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Original Article

Assessment of Sexual Health Literacy and its Associated Factors in Women of Reproductive Age in Zahedan City

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Abstract

Introduction: Sexual health literacy is one of the essential components in promoting women's reproductive and mental health. This study aimed to investigate the sexual and reproductive health literacy level and its relevant factors in women of reproductive age referring to comprehensive health service centers in Zahedan, Iran, in 2024.

Methods: This cross-sectional study was conducted on the reproductive age women referring to comprehensive health service centers in Zahedan city, Iran. The number of samples was determined 384 people. The data collection tool included a demographic information collection form and the Sexual Health Literacy for Adults (SHELA) self-report questionnaire with 40 questions in four subscales (access, reading and comprehension, analysis and evaluation, and application). The data were analyzed with SPSS software and statistical tests of descriptive indicators (mean, standard deviation, quartiles, and frequency), Pearson's test for correlations, and analysis of variance for group comparisons.

Results: The raw score of sexual health literacy was 140.85 ± 22.70 and the total score on a scale of 0 to 100 was 63.03 ± 14.19. Among the dimensions of sexual health literacy, the dimensions of information application skills (0.9) and access skills (0.61) obtained the highest standard average score, and reading and comprehension skills (0.51) and analysis and evaluation skills (0.52) obtained the lowest standard average score. A significant relationship was shown between sexual health literacy and the variables of participation in premarital counseling classes, marital status, education level of the individual and his/her spouse, occupation, and field of study ($P < 0.001$).

Conclusion: The overall level of sexual health literacy in this sample is relatively adequate, but the dispersion of scores and the wide range of values reveals significant inequalities between subgroups. It is suggested that targeted educational interventions be implemented in relevant centers such as schools, libraries, and premarital counseling centers to promote information literacy skills for lifelong learning of individuals, with a special focus on less advantaged groups.

Introduction

Sexual health means that an individual has the knowledge, attitudes, and basic beliefs, motivation, and ability to access, understand, evaluate, and apply information related to sexual health in daily life, so that the individual can negotiate, exercise sound judgment, and make appropriate decisions in the field of sexual care, including establishing effective communication, maintaining and continuing relationships, and ensuring quality of life (1). Sexual health has a significant impact on an

individual's health at all stages of life. Furthermore, lack of awareness in this area can cause irreparable damage to the individual and society. Countries around the world, specifically developing countries, are now facing sexual health challenges that stem from low levels of sexual health literacy regarding sexually transmitted diseases, unwanted pregnancy, sexual violence, and poor quality of sex life (2).

Sexual health literacy is a context-based variable influenced by the ecosystem or set of cultures and social factors of each society (3). In other words, sexual health literacy refers to a range of literacy in the field of sexual health, including different areas such as gender and sexual development, puberty, pregnancy, methods of preventing unwanted pregnancy, sexually transmitted diseases, development of skills for managing sexual relationships, comprising negotiating the quality of sexual relationships, sexual preferences and compulsions, and positive and romantic dimensions of sexual relationships (1).

Having a desirable sexual health literacy level increases an individual's skills in analysis, discourse, judgment, decision-making, and changing sexual behavior, and empowers the individual to ensure, promote, and maintain their sexual health (1). Paying attention to sexual health literacy at all ages and stages of life is essential, particularly among young people, as a group that may engage in risky behaviors threatening their health in any society. The developments of the present era, the increase in information, and information and communication technologies have caused a group of young people to engage in risky behaviors, which may expose themselves and those they are in contact with to a series of risks such as drugs, sexually transmitted diseases, suicidal disorders, depression, and mental illnesses and problems related to abnormal and risky sexual behaviors (4).

Studies have shown a relationship between religion, culture, performance, and sexual health. Furthermore, considering the changes in population age ratios and the decline in population growth and fertility rates in recent years in Iran and the concerns about the decline in the young population, increasing the awareness and knowledge of young people in various areas of sexual health and hygiene is essential for maintaining the health of individuals in society. For this reason, many researchers believe that breaking taboos and improving the state of sexual health in Islamic societies requires the attention of policymakers and planners to design and implement intervention programs following relevant sectors in this area (5-7).

Given the role of sexual health literacy in maintaining and promoting women's physical, mental, and social health, it is crucial to determine the current level of this literacy and identify the factors affecting it. On the other hand, the concept of sexual health literacy, due to its reflection of cultural and social values and norms, should be specifically examined in each local context. In a study conducted on women in Qazvin, Iran, the results revealed that although most women had a high level of sexual health literacy, the share of insufficient sexual health literacy was also significant (8). Moreover, in a study conducted on women in Tehran, Iran, about one-third of women had inadequate sexual health literacy (9). In general, numerous national and international studies have shown that the level of sexual health literacy in different population groups, specifically young women, is often insufficient (10-12), and this situation can lead to problems such as sexual disorders, unwanted pregnancies, and reduced quality of life. In such situations, ignorance or inadequate information about reliable sources and key skills of accessing, reading, understanding, analyzing, and applying sexual health information prevents the adoption of preventive behaviors and self-care.

