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The effect of sexual health literacy on the sexual life quality of women referring to healthcare centers in Qazvin, Iran

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Abstract:

BACKGROUND: Considering the role of sexual quality of life in public satisfaction, improving interpersonal relationships, promoting the general quality of life, especially in women, and ultimately maintaining, consolidating, and promoting family and community health, the need to explain the factors affecting it, such as sexual health literacy, is felt from the perspective of women. This study aimed to determine the relationship of sexual health literacy on the sexual life quality of women referring to health-care centers in Qazvin.

MATERIALS AND METHODS: This research was a descriptive cross-sectional study. The population of this study was 420 women of Qazvin in 2020 who were selected by multistage sampling. The data collection tool was a demographic questionnaire and the standard questionnaire sexual health literacy for adults and Sexual Quality of Life-Female questionnaire. Data were analyzed using SPSS software version 22 and descriptive statistics and logistic regression.

RESULTS: The mean (standard deviation) of the sexual health literacy score was 78.47 (17.85) and sexual quality of life was 59.71 (19.21). The results of logistic regression test showed that the variables of sexual health literacy, education level, age of marriage, and number of sexual intercourses per week were effective factors on the sexual quality of life ($P < 0.05$).

CONCLUSION: Women with lower sexual health literacy, lower education level, higher marriage age, and women who had sex less per week had a lower sexual quality of life. Therefore, it is necessary to pay more attention to these women in designing educational programs to improve the quality of sexual life.

Keywords:

Sexual health literacy, sexual health literacy for adults, sexual life quality, women

Introduction

The central component of the quality of life is health. Since the phenomenon of quality of life cannot be fully inquired in the health system, the concept of health is studied in relation to the quality of life, which is defined in the format of the concept of "health-related quality of life."[1,2] According to the definition of the World Health Organization, the quality of life is the individuals' perception about the state of life in the field of culture and value system in which they live, relating to goals, expectations, criteria, and important matters.[3] The sexual life quality is interrelated and intertwined with the level of the general quality of life so that poor sexual quality of life can be a picture of health status and general quality of life.[4] The sexual quality of life, like the quality

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of life, is a purely mental concept and is based on the individuals' perception of the sexual aspect of their life.[5]

One of the important physical and psychological dimensions of women's quality of life is their sexual quality of life, which is affected by many individual factors and has a decisive role in women's lives and health.[6] Women's sexual quality of life is one of the key issues in the field of sexual health and productivity,[5] which includes individuals' evaluation of the positive and negative aspects of their sexual relationships and responses to these evaluations.[7,8] Actually, the sexual quality of life is a tool to examine the relationship between sexual problems and quality of life.[9] Therefore, measuring the sexual quality of life is an important issue to evaluate the short- and long-term outcomes due to the sexual problems.[10] In some studies, the sexual quality of life of Iranian women was at a desirable level.[9,11]

The results of various studies show that health literacy affects the quality of life.[1,12,13] The World Health Organization has described health literacy as a cognitive and social skill, which determines the motivation and ability to use information in a way that leads to maintaining and improving their health.[14] As mentioned, poor health literacy is associated with poor life quality, which can be due to a reduction of accessibility and less use of medical care, increase stress , the ability to exercise control over life and the environment.[15,16] Inadequate health literacy is a common problem among women.[17] Women play a decisive and effective role in family health, and lack of attention to women's health can lead to permanent problems in the lifestyle and health of future generations.[18] Health literacy is an important element in a woman's ability to engage in health promotion and prevention activities for herself and her children. Without a proper understanding of health-care information, it will be difficult or impossible for a woman to make informed decisions leading to desirable health outcomes for herself and her family.[19]

Despite developments in the concept of public health literacy, the conceptualization of sexual health literacy has not yet been developed. For this reason, relatively little progress has been made in conceptualizing sexual health literacy, which necessarily should address specific sexual health concerns and the complexities of the sexual health practices in a wide range of contexts.[20,21] Sexual health literacy is defined as "a set of personal knowledge, attitudes and beliefs, motivations and abilities to access, understand, evaluate and use information related to sexual health"[11] and is a context-based variable.[11] On the other hand, the quality of sexual life is also a concept based on context.[5] Considering the role of sexual quality of life in overall satisfaction, improving interpersonal relationships, improving the general quality of life, especially in women, and finally maintaining, consolidating, and promoting the health of the family and society, explaining its affecting factors is necessary from women's perspective.[5] According to the research team, sexual health literacy can affect the sexual quality of life of individuals. Therefore, considering the effect of health literacy on quality of life[1,12,13] and sameness's of the two variables of sexual health literacy and quality of sexual life,[18] the present study aimed to determine the impact of sexual health literacy on women's sexual life quality was designed and implemented.

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 multistage sampling.

