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The Relationship between Health Promoting Lifestyle with Life Satisfaction in Postmenopausal Women

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ABSTRACT

Background and aim: Menopause transition is one of the factors affecting the satisfaction with life (SWL) and lifestyle. The aim of present study was to determine the relationship between health-promoting lifestyle and SWL in postmenopausal women.
Materials and Methods: The present cross-sectional (descriptive-analytic) study was carried out on 353 postmenopausal women referred to health care centers of Ahvaz in 2016. Data were collected using demographic Questionnaire, Health-Promoting Lifestyle Profile II (HPLPLII) and Life Satisfaction Inventory-Z (LSI-Z). Data analysis was carried out using SPSS ver.22.
Results: The mean age of the subjects was 54.416 ± 4.295 years. There was a positive relationship (0/001) between SWL with age and level of education and a negative one with the number of children. The mean SWL level in housewives was higher than employed women. There was a positive relationship (0/000) between the different dimensions of health-promoting lifestyle with SWL in postmenopausal women. Stepwise multiple regression analysis showed that the nutrition dimension has the greatest impact on SWL. The best SWL model is a model that includes nutrition, spiritual growth and self-actualization, age, exercise and physical activity, and interpersonal relations components.
Conclusion: Education of health-promoting behaviors in postmenopausal women can play a major role in increasing SWL level, and it can lead to a positive attitude towards menopause transition and facilitate the confrontation with problems related to this period.

Key words: Life satisfaction, Lifestyle, Menopause

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BACKGROUND

Today, health system plans are generally based on family health. On the other hand, women's health status is of great importance in the family and they are considered as main the role models for education and the promotion of a healthy lifestyle to the next generation. Although women and men have common issues in the health field, women face specific problems due to their specific physiological conditions, including those issues of menopausal transition [1]. Menopause is one of the most important stages in women's life that occurs at their midlife (45-60 years) [2]. The mean age of Iranian women at the time of menopause is 48.183 (47/457-48/91) years [3] and 50-51 years at the global level [4]. Menopause, according to the World Health Organization (WHO), is defined as a true 12-month menstrual cessation due to ovarian follicle loss [5]. Women report difficult concentration, daily dysfunction, mood changes, anxiety, fatigue, and emotional instability during the menopausal transition, which can affect their lifestyle patterns [6]. WHO defines the term ''lifestyle'' based on distinct behavioral patterns that derive from the interaction between personality traits, social interaction, environmental conditions, and socioeconomic status [7]. According to WHO, 60% of the individuals' quality of life and health status depends on their lifestyle and behavior [8]. Health-promoting behaviors are one of the best ways, by which individuals can maintain and control their health [9]. A health-promoting lifestyle is a multidimensional pattern of perceptions and actions initiated by one's own motives, which helps to maintain and enhance the level of health

and self-actualization. It also expresses the human desire for excellence which leads to favorable well-being, personal development and a creative life. This lifestyle consists of six aspects of "physical activity", "nutrition", "health responsibility", "spiritual growth", "interpersonal relations" and "stress management" [10,11]. These behaviors have been affected by factors such as age, race, educational level, economic status, people's perception of health, place of residence, self-confidence and cultural adaptation [12]. The SWL assessment in health care systems in the sense is important and closely related to the health, physical, mental health and SWL [13]. SWL refers to the judgmental and cognitive process, in which people value their quality of life on the basis of a set of criteria having different values in the view of different individuals [14]. SWL is related with factors such as religiosity, self-efficacy, positive attitude, work hope, health status, happiness, depression, anxiety, insomnia, religious rituals, friendship and servitude of God, social interaction, personality factors, income, social class, optimism and marital status [14-19]. Considering the average age and increasing life expectancy of women and, thus, the demographic composition of the society in the future as well as the increase in population of postmenopausal women, improving their lifestyle and solving their physical, psychological and social problems will be certainly effective on the health promotion at the family and, then, at the societal levels . There have been very few researches on comparison of SWL construct with other psychological concepts among postmenopausal women. Therefore, the aim of the present study was to investigate the relationship between health-promoting lifestyle and SWL in postmenopausal women in Ahvaz in 2016.

