surveys were administered entirely online. The study population consisted of postmenopausal women living in Adana Province. It was estimated that there were 600,000 women meeting these

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criteria at the time of the study, and this number was taken as the population. In this study, the required sample size was calculated to be 384 participants, based on a 95% confidence level, a 5% margin of error, and a 95% power. This study was conducted with 400 participants.

Ethics committee approval was received from the Scientific Research Ethics Committee of Adana City Training and Research Hospital on (Date: Dec 1,2022, No: 117/2293) and the Principles of the Helsinki were followed. The authors declare no conflict of interest. There was no funding for this research. Author contributions were as follows: MAD: Study design, data collection, processing, writing, statistical analysis and writing AIC: Study design, concept. MEY: Study design, Processing, literature search, mentor.

In this study, no upper age limit was set.The data collected in the study consist of four sections: Sociodemographic data, the Short Form-36 (SF-36) Quality of Life Scale, the Beck Depression Scale (BDS), and the Menopause Symptoms Assessment Scale (MRS).

The SF-36 Health Survey was developed and made available by the Rand Corporation.[9] The scale is structured into eight subdomains: physical function, physical role limitations, social function, pain, mental health, emotional role limitations, vitality, and overall perceived health. Separate scores between 0 and 100 can be obtained for each subdomain. Higher scores indicate better well-being and quality of life as they increase. The Turkish validity and reliability study was conducted by Koçyiğit et al.[10]

The Beck Depression Inventory was developed in 1961 by Beck et al. The scale is a Likert-type self-assessment scale used to determine the patient's level and risk of depressive symptoms. The scale consists of 21 questions. The highest score is 63 and the lowest score is 0. According to the scores obtained from the scale: 0-9 points indicate normal levels; 10-16 points, mild depression; 17-29 points, moderate depression; and 30-63 points, severe depression. A score of 17 is considered the cutoff value, and scores above 17 have been associated with depression at a rate of 90%.[11] The Turkish validity and reliability study was conducted by Hisli in 1988.[12]

The Menopause Symptoms Assessment Scale was first developed in German in 1992 by Schneider HPG et al. to measure the severity of menopausal symptoms and their impact on quality of life.[13] The scale was adapted into English, and its reliability and validity were established in 1996 by Schneider HPG et al.[13] This is a Likert-type scale consisting of a total of 11 items. For each item, the options are: 0: Not at all, 1: Mild, 2: Moderate, 3: Severe, and 4: Very severe. The total score of the scale is calculated based on the points given for each item. The minimum score obtainable on the scale is 0, while the maximum score is 44. The 11-item scale, which includes menopausal symptoms, consists of three sub-dimensions. These subscales are: 1- Somatic complaints subscale (items 1, 2, 3, 11), 2- Psychological complaints subscale (items 4, 5, 6, 7), and 3- Urogenital complaints subscale (items 8, 9, 10). An increase in the total score obtained from the scale indicates both an increase in the severit y of the complaints experienced and a negative impact on quality of life. The Turkish validity and reliability study

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was conducted by Gürkan Ö, in 2005.[14]

The IBM SPSS Statistics 22.0 software package was used for statistical analysis, and a significance level of $p<0.05$ was accepted.

The kurtosis and skewness values obtained from item-level scales that are between +3 and -3 are considered sufficient for a normal distribution. In our analyses parametric and nonparametric tests were performed. The relationship between the scale scores was analyzed using the Pearson correlation analysis.

Results

The total number of participants was 400, with an average age of 54.58 ± 5.32. Looking at their marital status distribution, 81.3% were married and 18.7% were single.

The vast majority of participants have received university-level education. Specifically, 2.5% held a Master's/Doctorate degree, 64% were university graduates, 30.5% were primary, middle, or high school graduates, and 3% had never attended school.

In terms of employment status, 57.5% of the participants were employed, 20.3% were unemployed or had no personal income, and 22.3% were retired.

The distribution of comorbid diseases among participants was as follows: 14.3% diabetes, 21% cardiovascular disease, 2.8% cerebrovascular disease, 7.3% psychiatric illness, and 7.8% rheumatic disease. Additionally, 48.3% of the participants did not report any illness.

The average height of the participants was 161.23±5.38 cm, and their average weight was 70.98±11.46 kg.

More than half of participants (58.5%) visited a gynecologist for control purposes; and 27.1% had visited a gynecologist within the past year.

The vast majority of participants had experienced pregnancy, while only 6.3% stated that they had never been pregnant.