Study participants and sampling

A list of health-care centers in Qazvin was prepared, compiled, and then divided into two districts, northern and southern, according to their location. Of each district, six health-care centers were randomly selected.

Inclusion criteria include referring to health-care centers in Qazvin, having a female gender, having a spouse, being sexually active, spending at least 1 year of cohabitation, not having a premature ejaculation, no diagnosed mental health problems (according to the participant report), having a minimum read and write, being at least 18 years old, a desire to participate in the study, and having Iranian citizenship. Existence of genital diseases and genital surgery affecting sexual desire, tubectomy, having any chronic debilitating disease, use of drugs that reduce libido, incomplete completion of questionnaires, and dissatisfaction with continuing to work were considered as exclusion criteria.

One of the objectives of this study was to determine the level of sexual health literacy. Therefore, according to the results from a pilot study on 30 women ($P = 0.5$ for the frequency of undesirable sexual health literacy) and in addition, Cochran's formula for calculating sample size which considers 80% as a test power and 95% and $d = 0.05$ as a statistical confidence interval was used. At first, the calculated sample size was 384 women. Considering the dropout percentage which may reach 10%, we had increased the sample up to 420.

- Patient and public involvement – Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research
- Patient consent for publication – Not required.

Data collection tool and technique

Regarding data collection, the used questionnaire encompasses two sections:

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1. Demographic and background characteristics – Age, education level, occupation, age of first child, age of spouse, level of education of spouse, duration of marriage, age of marriage, number of sexual intercourses per week, and use of contraceptives
2. Sexual health literacy – Health literacy data were collected through the sexual health literacy for adults (SHELA). This questionnaire was designed, validated, and used by Maasoumi and *et al*.[11] This questionnaire includes four main dimensions (access dimension, reading and comprehension dimension, evaluation and analysis dimension, and information application dimension) which has forty questions and measures the above dimensions. The Likert scoring scale is five options so that five points are assigned to the strongly agree option, four points are assigned to the option, three points have no opinion, two points are assigned to the disagree option, and one point is assigned to the strongly disagree option. How to score this tool is that first the raw scores of the four areas of health literacy are calculated and then converted to a standard score between 0 and 100, so that scores from 0 to 50 are considered 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] Furthermore, from the sum of two categories of "not enough and insufficient," the category of "limited health literacy" and, from the sum of the two categories of "excellent and sufficient," the category of "optimal health literacy" were extracted[11]

   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 results of exploratory factor analysis showed the establishment of four factors of access skills, reading and comprehension, evaluation and analysis, and application of information with a coverage of 1.68% of the variance. Convergent validity evaluation showed correlation coefficients between the dimensions of the designed questionnaire and the general health literacy questionnaire in the range of 31.0–0.7. The internal consistency of the instrument with 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] In the present study, 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
3. To evaluate the quality of sexual life of women, the Persian version of the Sexual Quality of Life-Female questionnaire was used to assess the quality of sexual life of women. This questionnaire was first designed in 1998 and reviewed and validated in 2005 by Symonds *et al*. This questionnaire has 18 questions with a six-point Likert scale (from strongly agree to strongly disagree), and the answers are scored on a scale of 1–6. The minimum score obtained from this tool is 18 and the maximum score is 108. Higher scores indicate a better quality of sex life.[22] According to the range of answers to the questions, up to grade 36 was classified as poor class, score 32-37 as middle class, and grade 108-73 as good class. In the present study, the standardized version of Masoumi *et al*. was used. This questionnaire was translated and psychoanalyzed by Maasoumi *et al*. in 2013, and Cronbach's alpha coefficient was 0.73 and internal correlation coefficient was 0.88. Furthermore, content validity index and content validity ratio have been reported as 0.91 and 0.84, respectively.[23] Furthermore, in the present study, Cronbach's alpha coefficient for this questionnaire was calculated to be 0.76. According to the researchers of the present study, the quality of sexual life was classified into two levels of undesirable (score of 18–36) and desirable (score of 37-108) and was used in logistic regression.

Ethical consideration

The ethical principles observed by the researchers included obtaining permission from the Ethics Committee of Qazvin University of Medical Sciences with the code: IR.QUMS.REC.1399.077.

After observing the ethical and research principles, submitting a letter of introduction to the Qazvin officials of health centers and goals, the questionnaires were distributed and completed by the women. The data were entered into SPSS ver 22. IBM Corporation, Armonk, NY and analyzed using descriptive statistics and logistic regression. It should be noted that the input of variables was performed concurrently by the Enter method of contrasting independent variables classified as an indicator, and the first class of variables was selected as the reference class. A significant level was considered <0.05 in this study.

