



# Sexual Health Literacy and the Related Factors among Women in Qazvin, Iran

## ARTICLE INFO

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## ABSTRACT

**Aims** Sexual health literacy is a context-based variable affected by the ecosystem or a set of cultural and social factors of each community. This study aimed to determine sexual health literacy and the related factors.

**Instrument & Methods** This was a cross-sectional study. The population of this study was 305 women referring to the health centers of Qazvin, Iran. Sampling was done through a one-stage cluster method. The data collection tool was a demographic and the standard questionnaire sexual health literacy for adults. Data were analyzed using SPSS 22 and descriptive statistics and logistic regression.

**Findings** In this study, 44.9% of women were under 30 years old. The mean±SD of sexual health literacy was 76.89±18.32. Women had 7.9% inadequate sexual health literacy, 9.5% had inadequate sexual health literacy, 50.1% had adequate sexual health literacy, and 32.5% had excellent sexual health literacy. The results of the logistic regression test showed that the variables of education level, spouse education level, and use of contraceptives affect women's health literacy ( $p<0.05$ ).

**Conclusions** Women with a lower education level, women whose spouses had low education levels, and women who did not use contraceptives had lower sexual health literacy. Therefore, according to the role of sexual health literacy in understanding, accepting, and applying sexual health messages, it is suggested that researchers and health providers pay more attention to the mentioned women in designing educational programs to promote women's sexual health literacy.

**Keywords** Health Literacy; Women; Sexual Health

## CITATION LINKS

[1] Sexual health definition from the perspective ... [2] The effect of education on the knowledge of sexual and ... [3] Demographic factors affecting sexual dysfunction in ... [4] Relationship between health literacy and sexual ... [5] Foundations of life-long sexual health ... [6] Race-ethnic differences in sexual health ... [7] The role of social media in sex education: dispatches ... [8] Sexual health literacy among gay, bisexual ... [9] Development and psychometric properties of sexual ... [10] Functional health literacy and health-promoting behavior ... [11] Priorities for women's health from the global burden ... [12] Health-promoting behaviors in women ... [13] Health literacy and health promotion, definition, concepts ... [14] Health literacy in Iran: findings from ... [15] Health literacy interventions and outcomes: an ... [16] Workers' knowledge and beliefs about cardiometabolic ... [17] Sexual and reproductive health literacy of the youth ... [18] Sexual and reproductive health literacy of school ... [19] Evaluation of Health Literacy and its influencing factors on ... [20] Health literacy level and its related factors among college ... [21] Relationship between health literacy and self-care ... [22] A survey on health literacy of referred diabetic ... [23] Health literacy among women referring to healthcare ... [24] Relationship between health literacy ... [25] Association between health literacy and adopting ... [26] The relationship between postpartum depression ... [27] Association between health literacy and ... [28] Functional health literacy among primary health-care ... [29] Functional health literacy among primary ... [30] Associated factors with the use of health services among ...

## Introduction

Sexual health is a part of reproductive health expressed as a need and a strategy to achieve the Millennium Development Goals [1]. Addressing all aspects of family health, including sexual health, is one of the measures that will strengthen the family's foundation. The evaluation of sexual issues is often neglected, especially in our country, which due to the traditional and cultural conditions of society, talking about sexual issues is restricted [1, 2]. The latest study in sexual health in Iran showed that sexual dysfunction in Iranian men and women was relatively high, and the participating women had undesirable sexual function [3]. One of the effective factors in improving sexual function is sexual health literacy [4].

Despite developments in the concept of public health literacy, conceptualization in sexual health literacy has not yet been developed [5, 6]. Sexual health literacy has been introduced as a concept related to the correct knowledge of sexual health and reproductive health, along with attitudes toward sexual health and fertility [7].

Sexual health literacy is a context-based variable affected by the ecosystem or a set of cultural and social factors of each community [3]. Sexual health literacy is a range of sexual health literacy that includes various areas such as gender and sexual development, puberty, pregnancy, contraceptive methods, unwanted pregnancy, transmittable diseases through sex, development of sex management skills such as discussing the quality of sexual relations, sexual preferences and coercion, and the positive and romantic dimensions of sexual relations [3]. Supporting sexual health literacy requires a plan based on diverse communities' specific social, cultural, and biomedical needs [8].