The duration of menopause was less than one year for 17.8% of the women, 1-5 years for 44%, 6-10 years for 17.3%, and more than 10 years for 21%. Of these, 91.5% experienced natural menopause, while 8.5% developed menopause due to surgical intervention.

While 23% of participants had consulted a doctor regarding menopause and its symptoms, 77% had not.

The majority of participants (90%) viewed menopause as a natural and normal process, while 3% considered it the loss of femininity, 13.3% a loss of fertility, 17% felt it made them feel old, and 11.3% reported a decrease in sexuality.

They had obtained information about menopause from their social circles (59.8%), healthcare professionals (49.3%), television (22%), the internet (38%), and newspapers (9.8%).

Only 11.3% of the participants had received treatment for menopause. Of those, 86.7% received drug therapy and 13.3% used alternative methods.

Furthermore, 34.8% of women reported that

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their sexual relations were affected after menopause while 65.2% reported no effect.

Participants were asked about the symptoms they experienced during menopause. The results are as shown in Table 1.

Table 1. Symptoms of menopause

		N (number)	% (percentage)
Which symptoms do you have?	Hot flashes, sweating (sweating episodes)	277	69.3%
	Heart conditions (chest tightness, sweating, or palpitations that you don't normally feel)	59	14.8%
	Sleep problems (difficulty falling asleep, inability to sleep for long periods, early waking)	153	38.3%
	Feeling down (feeling bad, sad, tearful, changes in mood with a lack of motivation)	115	28.8%
	Irritability (tension and quick temper)	161	40.3%
	Anxiety (inner restlessness, panic state)	96	24%
	Physical and mental fatigue (decreased performance in daily tasks, memory decline, difficulty concentrating, forgetfulness)	128	32%
	Sexual problems (difficulty with sexual desire, intercourse, and satisfaction)	73	18.3%
	Urinary problems (frequent urination, difficulty urinating, incontinence)	80	20%
	Vaginal dryness (vaginal dryness and burning sensation, difficulty with sexual intercourse)	101	25.3%
	Joint and muscle disorders (joint pain, rheumatic complaints)	153	38.3%

Among the participants, 49.3% (n=197) were found to have minimal depression levels, 33.3% (n=133) mild depression levels, and 17.5% (n=70) moderate depression levels. There were no participants presenting with severe depression.

The relationship between the Beck Depression Inventory, the SF-36 Quality of Life, and the Menopause Symptom Assessment Scale of the participants is shown in Table 2.

The average Beck Depression Inventory scores for participants with chronic illnesses were 11.86±6.97, while the scores for participants without illness were 8.12±5.92 (p = 0.001).

The scores for the SF-36 sub-parameters of Physical Function, Physical Role Difficulty, Emotional Role Difficulty, Energy Vitality, Social Functioning, Pain, and General Health were found to be statistically significant in participants with chronic diseases compared to those without, with p-values of 0.001, 0.024, 0.003, 0.002, 0.006, 0.001, and 0.001, respectively.

The average Quality of Life scores for participants with chronic diseases were 58.77±18.75, while the scores for participants without diseases were 66.74±14.75 (p=0.000).

The scores for Somatic Complaints from the MRS subscales were 7.11±4.4 for participants with chronic illness, while the scores for participants without illness were found to be 5.68±3.59 (p=0.000).

The mean score for the Psychological

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Complaints subscale of the MRS was 5.86±5.34 for participants with chronic illness, compared to 4.08±4.85 for participants without illness (p=0.001).

There was no statistically significant difference (p=0.127) between the scores of the Urogenital Symptoms subcategories of the MRS among participants with and without chronic diseases.

The mean score on the Menopause Symptom Assessment Scale for participants with chronic illness was 15.75±10.26, while the score for participants without illness was 12.04±7.88 (p=0.001).

The average Beck Depression Inventory score for participants whose sexual relationship with their spouse was affected after menopause was 12.95±6.98, while the score for unaffected participants was 8.68±6.15 (p=0.001).

The scores on the SF-36 sub-parameters of Physical Function, Physical Role Difficulty, Emotional Role Difficulty, Energy Vitality, Mental Health, Social Functioning, Pain, and General Health were found to be lower in participants whose sexual relationships with their partners were affected after menopause compared to those whose sexual relationships were not affected; the p-values were 0.003, 0.021, 0.001, 0.013, 0.011, 0.001, 0.004, and 0.001, respectively.

