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# Association of self-care status with some relevant factors in middle-aged women in their early menopausal stage

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## Abstract:

**BACKGROUND:** Through self-care, people can solve their health-related problems through increasing their awareness and correcting their lifestyles.

**OBJECTIVES:** To determine the association of self-care status with some relevant factors in Kashanian middle-aged women in their early menopausal stage.

**METHODS:** This is a cross-sectional study on 351 women in the age range of 45–60 years. Women were selected based on cluster sampling method from the individuals at health-care centers in Kashan, Iran. Researcher-constructed questionnaire on self-care was used. The validity and the reliability of the questionnaire were calculated. The information gathering method was questionnaire completion by the study participants or interview with them. Collected data were analyzed with SPSS 16 software. *T*-test, ANOVA, Spearman correlation, and linear regression analysis were applied.

**RESULTS:** The mean ( $\pm$ standard deviation) of the self-care score was  $108.14 \pm 20.43$ . Self-care scores were weak in 13.92%, intermediate in 71.02%, and good in 15.06%. Regression analysis showed that the mean of self-care was significantly higher in those with higher educational level of women's ( $P = 0.045$ ) and their spouses ( $P = 0.001$ ). Women who were covered by insurance also showed higher self-care; in addition, there was no significant relationship between self-care and participants' job, spouses' jobs, marital status, marital satisfaction, economic satisfaction, number of children, number of households, and type of accommodation ( $P > 0.05$ ).

**CONCLUSION:** The results indicate that self-care is inadequate and that the level of education of couples and insurance coverage has a positive effect on the level of self-care in postmenopausal women. To promote self-care in old age, education and empowerment can be considered.

## Keywords:

Menopause, self-care, women

## Introduction

Menopause is an important stage of women's life. It occurs following 12 continuous months of cessation in ovulation provided that other amenorrhea-related physiological or pathological factors are absent.<sup>[1]</sup> Various degrees of somatic and psychological discomforts including hot flashes, night sweating, sleeplessness, and vaginal dryness might be the possible symptoms of menopause.<sup>[1]</sup> Sexual

dysfunction,<sup>[2]</sup> sleep disorders, fatigue, short-term memory malfunctioning and depression,<sup>[3]</sup> changes in the senses, behaviors, and performance<sup>[4]</sup> are the other likely menopause symptoms and osteoporosis is a multifactorial disease of menopause.<sup>[5]</sup> Through self-care, people can solve their health-related problems through increasing their awareness and correcting their lifestyles.<sup>[6]</sup>

In many societies, women are burdened with excessive burdens, and they are expected to be in charge of housework and

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address the needs of their spouse and children, and sometimes other relatives, and work outside the home to earn money. Considering the heavy responsibility of women in society and the importance of their role in consolidating their families and their high role in society, it is necessary to ensure the health of this group.<sup>[7]</sup>

Health workers can play an important role in encouraging the clients to perform healthy and preventive behaviors and it was shown that additional studies are needed to identify the factors that make women using screening services.<sup>[8]</sup> The government plans must be necessarily consider postmenopausal women's health enhancement. There are few studies about menopausal self-care and on the other hand with increasing in life expectancy, the number of postmenopausal women is increasing too. Therefore further research is needed for considering many of the problems that are created or intensified in women at menopausal age.

**Objectives:** The aim of the present study was to determine the association of self-care status with some relevant factors in Kashanian middle-aged women in their early menopausal stage.

## Methods

The present cross-sectional study evaluated 351 postmenopausal women inhabiting the city of Kashan, Iran, during September to March 2016. Cluster sampling method was used. The city of Kashan was divided to nine clusters and participants were randomly selected in each center. The information gathering instrument was a researcher-made questionnaire designed into two parts based on library researches. First part comprised general and demographic characteristics and the next part comprised 34 questions regarding self-care. In order to obtain the content validity, we studied the books, journals, and scientific articles and made questionnaire. Then, ten experts were asked to provide their opinions regarding the questions. They were in fields of health, obstetrician, and nursing. Next, the ratio of content validity index and content validity rate (CVR) were computed for the questions. According to the ideas inquired from the foresaid ten experts and based on Lawshe Table, CVR value above 0.62 was considered acceptable, above 0.7 modified and above 0.8 appropriate. The questionnaire's reliability was confirmed using Cronbach's alpha coefficient ( $\alpha = 0.9$ ). Each question was scored based on Likert's five-point scale from 1 to 5 (for answers "never," "rarely," "sometimes," "most often," and "always"). The final score was the total scores earned from questions and ranged from 34 to 170. Self-care score was classified to three groups according to the mean ( $\pm$ standard deviation [SD]), namely, 34–87.71 for

weak, 87.71–128.58 for intermediate, and 128.58–170 for high self-care.