To indicate the importance of sexual health literacy, it can be noted that this variable has received more attention in recent years in the development of health-related programs such as the Australian National Sexual and Reproductive Health Program [9]. Possessing sexual health literacy leads to promoting a correct understanding of duties and responsibilities in sexual relations, providing a good opportunity to play gender roles correctly, promoting the ability to understand and assess the risks related to sexual health, promoting individual sexual health, having safe sexual experience, reducing unwanted pregnancies and transmittable diseases through sex, and improving the health of the family and society [5, 10].

Today, women's empowerment is an important issue that is recognized as a health priority. On the other hand, women makeup half of the country's population and are managers, educators, and community activists, and their health forms the basis of the health of half of the family and community [11, 12].

Women are the foundation of family health, and not paying attention to women's health can lead to permanent problems in the lifestyle and health of future generations [12]. Measuring health literacy can also be an important first step in building a new health indicator for communities [13]. A review of the studies shows that the concept of sexual health literacy has not been assessed in the country so far. Considering the importance of sexual health literacy [3], the role of sexual health literacy in promoting individual sexual health and ultimately improving the health of the family and society [3], the pivotal role of women in family health [12], and also the lack of sexual health assessment among women in the country, the present study aimed to determine the sexual health literacy and its related factors in among women.

## Instrument and Methods

This was a cross-sectional study conducted in 2020 among women referring to the health centers of Qazvin, Iran. Sampling was done through a one-stage cluster method so that, at first, a list of all comprehensive health centers in Qazvin was prepared. Then, out of these 24 centers, six centers from the north, south, and the city center were randomly selected and all women referring to these centers, who met the inclusion criteria, entered the study after obtaining written informed consent. Considering the results from a pilot study on 30 women ( $p=0.25$  for undesirable sexual health literacy), using Cochran sample size formula, taking into account 80% test power and 95% statistical confidence and  $d=0.05$ , the sample size was estimated to be 288. Besides, considering the 5% probability of specimen loss, 305 subjects were considered for this study. Inclusion criteria included being female and married, referring to comprehensive health centers in Qazvin, having a minimum literacy to read and write, having at least 18 years of age, having Iranian citizenship, and willingness to participate in the study. Incomplete completion of questionnaires was considered as an exclusion criterion.

Data collection was conducted via a two-part questionnaire:

- A) Demographic questionnaire, including age, job, level of education, spouse's level of education, age of the first child, age of spouse, duration of marital life, age of marriage, number of sexual intercoursures per week, and use of contraceptives.
- B) Sexual Health Literacy, health literacy data were collected through the sexual health literacy for adults (SHELA). This questionnaire was designed, validated, and used by Masoumi *et al.* [9]. This questionnaire included four main dimensions (access, reading and comprehension, evaluation and analysis, and information application dimension), with 40

items. The Likert scoring scale was five options so that 5 points were assigned to the strongly agree option, 4 points to the "agree" option, 3 points to have "no opinion", 2 points to the "disagree" option and 1 point to the "strongly disagree" option [9]. Moreover, by combining the two categories of "not so much sufficient and insufficient", the category of "limited health literacy" was extracted, and by combining the two categories of "excellent and sufficient", the category of "optimal health literacy" was extracted [14]. The validity and reliability of the SHELA questionnaire have already been established; the content validity ratio and the content validity index of the tool were 0.84 and 0.81, respectively. The instrument's internal consistency with the Cronbach's alpha index for the identified factors ranged from 0.84 to 0.94 [9]. The Cronbach's alpha coefficient was calculated to be 0.94 for accessibility, 0.98 for reading and comprehension, 0.77 for evaluation and analysis, 0.94 for health information, and 0.98 for the whole questionnaire.

Completion of the questionnaires was self-reported, and the women in the study were assured that all the information requested in the questionnaire would be used confidentially. In addition, the questionnaires were completed at the health centers of Qazvin.