The average Quality of Life scores for participants whose sexual relationships with their partners were affected after menopause were 57.8±16.86, while the scores for unaffected participants were 65.24±16.68 (p=0.001).

There was no statistically significant difference in the Somatic Complaints subscale scores of the MRS among participants whose sexual relationships with their spouses were affected after menopause (p=0.851).

The average score on the Psychological Complaints subscale of the MRS for participants whose sexual relationship with their spouse was affected after menopause was 6.67±5.97, while the score for unaffected participants was 4.02±4.45 (p=0.001).

The mean score for the Urogenital Symptoms subscale of the MRS was 3.97±3.68 for participants whose sexual relationship with their partner was affected after menopause, compared to 1.87±2.9 for unaffected participants (p=0.001).

The mean MRS score for participants whose sexual relationships with their spouses were affected after menopause was 17±10.37, while the score for those whose relationships were not affected was 12.34±8.3 (p=0.001).

Table 3 presents the results of the linear regression analysis examining the association between Beck Depression Inventory scores and SF-36 quality of life scores. When examining the effect of depression on quality of life, the effect is found to be negative (Beta = -0.656).

The results of the linear regression analysis examining the association between Beck

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Depression Inventory scores and the SF-36 subscale scores are presented in Table 4. The analysis demonstrated that Beck Depression Inventory scores had a statistically significant effect on all SF-36 subscales.

Table 2. Relationship between depression, quality of life, and assessment of menopausal symptoms

		Beck Depression Scale	Somatic Complaints	Psychological Complaints	Urogenital Complaints	Menopause Rating Scale
Beck Depression Scale	r		.314**	.507**	.266**	.512**
	p		.001	.001	.001	.001
Physical Function	r	-.416**	-.240**	-.234**	.021	-.227**
	p	.001	.001	.001	,682	.001
Physical Role Difficulty	r	-.511**	-.252**	-.396**	-,036	-.342**
	p	.001	.001	.001	.468	.001
Emotional Role Difficulty	r	-.525**	-.179**	-.317**	-.056	-.274**
	p	.001	.001	.001	.260	.001
Energy Vitality	r	-.572**	-.349**	-.461**	-,171**	-.468**
	p	.001	.001	.001	.001	.001
Mental Health	r	-.480**	-.275**	-.374**	-.167**	-.386**
	p	.001	.001	.001	.001	.001
Social Functionality	r	-.507**	-.179**	-.325**	-.162**	-.315**
	p	.001	.001	.001	.001	.001
Pain	r	-.499**	-.298**	-.354**	-.079	-.354**
	p	.001	.001	.000	.115	.000
General Health	r	-.465**	-.313**	-.277**	-.081	-.318**
	p	.001	.001	.001	.107	.001

*p<0.01 Pearson correlation test

Table 3. An examination of the impact of depression on quality of life

Independent variable	Dependent variable	Model F	Model p	Beta	t	p	R2
Beck Depression Scale	Quality of Life	300,415	,000*	-,656	-17,332	,000*	,430

*p<0,05 linear regression test

Table 4. Relationship between depression, quality of life, and assessment of menopausal symptoms

Independent variable	Dependent variable	Model F	Model p	Beta	t	p	R2
Beck Depression Scale	Physical	83,498	,000*	-,416	-9,138	,000*	,173
	Physical Role	140,742	,000*	-,511	-11,863	,000*	,261
	Emotional Role	151,520	,000*	-,525	-12,309	,000*	,276
	Energy Vitality	193,133	,000*	-,572	-13,897	,000*	,327
	Mental Health	118,951	,000*	-,480	-10,906	,000*	,230
	Social	138,027	,000*	-,507	-11,748	,000*	,257
	Pain	132,135	,000*	-,499	-11,495	,000*	,249
	General Health	109,665	,000*	-,465	-10,472	,000*	,216

*p<0,05 linear regression test

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Discussion

Menopause is an important topic that needs to be evaluated in terms of its physical, mental, and its social consequences, as well as the need to increase individual awareness.

In our study, the average age of the participants was 54.58. In a study conducted in Saudi Arabia in 2015 that examined menopausal symptoms and quality of life, the average age was 49 years.[15] The higher average age in our study can be attributed to the participants being postmenopausal. In a study by Wieder-Huszla et al. examining the effects of sociodemographic, personal, and medical factors on quality of life in postmenopausal women, the average age of the participants was 57 years.[16] Our sample group is similar to the research in the literature on postmenopausal women.

