Effect of Menopause on Quality of Life and Psychological Profile of Women in Gorgan, Iran

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ABSTRACT

Introduction: Menopause is an important event accompanied with significant hormonal changes that have permanent and irreversible effects on women's lives. The purpose of this study was to compare the quality of life and psychological profile of postmenopausal and non-menopausal women in Gorgan, Iran. **Materials and Methods**: This descriptive-analytical study was conducted on 120 women (60 non-menopausal and 60 postmenopausal women) who were selected via randomized sampling. Data were collected using a quality of life questionnaire and the Minnesota multifaceted questionnaire. Descriptive and analytical statistics were used to analyze the data. **Results:** The mean age of postmenopausal women and non-menopausal women was 56.53 ± 1.32 years and 57.43 ± 1.02 years, respectively. The vasomotor and physical function and psychological profile of postmenopausal and non-menopausal women were significantly different ($P<0.05$). Education had no effect on the quality of life and the psychological profile of postmenopausal and non-menopausal women ($P<0.05$). **Conclusions:** The present study showed that common menopausal symptoms affect the quality of life and psychological profile of postmenopausal women. Relieving symptoms of menopause can promote quality of life of postmenopausal women and prevent complications and adverse psychological effects of menopause in these individuals.

KEYWORDS: Menopause, Quality of life, Psychological profile

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INTRODUCTION

Menopause is an important event accompanied with significant hormonal changes that have permanent and irreversible effects on women's lives [1]. Ovulation cycle and production of estradiol and progesterone decline a few years before menopause. Menopause occurs when the remaining follicles become resistant to increased level of follicle-stimulating hormone [2]. Symptoms of menopause include physical, psychological and sexual complaints. Physical symptoms include hot flushes, vaginal mucosal atrophy and irritable bladder, palpitation, headache and muscle pain. Psychological symptoms include irritability, anger and depression. Sexual symptoms include decreased sexual drive or sexual satisfaction [3-5]. Although menopause is a normal biological process in women, it is not defined nor experienced in the same manner in all women. In fact, the mental-psychological state and emotional, cultural and social health of an individual may affect this experience [2].

In a systematic review of prospective studies, Ayers et al. showed that women who had a more negative attitude toward menopause in the premenopausal period experienced more severe hot flashes [6]. Duration, severity and impact of menopausal symptoms may vary from person to person and from society to society. Some women experience severe symptoms that affect their physical and social performance as well as their quality of life [7], which is a subjective component of well-being and one of the health indices [8].

In a systematic review by Bahri et al. (2016), about half of the women had a neutral attitude toward menopause [9]. In a cross-sectional study by Nowroozi et al. (2013), there was a positive and significant correlation between attitude toward menopause and quality of life, which also had a significant correlation with knowledge about menopause [10]. Various studies in Iran and other parts of the world have shown the negative and positive

impact of menopause on the quality of life of postmenopausal women [4, 11, 12]. In addition, the physical and mental health of women declines a year after menopause compared to the premenopausal state [13]. The physical and psychological signs and symptoms can also lower women's quality of life [14]. Therefore, studying the quality of life and psychological profile can help clarify the problems and complications of menopause, the severity of their impact and the aspects of life affected by these complications. It also identifies the educational, therapeutic and counseling needs for establishment and implementation of healthcare plans and policies. The results of such studies are effective in promoting women's health, helping them maintain physical and mental health during middle age and in the following years. Considering the importance of information on screening planning as well as prevention and reduction of the complications associated with menopause, this study aimed to assess the quality of life and psychological profile of postmenopausal and non-menopausal women in the city of Gorgan, Iran.

MATERIAL AND METHODS

This descriptive-analytical study was carried out on 60 postmenopausal and 60 non-menopausal randomly selected women in Gorgan (Iran) in 2016. The study received approval from the ethics committee of Islamic Azad University of Sari and informed consent was obtained from all participants.