Despite the pivotal role of sexual health literacy in promoting women's health, according to researchers, no coherent and comprehensive study has been conducted in this field in Sistan and Baluchestan Province, particularly in Zahedan, Iran. This lack of basic information about the status of sexual knowledge and skills of young women referring to health centers limits the possibility of targeted planning by health officials to educate and empower them. Therefore, the present study aimed to investigate the sexual health literacy level and its related factors in women of reproductive age

referring to comprehensive health service centers in Zahedan city in 2024. The research findings can be used to design local educational programs, improve access to accurate information, and ultimately promote women's comprehensive health.

Methods

The present study is a cross-sectional study among women of reproductive age referring to comprehensive health service centers in Zahedan, Iran, in 2024. The number of women between 15 and 45 years old in Zahedan is 221,626 people based on the data of the Integrated Health System (SIB) (https://sib. zaums.ac.ir). Three hundred and eighty-four people were included in the study using the Morgan Table. Cluster sampling method was used to select comprehensive urban and suburban health centers. The researchers divided Zahedan city into four regions: North, South, East, and West, and one health center was randomly selected from each region, and a total of four centers (clusters) were selected. Then, 96 people from each center were included in the study by convenience.

The inclusion criteria for this study included young women referring to health centers, willingness to participate in the study, being literate, completing the personal information form and questionnaire, individuals with health records in health centers, and individuals with Iranian citizenship. After obtaining permission to conduct the research from the Ethics Committee of Zahedan University of Medical Sciences, sampling was conducted. Individuals who met the inclusion criteria and provided informed consent were invited to participate in the study, and participants were assured that the information collected would remain confidential. Questionnaires were distributed and completed in person between November 2024 and February 2025.

The Sexual Health Literacy for Adults (SHELA) questionnaire was used to assess sexual health literacy in young women (13). This questionnaire is a self-report instrument for assessing sexual health literacy in Iranian adults (men and women) and consists of 40 questions categorized into four subscales: Access skills, reading and comprehension, analysis and evaluation, and information application. Access skills included seven questions about access to sexual health information. Reading and comprehension skills included 18 questions about the ease of understanding and reading sexual health information. Analysis and evaluation skills included five questions, three of which assess the accuracy of information, one question about transferring sexual health information to others, and one question about seeking appropriate professional help. Information application skills included ten questions examining appropriate actions in line with the sexual health information obtained. The questionnaire items along with the frequency of responses of the participants in the present study are presented in Appendix 1.

Each item was scored on a five-point Likert scale: "Strongly disagree" (1), "Disagree" (2), "Neither agree nor disagree" (3), "Agree" (4), and "Strongly agree" (5). The raw score range for the questionnaire was between 40 and 200, which was calculated on a scale of zero to one hundred using the following formula:

$$Total\ score = \frac{Row\ score - 40}{160} \times 100$$

The total score range was from zero to one hundred, with scores of 0 to 50 considered as insufficient health literacy, 50.1 to 66 as not very sufficient health literacy, 66.1 to 84 as sufficient health literacy, and scores of 84.1 to 100 as excellent health literacy. In terms of reliability, in the study by Maasoumi et al., the total Cronbach's alpha coefficient was 0.95, indicating good internal consistency. The content validity of this tool was confirmed with Content Validity Ratio (CVR) values of 0.84 and Content Validity Index (CVI) of 0.81 (13).

To compare different dimensions of sexual health literacy, after calculating the score of each dimension, the scores were normalized using the formula $\frac{mean - \min}{\max - \min}$, and the average standard score was reported in the range of zero to one.

All statistical analysis was performed using SPSS version 28 software. In the data analysis section, descriptive statistics indicators such as mean and standard deviation were used. Besides,

in the inferential statistics section, the Kolmogorov-Smirnov test was used to examine the assumption of normality of the data. Therefore, parametric two-sample t-tests, Pearson correlation coefficient, and one-way analysis of variance were used to examine the relationship between variables. The significance level in all tests was considered to be 5%.