The data were entered into SPSS 22 and analyzed using descriptivist statistics and logistic regression. The significant level was considered <0.05.

## Findings

In this study, 305 women were included (100% participation rate), that 161 (52.8%) were in undergraduate and higher education, and 150 (49.2%) were housewives (Table 1).

The results showed that the mean±SD of sexual health literacy was 76.89±18.32. Table 2 shows the frequency distribution of different levels of sexual health literacy among the studied women.

The results in Table 3 showed that the variables of education level, spouse education level, and contraceptive use were among the factors affecting sexual health literacy (p<0.05):

-The variable of the education level was one of the factors affecting sexual health literacy (p=0.036); so that the chances of having a desirable sexual health literacy in women with bachelor's and higher education and post-diploma were 4.845 and 2.388, times higher than women with primary education, respectively.

-The variable of the spouse's education level was one of the factors affecting sexual health literacy (p=0.033); so that the chances of having a desirable sexual health literacy in women whose spouses had a

bachelor's degree and higher, and post-diploma were 4.25 and 3.987 times higher than women whose spouses had primary education, respectively.

-The variable of using contraceptives was one of the factors affecting sexual health literacy (p=0.028) so that the chance of having desirable sexual health literacy in women who did not use contraceptives was 0.121 times higher than women who used contraceptives.

In addition, there was no significant relationship between age, job status, age of the first child, age of spouse, duration of marital life, age of marriage, and the number of sexual intercourses per week with sexual health literacy.

**Table 1)** Demographic and background characteristics of women

Variables	Frequency	Percent	
<b>Age</b>	Under 30 years	137	44.9
	30 years and older	168	55.1
<b>Education level</b>	Elementary	27	8.8
	Middle school	22	7.2
	Diploma	42	13.8
	Associate Degree	53	17.4
	Bachelor's degree and higher	161	52.8
<b>Job level</b>	Housewife	150	49.2
	Unemployed	27	8.9
	Employed	100	32.8
	Retired	28	9.1
<b>Age of first child</b>	Under ten years old	111	36.4
	10-20 years	98	32.1
	Over 20 years	96	31.5
<b>Spouse age</b>	Under 35 years	131	43.00
	35 years and older	174	57.00
<b>Spouse education level</b>	Elementary	29	9.5
	Middle school	26	8.5
	Diploma	55	18.1
	Associate Degree	45	14.7
	Bachelor's degree and higher	150	49.2
<b>Duration of marital life</b>	Under ten years old	109	35.7
	10-20 years	101	33.15
	Over 20 years	95	31.15
<b>Marriage age</b>	Under 25 years	148	48.5
	25-35 years	105	34.4
	Over 35 years	52	17.1
<b>The number of sexual intercourses per week</b>	Not at all. "	51	16.7
	Once	84	27.6
	2-3 times	104	34.1
	Four times and above	66	21.6
<b>Use of contraceptive methods</b>	Yes	169	55.40
	No	136	44.60

**Table 2)** Frequency distribution of different levels of sexual health literacy among the studied women

Level of sexual health literacy	Number	Percent
<b>Inadequate sexual health literacy</b>	24	7.9
<b>Not so much adequate sexual health literacy</b>	29	9.5
<b>Adequate sexual health literacy</b>	153	50.1
<b>Excellent sexual health literacy</b>	99	32.5
<b>Total</b>	305	100