Inclusion criteria included willingness to participate in the study, self-reported physiological menopause, confirmation of menopause by a gynecologist and no history of surgery in the past three months. Exclusion criteria included having diseases including diabetes, hypertension and thyroid, liver and kidney disease, history of cancer or heart attack or stroke, loss of a close relative in the past six months, consumption of neuropsychiatric drugs, unwillingness to participate or continue participating in the study. Prior to participation in the study, details regarding the purpose, benefits and anticipated results of the research were explained for the subjects and they were assured of the confidentially of information collected in the study. A questionnaire was then completed in the presence of the researcher during four-person sessions. Sample size was determined based on both variables of menopausal symptoms and quality of life. Demographic information including age, age at menopause, number of children and education level were collected using a questionnaire. The menopause-specific quality of life (MENQOL) questionnaire was used for assessment of quality of life in postmenopausal women. The questionnaire consists of 29 questions in four domains: vasomotor, psychomotor, physical and sexual dysfunction. The answers were scored from 1 to 7 (1: not at all, 7: very much). Validity and reliability of the questionnaire have been assessed in other studies with a correlation coefficient of 0.95.

The Minnesota multiphasic personality inventory (MMPI) included 71 questions on the psychological state of the subjects with three validity scales (L, F, K) and eight clinical subscales including hypochondriasis, depression, hysteria, psychopathic deviate, paranoia, psychasthenia, schizophrenia and hypomania [16]. Reliability of the whole test was confirmed by the Cronbach's alpha coefficient of 0.91 ($P < 0.001$) [17].

After completion of the questionnaire, data were analyzed in SPSS 16 using descriptive statistics with central indices and inferential statistics. T-test was used to compare the two independent groups. A P-value of less than 0.05 was considered statistically significant.

RESULTS

The mean age of subjects in the menopause group was 56.53 ± 1.32 years (range 38-49 years) and the mean age of non-menopausal women was 57.43 ± 1.02 years. In addition,

57.5% of the subjects had a single child and 42.5% had a bachelor's degree. Significant difference were observed in the mean scores of quality of life in terms of the vasomotor and physical function between the postmenopausal and non-menopausal women (P<0.05). However, the two groups had no significant difference in terms of psychosocial and sexual domains (P>0.05). The mean scores of psychological profile in both postmenopausal and non-menopausal groups were significantly different (P<0.05) (Table 1).

Table 1. Difference between the mean scores of quality of life and the scores of psychological profile in postmenopausal and non-menopausal women

Clinical scales	Group	Mean score	Standard deviation	t	df	P-value*
Vasomotor	Postmenopausal	2.022	0.878	8.172	118	0.001
	Non-menopausal	1.061	0.241			
Psychosocial	Postmenopausal	1.557	0.909	0.523	118	0.602
	Non-menopausal	1.476	0.782			
Physical	Postmenopausal	1.827	1.061	2.422	118	0.017
	Non-menopausal	1.472	0.394			
Sexual	Postmenopausal	2.033	1.376	1.317	118	0.190
	Non-menopausal	1.750	0.940			
Hypochondriasis	Postmenopausal	0.510	0.048	14.177	117	0.001
	Non-menopausal	0.395	0.039			
Depression	Postmenopausal	0.235	0.082	8.249	118	0.001
	Non-menopausal	0.129	0.056			
Hysteria	Postmenopausal	0.455	0.058	17.450	118	0.001
	Non-menopausal	0.279	0.051			
Psychopathic Deviate	Postmenopausal	0.230	0.062	10.572	118	0.001
	Non-menopausal	0.126	0.044			
Paranoia	Postmenopausal	0.181	0.106	- 3.003	117	0.001
	Non-menopausal	0.248	0.135			
Psychasthenia	Postmenopausal	0.275	0.075	6.978	118	0.001
	Non-menopausal	0.158	0.105			
Schizophrenia	Postmenopausal	0.230	0.070	5.252	117	0.001
	Non-menopausal	0.171	0.049			
Hypomania	Postmenopausal	0.468	0.468	11.476	118	0.001
	Non-menopausal	0.371	0.371			

*Independent t-test

There was no significant difference in the mean scores of quality of life domains between the postmenopausal and non-menopausal women considering the education level (Table 2).

