

Evaluation of health literacy rate of postmenopausal women covered by Mashhad health centers in 2018

ABSTRACT

Background and Objective: Health literacy is one of the social components of health, which plays a vital role in health education and health promotion. The lack of awareness of women and the low level of literacy and its complications reduce the quality of life in postmenopausal women. The key to solving this problem is only to educate women with the right methods of learning. Considering its importance, this study was conducted to determine the health literacy among postmenopausal women in Mashhad.

Materials and Methods: This research is a descriptive-analytic study. The statistical population consisted of 425 menopausal women aged between 45 and 65 years old. The cluster sampling method was performed. The tools used for demographic and adult literacy questionnaires were short forms. The results were analyzed using Kolmogorov-Smirnov test and correlation and chi-square tests in SPSS_24 software.

Results: The average literacy rate between the target groups was 54.06 ± 20.69 out of 100, which is equivalent to the borderline level. In this study, 47.8% of the subjects were inadequate, 17.2% borderline and 35.1% adequate level of health literacy.

Conclusion: The overall health literacy score in the sample population indicates that a high percentage of women do not have good health literacy. It should be noted that women need to have enough information to judge whether their symptoms need to be treated and how to monitor medical care in order to empower the group for menopause and its complications. In this regard, awareness of this group about menopause and its complications requires essential interventions.

Paper Type: Research Article.

Keywords: health literacy, menopause, education, health, women

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Introduction

Health literacy is a social component of health(1). Recent researches suggested that health literacy is a better predictor for health condition than education, social and economic conditions, occupation, race, or gender (2). It has been more than 40 years that health literacy is considered as one of the factors affecting health (3). So far, several definitions have been proposed for health literacy (4). The World Health Organization (WHO) defines health literacy as “cognitive and social skills that determine the motivation and ability of individuals to acquire, understand and use health information to promote and maintain good health” (5).

In the last decade, health literacy has played a vital role in health education and health promotion, and has been increasingly seen as a means to improve health outcomes and reduce inequity in health (6). The World Health Organization has reported health literacy as one of the greatest determinants of health. WHO also recommended that countries of the world create a community of all individuals affected by this in order to monitor and coordinate strategic activities to promote health literacy in different communities (7). In spite of the importance of the probable outcome of limited health literacy, health care providers are often unaware of the reading ability of patients. If service providers are trying to overcome the adverse effects of low health literacy, the ability to diagnose patients with a potential health problem is also important (8). Inadequate health literacy leads to lower health behaviors, higher hospitalization rates, difficulties in verbal communication with service providers and poorer health status. An individual with inadequate health literacy may not understand the written health informa-

tion, or what professional health care providers say about his/her health status, or he/she can not follow oral and written instructions to manage his or her condition, labels on the food packages and drugs or understand the health information provided in posters or brochures (1). Therefore, the first step in examining such problems is to measure health literacy, which will be planned according to the results of the relevant interventions. In a meta-analysis study that collected the results of 85 different studies, the prevalence of inadequate health literacy in the United States was 25% and the prevalence of border health literacy was 20% (9). In a study conducted in the United States, most people over the age 16 had a moderate health literacy level, and only 12% had an adequate level of health literacy (10). Although health literacy is important for everyone in the community, it focuses specifically on the women who play an important role. On the other hand, since women’s awareness is effective on the promotion and preservation of the health of children and society, women have been identified as the primary population for emphasizing increased health literacy(11). Tol et al., in a study aimed at assessing the awareness and health status of women with type 2 diabetes, as well as the investigating the relationship between health literacy and awareness, found that the target group had a moderate health literacy, and this emphasized that the group needs education (12). Also, Ganbari et al. investigated the health literacy of pregnant women, and the results showed that 30% of women had inadequate health literacy, 24.6% had border health literacy and 45.4% had adequate health literacy (13). Considering these findings and interpretations, it is important to assess women’s health literacy.