Looking at the distribution of chronic diseases, 14.3% of participants had diabetes, 21% had cardiovascular disease, 2.8% had cerebrovascular disease, 7.3% had psychiatric illness, and 7.8% had rheumatic disease, while 48.3% did not have any illness. Similar to our study, the prevalence of chronic diseases in the study by Karaçam Z and colleagues was 50.9%.[17] The frequency of chronic diseases tends to increase with age.

Differences are observed in the symptoms experienced during menopause based on the characteristics of individuals and societies. The most common menopausal symptoms observed in the participants of our study were hot flashes, sweating, and irritability. A study conducted in China found that the three most frequently reported symptoms were insomnia, fatigue, and irritability.[18] In a different study, the most common menopausal symptoms were identified as muscle and joint discomfort, depressive mood, sexual problems, and hot flashes.[19] In our study, the fact that hot flashes and irritability were the most frequently reported symptoms can be explained by biological and sociocultural factors. Hot flashes are one of the most characteristic symptoms of estrogen deficiency, and as they directly affect daily life, sleep patterns, and social functioning, they are more easily noticed and reported by women. Irritability, on the other hand, may reflect not only hormonal changes but also shifts in family roles and health-related anxieties during midlife. Additionally, women tend to express visible physical and emotional symptoms more comfortably than they do more private issues, such as sexual problems.

When looking at where participants obtained their information about menopause, 59.8% stated they learned from their environment, 49.3% from healthcare professionals, 22% from television, 38% from the internet, 9.8% from newspapers, and 3% from other sources. In a study conducted in Brazil, 44.5% of women reported getting information from the environment, 44.3% from healthcare personnel, 22% from television or radio, 14% from

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magazines, newspapers, or books, 6.8% from the internet, and 6.9% reported having no source of information about menopause.[20] Participants' information sources may vary socioculturally. Although the results of our study are positive, health professionals taking a more active role in the educational process will contribute to raising awareness in a healthy way.

In our study, the proportion of participants who stated that their sexual relationships were affected after menopause was 34.8%, while 65.2% reported being unaffected. In fact, it is known that hormonal changes during menopause affect a woman's sexual health and reproductive health.[21] In a study conducted in 2024, the prevalence of sexual dysfunction was found to be 88.9%, demonstrating that sexual dysfunction in women tends to increase with age.[22] Although it is known that menopause is associated with sexual dysfunction, the relatively low proportion of women in our study who reported that their sexual life was affected may be explained by sociocultural factors. In traditional societies, sexuality is often viewed as a private matter, and women may be reluctant to discuss their sexual problems due to feelings of shame, fear of stigma, or a desire to conform to social norms. Additionally, some women may accept sexual problems as a natural consequence of aging and not consider them a health issue. This situation may have led to the reported prevalence of sexual symptoms being lower than their actual prevalence.

Chronic diseases that increase with age during menopause, societal expectations, and role changes can trigger depression in women. When assessing depression levels in our study, minimal depression was found in 49.3% of participants, mild depression in 33.3%, and moderate depression in 17.5%. There were no participants at the level of severe depression.

In our study, there is a significant negative correlation between participants' Quality of Life scores and Beck Depression Inventory scores. Depression can negatively affect individuals' motivation, participation in social life, and level of physical activity. Symptoms that arise during menopause and age-related health issues can also exacerbate this effect, leading to a significant decline in quality of life. A study in Saudi Arabia found that menopausal symptoms have a profound impact on both physical and mental health, significantly affecting quality of life.[23] Indeed, there are other studies showing that menopausal depression significantly reduces quality of life.[24,25]

In our study, there is a positive and significant relationship between participants' Beck Depression Inventory scores and the Menopause Symptom Assessment Scale scores. In a study conducted in 2020, an increase in depressive symptoms was found to be significantly associated with menopausal status and menopausal symptoms.[26] In another study, the relationship between

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depression and menopausal symptoms yielded similar results to our study.[27]

In our study, there is a negative and significant relationship between participants' Quality of Life and the Menopause Symptoms Assessment Scale. In 2025, the study by Sijjil D. et al. revealed a negative relationship between quality of life and postmenopausal symptoms.[28] In a study by Sharin AK et al., it was found that menopausal symptoms significantly reduced quality of life.[29] It is to be expected that menopausal symptoms will reduce quality of life. In particular, vasomotor, psychological, and somatic symptoms can negatively affect sleep quality, daily activities, work performance, and interpersonal relationships. As the frequency and severity of symptoms increase, women's physical, mental, and social well-being deteriorates, and consequently, their quality of life declines. Considering that menopause occurs during a significant period of life, the importance of treating its symptoms becomes evident.