Table 2. Quality of life of postmenopausal and non-menopausal women based on their education level

Group	Variable		Sum of squares	df	Mean squares	F-value	P-value*
Postmenopausal	Vasomotor	Intragroup	3.351	4	0.838	1.092	0.369
		Intergroup	42.175	55	0.767		
		Total	45.526	59			
Non-menopausal		Intragroup	0.105	2	0.052	0.869	0.414
		Intergroup	3.338	57	0.059		
		Total	3.443	59			
Postmenopausal		Intragroup	3.295	4	0.824	0.995	0.418
		Intergroup	45.550	55	0.828		

	Psychosocial	Total	48.845	59			
Non-menopausal		Intragroup	1.675	2	0.838	0.519	0.722
		Intergroup	34.434	57	0.604		
		Total	36.109	59			
Postmenopausal	Physical	Intragroup	2.419	4	0.605	2.762	0.072
		Intergroup	64.060	55	1.165		
		Total	66.479	59			
Non-menopausal		Intragroup	0.816	2	0.406	1.036	0.397
		Intergroup	8.386	57	0.147		
		Total	9.198	59			
Postmenopausal	Sexual	Intragroup	7.826	4	1.957	1.036	0.397
		Intergroup	103.885	55	1.889		
		Total	111.711	59			
Non-menopausal		Intragroup	5.631	2	2.815	3.451	0.038
		Intergroup	46.508	57	0.816		
		Total	52.139	59			

*ANOVA

There was no statistically significant difference between the psychological profile of postmenopausal and non-menopausal women based on the education level (P<0.05) (Table 3).

Table 3. Psychological profile of postmenopausal and non-menopausal women in Gorgan based on the education level

Group	Variable		Sum of squares	df	Mean squares	F-value	P-value*
Postmenopausal	Hypochondriasis	Intragroup	0.009	4	0.002	0.869	0.472
		Intergroup	0.133	55	0.002		
		Total	0.142	59			
Non-menopausal		Intragroup	0.005	2	0.002	1.559	0.219
		Intergroup	0.084	56	0.001		
		Total	0.088	58			
Postmenopausal	Depression	Intragroup	0.020	4	0.005	0.729	0.576
		Intergroup	0.380	55	0.007		
		Total	0.4000	59			
Non-menopausal		Intragroup	0.004	2	0.002	0.662	0.520
		Intergroup	0.187	57	0.003		
		Total	0.191	59			
Postmenopausal	Hysteria	Intragroup	0.024	4	0.006	1.817	0.139
		Intergroup	0.181	55	0.003		
		Total	0.204	59			
Non-menopausal		Intragroup	0.006	2	0.003	1.065	0.352
		Intergroup	0.152	57	0.003		
		Total	0.157	59			
Postmenopausal	Psychopathic Deviate	Intragroup	0.017	4	0.004	1.136	0.349
		Intergroup	0.210	55	0.004		
		Total	0.228	59			
Non-menopausal		Intragroup	0.011	2	0.005	2.809	0.069
		Intergroup	0.107	57	0.002		
		Total	0.117	59			
Postmenopausal	Paranoia	Intragroup	0.026	4	0.007	0.564	0.690
		Intergroup	0.630	55	0.012		
		Total	0.656	59			