Today, considering the aging population

and rising life expectancy rate, the most important issue we face is the quality of life. "If the challenge of the 20th century was to increase life expectancy, the main challenge of the 21st century would be increasing the quality of life" (14). According to these interpretations, the phenomenon of menopause is something that overwhelms women's quality of life during this period. Menopause is a stage in women's life that accompanies ovarian inactivity and a significant reduction in female hormones (estrogen and progesterone) after 12 months. The average age of menopause is 42-58 and the mean age is 51.4 years. Menopause, as with other problems, has certain complications for women. One of the most common side effects is vasomotor symptoms, varying from 18% to 85% in various studies. It was reported 25% in American women over 50, and 53.1% for Iranian women with the same age (15). This condition can disrupt the feeling of being healthy and reduce the women quality of life during this period. Lack of women's awareness and low health literacy as well as their inability to manage this phenomenon and management of its complications reduce the quality of life of postmenopausal women. The key to solving this problem is to educate and empower women in this area with appropriate learning methods. Given the importance of the issue and the findings, empowering women to better confront menopausal symptoms and raise their awareness of this issue is of particular importance (15). Therefore, this study was conducted to determine the level of health literacy in postmenopausal women in Mashhad.

Materials and Methods

This research is a descriptive-analytic study.

The statistical population consisted of 425 postmenopausal women aged 45-65. The inclusion criteria for the study include the followings:

- 1- Women's willingness to participate in the study
- 2- Not being treated with any hormonal medication
- 3- Hysterectomy has not been performed
- 4- Their menstruation has been discontinued for at least 12 months
- 5- They should Live in mashhad

Exclusion criteria also include the following:

- 1- Women's unwillingness to participate in the study
- 2- Failure to answer more than 10 percent of the questionnaire questions
- 3- Die before study completion

The sample size was based on the Machi Suca study titled "investigating the health literacy of postmenopausal women" and was calculated using the sample size formula for estimating the ratio of a quantitative variable (16). The sample size was estimated to be about 380 ($p = 0.65$ and 0.05), but with a probability of 10% dropping out, the final sample size was 425. The cluster sampling method was performed and each health center was considered as a cluster, then three bases were randomly selected from each center.

$$n = \frac{\left(z_{1-\frac{\alpha}{2}}\right)^2 p(1-p)}{(d)^2}$$

In this study, the data were collected from the subjects through interviewing by the researcher and colleagues. In order to achieve the research goals, demographic questionnaires and the short form of adult health literacy were completed by participants.

- 1- Demographic and background question-

naire: The questionnaire consists of 12 items that were prepared by a survey of professors. The questionnaire included questions such as: age, marital status, employment status, educational level, income, housing status, insurance status, last menstruation, treatment with hormonal drugs, hysterectomy surgery, sexual activity status, and sexual satisfaction rate.

2- Adult Health Literacy Short Form: for data collection, the Persian version of the Adult Health Literacy Test was used which is one of the most important and most reliable health literacy tests in the world. Tehrani et al. confirmed the validity and reliability of this test for the Iranian society (17). After translating the questionnaire into Persian-language and selecting Persian equivalents for reading and completing the stages of reliability and validation, the questionnaire was run on 50 people in the first preliminary study. Then, given the difficulty of the questions and the variance of responses, some alternatives were applied and the second preliminary study was done on 50 people.

The health Literacy Tests covers two sections: reading comprehension and computing skills. In the reading section, the respondent's ability to read actual health-related texts is evaluated. This section consists of three texts in relation to the preparing instructions for photography of the upper device, the rights and responsibilities of the patient in the insurance papers and a patient satisfaction standard sheet, which is set out in the form of 20 four options incomplete questions.

In the computing section, cards containing a description of some medications, appointments, and an example of the outcome of a blood glucose test are given to the respond-

ents and this section contains four questions. For each question of the reading comprehension section, a calculated score is considered. In the computing section for each question, the coefficients applied to 50 and the total score of the questionnaire was calculated from 100. Finally, on the basis of separation points 59 and 74, the health literacy of individuals was classified into three levels: inadequate (0-59), borderline (60-74) and adequate (above 75). Finally, the results were analyzed using Kolmogorov-Smirnov test and Correlation and Chi-square tests in SPSS-24 software.