Results

The findings revealed that the raw score of sexual health literacy was 140.85 ± 22.70 and the mean total score of sexual health literacy (on a scale of 0 to 100) was 63.03 ± 14.19. The minimum score of sexual health literacy was 26.25 and the maximum score was 96.25. Table 1 shows the scores of sexual health literacy dimensions and their comparison. The mean and standard deviation of access skills was 24.09 ± 16.76, reading and comprehension skills were 55.11 ± 11.06, analysis and evaluation skills were 15.47 ± 5.19, and information application skills were 46.18 ± 9.36. Among the dimensions of sexual health literacy, the dimensions of information application skills (0.9) and access skills (0.61) had the highest standard score, and reading and comprehension skills (0.51) and analysis and evaluation skills (0.52) had the lowest standard score. Details are presented in Table 1.

Table 1. Comparison of mean scores of sexual health literacy dimensions

Sexual health literacy dimensions	Range of scores	Mean	Median	Standard deviation	Average standard score
Access skills	7-35	24.09	16	16.76	0.61
Reading and comprehension skills	18-90	55.11	56	11.06	0.51
Analysis and evaluation skills	5-25	15.47	16	5.19	0.52
Information application skills	10-50	46.18	50	9.36	0.9

Demographic variables demonstrated that the majority of the respondents were married, 295 (76.8%), and the largest religion was Sunni, 258 (67.2%). More than half of the women had a bachelor's degree, 222 (57.8%), and the majority were housewives, 233 (60.7%). Most of the women were in non-medical fields, 361 (94%), and among the spouses, the largest group was in non-medical fields, 252 (65.6%). Regarding the spouses' occupation, the largest share was in self-employment, 178 (46.4%). In terms of economic status, the largest frequency was in the poor group, 299 (77.9%). Regarding premarital education, 89 (23.2%) participated, and 295 (76.82%) did not participate. Details are presented in Table 2.

Table 2 shows a significant relationship between the mean score of sexual health literacy and the groups participating in the premarital counseling class ($P < 0.05$). Furthermore, marital status showed that single people had a higher mean score of sexual health literacy ($P < 0.001$). A significant difference was observed between the sexual health literacy of women with different levels of education, field of study, economic status, and employment status ($P < 0.05$), and women with higher education, education related to medical sciences, employment, and better economic status obtained a higher score of sexual health literacy. Moreover, significant differences were observed between the sexual health literacy of the women studied according to their level of education, field of study, and husband's employment status ($P < 0.05$). The women studied who had husbands with higher education, education related to medical sciences, and job status as employees, obtained a higher sexual health literacy score ($P < 0.05$). In other words, higher levels of education and employment, and being related to medical sciences are associated with higher sexual health literacy scores. No significant relationship was observed between religion and the use of social networks with sexual health literacy ($P > 0.05$).

Table 2. Comparison of the mean total sexual health literacy score of women according to demographic characteristics (n = 384)

Variables	Variable grouping	Number	Percent	Mean ± Sd	P-value
Education level	Undergraduate	222	57.8	58.38 ± 13.65	< 0.001
	Diploma	120	31.3	66.29 ± 11.95	
	Bachelor's degree	38	9.9	78.7 ± 7.38	
	Master's degree and above	4	1	74.38 ± 18.44	
Field of study	Not related to medical sciences	361	94	61.28 ± 12.73	< 0.001
	Related to medical sciences	23	6	90.4 ± 4.04	
Employment status	Housewife	233	60.7	60.06 ± 15.6	< 0.001
	Employed	151	39.3	67.61 ± 10.12	
Marital status	Single	89	23.2	70.71 ± 12.3	< 0.001
	Married	295	76.8	60.71 ± 13.91	
Religion	Sunnah	258	67.2	63.4 ± 13.75	0.468
	Shia	126	32.8	62.27 ± 15.05	
Participate in a premarital education course	No	206	53.6	58.75 ± 14.8	< 0.001
	Yes	89	23.2	65.25 ± 10.31	
	The person is single	89	23.2	70.71 ± 12.30	
Using social networks	No	233	60.7	62.3 ± 14.69	0.213
	Yes	151	39.3	64.15 ± 13.34	
Economic situation	Weak	299	77.9	62.21 ± 14.78	0.02
	Medium	73	19	64.79 ± 11.57	
	Good	12	3.1	72.76 ± 8.02	
Spouse's education level	Undergraduate	34	11.5	51.71 ± 11.39	< 0.001
	Diploma	218	73.8	61.4 ± 13.96	
	Bachelor's degree	41	13.8	63.75 ± 12.71	
	Master's degree and above	2	0.67	75.94 ± 11.93	
Spouse's job	Unemployed	100	33.8	50.09 ± 11.16	< 0.001
	Freelance job	178	60.3	64.81 ± 11.21	
	Employee	17	5.7	80.18 ± 10.09	
Spouse's field of study	Unrelated	252	85.4	60.09 ± 14.02	< 0.001
	Related to medical sciences	43	14.5	64.31 ± 12.8	

The results of the Pearson correlation test (Table 3) showed a positive and significant relationship between age, age at marriage, age at first sexual intercourse, and number of years of marriage with the total sexual health literacy score ($P < 0.05$). Besides, an inverse and significant relationship was observed between the number of children and the total sexual health literacy score ($P < 0.05$). The age of the spouse was not significantly related to the total sexual health literacy score ($P > 0.05$).