Results

In this study, 420 women were included (100% participation rate). Of these, the highest number was in the age group of over 30 years with 250 women (59.5%). One hundred and ninety-nine (47.4%) were in undergraduate and higher education and 150 (49.2%) were homemakers. Table 1 shows the other demographic and background characteristics of the sample.

The results showed that the mean (standard deviation) score of sexual health literacy (17.85) was 78.47 of 100

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and was at a desirable level. Furthermore, 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 dimension reading and comprehension (82.11 ± 18.26), and the lowest mean score application of health information dimension (75.70 ± 23.79).

The mean (standard deviation) score of quality of sexual life of participating women was (19.21) 59.71 out of 108 points and was at a moderate level. Furthermore, 107 women (25.5%) had poor quality of sexual life, 252 women (60%) had moderate quality of sexual life, and 61 women (14.5%) had good quality of sexual life.

Table 2 shows the results of logistic regression to determine the factors affecting the quality of sexual life of the studied women. The results showed that the variables of marriage age, level of education, number of sexual intercourses per week, and sexual health literacy were the factors affecting the quality of sexual life ($P < 0.05$):

- The age of marriage was one of the factors affecting the quality of sexual life of women ($P = 0.037$), so that the chance of having a desirable quality of sexual life in women aged 25–35 years was 6.942 times higher than women under 25 years
- The level of education variable was one of the factors affecting the quality of women's sexual life ($P = 0.039$), so that the chances of having a desirable quality of sexual life in women with bachelor's degree and higher education and postdiploma education were 1.282 and 1.001, respectively, of women with elementary education
- The variable of the number of sexual intercourses per week was one of the factors affecting the quality of sexual life of women ($P = 0.044$), so that the chances of having a desirable quality of sexual life in women with 4 times more sex per week and more and women with 2–3 times of sex per week were 8.214 and 4.479 times higher than women without sex per week, respectively
- The variable of sexual health literacy was one of the factors affecting the quality of sexual life of women ($P = 0.017$), so that the chances of having a good quality of sexual life in women with excellent, sufficient, and not enough sexual health literacy were 3.415, 2.304 and 1.412 times higher than women with inadequate health literacy, respectively
- Furthermore, there was no significant relationship between the variables of age, job status, age of first child, age of spouse, level of education of spouse, duration of marriage, and use of contraceptives with women's quality of sexual life ($P < 0.05$).

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 level	
Homemaker	184 (43.8)
Unemployed	47 (11.2)
Employed	131 (31.2)
Retired	58 (13.8)
Age of first child (years)	
Under 10	150 (35.7)
10-20	139 (33.1)
Over 20	131 (31.2)
Spouse age (years)	
Under 35	196 (46.7)
Over 35	224 (53.3)
Spouse education level	
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 marriage (years)	
Under 10	149 (35.5)
10-20	140 (33.3)
Over 20	131 (31.2)
Marriage age (years)	
Under 25	188 (44.7)
25-35	162 (38.6)
Over 35	70 (16.7)
Number of sexual intercourses per 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)

Discussion

This study aimed to determine the effect of sexual health literacy on the sexual life quality of women referring to health-care centers in Qazvin city, Iran. The results of the present study showed that the sexual quality of life of participating women was at moderate level. Considering the desirable level of sexual health literacy and the relationship between sexual health literacy and sexual life quality in the present study, it was

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Table 2: Factors affecting the quality of sexual life of women studied in logistic regression test

Variables	Significant	Chance ratio
Contraceptives	0.829	1.230
Age	0.631	0. 488
Education level	0.039	
Elementary	Reference	
Middle school	0.215	0.114
Diploma	0.162	0.506
Associate degree	0.041	1.001
Bachelor's degree and higher	0.034	1.282
Job	0.366	
Homemaker	Reference	
Unemployed	0.999	1.189
Employed	0.682	1.424
Retired	0.125	0.034
Spouse age	0.230	0.105
Spouse education level	0.784	
Reference		
Elementary	0.999	0.000
Middle school	0.999	0.000
Diploma	0.999	0.000
Associate degree	0.999	0.000
Bachelor's degree and higher	0.999	0.000
Duration of marriage	0.929	
Under 10 years old	Reference	
10-20 years	0.814	1.457
Over 20 years	0.715	1.809
Marriage age		
Under 25 years	0.037	
25-35 years	Reference	
Over 35 years	0.048	6.942
Under 25 years	0.999	0.100
Number of sexual intercourses per week	0.044	
Not at all	Reference	
Once	0.998	1.148
2-3 times	0.043	4.479
4 times and above	0.041	8.214
Age of first child	0.108	
Under 10 years old	Reference	
10-20 years	0.056	21.258
Over 20 years	0.559	2.264
Sexual health literacy	17	
Insufficient sexual health literacy	Reference	
Not so much insufficient sexual health literacy	0.036	1.412
Adequate sexual health literacy	0.022	2.304
Excellent sexual health literacy	0.011	3.415
Constant	1.000	8.286

