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The association between sexual health literacy and sexual function of women in Iran

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Abstract:

BACKGROUND: Considering the importance of sexual health literacy in promoting individual sexual health and ultimately improving family and social health as well as the effect of health literacy on sexual function, this study was designed and conducted to determine the association between sexual health literacy and sexual function among women.

MATERIALS AND METHODS: This was a cross-sectional study. A total of 420 women referring to health centers were entered into the study using one-stage cluster sampling method. Data collection tools included a demographic questionnaire, Iranian Adult Sexual Health Literacy Assessment Questionnaire, and the Persian version of the Female Sexual Function Assessment Questionnaire (FSFI). Data were collected and entered into SPSS 22 and logistic regression.

RESULTS: The results of the logistic regression test showed that the variable of sexual health literacy was effective on women's sexual function ($P = 0.021$) so that the chances of having a desirable sexual function in women with excellent were 4.222 times more than women with inadequate health literacy; the variables of employment status, level of education, duration of marital life, and the number of sexual intercourses per recent week were the factors affecting women's sexual function ($P < 0.05$).

CONCLUSION: The results of this study pointed out the existence of an undesirable level of sexual function and a desirable level of sexual health literacy among participating women. Hence, designing and implementing the training plans to promote sexual function among these women is necessary.

Keywords:

Health literacy, sexual dysfunction, sexual health

Introduction

Sexual activity is one of the most important aspects of human life, which can be affected by individual characteristics, interpersonal relationships, family and sociocultural conditions, environment, sexual activity background of the individual and the spouse, physical-mental health, and hormonal status.^[1] Sexual health is one of the key factors in the stability of marital life and one of the most important factors in the couple's happiness, the proper quality of life.^[2] The prevalence rate of sexual dysfunction and impotence

in women is from 90% to 43%. This rate is because of the diversity of definitions, study protocols, cultural differences, and environmental factors.^[3] Natural sexual function is part of a woman's sexual and mental health; as a result, changes in sexual function for a variety of reasons can cause disorders in emotional and interpersonal communication, which can affect women's other functions.^[1] Sexual function means engaging in sexual intercourse, as one desires, including stages such as sexual desire, arousal, orgasm, and abating, without pain and with satisfaction and orgasm.^[4]

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A reduction in sexual function could have negative impacts on self-esteem and interpersonal relationships and lead to stress.^[5] The overall prevalence of sexual dysfunction was 31%.^[6] The latest research on sexual health in Iran demonstrated that the rate of sexual dysfunction in Iranian men and women was relatively high and the participating women had an undesirable sexual function.^[7] Sexual function is associated with health literacy so that higher health literacy is associated with higher levels of sexual function in men and women.^[8] Sexual health literacy plans include comprehensive lifelong information on gender, knowledge, risks, and vulnerability to unhealthy sexual activity that causes and promotes sexual health.^[9,10] Having sexual health literacy leads to improving the ability to understand and assess the risks associated with sexual health, delaying the first sexual experience, engaging in a safe sexual experience, providing a good opportunity to play properly the gender role, improving sexual interactions of couples, improving individual sexual health, and eventually, improving family and social health.^[11]

Health literacy can affect not only health-related behaviors but also the use of information and sexual function in couples.^[12] Sexual health literacy is a set of skills, abilities, and capacities in various dimensions of sexual health. These skills and capacities can affect sexual function from time to time emergence in any of the following dimensions, including access to sexual health information, reading, understanding, evaluation and analysis, and using this information. Furthermore, considering the correlation between health literacy and sexual satisfaction,^[13] it is possible that sexual health literacy can also affect sexual function by increasing sexual satisfaction.^[8] Women are the origin of family health and lack of attention to women's health could lead to permanent disorders in the lifestyle and health of future generations.^[14] Sexual problems are one of the prevalent problems of women throughout the life.^[3] Considering the relatively high prevalence of sexual dysfunction among Iranian women^[7] and the importance of sexual health literacy in promoting individual sexual health and ultimately improving family and social health,^[11] as well as the impact of health literacy on sexual function,^[8,12] this study aimed to determine the association between sexual health literacy and sexual function among women.

Materials and Methods

Study design and setting

This is a descriptive, cross-sectional study in which 420 women referring to health-care centers in 2020 in Qazvin were selected via one-stage cluster sampling method.