Results

According to the findings of this study, among the 425 people, the largest number of participants (29.4%) are women aged 55-60. The highest number of participants were married (72.9%) and the lowest (2.4%) were single. Based on the data in Table (1), 345 (81.2%) of the target group who have participated in the study, had under the diploma degree. Also, in the case of income variable, only 7.7% of people had income above 3 million Tomans. In our sample population, 398 were housewives and the rest were working somewhere. According to findings, there were 198 women who had sexual activity, of which only 154 were satisfied with their sexual activities, and others expressed their dissatisfaction. 76.2% of dissatisfaction were related to the lack of confidence among women. Other demographic information is presented in Table 1. In this study, there was a significant relationship between the marital status, income and education level with the health literacy variable (Table 3). According to the data summarized in Table 4, the target group's health literacy rate is inadequate. The mean and standard deviation of this variable among this group is

54.06 ± 20.69, which is equivalent to the borderline level. The highest score is 25/92 and the lowest is zero. Among them, 203 (47.8%)

were in inadequate, 73 (17.2%) were in borderline, and only 149 (35.1%) had adequate health literacy.

Table 1: Demographic characteristics of the target group

Variables		n	%	Variables		n	%
Age	45-50	86	20.2	Employment Status	Housewife	398	93.6
	50-55	97	22.8		Employed	27	6.4
	55-60	125	29.4	Residence Status	Leased	87	20.5
	60 and more	117	27.5		Private	338	79.5
Marital Status	Married	310	72.9	Insurance	Yes	271	63.8
	Single	10	2.4		No	154	36.2
	divorced	21	4.9	Sexual Activities	Yes	198	46.6
	Widow	84	19.8		No	227	53.4
Education Level	Under the diploma	345	81.2	Sexual Satisfaction	Yes	154	51.9
	Diploma	64	15.1		No	143	48.1
	Bachelor	10	2.4		* Missing data	128	30.1
	Master's degree and higher	6	1.4	The reason for sexual dissatisfaction	feeling pain	7	4.9
Income Level	Less than 1 million Tomans	175	41.3		Lack of confidence	109	76.2
	1-2 million Tomans	154	36.3		Unwilling wife	27	18.9
	2-3 million Tomans	58	13.7		* Missing data	282	
	Higher than 3 million Tomans	37	8.7	* In this study, because of the existence of single, divorced, and widowed individuals, some of whom have not had sexual relations so far, some questions about the "cause of sexual dissatisfaction" and "sexual satisfaction" were not answered.			

Table 2: Pearson correlation between demographic variables and health literacy

Variable	Health literacy	
	The correlation coefficient	P-value
Marital Variables	-0.09	0.05
Occupation	0.07	0.1
Educational Level	0.3	<0.001
Income Level	0.2	<0.001
Residence Status	0.05	0.2
Insurance Status	-0.04	0.3
Sexual Activities	-0.09	0.4
Sexual Satisfaction	-0.08	0.1
Age	-0.01	0.7

Table 3: Comparison between health literacy and some demographic variables

Variables		health literacy						P-value
		Inadequate		Boundary		Adequate		
		n	%	n	%	n	%	
Marital Status	Married	142	70	48	65.8	120	80.5	0.03
	Single	3	1.5	5	6.8	2	1.3	
	Divorced	10	4.9	5	6.8	6	4	
	Widow	48	23.6	15	20.5	21	14.1	
Educational Level	Under the diploma	180	88.7	62	84.9	103	69.1	<0.001
	Diploma	22	10.8	10	13.7	32	21.5	
	Bachelor	1	0.5	1	1.4	8	5.4	
	Master's degree and higher	0	0	0	0	6	4	
Income Level	Less than 1 million Tomans	101	49.8	33	45.2	41	27.7	<0.001
	1-2 million Tomans	68	33.5	32	43.8	54	36.5	
	2-3 million Tomans	21	10.3	3	1.4	34	23	
	Higher than 3 million Tomans	13	6.4	5	6.8	19	12.8	

Table 4: Variable Frequency of Health Literacy by Level

Variables		n	%
Health literacy	Inadequate	203	47.8
	Boundary	73	17.2
	Adequate	149	35.1
Mean health literacy score		20.69±54.06	

