

Maternal Health Literacy and Its Association with Spiritual Health in Women

ABSTRACT

Background and Objective: Maternal health literacy is important because women's health and their children and family's health depends on their women's health literacy skills. Inadequate health literacy is a main factor to several health disparities and may affect women's spiritual health. However, the linkage between maternal health literacy and women's spiritual health has not yet been studied well and it remains an open question. . The aim of this study is to examine level of maternal health literacy of women Torbat Heydarieh and to explore its association with spiritual health.

Materials and Methods: A cross-sectional study was conducted, in 2018, through a multi-stage sampling design on 269 women in Torbat Heydarieh, Iran. Data was collected through valid and reliable questionnaires including the maternal health literacy, Paloutzian and Ellison Spiritual Health. Data were analyzed using correlation and regression coefficients test by the SPSS23.0.

Results: mean age of the studied women, maternal health literacy score, and spiritual health were 28.9±5.8 years, 42.9±5.8, and 88.7±13.3, respectively. There was no significant relationship between maternal health literacy and spiritual health (P=0.20), and level of education had a significant relationship with health literacy (P<0.0001).

Conclusion: In this study, also there was no significant relationship between maternal health literacy and spiritual health among women, which can be an area of future research.

Paper Type: Research Article

Keywords: Health literacy, Spiritual health, Health.

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Elham Charoghchian Khorasani

Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.

Department of Health Education and Health Promotion, school of Health, Mashhad University of Medical Sciences, Mashhad, Iran.

Seyedeh Belin Tavakoly Sany

Department of Health Education and Health Promotion, school of Health, Mashhad University of Medical Sciences, Mashhad, Iran.

Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.

Mahbobe Abdollahi

Department of Public Health, School of Health, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran.

Mahbobe Najafi

Department of Public Health, School of Health, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran.

Zohre Zadehahmad

* Department of Public Health, School of Health, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran. (Corresponding Author) : zadehahmadz1396@gmail.com.

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Introduction

In the 21st century, the health literacy has been known as a global issue (1). Health literacy refers to the person's capacity for acquiring, interpreting, and understanding preliminary information and healthcare services that are required for proper decision-making (2). Although, it is still not well clear to what extent health literacy affects health outcomes. It was evidenced that many of the health disparities associated with inadequate health literacy(3). Cross-sectional studies showed that individual with a low level of health literacy has a low level of health knowledge, worse self-management of chronic diseases, underuse of preventive services, and poorer health. (4). In the United State, around 90 million people have limited health literacy which causes an increased hospitalization rate, higher use of emergency services and spending about 69 billion dollars for the healthcare cost(5). In Iran, based on a study across five provinces, only 28.1% of the participants had sufficient health literacy, 15.3% had borderline, and 56.6% had insufficient health literacy(6). Health literacy skills are important to promote women's ability to get involved in health promotion activities (7). The results of a systematic review was performed in 2019 in Iran indicated that the mean health literacy score among Iranian women was average or limited, and health literacy score were significantly higher among pregnant women, compared with women suffering from chronic diseases(9). spiritual health is one of the newest dimension of health alongside other health dimensions such as physical, psychological, and social health. Spiritual health refers to enjoying a sense of approval, positive feelings, moral, and a sense of positive interaction with a holy superior authority, others and the self, which develops during a dynamic and coordinated personal cognitive, emotional, active and consequential

process(11). Fostering spiritual health enhances adaptation to conditions. Spirituality improves the person's attitude to their surroundings, which can reduce negative emotions, stresses, and develop a sense of independence and power. Meanwhile, there is a relationship between faith and positive mood states(12). Various studies have examined the effects of various factors on spiritual health (13-15). In this study, we tried to examine association between the maternal health literacy and spiritual health. A limited number of studies have examined the relationship between health literacy and spiritual health (16-18). Therefore, the primary aim of this study is to examine this relationship among women via maternal health literacy questionnaire. Because women are the educators of the next generation in any country (19), and their spiritual health plays an important role in the health of any society.