Study participants and sampling

At first, a list of all comprehensive health centers in Qazvin was prepared. Then, out of these 24 centers, 6 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. Inclusion criteria include being at least 18 years old, married, having female gender and stable life with spouse, no spouse with premature ejaculation or impotence, no severe debilitating diseases, and no mental illness.

According to the results of the pilot study among 30 women (considering $r = 0.15$ for the correlation between sexual health literacy and sexual function) and can also be seen from the sample size table for correlation research^[15] Then, taking into account design effect = 2, the sample size was estimated to be 350 people. Finally, considering a 20% chance of dropping samples, 420 people were included in the study.

Data collection tool and technique

The data collection method in this study was a questionnaire that included the following:

1. Demographic and background characteristics: age, education level, occupation, age of the first child, age of spouse, education level of spouse, duration of marital life, age of marriage, number of sexual intercourses per recent week, and use of contraceptives
2. Health literacy data were collected through the sexual health literacy for adults. This questionnaire includes four main dimensions (access dimension, reading and comprehension dimension, evaluation and analysis dimension, and information application dimension) which has 40 questions and measures the above dimensions. Five points are assigned to the strongly agree option, up to 1 point is assigned to the strongly disagree option. The total score of the questionnaire is a minimum of 40 and a maximum of 200. The maximum scores are 8 and 40 in the access dimension, 17 and 85 in the reading and comprehension skills, 5 and 25 in the evaluation and analysis dimension, and 10 and 50 in the application skills. Scores from 0 to 50 as inadequate health literacy, 50.1 up to 66 are considered as insufficient health literacy, 66.1–84 are considered as adequate health literacy, and grades 84.1–100 are considered as excellent health literacy;^[11] the content validity ratio and the content validity index of the tool were 0.84 and 0.81, respectively. The convergent validity evaluation showed correlation coefficients in the range of 0.31–0.7. The internal consistency of the instrument with the Cronbach's alpha index for the identified factors ranged from 0.84 to 0.94. The intraclass homogeneity of the instrument based on the ICC index calculated was in the range

of 0.90–0.97.^[11] 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

- Female's Sexual Function (FSFI) Questionnaire was used to assess women's sexual performance. The questionnaire consists of 19 5-choice questions that include sexual desire, arousal, orgasm, sexual pain, genital softening, and sexual satisfaction. The overall cutoff point of this questionnaire is 28, higher scores indicate good sexual performance. The minimum score is 2 and the maximum score is 36.^[16-18] The overall test re-test reliability coefficients were high for each of the individual domains ($r = 0.79-0.86$) and a high degree of internal consistency was observed (Cronbach's alpha values of 0.82 and higher) Good construct validity was demonstrated. The reliability of the scale the Cronbach's alpha coefficient was ≥ 0.7 .^[19] The Cronbach's alpha coefficient for FSFI was calculated to be 0.81. According to the researchers of the present study, the level of sexual function was classified into two levels: undesirable (score 2–28) and desirable (score 29–36) and used in logistic regression.

Ethical consideration

After observing the ethical (code ethical: IR.QUMS.REC.1399.077) and research principles, the data were entered into SPSS ver 22. IBM Corporation, Armonk, NY and analyzed using descriptive statistics (mean \pm standard deviation [SD]) and logistic regression.

Results

In this study, a total of 420 women were included (100% participation rate). Of these, 296 (70.5%) had higher education than diploma and 236 (56.2%) had a job other than housekeeping. Table 1 shows the other demographic and background characteristics of the sample.

The results showed that the mean \pm SD score of sexual health literacy was 78.47 ± 17.85 of 100 and was at a desirable level. In addition, 44 (10.5%) had insufficient sexual health literacy, 42 (10%) had not so much insufficient sexual health literacy, 200 (47.6%) had adequate sexual health literacy, and 134 (31.9%) had excellent sexual health literacy. Among the four dimensions of sexual health literacy, the highest mean score and the application of health information dimension reading and comprehension dimension (82.11 ± 18.26), the lowest mean score (75.70 ± 23.79).

The mean and SD score of sexual performance of participating women was 21.56 ± 4.83 out of 36 points and was at an undesirable level.