MATERIALS AND METHODS

The present study is a cross-sectional (descriptive-analytic) study and the study population consisted of all postmenopausal women who aged 45-60 years, had their last menstruation at least 12 months ago and referred to Ahvaz health care centers in 2016. The sample size was estimated to be 353 individuals using the following formula and with r=0.18 [11], and at 95% confidence interval (CI).

$$n = \frac{(z_{1-\frac{\alpha}{2}} + z_{1-\beta})^2}{(\frac{1}{2} L\eta \frac{1+\gamma}{1-\gamma})^2} + 3$$

Considering the fact that there are two health centers with their own branches in the east and west of Ahvaz, five health centers are selected in each region using by cluster random sampling based on the number of active medical records, the last digit of which was odd. The questionnaires were provided to the subjects in order to be completed after attending selected centers in a safe environment and receiving subjects' informed consent. The researcher was alongside the subjects while they were completing questionnaires in order to provide explanations in the case of any question or ambiguity. The inclusion criteria include postmenopausal women aged 45-60 years who had their last menstruation at least a year ago and were considered to be postmenopausal based on the physician's diagnosis. Exclusion criteria also include women who had a difficult-to-cure disease such as cancer or advanced diseases that require treatment or admission, and those who have neurological disorders as well as those who take depressive drugs and have undergone a major surgery during the past six months. Data collection was carried out in present study using three questionnaires of demographic, health-promoting lifestyle profile II (HPLPLII) and Satisfaction with life inventory-Z (LSI-Z). HPLPLII evaluates the frequency of health promoting behaviors in six dimensions of stress management, spiritual growth and self-confidence, health responsibility, interpersonal relations, exercise and physical activity, and nutrition. This questionnaire contains 52 questions, answered using 4-point Likert scale (Never, Sometimes, Usually, Always), which are assigned scores 1, 2, 3, and 4, respectively. HPLPLII score is calculated using the average of responses given for each dimension and [9,20] in general, with scores ≥ 50 indicating the optimal level of health-promoting behaviors. The Cronbach's alpha has been calculated in many studies both for the total instrument and for each dimension, and shows its high validity. The same Cronbach's alpha has been studied by Zeydi et al. [21]. The correlation coefficient of the re-test method was 0.91 for the total instrument and 0.71-0.89 for its dimensions [21]. LSI-Z, which consists of 13 questions and is designed by Wood, Wylie and Sheafor [22,23], was used in the present study. Tagharobi et al. [24] reported a validity coefficient of 0.79 for the above inventory. The stability and internal consistency measures were used in order to assess the reliability and the above 13-item inventory was considered to be reliable based on the relevant tests carried out. Each question was answered using Neutral, Agree and Disagree options. Overall, there are 5 questions (questions number 3, 6, 10, 11, 13) with negative connotations and the remaining 8 questions had positive connotations. The first option set for questions with negative and positive connotations included ''Agree'' and ''Disagree'' options, respectively and 0-1-2 scoring system was used to score each response. Considering the questions with positive connotations, scored 1, 2 and 0 were assigned to Neutral, Agree and Disagree options, respectively; however, scores 2, 0 and 1 were assigned to Disagree, Agree and Neutral options, respectively in case of questions with negative connotations. Overall, the possible LSI-Z score range was 0-26, with scores >12, 2-13 and <22 indicating low, moderate and high satisfaction rates, respectively. The correlation coefficient of these tools for the total instrument in our study was 0.88. Data collection was carried out using descriptive statistics (frequency, percentage, mean, and standard deviation). For Data analysis using Pearson and Spearman correlation coefficient, Independent-t test, and stepwise multiple regression tests in SPSS version

16. All the ethical considerations necessary for the study were considered. The Ethical code of this study was 2016.789 REC. AJUMS, IR.

RESULTS

The mean age of women participating in the present study was 54.416 ± 4.295 years, with the minimum and maximum age range of 45 and 60 years, respectively. The mean age of the women's husbands was 59.538 ± 5.850 years. The mean marriage duration of the postmenopausal women was 34.5 ± 5.4 years. Considering the level of education, the majority of the postmenopausal women (33.1%) and their husbands (30.9%) had a diploma. The survey of employment status showed that 82.2% of postmenopausal women were housewives and 43.3% of their husbands also had jobs. The demographic characteristics of the participants are presented in Table 1. Pearson correlation coefficient test showed a positive direct linear relationship between SWL and age in postmenopausal women (r=0.137 and p=0.010), but negative relationship with the number of children (r=-0.159 and p=0.003), which was statistically significant. There was no significant relationship between SWL with marriage duration (r=0.048 and p=0.371) and husbands' age (r=0.029 and p=0.584). Spearman's correlation coefficient test showed a significant linear relationship between educational level of postmenopausal women (r=0.253 and p=0.000) and that of their husbands (r=0.0000 and p=0.000) with SWL in postmenopausal women.

Table 1: Demographic characteristics of postmenopausal women (n=353)

Demographic characteristics	Frequency (percent)
Level of education	
Illiterate	(7/1) 25
Elementary	(20/1) 71
Middle school	(17) 60
Diploma	(33/1) 117
Associate Degree	(9/9) 35
Bachelor's degree and higher	(12/7) 45
Job	
Employed	(17/8) 63
Housewife	(82/2) 290
Husband's educational level	
Illiterate	(2) 7
Elementary	(18/1) 64
Middle school	(15/3) 54
Diploma	(30/9) 109
Associate Degree	(12/5) 44
Bachelor's degree and higher	(21/2) 75
Husband's job	
Deceased	(5/7) 20
Employed	(43/3) 153
Unemployed	(51) 180

The average SWL level of housewives was higher than employed women. The women with working husbands also had higher mean SWL and these relationships were statistically significant (Table 2).