Inclusion criteria were healthy Iranian women, 45–60 years old, natural menopause, 1–5 years had elapsed since the last menstruation, absence of the other amenorrhea-related physiological and pathological factors, lack of taking hormonal drugs or hormone-bearing foodstuff or herbs within the past 3 months, lack of taking effective medications on menopausal symptoms, the absence of diseases influencing the physical mobility such as arthritis and depression. The exclusion criterion was incomplete information.

Individuals with sufficient educational level completed the questionnaires themselves, but questionnaire completion for individuals having low educational levels was carried out in the form of interviews.

## Statistical methods

The collected information was analyzed in SPSS software, ver. 16 (IBM Company, Armonk, NY, USA). Numbers (percentage) were used to describe the qualitative variables. For quantitative variables mean ( $\pm$ SD) or median (p10, p90) were used depending on the normality status. Kolmogorov–Smirnov test was used to assess normality. *T*-test and ANOVA were used for assessing of relationship between self-care and the other qualitative variables; moreover, the correlation between self-care with age of participants and menopausal age was determined using Spearman correlation because despite the fact that self-care score was normal ( $P = 0.98$ ), but the normality of these two variables were not established. Using linear regression analysis, we examined the simultaneous effects of demographic and midwifery variables and finally, backward modeling. Values  $<0.05$  were considered statistically significant.

## Ethical considerations

The research was approved by the Ethics Committee of Iran University of Medical Sciences and confirmation code no is IR.IUMS.REC1395.9223489203. It was explained to the participants that participation is voluntary and they can be excluded from the study any time they wished. Informed consent was obtained, and information was obtained in a confidential environment by a homosexual questioner.

## Results

The study women ranged in age from 45 to 60 years with mean  $\pm$  SD of  $53.37 \pm 4.10$  and age at menopause ranging from 41 to 59 years with the mean ( $\pm$ SD) of  $49.07 \pm 3.74$ . Range of self-care was 49–166 with the

mean ( $\pm$ SD) of 108.14 ( $\pm$ 20.43). In most areas, the average score is earned. The majority of the study participants gained intermediate self-care score (250 individuals, 71.02%) [Table 1].

There was no correlation between self-care and age of participants ( $r = 0.03$ ,  $P = 0.53$ ), but self-care was inversely correlated with the age at menopause ( $r = -0.001$ ,  $P = 0.01$ ). Mean self-care of different levels of demographic and obstetric variables are shown in Table 2.

**Table 1: Frequency distribution of the study participants' self-care scores**

Self-care score	n (%)
Weak	49 (13.92)
Intermediate	250 (71.02)
Good	53 (15.06)
Total	352 (100)

It was found that self-care has significant relationship with the individual's education level ( $P < 0.001$ ) and spouse's education level ( $P < 0.001$ ), but no significant relationship was figured out between self-care score and job ( $P = 0.20$ ), spouse's job ( $P = 0.15$ ), marital status ( $P = 0.29$ ), type of accommodation ( $P = 0.29$ ), and insurance coverage ( $P = 0.13$ ) [Table 2].

Frequency distribution of the topical mean self-care scores is shown in Table 3.

According to Table 4, only the variables of the level of education, the level of education of the spouse, and the insurance remained in the model. When all other variables remain constant; (1) women with diploma or higher education receive an average of 8 self-care scores higher than those who are illiterate or have "undergraduate" education, (2) women whose spouses have diploma or higher education receive an average of