Table 1: Frequency distribution of the women according to demographic characteristics

Variables	Frequency (%)
Age (years)	
Under 30	170 (40.5)
Over 30	250 (59.5)
Education level	
Elementary	45 (10.7)
Middle school	32 (7.6)
Diploma	47 (11.2)
Associate degree	97 (23.1)
Bachelor's degree and higher	199 (47.4)
Job status	
Housewife	184 (43.8)
Unemployed	47 (11.2)
Employed	131 (31.2)
Retired	58 (13.8)
Age of first child	
Under 10 years old	150 (35.7)
10-20 years	139 (33.1)
Over 20 years	131 (31.2)
Spouse age (years)	
Under 35	196 (46.7)
Over 35	224 (53.3)
Spouse's level of education	
Elementary	44 (10.5)
Middle school	31 (7.4)
Diploma	59 (14)
Associate degree	89 (21.2)
Bachelor's degree and higher	197 (46.9)
Duration of marital life	
Under 10 years old	149 (35.5)
10-20 years	140 (33.3)
Over 20 years	131 (31.2)
Marriage age (years)	
Under 25	188 (44.7)
25-35	162 (38.6)
Over 35	70 (16.7)
The number of sexual intercourses per recent week	
Not at all	82 (19.5)
Once	113 (26.9)
2-3 times	134 (31.9)
4 times and above	91 (21.7)
Use of contraceptive methods	
Yes	226 (53.8)
No	194 (46.2)

The results of Table 2 showed that the variables of employment status, level of education, duration of marital life, number of sexual intercourses per recent week, and sexual health literacy were the factors affecting women's sexual performance ($P < 0.05$):

The employment status variable was one of the factors affecting women's sexual function ($P = 0.040$) so that the chances of having a desirable sexual function in women with freelance and employee jobs were 1.207 and 1.651,

Table 2: Factors affecting the desirable sexual function of women studied in logistic regression test

Variables	B	SE	P	OR
Contraceptives	0.089	0.780	0.263	1.093
Age	0.83	0.392	0.536	2.293
Education level				
Elementary		Reference		
Middle school	0.168	0.074	0.296	1.183
Diploma	0.184	0.481	0.354	1.202
Associate degree	0.295	0.470	0.411	1.343
Bachelor's degree and higher	0.411	0.307	0.034	1.508
Job				
Housewife		Reference		
Unemployed	0.149	0.049	0.199	1.161
Employed	0.501	0.073	0.029	1.650
Retired	0.565	0.093	0.044	1.759
Spouse_age	0.284	0.062	0.441	1.328
Spouse education level				
Elementary		Reference		
Middle school	0.139	0.068	0.774	1.149
Diploma	0.113	0.086	0.884	1.119
Associate degree	0.417	0.046	0.824	1.517
Bachelor's degree and higher	0.443	0.096	0.989	1.557
Duration of marriage				
Under 10 years old		Reference		
10-20 years	0.799	0.048	0.013	2.179
Over 20 years	0.975	0.056	0.135	2.651
Marriage age (years)				
Under 25		Reference		
25-35	0.872	0.30	0.173	2.391
Over 35	0.959	0.97	0.699	2.609
Number of sexual intercourses per recent week				
Not at all		Reference		
Once	0.689	0.099	0.088	1.992
2-3 times	0.693	0.090	0.035	1.999
4 times and above	0.917	0.080	0.029	2.502
Age of first child				
Under 10 years old		Reference		
10-20 years	0.019	0.040	0.117	1.019
Over 20 years	0.078	0.034	0.545	1.081
Sexual health literacy				
Insufficient sexual health literacy		Reference		
Not so much insufficient sexual health literacy	0.414	0.152	0.029	1.513
Adequate sexual health literacy	0.514	0.522	0.016	1.672
Excellent sexual health literacy	0.879	0.121	0.008	2.408

SE=Standard error, OR=Odds ratio

respectively, of women with housework. The level of education variable was one of the factors affecting women's sexual function ($P = 0.019$) so that the chance of having a desirable sexual function in women with a bachelor's degree and higher was 2.113 times higher than women with primary education.

The duration of marital life was one of the factors affecting women's sexual function ($P = 0.024$) so that the

chance of having a desirable sexual function in women with a marital life duration between 10 and 20 years was 0.817 times higher than women with a marital life duration of <10 years.

The variable of the number of sexual intercourses per recent week was one of the factors affecting women's sexual function ($P = 0.038$) so that the chances of having a desirable sexual function in women with 4 times more sex/week and more and women with 2-3 times of sex/week were 6.333 and 3.360 times higher than women without sex/week, respectively.