Non-menopausal		Intragroup	0.077	2	0.039	2.182	0.122
		Intergroup	1.009	57	0.018		
		Total	1.087	59			
Postmenopausal	Psychasthenia	Intragroup	0.018	4	0.005	0.788	0.538
		Intergroup	0.319	55	0.006		
		Total	0.338	59			
Non-menopausal		Intragroup	0.048	2	0.024	2.258	0.114
		Intergroup	0.604	2	0.011		
		Total	0.652	59			
Postmenopausal	Schizophrenia	Intragroup	0.010	4	0.002	0.466	0.760
		Intergroup	0.280	54	0.005		
		Total	0.290	58			
Non-menopausal		Intragroup	0.001	2	0.0001	0.180	0.836
		Intergroup	0.146	57	0.003		
		Total	0.147	59			
Postmenopausal	Hypomania	Intragroup	0.015	4	0.004	1.358	0.261
		Intergroup	0.147	54	0.003		
		Total	0.162	58			
Non-menopausal		Intragroup	0.001	2	0.0001	0.218	0.805
		Intergroup	0.087	57	0.002		
		Total	0.087	59			

*ANOVA

DISCUSSION

The findings of this study showed that there were significant differences between the mean scores of quality of life of postmenopausal and non-menopausal women in terms of the physical and vasomotor domains. In addition, education had no significant impact on the quality of life of the subjects. In 2010, Borimnejad et al. showed that quality of life, especially its psychosocial domain, is low in women who undergone hysterectomy before menopause [18]. Lorenzi et al. stated that women had a higher quality of life before menopause [19]. On the other hand, Yeo [20] and Satoh et al. [21] found no difference in the quality of life of postmenopausal and non-menopausal women. Shobeiri et al., Ceylan et al. and Ghazanfarpour et al. also reported that occurrence of menopause symptoms lowers the quality of life of women. They also claimed that women with university degrees achieved a lower quality of life score, which was associated with vasomotor, psychological and physical symptoms [22,24]. In addition, Fallahzadeh found that menopause had a negative impact on the quality of life of women, and the level of university education, number of children, employment status and body mass index were associated with improved quality of life of postmenopausal women [16]. Overall, the above studies show that the quality of life of postmenopausal and non-menopausal women is different in many aspects. Our results also showed that the quality of life of postmenopausal and none-menopausal women is significantly different in some domains. Therefore, particular attention should be given to these domains when planning strategies to improve quality of life during menopause and reduce some of the shortcomings that arise during this period. Other findings of the present study indicated significant differences between all domains of the psychological profile of postmenopausal and non-menopausal women in Gorgan. Moreover, psychological disorders were observed in all psychosocial profile subscales of postmenopausal women. Georgakis et al. conducted a systematic review on the duration of menopause and menopause-associated depression and reported an inverse relationship between

depression, age and duration of fertility. In addition, menopause at the age of ≥40 years was associated with reduced risk of depression compared with early menopause [25]. In study of Chou et al., symptoms of depression were observed during the climacteric periodic [26]. On the other hand, Zang et al. claimed that rural women do not experience any symptoms of depression, and reported a relationship between depression and vasomotor symptoms and sleep disorders [27]. Afghari et al. showed that postmenopausal women experience numerous emotional-psychological changes, which are mostly associated with feeling old [28]. Shouhani et al. stated that postmenopausal women had mild depression (32%), mild anxiety (22.7%) and memory impairment (39.3%) [29]. Reed and Yen identified high body mass index, education level, parity, race and number of children as factors effective on depression during menopause. All of the above studies as well as the present study confirm the increase in psychological symptoms during menopause. The development of psychological problems in this group of individuals might be due to hormonal and physiological changes in the body. Therefore, effective planning and developing strategies on these psychological concepts and adaptation to these symptoms can help women cope with the disorders associated with menopause.[30,31]

CONCLUSION

The findings of this study show that vasomotor and physical symptoms are common among postmenopausal women, which negatively affect their quality of life. Since a considerable percentage of women at menopause already have health disorders, menopause can act as a triggering, persisting or exacerbating factor for these disorders. Thus, offering education, counseling and especial care to these individuals can facilitate improvement of the aspects of quality of life affected by menopausal symptoms. Further studies are recommended in this regard to clarify the role of other factors effective on the quality of life including socioeconomic status and culture.

ACKNOWLEDGEMENTS

The authors would like to express their appreciation to all women who participated in this study. This article is based on the results of a Master's thesis in General Psychology.

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