## Sexual Health Literacy and the Related Factors ...

**Table 3)** Factors affecting the sexual health literacy of women studied in logistic regression

Variables	Sig.	Beta	Odds Ratio	95% CI	
				Lower	Upper
<b>Age</b>	0.541	-1.495	0.224	0.002	27.272
<b>The level of education</b>	0.036				
Elementary	Reference				
Middle school	0.999	-3.312	0.020	0.000	1.005
Diploma	0.179	-3.218	0.040	0.000	4.344
Associate degree	0.038	0.87	2.388	.071	80.757
Bachelor's degree and Higher	0.029	1.578	4.845	.412	56.907
<b>Job</b>	0.926				
Housewife	Reference				
Unemployed	0.494	1.305	3.691	0.088	155.476
Employed	0.999	2.054	7.803	0.080	145.258
Retired	0.550	1.076	2.934	0.086	99.857
<b>Spouse's age</b>	0.231	3.111	22.462	0.138	3662.499
<b>Spouse's education level</b>	0.033				
Elementary	Reference		<0.001	0.020	1.998
Middle school	0.549	1.547	4.698	0.030	735.530
Diploma	0.761	-0.648	0.523	0.008	34.034
Associate degree	0.028	1.383	3.987	0.130	121.835
Bachelor's degree and Higher	0.04	1.448	4.254	0.219	23.240
<b>Duration of marital life (year)</b>	0.272				
Under 10	Reference				
10-20	0.107	-2.797	0.061	0.002	1.828
Over 20	0.420	-0.872	0.418	0.050	3.493
<b>Marriage age (year)</b>	0.870				
Under 25	Reference				
25-35	1.000	0.000	<0.001	0.010	1.021
Over 35	1.000	0.000	<0.001	0.090	2.100
<b>The number of sexual intercourses per recent week</b>	0.973				
Not at all	Reference				
Once	1.000	-1.832	0.160	0.031	0.997
2-3 times	0.998	-0.002	<0.001	0.055	1.114
4 times and more	0.998	-0.002	<0.001	0.070	1.251
<b>Age of first child (year)</b>	0.862				
Under 10	Reference				
10-20	0.633	-0.663	0.515	0.034	7.871
Over 20	0.927	-0.121	0.886	0.067	11.650
<b>Using Contraceptives</b>	0.028				
yes	Reference				
No	0.038	0.87	0.121	0.018	0.800
<b>Constant</b>	1.000	2.020	7.539		

## Discussion

The sexual health literacy of women participating in the present study was at a desirable level. This result can be justified considering the impact of the higher level of education on the prevalence of adequate health literacy [15, 16] and that 70% of women participating in the present study had a university education. Another possible reason for this result is that approximately two-thirds of the husbands of women studied had a university education in the present study. Given the effect of husbands' level of education on the behavior of family members, especially women, regarding healthcare issues, it can

be said that the high level of education of husbands, along with the high level of education of wives, has been able to promote sexual health literacy among women of the present study. In the studies of Dabiri [17] and Vongxay [18], sexual health and productivity literacy were inadequate, which contradicted the present study results. Possible reasons for these discrepancies included the difference between the two studies and the present study in terms of measuring tools, age, gender, and the level of education of the participants. The measurement tool in the present study only measured sexual health literacy, while in the two studies, sexual health literacy has been measured collectively with productivity health literacy.

In these two studies, adolescents and young people of both genders participated, while in the present study, only women with an average age of over 36 years were present. Therefore, given the impact of gender [19-20] and [22, 21] age on health literacy, this difference can be justified. Also, in the present study, 70% of women had a university education, and considering the effect of education on health literacy [15, 16], it was normal that the level of sexual health literacy in the present study was more than the two studies mentioned above. According to the research team's opinion, these results were in line with the studies of Ghaffari [22] and Mahdavi [23]. But, it was inconsistent with the results of the studies of Panahi [24], Ghaffarzadeh Khoi [25], and Aghaeian [26]. This difference includes the difference in health literacy measuring tools in these studies [26-30] compared to that of the present study and the higher education level of women in the present study.

The variable of education level was one of the factors affecting women's sexual health literacy. The present study results were consistent with the results of the studies of Mahdavi [23], Aghaian [26]. Downey Sarkar [27] said that education provides more opportunities for the individual to understand, evaluate, and make correct decisions about health and provides a more conducive environment for increasing health literacy and the use of information earned [30]. Therefore, considering the effect of higher education level on health literacy [14, 15]

The variable of spouse's education level was one-factor affecting women's sexual health literacy. In justifying this result, it can be said that science, knowledge, and education play a role in individuals' growth and intellectual excellence. It also affects the behavior of family members, especially spouses, regarding health issues. Therefore, the higher level of education of the spouse can increase the sexual health literacy of the wife.