The variable of sexual health literacy was the other one factors affecting women's sexual function ($P = 0.021$) so that the chances of having a desirable sexual function in women with excellent, sufficient, and not enough sexual health literacy were 4.222, 2.219, and 1.313 times more than women with inadequate health literacy, respectively.

Discussion

The results of the present study showed that 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^[20,21] and that 70% of women participating in the present study had a university education. Another possible reason for this result is that in the present study, approximately two-third of the husbands of women studied had a university education. The studies of sexual health and productivity literacy were inadequate, which contradicted the results of the present study.^[22,23] Possible reasons for these discrepancies included the difference between the two studies and the present study in terms of items such as measuring tools, age, gender, and the level of education of the participants.

The results of the current study indicated that the sexual function of the participants was at an undesirable level. Considering that the low level of health literacy in the domain of using information compared to other domains of health literacy leads to not taking appropriate measures in applying health knowledge,^[24,25] it can be said that the undesirable level of sexual function of these women was probably more for the low mean score of sexual health literacy in the domain of using health information compared to other domains of sexual health literacy. Similarly, in the study, the sexual function of the studied women was undesirable.^[7] The results of the studies were in line with the results of the present study.^[26-28] But, in two studies of most women had a desirable sexual function.^[8,29] The reason for the discrepancy between the results of the above studies

and the results of the present study is the difference in the statistical population, cultural conditions, and tools used.

Further, the results explicated that the variable of sexual health literacy was one of the factors affecting women's sexual function. To justify this result, it can be said that health literacy, like knowledge, is a cognitive variable,^[30] and knowledge is related to behavior.^[31,32] Therefore, considering the similarity of the nature of health literacy and awareness, it can be said that health literacy can also affect behavior. Health literacy can affect not only health-related behaviors but also the use of information and sexual function in couples.^[12]

Besides, the results of the present study demonstrated that the variable of employment status was one of the factors affecting women's sexual function. In justifying this result, it can be said that women's employment outside the home causes an increase in social knowledge and insight, getting out of passivity, becoming more familiar with women's social problems, and thus realizing the value of their husbands' work; as a result, it could increase sexual function quality too. The results of the studies were consistent with the present study,^[33] but the results of the studies were inconsistent with the results of our study.^[34] Possible reasons for this discrepancy include differences in the type of tools used, geographical conditions, the research community, samples, age, and educational conditions.

The variable of the number of sexual intercourses per recent week was one of the factors affecting women's sexual function. In this regard, it can be said that the more sexual intercourse, more sexual arousal, sexual desire, sexual pleasure, orgasm, suppression, without pain, with satisfaction, and ultimately the peak of sexual pleasure occur; as a result, sexual function would be increased, the variable of women's education level was one of the factors affecting women's sexual function. The present study was in line with the studies.^[35,36]

The results of the present study additionally declared that the variable of the marital life duration was one of the factors affecting women's sexual function. In this regard, it can be said that by increasing the duration of the marital life, a feeling of satisfaction would be created in the couple. Moreover, studies found a significant relationship between marital life duration and sexual dysfunction, which were concordant with the present study.^[37] However, the results of the study^[38] were contrary to the results of our study. One of the main reasons for the discrepancies in various studies in Iran and other countries is the difference between the studied populations and use of different questionnaires.

Limitation and suggestion

The major limitation of the present study was that no study was found to measure women's sexual health literacy and its association to sexual function, and this could further limit the comparability of the results and emphasize the necessity of further studies in this area. Another limitation of this study was participants' self-report while completing the questionnaires, which may not provide accurate information to the research team. The embarrassment of talking about sexual problems due to cultural issues was another limitation of the study, the relatively small sample size was another limitation of the present study. Since this study was conducted only among selected women in several health-care centers in Qazvin, the results cannot be generalized to all women in other parts of the country.

Conclusion

Overall, the results of this study pointed out the existence of an undesirable level of sexual function and a desirable level of sexual health literacy among participating women. Moreover, the variables of women's education level, duration of marital life, employment status, number of sexual intercourses per recent week, and sexual health literacy were factors affecting women's sexual function. Hence, the necessity of designing and implementing the training plans to promote sexual function among these women, feels more than ever. Therefore, it is recommended to conduct this study on a larger scale of women in this city and other cities, especially rural areas.

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Conflicts of interest

There are no conflicts of interest.

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