Hence, this study was conducted to investigate the relationship between maternal health literacy and spiritual health in women referring to comprehensive health services in Torbat-e Heydarieh, Iran.

Methods

This research is a cross-sectional study with descriptive- analytical type was performed in comprehensive healthcare centers of Torbat Heydarieh, Iran in 2018. The sample size was estimated at least 260 based on their study by Ghafari et al. and using the sample size formula for mean estimation with 95% confidence interval and accuracy of 0.8(20). In this study, 285 women participated, and 269 questionnaires were included in final analysis.

The subjects were chosen through cluster random sampling. Five centers were randomly chosen from 11 comprehensive healthcare

centers across Torbat Heydarieh town. Next, the researcher referred to these healthcare centers and investigated the household files. Women who met the inclusion criteria were selected to attend in this study. Through phone call, the women were asked to present themselves for completing questionnaires at a certain time if they wished. The inclusion criteria were Iranian nationality, having reading and writing literacy, willingness to participate, and age range 15-49 years. The women who were willing to participate in the study would refer to the comprehensive healthcare center. Initially, the researcher explained the objective of the study and its stages to the women. Next, the women completed the written informed consent form for participation, and then the questionnaires would be completed in a self-administered way by the women.

The instrument utilized in this research was a three-part questionnaire included demographic characteristics of the subjects, maternal health literacy questionnaire, and spiritual health questionnaire. The questionnaire related to the demographic characteristics related to information of age, spouse age, level of education, spouse level of education, occupation, and number of children. The maternal health literacy scale was first developed by Mojuyinola,(2011) (21), and translated to Persian. It was tested for validity and reliability by Peyman & et al (2016) for Iranian population (22). This questionnaire composed of 14 items and it is scored based on “strongly agree” (four points), “agree” (three points), “disagree” (two points) and “strongly disagree” (one point). The total score shows the health literacy score of the participants, with the least and highest possible scores of 14 and 56, respectively. Content validity of this questionnaire was 0.96 and reliability of this questionnaire was also confirmed at the

Cronbach’s alpha coefficient of 0.89(22).

The other questionnaire was SWBS spiritual health questionnaire which was designed by Paloutzian and Ellison in 1982, containing 20 items. The response of items is in the form of Likert 6-option scale ranging from absolutely disagrees to absolutely agree. In the items with positive nature, score 1 is attributed to the absolutely disagree response and score 6 to absolutely agree, while in the items with the negative form, score 6 is assigned to the absolutely disagree and score 1 to absolutely agree. Thus, the range of scores of the spiritual health is from 20 to 120. Spiritual health was classified into three levels of low (score 20-40), average (score 41-99), and high (score 100-120). Its reliability and validity have been evaluated by Rahmati et al. Its Cronbach alpha was obtained 0.895 and the correlation was 0.893(23). The data were then analyzed by SPSS 23.0, through descriptive statistics plus correlation and regression coefficients.

Results

The mean age of the participants was 28.96 ± 5.82 years and the average number of children per each household was 1.32 ± 1.06 . The mean age of the spouse of participants was 33.72 ± 6.44 . Other demographic characteristics of the subjects are reported in Table 1.

The mean maternal health literacy score was 42.9 ± 5.8 . The mean score of spiritual health was 88.7 ± 13.3 .

The results showed that there was no significant relationship between maternal health literacy and spiritual health, and their correlation coefficient between them was not significant ($r=0.08$, $P=0.02$).