The variable of contraceptive use was one-factor affecting women's sexual health literacy. One of the areas of sexual health literacy is knowing the methods of contraception and using them to prevent unwanted pregnancies [3]. Therefore, it can be said

that women with higher sexual health literacy are more likely willing to use contraceptives than other women.

The most important limitation of this study is that no study was found on measuring sexual health literacy, which limits the comparability of other findings and emphasizes the need for further studies in this area. The other limitation was women's self-report while completing the questionnaire, which may not provide accurate information to the research team. Furthermore, relatively small sample size was another limitation of the present study, causing the results cannot be generalized to all women throughout the country. Therefore, further studies on a larger scale of women in this city and other cities are recommended. Also, considering that sexual health literacy among women has not been assessed so far, conducting such a study among these women can be considered the innovation of this study. Considering the role of sexual health literacy in understanding, accepting, and applying sexual health messages, it is suggested that researchers and health providers pay more attention to the mentioned women in designing educational programs to promote women's sexual health literacy.

## Conclusion

Overall, the results showed that women's health literacy in the study was at a desirable level. Sexual health literacy was also significantly related to the variables of education level, spouse's education level, and contraceptive usage. Women with lower education levels, spouses with low education levels, and women who did not use contraceptives had lower sexual health literacy.

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## References

1- Hosein Rashidi B, Kiyani K, Haghollahi F, Shahbazi Sighaldehy S. Sexual health definition from the perspective

of Iranian experts and description its components. *Tehran Univ Med J.* 2015;73(3):210-20. [Persian]

2- Khodakarami B, Aligholi S. The effect of education on the knowledge of sexual and reproductive health of women participating in marriage counseling classes of Hamedan based on the role model of James Brown. *J Hamadan Univ Med Sci.* 2011;19(1):52-8. [Persian]

3- Masoumi S.Z, Alavipour N, Parsa P, Kazemi F. Demographic factors affecting sexual dysfunction in postmenopausal women. *J Educ Community Health.* 2020;7(1):5-12. [Persian]

4- Sahebalzamani M, Mostaedi Z, Farahani H, Sokhanvar M. Relationship between health literacy and sexual function and sexual satisfaction in infertile couples referred to the Royan Institute. *Int J Fertil Steril.* 2018;12(2):136-41.

5- Graf AS, Patrick JH. Foundations of life-long sexual health literacy. *Health Educ.* 2015;115(1):56-70.

6- Guzzo K. B, Hayford S. Race-ethnic differences in sexual health knowledge. *Race Soc Probl.* 2012;4(3-4):158-70.

7- Manduley AE, Mertens AE, Plante I, Sultana A. The role of social media in sex education: dispatches from queer, trans, and racialized communities. *Fem Psychol.* 2018;28(1):152-70.

8- McDaid L, Flowers P, Ferlatte O, Young I, Patterson S, Gilbert M. Sexual health literacy among gay, bisexual and other men who have sex with men: a conceptual framework for future research. *Cult Health Sex.* 2020;23(2):207-223.

9- Maasoumi R, Tavousi M, Zarei F. Development and psychometric properties of sexual health literacy for adults (SHELA) questionnaire. *J Hayat.* 2019;25(1):56-69. [Persian]

10- von Wagner C, Knight K, Steptoe A, Wardle J. Functional health literacy and health-promoting behavior in a national sample of British adults. *J Epidemiol Community Health.* 2007;61(12):1086-90.

11- Ribeiro P, Jacobsen K, Mathers C, Garcia-Moreno C. Priorities for women's health from the global burden of disease study. *Int J Gynaecol Obstet.* 2008;102(1):82-90.

12- Mirjalili MR, Mirrezaee S, MazloomiMahmoodabad SS, Dehghan HR. Health-promoting behaviors in women of reproductive age in Yazd city. *J Toloo-e-Behdasht.* 2018;17(4):1-12. [Persian]

13- Kanj M, Mitic W. Health literacy and health promotion, definition, concepts and examples in Eastern Mediterranean region. 7th Global Conference on Health Promotion, "Promoting Health and Development: Closing the Implementation Gap", Nairobi, Kenya 2009;5: 26-30. Geneva: WHO; 2009.