**Table 2: Mean self-care of different levels of demographic and obstetric variables of the study participants**

Variable	Levels	Frequency (%)	Self-care (mean $\pm$ SD)	P
Level of education	Illiterate and under the diploma	291 (84.30)	105.93 $\pm$ 19.75	<0.001
	Diploma and higher	54 (15.70)	118.17 $\pm$ 21.52	
Job	Homemaker	322 (92.8)	107.13 $\pm$ 20.27	0.20
	Worker	25 (7.20)	117.44 $\pm$ 20.63	
Spouse's education level	Illiterate and under the diploma	223 (66.2)	103.39 $\pm$ 19.30	<0.001
	Diploma and higher	114 (33.80)	115.82 $\pm$ 20.31	
Spouse's occupation	Worker	63 (19.30)	104.85 $\pm$ 21.98	0.15
	Employee	32 (9.80)	111.39 $\pm$ 17.54	
	Freelancer	52 (15.90)	110.45 $\pm$ 20.99	
	Unemployed	14 (4.30)	97.57 $\pm$ 21.44	
Marital status	Single	300 (86.70)	108.24 $\pm$ 20.26	0.43
	Married	46 (13.3)	105.67 $\pm$ 21.89	
Life of spouse	Alive	306 (90.30)	107.91 $\pm$ 20.38	0.65
	Not live	33 (9.70)	106.18 $\pm$ 22.12	
Number of children	0-2	61 (25.40)	106.93 $\pm$ 18.33	0.60
	3-4	139 (57.90)	104.50 $\pm$ 21.45	
	$\geq 5$	40 (16.70)	102.90 $\pm$ 19.07	
Number of pregnancy	0-2	48 (20.10)	106.41 $\pm$ 18.51	0.69
	3-4	128 (53.60)	104.71 $\pm$ 19.03	
	$\geq 5$	63 (26.40)	103.05 $\pm$ 22.86	
Number of households	$\leq 4$	199 (84)	103.63 $\pm$ 19.83	0.17
	$\geq 5$	38 (16)	108.54 $\pm$ 19.38	
Type of accommodation	Personal	321 (93.90)	108.31 $\pm$ 20.44	0.29
	Rental	21 (6.10)	103.38 $\pm$ 21.80	
Insurance coverage	Insured	321 (95.80)	107.90 $\pm$ 20.02	0.13
	Not insured	14 (4.20)	99.5 $\pm$ 20.56	
Type of delivery	Normal	159 (75.70)	104.35 $\pm$ 20.07	0.63
	Cesarean section	51 (24.30)	105.96 $\pm$ 21.12	
Marital satisfaction	Without satisfaction or low	21 (8.90)	99.95 $\pm$ 21.12	0.31
	Medium	125 (52.70)	104.41 $\pm$ 22.13	
	Much	91 (38.40)	107.14 $\pm$ 17.26	
Economic satisfaction	Without satisfaction or low	56 (23.40)	100.74 $\pm$ 20.58	0.22
	Medium	158 (66.10)	106.32 $\pm$ 20.30	
	Much	25 (10.50)	105.76 $\pm$ 19.11	

SD=Standard deviation

9.53 self-care scores higher than other women, and (3) women who were insured had 14.7 self-care score higher than noninsured women. Furthermore, the  $r^2$  resulted from the regression model was equal to 12%, which shows that besides these three variables, there are other variables that affect self-care and have not been studied in this study.

## Discussion

The majority of the study participants in the present study acquired an intermediate self-care score. The results indicate that self-care is inadequate and that the level of education of couples and insurance coverage has a positive effect on the level of self-care in postmenopausal women. In a study by Golyan Tehrani for Promoting the Health Status of Menopausal Women by Educating Self Care, education had a strong effect on the promotion of respondents' knowledge about self-care strategies.<sup>[3]</sup> We, like them, believe that, given the high number of older women in the present day, the stronger efforts are needed to promote self-care behaviors in these women. In line with the results of the present study, in the study of Yanikkerem *et al.*, psychosocial and physical scores of symptoms were found to be higher in women who had no health insurance,<sup>[9]</sup> which shows the importance of empowering women for self-care.

Our participants were found accepting menopause as a new stage of their lives, and they had intermediate information regarding self-care specific to this period of their lives. There are different results posited in the prior

studies carried out in this regard. In the study carried out by Hammoudeh *et al.*, most of the women had positive attitudes toward middle age and old age as a natural phenomenon. In describing the menopause, they used various expressions based on their marital and maternity statuses. For a great many of the women, menopause was solely an unimportant aspect of the changes brought by aging.<sup>[10]</sup> However, Doubova *et al.* pointed to a traditional look at this period which does not have a good attitude toward menopause. They highlighted the women's lack of self-care and concluded that climacteric women need more information on factors that could affect their health.<sup>[11]</sup> The factors that are followed by a reduction in the self-care ability of the old-aged people are the lack of social support, family structure, and "empty nest;" the development of chronic diseases; and lack of money and facilities.<sup>[12]</sup> Of course, society's expectation of the women influences on women's look at the middle age. In the present study, the majority of the studied women were married homemakers. They felt better about their lives due to having close family and maternity statuses and lack of occupational relationships and did not need to pay too much attention to social opinion. On the other hand, health-care professionals should understand women's attitudes toward menopause, to give optimal information and help the women create positive attitudes and healthy perceptions of this period of life.<sup>[9]</sup>

In the current research paper, the women were found in an intermediate level of care in terms of Public Health Care and Screening. In the study performed by Chan *et al.*, 48% of the participants had never undergone Pap smear test.<sup>[13]</sup> In the study conducted by Abdullah *et al.*, Pap smear test frequency was 39.22% that was unsatisfactory and it was also associated with the health-care providers, education level, and worries about the test results.<sup>[14]</sup> In the study performed by Sarrafzadegan *et al.*, the postmenopausal women were found having higher blood sugar and fat in contrast to premenopausal women.<sup>[15]</sup> According to Arthur *et al.* study, the high frequency of metabolic syndrome (obesity, hypertension, and high blood sugar) in postmenopausal women puts them at a higher risk in terms of heart diseases, so these women need to be monitored and changed in their lifestyles.<sup>[16]</sup>