In order to explore the effect of demographic factors on the maternal health literacy and spiritual health, linear regression model was used (Table

Table 1: The demographic characteristics of women referring to comprehensive healthcare centres of Torbat Heydarieh

Variable		Number (percent)	Variable		Number (percent)
Age, years	Range: 15-25	85(31.6)	Spouse age, years	Range: 15-25	18(6.7)
	Range: 26-36	126(46.8)		Range: 26-36	180(66.9)
	Range: 37-47	58(21.6)		Range: 37-47	61(22.7)
	Range: 48-58	10(3.7)		Range: 15-25	18(6.7)
Number of children	0	68(25.3)	Spouse's education level	Under diploma	69(25.6)
	1	90(33.5)		Diploma	86(32)
	2	78(29.0)		University	114(42.4)
	3	22(8.2)	Women's Employment Status	Housewife	205(76.2)
	4	11(4.1)		Employed	64(23.8)
Women's Education level	Under diploma	61(22.7)			
	Diploma	96(35.7)			
	University	112(41.6)			

Table 2: Grading the spiritual health of women referring to the comprehensive healthcare centres of Torbat Heydarieh

Variable	Classification	Number (percent)	Mean±SD
Spiritual health	Low	0	88.13±7.3
	Medium	220(82)	
	Top	49(18)	

3). The results showed that the level of education had a significant relationship with maternal health literacy. At the level of high school or diploma, the mean maternal health literacy score was 3.81, and it was significantly greater in this population compared with participants who have lower degree (guidance and primary school) ($P < 0.0001$). Further, at the level of university degree, the mean maternal health literacy score was 5.87 units greater than the guidance and primary school ($p < 0.0001$). Other variables including age, spouse age, number of children, level of spouse education, and occupation had no significant relationship with maternal health literacy.

The variables of spouse age, number of children,

and level of education had a direct and significant relationship with spiritual health. With one year increase to the spouse age, the mean score of spiritual health increased by 0.54 ($P = 0.02$), and with adding one child, the mean score of spiritual health increased by 2.12 units ($P = 0.03$). At the level of high school or diploma education, the mean score of spiritual health was 10.47 greater than the guidance school and primary school ($P < 0.0001$). Further, at the level of university degree, the mean spiritual health score was 7.77 units greater than the primary school and guidance school ($P = 0.01$). There was no significant relationship between other demographic variables and the above-mentioned factors.

Table 3: The relationship between demographic characteristics and maternal health literacy as well as spiritual health

Variable B(95%CI)		Maternal health literacy		Spiritual health	
		P value	B(95%CI)	P value	
Age		-0.14(0.36,0.07)	0.21	0.33(0.20,0.86)	0.24
Spouse age		-0.17(-0.37,0.02)	0.08	0.54(0.06,1.02)	0.02*
Number of children		0.46(-0.34,1.26)	0.26	2.12(0.09,4.02)	0.03*
Level of Education	Under diploma	-	-	-	-
	Diploma	3.81(1.88,5.75)	<0.0001*	10.47(5.83,15.11)	<0.0001*
	University	5.87(3.35,8.38)	<0.0001*	7.77(1.76,13.78)	0.01*
Spouse's education level	Under diploma	-	-	-	-
	Diploma	0.47(-1.37,2.32)	0.62	2.32(-2.11,6.74)	0.33
	University	0.84(-1.42,3.09)	0.47	3.21(-2.20,8.63)	0.24
Job	Housewife	-	-	-	-
	Employed	0.96(-0.88,2.80)	0.31	-2.39(-6.86,1.96)	0.29

* Confidence interval is 95%.

Discussion

This study aims to determine the maternal health literacy of women in Torbat Heydarieh and explore its relationship with spiritual health in 2018. The results indicated that there was no significant relationship between health literacy and spiritual health, which was not consistent with the study of Padehban et al., who examined the relationship between spiritual health and health literacy among the Marine force personnel(16). This result may be due to the differences in type of population and the questionnaire used. In the study of Padehban et al., the study population was naval personnel who were surveyed by the Helia questionnaire and a significant relationship was observed between health literacy and spiritual health. However, in the present study, the study population was women referring to Comprehensive Health Service Centers and the Maternal Health Literacy Questionnaire was used, and there is no significant relationship was observed between maternal

health literacy and spiritual health. Health literacy questionnaires are different according to the aspects of health literacy that they examine. In the maternal health literacy questionnaire, items related to maternal and child care have been examined, so the difference between the items in this questionnaire and the Helia questionnaire lies in the reasons for the different results. The similarity between the two studies is related to the use of the Paloutzian and Ellison Spiritual Health Questionnaire.