14- Tavousi M, Haeri Mehrizi AA, Rafiefar SH, Solimanian A, Sarbandi F, Ardestani M, et al. Health literacy in Iran: findings from a national study. *PAYESH.* 2016;15:95-102. [Persian]

15- Berkman ND, Sheridan SL, Donahue KE, Halpern DJ, Viera A, Crotty K. Health literacy interventions and outcomes: an updated systematic review. *Evid Rep Technol Assess (Full Rep).* 2011;199(199):1-941.

16- Damman OC, van der Beek AJ, Timmermans DR. Workers' knowledge and beliefs about cardiometabolic health risk. *J Occup Environ Med.* 2014;56(1):92-100.

17- Dabiri F, Hajian S, Ebadi A, Zayeri F, Abedini S. Sexual and reproductive health literacy of the youth in Bandar Abbas. *AIMS Med Sci.* 2019;6(4):318-25.

18- Vongxay V, Albers F, Thongmixay S, Thongsombath M, Broerse JEW, Sychareun V, et al. Sexual and reproductive health literacy of school adolescents in Lao PDR. *PLoS ONE.* 2019;14(1):e0209675.

- 19- Panahi R, Ramezankhani A, Tavousi M, Osmani F, Ghazanfari E, Niknami S. Evaluation of Health Literacy and its influencing factors on dormitory students of Shahid Beheshti University of Medical Sciences in Tehran. *J Educ Community Health*. 2016;3(3):30-6. [Persian]
- 20- Mohammadi Farah S, Saati Asr MH, Kavivani Manesh A, Barati M, Afshari M, Mohammadi Y. Health literacy level and its related factors among college students of Hamadan University of Medical Sciences, Hamadan, Iran. *J Educ Community Health*. 2017;4(2):11-7. [Persian]
- 21- Barati M, Bayat F, Asadi Z A, Afshari Moshir F, Afshari M. Relationship between health literacy and self-care behaviors in hypertensive patients. *J Educ Community Health*. 2020;7(2):89-96
- 22- Rezaee Esfahrood Z, Haerian ardekani A, Rahmanian M, Ghaffari Targhi M. A survey on health literacy of referred diabetic patients to Yazd diabetes research center. *J Toloo-e-Behdasht*. 2016;15(3):176-86. [Persian]
- 23- Ghaffari M, Hatami H, Rakhshanderou S, Shoghli A, Heidari A. Health literacy among women referring to healthcare centers of Zanjan city, Iran: a cross-sectional study. *J Educ Community Health*. 2018;5(1):42-8.
- 24- Mahdavi ZH, Ramezankhani A, Ghanbari SH, Khodakarim L. Relationship between health literacy and female cancers preventive behaviors. *PAYESH*. 2017;16(5): 613-25. [Persian]
- 25- Panahi R, Namdar P, Samiei Siboni F, Fallah S, Anbari M, Dehghankar L, et al. Association between health literacy and adopting preventive behaviors of breast cancer in Iran. *J Edu Health Promot*. 2020;9:241.
- 26- Ghaffarzadeh Khoei M, Lamyaian M, Lotfi R, Montazeri A. The relationship between postpartum depression and health literacy among nulliparous women. *PAYESH*. 2017;16(6):797-805. [Persian]
- 27- Aghaeian N, Farahaninia M, Janmohamadi S, Haghani H. Association between health literacy and preventive behaviors of breast cancer in women. *JHL*. 2019;4(2):9-17.
- 28- Downey LVA, Zun LS. Assessing adult health literacy in urban healthcare settings. *J Natl Med Assos*. 2008;100(11):1304-8.
- 29- Jovic Vranes A, Bjegovic -Mikanovic V, Marinkovic J. Functional health literacy among primary health-care patients: data from the Belgrade pilot study. *J Public Health*. 2009;31(4):490-95.
- 30- Abdolmalaki B, Peyman N, Esmaeili H, Tajfard M. Associated factors with the use of health services among postmenopausal women in Mashhad based on the theory of planned behavior: the role of health literacy. *J Educ Community Health*. 2019;6(2):111-17.