Table 3. Correlation between demographic variables and total sexual health literacy score of women (n = 384)

Variables	Pearson correlation coefficient (r)	P-value	Type of communication
Age/Sexual health literacy	0.22	< 0.001	Positive and meaningful
Spouse's age/sexual health literacy	0.15	< 0.071	Reversed and meaningless
Age at marriage/sexual health literacy	0.26	< 0.001	Positive and meaningful
Age at first sexual intercourse/sexual health literacy	0.26	< 0.001	Positive and meaningful
Number of children/sexual health literacy	0.35	< 0.001	Reverse and meaningful
Number of years of marriage/Sexual health literacy	0.23	< 0.001	Positive and meaningful

Discussion

The research findings showed that the sexual health literacy level among the women studied was not sufficient, and among the dimensions of sexual health literacy, the highest mean and standard deviation were related to reading and comprehension skills, and the lowest were related to analysis and evaluation skills. A significant relationship was shown between sexual health literacy and the variables of participation in premarital counseling classes, marital status, education level of the individuals and their spouse, job, and field of study.

The sexual health literacy level of the women studied was insufficient and a significant gap was observed from the ideal level. The findings of the study are inconsistent with the results of most previous studies. For example, in the study by Panahi et al., who investigated the sexual health literacy of women in Qazvin, the study sample reported a desirable level of sexual health literacy, which was expected given that more than half of the women studied had an academic education (8). Serhatlıoğlu et al.'s study conducted in Turkey examined sexual health knowledge and factors affecting it in health science students, indicating an average level of sexual health literacy among the participants (14). Furthermore, these results were inconsistent with the results of the study by Nematzadeh et al. (15) and Simpson et al. (16).; Nematzadeh et al., in a study conducted on married students of Mazandaran University of Medical Sciences, reported the average sexual health literacy at an "adequate" level (15); Simpson et al. also stated that medical and nursing students had the highest level of sexual health literacy (16). The discrepancy in the findings of the study with previous studies may be due to the cultural, social, and economic differences of the current study population, as well as their less access to information sources, including books, social media, and most importantly, reputable health professionals to promote women's sexual health knowledge. Previous studies have mostly been conducted on students, and these individuals have higher sexual health literacy due to better access to scientific content and an academic environment.

In addition, in the context of sexual health literacy dimensions, the highest average standard score was related to the skills of application and access, and the lowest was related to the skills of reading, understanding, and analysis and evaluation. In the study of Dabiri et al. (10), the highest average was related to the dimensions of reading, understanding, and access. Additionally, in the study of Bageri et al. (17), the lowest average was related to the

component of analysis and evaluation. The low level of the component of reading, understanding, analysis, and evaluation could be due to the fact that more than half of the women studied had a less than diploma education, so this issue could affect the ability to read and understand sexual health information, particularly if it is not written in simple language. On the other hand, given that today cyberspace and social networks are considered as a source of accessible health information, the lack of information literacy skills of individuals in obtaining reliable information from cyberspace and analyzing, evaluating, and applying the retrieved information can be influential. Therefore, given the importance of reading, understanding, analyzing, and evaluating information skills in informed decision-making, specifically in matters related to sexual health, planning and designing interventions to improve the information literacy level with an emphasis on sexual health literacy of individuals, mainly women of reproductive age, is essential as a lifelong skill.

The results show that as women age, their sexual health literacy increases. Although the correlation in the present study indicates a relatively weak relationship, significance at the 99% confidence level confirms the importance of this increasing trend. In line with the present study, Serhatlıoğlu et al. also reported that women's age was significantly correlated with sexual health knowledge test scores and the increasing age can be a factor enhancing literacy (14). In the study of Simpson et al., older age of women was also identified as a positive predictor of sexual literacy (16). Despite the difference in cultural environment, an increasing pattern was observed in both studies. Interpreting this finding, it can be stated that over time, women find more opportunities to be exposed to health information, whether through books, social media, or through conversations with their spouses, family, or friends, and these repeated exposures can lead to improved overall literacy levels. Older women may have visited more often for premarital visits, prenatal care, or vaccinations, and may have acquired basic sexual health information during these sessions (18).