Table 2: Comparison of SWL level based on the occupation of women and their husbands

Demographic characteristics	Satisfaction with life Mean (SD)	P-value
Job		
Employed	(2/78) 11/15	0/000
Housewife	(3/21) 12/70	
Husbands' Job		
Deceased	(51/93) 10/20	
Employed	(3/34) 12/64	0/005
Unemployed	(3/08) 12/50	

The results of assessing the mean and standard deviation (SD) of different dimensions of health-promoting lifestyle showed the highest and the lowest mean obtained for health responsibility (40.4 ± 4.8) and stress management (12.3 ± 2.5) dimensions, respectively. The total mean SWL in postmenopausal women was 12.4 ± 3.1 which was at moderate level according to the questionnaire SWL classifications (Table 3).

Table 3: Mean dimensions of health-promoting lifestyle and SWL in postmenopausal women

Variables	Mean	SD	Max	Min
Stress management	12/36	2/58	20	8
Spiritual growth and self-actualization	32/55	5/02	44	22
Health responsibility	40/43	4/81	51	24
Interpersonal relations	21/19	3/26	32	14
Exercise and physical activity	13/07	3/37	24	7
Nutrition	18/18	2/74	26	12
The overall average of health promoting behaviors	137/81	13/77	177	111
Satisfaction with life	12/43	3/19	23	6

Pearson correlation coefficient test showed a positive direct linear relationship between different dimensions of health-promoting lifestyle and LSI-Z in postmenopausal women (P-value ≤ 0.05), which is statically significant (Table 4).

Table 4: Correlation between different dimensions of health-promoting lifestyle and LSI-Z

Health-promoting lifestyle Dimensions	Satisfaction with life	
	Pearson Correlation (r)	P-value
Stress management	0/409	0/000
Spiritual growth and self-actualization	0/443	0/000
Health responsibility	0/259	0/000
Interpersonal relations	0/247	0/000
Exercise and physical activity	0/442	0/000
Nutrition	0/447	0/000
The overall score of health promoting behaviors	0/585	0/000

Stepwise multiple regression analysis was used to predict and explain the effectiveness of health-promoting lifestyle and other demographic variables on the SWL of postmenopausal women. The results showed that the total six dimensions of health-promoting lifestyle and age could significantly explain 38.1% of changes in SWL in the second model (Table 5).

Table 5: Multiple regression analysis of SWL with the total dimensions of health-promoting lifestyle and age

Models	Source of change	SS	df	MS	R^2	P-value
First:	Regression	1227/1	1	1227/1		
Total six dimensions of health promoting lifestyle	Remaining	2363/44	351	6/73	0/342	0/000
	Total	3590/55	352	-		
Second:	Regression	1369/59	2	684/79	0/381	0/000
Total six dimensions of health promoting lifestyle and Age	Remaining	2220/95	350	6/34		
	Total	3590/55	352	-		

Stepwise multiple regression analysis was also used to investigate examining which components of health-promoting lifestyle and demographic variables have a greater role in predicting and explaining SWL in postmenopausal women and the results showed that nutrition dimension had the greatest impact on SWL and also a higher relative share (20%) in predicting the SWL level than other aspects of health-promoting lifestyle, which was statistically significant (p=0.000). The beta coefficient also shows that SWL is increased by 0. 447 units in case of one score increase as a standard deviation (Table 6). Among the proposed models, Model No. 5 had a greater ability to explain SWL in a way that 41.8% of lifestyle changes was predicted by this present model, which consisted of nutrition, spiritual growth and self-actualization, age, exercise and physical activity, and interpersonal relations components (Table 6).

Table 6: Multiple regression analysis of SWL with different dimensions of health-promoting lifestyle and demographic variables

Model	Predictor variables	R	R^2	Beta	P-value
Model No. 1	Nutrition	0/447	0/200	0/447	0/000
Model No. 2	Nutrition	0/551	0/304	0/354	0/000
	Spiritual growth and self-actualization			0/338	
Model No. 3	Nutrition	0/595	0/354	0/357	0/000
	Spiritual growth and self-actualization			0/368	
	Age			0/226	
Model No. 4	Nutrition	0/638	0/406	0/278	0/000
	Spiritual growth and self-actualization			0/287	
	Age			0/258	
	Exercise and physical activity			0/267	
Model No. 5	Nutrition	0/664	0/418	0/270	0/000
	Spiritual growth and self-actualization			0/273	
	Age			0/220	
	Exercise and physical activity			0/268	
	Interpersonal relations			0/114	