Conclusion

The aim of this study was to determine the health literacy status among postmenopausal women covered by Mashhad health centers. The results showed that the overall level of health literacy in the target group was in borderline and close to inadequate. The study results were consistent with the studies that conducted by Montazeri et al (18), Baker (19), and finally Sahrayi (20). As stated earlier, the mean score of health literacy was 54.06. In the study of Tehrani et al. (17), which was conducted in five provinces on people over 18 years old, the mean score of health literacy was 56.6, which is more than the findings

of this study. It should be noted that since domestic and foreign studies use a variety of tools, comparing the findings is difficult. In a study conducted by Javadzadeh et al. (21) in Isfahan using the S-TOFHELA questionnaire, it was found that nearly half of the people had adequate health literacy that is in agreement with our research findings. Another research that was consistent with our findings was the study of Van der Hider, which found that the health literacy rate of nearly half of the Dutch population was inadequate (22). In general, the level of health literacy in a wide range of countries is different. For example, the results of the study of Daman et al in the

Netherlands showed that about two thirds of the subjects had adequate health literacy (23). However, the results of studies conducted in Iran indicate that this range varied from 8.8 (24) to 45.4 (13).

In the present study, there was a significant relationship between health literacy and income levels, so that borderline and inadequate health literacy was more prevalent in people with lower income levels. This finding was consistent with the results of other studies (10, 25-28). Also, Tiller et al. in Germany indicated that the economic and social status of adults as one of the most important factors affecting the level of health literacy (29). The results of most studies show that the economic status is an important factor in health outcomes, but other studies show that economic status is not a major determinant factor in having high health literacy (30). It seems that high economic levels through other factors can increase the level of health literacy. Other factors such as: financial rehabilitation in seeking further health problems and better access to health centers have increased the level of health literacy in our study and other studies. However, some studies rejected this significant correlation between the two variables of health literacy and income (31-33). The contradiction between the results of this study and other studies can be explained by the difference in the economic status of target groups, their access to health facilities, demographic characteristics, and tools used in their studies. Also, there was a significant relationship between marital status and education level with health literacy. In the case of marital status, the level of inadequate and borderline health literacy in married individuals was higher than other people, which was not in line with research conducted by Kho-

shravesh et al. (34), as well as Tehrani Bani Hashemi et al. (17). But this finding is consistent with research conducted by Sahrayi (20). The reason for this finding is that the high level of health literacy in single individuals is due to the younger age and possibly higher levels of education and having more free time to study. Also, according to the results of this study, a significant relationship between health literacy and the level of education indicates that the higher the level of education lead to increase the level of health literacy, and this finding is confirmed in most studies (30). In the study of Raeesi et al., there was a significant difference between adequate health literacy of well-educated people and low educated people (24). In the research conducted by Ganbari et al. (13) on diabetic patients, there was a positive correlation between education level and health literacy, as stated in our study. The results of our study are also consistent with the research conducted by Borgi et al. (31). Education in other studies has also been recognized as an important factor in health literacy and this relationship has been confirmed by several studies (20). The relationship between health literacy and the level of education can be attributed to the fact that education provides more opportunity for understanding, assessing and making better decisions about health and offers a more favorable context for increasing health literacy and using obtained information.

The overall health literacy score among the sample population indicates that the level of health literacy is moderate and low. Also, considering the importance of health literacy in promoting health and reducing diseases and disabilities, it is necessary to increase the level of health literacy through planning in

the target population for enhancing the quality of their life. Alternative strategies for improving health and better confrontation with symptoms and complications of menopause include: health education interventions and increasing women's health literacy. It should be noted that menopausal health literacy does not only include recognition of menopausal symptoms, but women need to have enough information to judge whether their symptoms need treatment and how to take care of themselves (16). Our finding provided relevant educational content that could be implemented in health education program based coherent planning and communication channels (e.g., mass media) and training sessions. This research can help health educators to improve health promotion behaviors by improving health literacy and the quality of life among postmenopausal women. Our study like other studies, has limitations, including the self-reporting of information.

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