**Table 3: Frequency distribution of the topical mean self-care scores of the study participants**

Self-care topic	Minimum	Maximum	Mean±SD
Public health care (7 questions)	7.00	34.00	19.45±5.94
Screening (6 questions)	6.00	30.00	17.60±5.63
Nutrition and drugs (5 questions)	7.00	25.00	18.47±3.93
Memory (3 questions)	3.00	15.00	9.52±2.86
Hot flashes and night sweats (4 questions)	4.00	20.00	13.88±3.39
Sexuality (3 questions)	3.00	15.00	6.77±2.69
Information and social communication (5 questions)	5.00	25.00	18.49±3.32
Urinary disorders (1 question)	1.00	5.00	4.15±1.03

SD=Standard deviation

**Table 4: The results of linear regression model of demographic and obstetric variables on women self-care (Dependent variable: Self-care)**

Model	Unstandardized coefficients		t	Significant	95% CI for B	
	B	SE			Lower bound	Upper bound
Constant	91.465	9.126	10.022	0.000	73.476	109.454
Education	7.998	3.986	2.006	0.046	0.141	15.856
Education of the spouse	9.534	2.953	3.229	0.001	3.713	15.354
Bime2 group	14.703	6.936	2.120	0.035	1.031	28.375

SE=Standard error, CI=Confidence interval

In the present study, the women were found taking self-care measures for night sweats more than hot flashes. The study conducted by Dhillon *et al.* showed similar results. They reported that the women took more self-care interventions for night sweat as compared to hot flashes. Their interventions for this issue were sleeping in places with air conditioners or sleeping right in front of cooler devices and one-fourth of them used hormones.<sup>[17]</sup> This can be due to the importance of night sweats in disordering the night sleeping.

The studied women earned only half of the sport and physical activity scores. In fact, they had lower mobility. While in the study carried out by Diniz *et al.* (2016), it was found out that even longer durations of taking a standing position improve the postmenopausal women's quality of life and social performance,<sup>[18]</sup> decrease obesity, and enhance the physical status.<sup>[19]</sup> In the study of Akinpetide, as women aged, they were less likely to participate in osteoporosis prevention exercises. They reported that this is indicative of the need for women to learn how to prevent osteoporosis.<sup>[20]</sup> In our study, since the studied women were predominantly homemakers and have no social business, their inactivity can be a result of the way they lived.

The present study participants acquired higher scores in nutrition (paying attention to the food groups, reduction in consuming salt and fat, sugar, and soft drinks) than the other areas. In the study by Mirghafourvand *et al.*, the age, job, and educational level of the participants were similar to the current research. In their study, the women acquired a self-care score of 14.8, out of 10–40, for nutrition which is lower than half of the attainable score.<sup>[21]</sup> Possibly, because women in their study were not mostly postmenopause, while reducing the consumption of sugars, fats, and salts is more important in menopausal women. As well, Haardörfer *et al.* reported that individuals' age, gender, and self-efficacy are factors influencing the healthy nutrition and the amount of fat take-up.<sup>[22]</sup>

The women in the present study received less than half of sexual performance. In other words, they did not pay much attention to maintaining sexual intercourse and the treatment of vaginal dryness in the study undertaken by Politano *et al.*, it was indicated that the women's age or her husband's age over 50 years old is one of the factors affecting poor sexual performance.<sup>[23]</sup> In a study by Krychman *et al.*, middle-aged women believe that vaginal changes are normal at this age and they should be compatible with this issue.<sup>[24]</sup> We, as well, believe that according to the circumstances of each person's life, higher age of a spouse than a woman, so every intervention should accordingly be carried out based on the individual conditions.

The strengths of this study can be referred to the coverage in the city which gives the power of generalizing the results. The limitations were that the participants were mostly poor educated and it was difficult to establish contact with them since the participants were in the age range, who had no reason to go to the clinic.

## Conclusion

Most of the participants acquired intermediate self-care scores which indicate the need to try to improve it. The level of education of couples and insurance coverage has a positive effect on the level of self-care in postmenopausal women. This study can provide the basis for future research to increase self-care in postmenopausal women.

## Suggestions

Based on the results, education and empowerment can be considered to promote self-care in old age. Further studies are recommended to find other effective factors and self-care status in chronic illnesses.

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## Conflicts of interest

There are no conflicts of interest.

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