DISCUSSION

The aim of the present study was to investigate the relationship between health-promoting lifestyle and SWL in postmenopausal women and the results showed a significant positive correlation between SWL and age in postmenopausal women. In other words, SWL level increases with an increasing age (in Researcher opinion, with increasing age, the ability to solve problems, solutions to the challenges of the day and the use of experience increases the satisfaction of life), that which is not consistent with results of Niknam et al. study [25]. However, this result is consistent with the results of studies by Monshipour et al. [26] and Sharifinia et al. [27], which showed that quality of life is declining with age. The goals and focus of people seem be changing with increasing age, and individuals try to be more satisfied with simple and accessible things. The present study showed a significant negative relationship between SWL and the number of children; in other words, SWL decreased with the increase in the number of children, which is inconsistent with the results of studies carried out by Saadatkhah et al. [28] who studies SWL in the elderly; however it is consistent with the results of Anjzab et al. [29]. At first glance, the number of children seems to be more likely to lead to more intellectual conflict and troubles for parents, and ultimately, reducing the SWL; however, in fact, the children's situation should also be considered, since large numbers of children with good social positions may lead to increased SWL. There was a significant relationship between the educational level of postmenopausal women and that of their husbands with SWL level, which was consistent with the studies carried out of Monshipour et al. [26] and Rashidi et al. [30]. It's crystal clear that people with higher level of education establish social communication more easily, and more likely to learn more about health-promoting behaviors.

They may also tolerate menopausal complications more easily, which leads to an increase in SWL level in these individuals. The present study revealed that mean SWL level in housewives was significantly higher than that of employed women, and women with working husbands had also a higher mean SWL. Since working women, besides taking care of their children and doing chores, have their social responsibilities, they may experience energy depletion and reduced SWL level. However, some studies showed a positive relationship between the different dimensions of health-promoting life style or quality of life with the employment status and having higher incomes [2,31,32]. Thus, it seems to be necessary to take into account the type of occupation of individuals and their lifestyle in order to obtain the correct results. The results showed that postmenopausal women studied do not have a good lifestyle status. Among the six dimensions of health-promoting lifestyle, the exercise and physical activity and stress management dimensions were practiced less frequently unfavorable, and these results were consistent with the Rashidi et al. study [30], which indicated that stress management and physical activity dimensions in the elderly were at more unfavorable status than other dimensions. Mahmoudi et al. showed in a study that elderly women obtained poor scores on exercise and stress dimensions [33]. One of the reasons justifying the reduced physical activity in the above women may be attributed to fear of falling and injuries during physical activity. If we can provide conditions for proper training on having optimal exercise for postmenopausal women, we would hope to increase their level of physical activity at this age. Findings of Borhaninejad et al. study confirm that fear of falling in the elderly can lead to limited and reduced physical activity [34]. In the present study, the best health-promoting lifestyle behavioral state was related to health responsibility and spiritual growth and self-actualization as the next dimensions. These results are consistent with Azhari et al. study [35], which showed that spiritual growth & health responsibility dimension and physical activity obtained respectively the maximum and the minimum scores among other aspects of the health-promoting lifestyle in postmenopausal women. This optimal spiritual growth can be due to the religious beliefs of individuals and; on the other hand, these beliefs can lead to more adaptation and meaningfulness in life. The results of our study showed a positive linear relationship between health-promoting lifestyle and SWL in postmenopausal women. Keldi et al. showed a significant statistical relationship health-promoting lifestyle and quality of life among students [32]. Stief Burger et al., also found that the frequency of health-promoting behaviors was significantly related with perceived quality of life in individuals with multiple sclerosis [36]. The results of regression analysis of the demographic variables studied and the six dimensions of health-promoting lifestyle indicate that some of the variables were had greater effect in predicting SWL, and variables that even seem to have a significant relationship with SWL based on the multiple regression analysis, were not included in SWL prediction models and thus eliminated. The best SWL prediction model in the present study was the one that consisted of nutrition, spiritual growth and self-actualization, age, exercise and physical activity, and interpersonal relations components. Taking account these predictive variables can greatly increase the frequency of healthy behaviors in the life style of postmenopausal women, which ultimately results in an increase in SWL level in this group.

CONCLUSION

to adopt a positive attitude toward menopause transition, and overcome the problems associated with period more easily. Postmenopausal women studied in the present study had a moderate SWL and there was a significant positive relationship between the different dimensions of health-promoting lifestyle with SWL in postmenopausal women; while only health responsibility, spiritual growth and self-actualization scores were at optimal levels among these women. Efforts to increase the frequency of health promoting behaviors in postmenopausal women can be of great help in increasing the SWL level of this age group. Accordingly, we can help postmenopausal women.

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