Our study shows that the Beck Depression Inventory scores of participants with chronic illness are statistically significantly higher compared to those without illness. Similarly, there is a meta-analysis study[30] showing the role of chronic illness among factors related to depression in postmenopausal women. The higher depression scores observed among women with chronic illnesses may be attributed to the cumulative burden of long-term illness management, concerns about the progression of the disease, reduced physical functioning, and increased dependence on healthcare services.

Our study shows that the quality of life scores of participants with chronic diseases are statistically significantly lower compared to those without the disease. Similarly, a study showed that the presence of chronic diseases (arterial hypertension, coronary artery disease, diabetes, and osteoporosis) negatively affected the participants' quality of life.[31] The co-occurrence of physiological changes during menopause and issues associated with chronic illnesses can exacerbate women's symptom experiences, thereby having a more negative impact on their quality of life.

Our study shows that participants with chronic diseases had statistically significantly higher scores on the Menopause Symptom Assessment Scale compared to those without the disease. The finding that women with chronic illnesses had higher menopause symptom scores may be related to the physical limitations caused by chronic illnesses, the need for ongoing treatment, and health-related concerns. A study showed that menopausal symptoms significantly increase in the presence of chronic diseases.[32] The similarity of results in similar studies in the literature suggests that managing chronic diseases will be helpful for women in menopause regarding depression, quality of life, and menopausal symptoms. Knowing the

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effects of this period in advance and understanding that it is a natural consequence of life will have positive outcomes for women. Additionally, treatment methods should also be explained.

In our study, the Beck Depression Inventory scores of those whose sexual relationships with their spouses were affected after menopause were found to be higher compared to those who were not affected. In fact, while depression negatively affects sexual function, sexual dysfunction also increases the risk of depression.[33] Changes in sexual function can negatively affect women's body image, their relationships with their partners, and their emotional intimacy. Over time, this can contribute to psychological distress and an increase in depressive symptoms.

In our study, we found that women whose sexual relationships with their spouses were affected by menopause had lower quality-of-life scores compared to those who were not affected by this condition. In another study, a significant and direct correlation was observed between the quality of life and sexual competence of women during menopause.[34] Difficulties in sexual relationships can negatively affect emotional intimacy, marital satisfaction, and self-esteem, which can contribute to a lower quality of life.

The scores on the Menopause Symptom Assessment Scale were found to be higher for those whose sexual relationship with their spouse was affected after menopause compared to those who were not affected. Numerous studies show that an increase in the severity of menopausal symptoms (especially urogenital, psychological, and somatic symptoms) leads to a significant impairment in sexual function.[35,36]

These findings suggest that effective management of menopausal symptoms may not only improve sexual health but also contribute to better psychological well-being and overall quality of life. Therefore, comprehensive menopause care should include an assessment of psychological well-being, sexual health, and the burden of chronic diseases.

Limitations

This study has several limitations. First, the data from the scales were collected through participants' self-reports; this may lead to recall and reporting biases. Second, the study was conducted among women who visited Family Health Centers in a single province of Turkey, which may limit the generalizability of the findings to other populations. Finally, cultural sensitivity regarding sexual issues may have led to underreporting of sexual problems.

Conclusıons

In the study evaluating women in menopause, the participants' depression levels, quality of life, and menopausal symptoms were assessed. In our study, many parameters such as educational status, marital status, presence of chronic diseases, and employment status were found to be associated

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with the results.

The symptoms experienced during menopause negatively impact women's quality of life, as well as their physical and mental health. In the delivery of healthcare services for women's health, the treatment plan should be evaluated within a biopsychosocial framework to guide clinical decision-making.

Declarations

Ethical Considerations: Approval was received from the Scientific Research Ethics Committee of Adana City Training and Research Hospital on (Date: 01.12.2022, No: 117/2293) and the Principles of the Helsinki Declaration were followed.

Availability of data and materials: The original contributions presented in this study are included in the article and supplementary materials. For further inquiries, please contact the corresponding author.

Conflict of Interest: The authors declare no conflict of interest.

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Author contributions

MAD: Study design, data collection, processing, writing, statistical analysis and writing AIC: Study design, concept. MEY: Study design, processing, literature search, mentor

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