expected that the level of sexual quality of life would be desirable. Considering that poor health literacy in the domain of applying 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 women's average level of sexual quality of life was probably because of the low average score of sexual health literacy in the domain of applying health information compared to other domains of sexual health literacy. This result was consistent with the results of studies by Kisa *et al*,.[26] Nezal *et al.*,[27] and Sezgin *et al.*[28] However, it was inconsistent with the results of studies by Samimi *et al.*,[29] Maasoumi *et al.*,[23] Roshan Chesli *et al.*,[9] Ahmadian Chashemi *et al.*,[30] and Aduloju *et al.*[31] Possible reasons for this discrepancy could be differences in the study population, research environment, and women's employment status in these studies compared to those of the present studies, because in the present study, the majority of the women were homemakers, but in the mentioned studies, most of them were employed. People's job is one of the most important factors that can affect the quality of life and consequently the sexual quality of life. Because of the special physical, physiological, and psychological characteristics of women, the job can have a great impact on women's sexual quality of life.[29] Because of women's employment, the family income increases that leads to the stabilization of the family economic status, reducing family financial stress, and ultimately increasing women's sexual quality of life.

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[32,33] 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-thirds of the husbands of women studied had a university education. Given the effect of husbands' level of education on the behavior of family members, especially women, regarding health-care 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 *et al.*[34] and Vongxay *et al.*,[35] sexual health and productivity literacy were inadequate, which contradicted the results of the present study. 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 measurement tool in the present study only measured sexual health literacy, while in the two aforementioned 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[36-38] and age on health literacy,[37,39] this difference can be justified. Furthermore, in the present study, 70% of women had a university education, that considering the effect of

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education on health literacy,[32,33,40] it was normal that the level of sexual health literacy in the present study was more than the two studies mentioned above.

The results of the present study showed that the variable of sexual health literacy was one of the factors affecting women's sexual quality of life. To justify this result, it can be said that sexual health literacy, like sexual life quality, is a context-based variable; therefore, it can affect a variable of its kind. Besides, sexual health literacy is a set of skills, abilities, and capacities in various dimensions of sexual health. These skills and capacities can sometimes emerge in the domain of access to sexual health information, sometimes in the domain of reading them, sometimes in the domain of understanding them, sometimes in the domain of evaluating and analyzing them, and sometimes in the domain of using this information and by these ways affect the sexual quality of life. These results were in line with the results of the studies by Panahi *et al*.,[1] Khaleghi *et al*.,[12] and Wang *et al*.[13]

The results of the present study indicated that the variable of marriage age was one of the factors affecting women's sexual quality of life. To justify this result, it can be said that age can affect the sexual performance of couples and consequently women's sexual quality of life by changing sexual feelings and desires, feeling of sexual attractiveness, body shape, sexual ability, and health status. In this regard, the results of the present study were consistent with the research of Shahraki *et al.*[41] Similar to the results of the present study, Samimi *et al.* also believed that the role of age variable in causing changes in sexual function and individuals' sexual quality of life cannot be ignored.[29]

The results of this study also demonstrated that the variable of women's level of education was one factor affecting their sexual quality of life. The reason is the role of science and knowledge in the growth and intellectual excellence of individuals, which affects the behavior of people in social interactions in general and with family members in particular. Therefore, it can increase women's sexual quality of life. This part of the results was consistent with the results of various studies.[42-46]

The results of the current study revealed that the variable of the number of sexual intercourses per week was one factor affecting participants' sexual quality of life. It is clear that the more sexual intercourse, the greater the sexual arousal, sexual desire, sexual pleasure, and orgasm. As a result, the sexual quality of life increases.

Limitation and recommendation

The major limitation of the present study was that no study was found to measure women's sexual health literacy and its relationship with sexual quality of life, 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. In addition, the relatively small sample size was another limitation of the present study. Other limitations included ignoring other dimensions related to health literacy such as self-efficacy, communication, calculation, speaking, listening, and individuals' background and cultural knowledge, 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. Therefore, it is recommended to conduct this study on a larger scale of women in this city and other cities, especially rural areas.

Conclusion

Overall, the results revealed that the sexual life quality was moderate and the sexual health literacy was desirable among the participating women. Furthermore, the variables of women's level of education, age of marriage, number of sexual intercourses per week, and sexual health literacy were the factors affecting women's sexual quality of life. Therefore, the need to design and implement the necessary training to improve the sexual life quality of these women, especially women with a lower level of sexual health literacy, lower level of education, higher age of marriage, and women who had less sexual intercourse per week, is felt more than ever.

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Conflicts of interest

There are no conflicts of interest.

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