The health literacy in women in Torbat-e Heydarieh, according to the maternal health literacy questionnaire, is equal to the women's health literacy in Iran. According to a systematic study was conducted in 2019,(9) the average women's health literacy based on the maternal health literacy questionnaire is 42.7 ± 5.6 , which is almost consistent with the average women's health literacy in Torbat Heydarieh. Insufficient or low health literacy brings a considerable

burden to the medical system and the public health. Although maternal health literacy among women in Torbat-e Heydarieh is not less than maternal health literacy in Iranian women, steps must still be taken to improve women's health literacy. Because health literacy will affect the public's access to health care services, reduce the understanding of health information, and adversely affect health-related decisions. It also leads to an increase in hospitalization and mortality(24, 25).

One of the factors affecting health literacy of people is the personal situation of the person. Several studies showed that deferent type of determinates affect level of health literacy in communities such as individual's health status, the risks and challenges, level of individual's dependency on social groups, the communication with physicians and healthcare personnel age,, and social determinant factors (poor socioeconomic conditions, stress, unemployment and occupational status, social support and lifestyle)(26, 27). It was evidenced that the level of health literacy is higher among women than men(28) because women is the first population who receive more attention to promote their health literacy, as training this population causes promotion of children health as well as the health of the family(27). Health literacy is an essential element of the woman's ability in understanding and processing information related to health, and the women's level of health literacy not only affects their own health but also the health of their children and families(28). Studies have shown that health literacy is associated with fertility knowledge of women. Also, women with lower health literacy have less tendency to plan their pregnancies, to take folic acid and vitamins, and are more likely to give birth to a newborn with a weight less than 4000 g(24, 29, 30). Furthermore, health literacy was positively

associated with knowledge about hormone therapy (31), mammography(32), and selecting breast-feeding or feeling with artificial milk(33).

The results of the present study indicated that the only level of education was significantly and directly associated with individual's health literacy (34-36). However, results of our study was not consistent with study of Charoghchian(3) and Najimi(37). The different results can be due to different conditions of study participants. For example, Charoghchian et al.(3) Investigated level of health literacy on among diabetic women. Thus, the target group and the level of culture of urban and rural regions as well as level of education can affect this issue.

In this study, there was no significant relationship between health literacy and age, which did not concur with the results of Safari Moradabadi et al.(36), who examined the pregnant women's health literacy in Bandarabbas. However, it was in line with the study of Abdollahi et al. who dealt with health literacy among women postpartum in Mashhad(38). This similarity between women from Mashhad and Torbat Heydarieh may be due to the similar culture of the women in Razavi Khorasan province.

In this study, the spouse level of education had no significant relationship with occupation. However, in the study by Charoghchian et al.(39) who explored the maternal health literacy among pregnant women, this relationship was significant.

In the present study, occupation had no significant relationship with health literacy, which was in line with the study of Charoghchian et al.(39). Also, the spouse age and number of children had no significant relationship with the health literacy.

This study had some limitations. The first was investigating health literacy among women while neglecting the men's health literacy. The health literacy of women referring to comprehensive

healthcare centers was investigated, while the women who did not refer to these centers for any reasons possibly because of being employee, worker, or student who failed to present in these centers during office hours were not investigated. Furthermore, the women were limited to married women. Future research is proposed to investigate the health literacy of women in Torbat Heydarieh town without any limitation on marital status and level of referring to the centers. Further, the men's health literacy in this town should also be investigated.

Conclusion: The results of this study show that

there is no relationship between maternal health literacy and spiritual health, and the only factor that affects maternal health literacy is the level of female education. Therefore, considering the importance of maternal health literacy in women, it is necessary to plan to promote maternal health literacy in women.

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