Perhaps as people age, they have more experience in appropriate information-seeking behaviors, such as obtaining sexual health information and reliable professional help. Therefore, it is essential for young people to have access to health information about sexual and reproductive health, as well as information about risky sexual behaviors, through a preferred information source (19).

On the other hand, there was a very small increase in the total sexual health literacy score with increasing age at marriage. Marriage at an older age is usually associated with greater intellectual maturity; older women at the time of marriage are better able to understand the importance of sexual and health responsibilities and then seek educational resources. Marriage at an older age is usually associated with more careful financial and psychological planning, creating a greater motivation to participate in premarital classes and sexual health counseling (20). In the study by Simpson et al., higher age at marriage was also associated with higher sexual literacy scores (16). Patras et al. also showed in a study among infertile women in Tabriz that those who started their sexual experience at an older age had a protective attitude and better knowledge about sexual behaviors; these findings are consistent with this study's results (21). Correspondingly, the study by Duffey et al. reported that the group that had completed the training course before any type of sexual intercourse had stronger protective skills, while the older age of the first sexual intercourse in that study was also consistent with higher scores (22).

The results of the present study showed that the duration of marriage has a positive and significant relationship with the total sexual health literacy score. In line with this finding, Sayyadi et al. also stated that married women had a higher sexual health score, indicating that with an increase in the level of sexual health literacy, individuals become more aware of their sexual rights and, as a result, make more efforts to achieve their rights (23). In its interpretation, it can be stated that with an increase in the experience of living together, the level of sexual health literacy of women improves to some extent. In the early years of marriage, couples may still be adjusting to new roles and may not have the

time or motivation to pursue additional education. However, as the roles become more established, seeking out educational resources and pursuing health care becomes a priority. Longer marriage can provide more opportunities to attend workshops, seminars, and support groups. Besides, interacting with other couples with similar experiences can expand knowledge and help with its effective application (23). In addition, previous studies show that individuals exhibit more appropriate information-seeking behavior as they increase their sexual experience and are likely to encounter symptoms of sexually transmitted diseases, and as a result, they seek more online and offline information sources, influencing individuals' professional help-seeking behavior (24, 25) and increases sexual health knowledge, specifically in the field of sexually transmitted diseases.

The results of this study revealed that women's education level has a strong and significant relationship with the total sexual health literacy score. In other words, the higher the level of women's education, the significantly higher their sexual health literacy. As Nematzadeh et al. showed that women with a general doctorate degree had higher sexual health literacy scores, and the economic status and education of their spouse were also influential (15). These findings are consistent with our increasing trend in bachelor's education. AlQuaiz et al. reported that the lack of a curriculum and low parental education among adolescent girls in Riyadh led to inadequate sexual health knowledge (26). Educated women have a sense of self-confidence and skills in expressing needs and asking questions in educational and clinical settings. This characteristic encourages them to ask questions and receive more scientific answers. In contrast, illiterate women may be reluctant to ask significant questions and receive educational services due to shame or fear of judgment (8). Additionally, educated women, particularly those with academic degrees, have had access to reliable scientific information in scientific articles and books during their studies, which can be effective in improving people's sexual health knowledge. In previous studies, the results disclosed that people with lower levels of education are less likely to seek health information (27), and with increasing education, their understanding of the effects of sexually transmitted diseases on health increases, and as a result, they are more inclined to seek information related to sexually transmitted and sexual diseases (28).

The present study's results showed that the education level of the spouses has a significant relationship with the total sexual health literacy score. In general, women with spouses with higher education obtained higher sexual health literacy scores. Ozdemir et al. also showed that the level of education of the mothers has a significant effect on the tendency to sexual behaviors. Although the father's education was not examined, a similar trend of the role of parental education in the empowerment of children is observed (4). Simpson et al. emphasize that education is one of the strongest predictors of sexual literacy (16), and this study's findings in the section on spouse's education also confirm this role. Analyzing this finding, it can be stated that husbands with higher education are likely to have more accurate knowledge and attitudes about sexual health and act as informal advisors to women. This enables women to participate in private training courses or specialized workshops. In families where men are educated, the value of education and learning is usually promoted for both sexes. Women in such families are more motivated to learn about sexual health issues (4).

Another result of this study was that women's employment was significantly associated with the total sexual health literacy score. In general, employed women scored higher on sexual health literacy. Rahmani et al. also indicated that employed women had significantly higher sexual self-efficacy, knowledge, and attitudes. This finding is consistent with the present finding that employed individuals had higher overall sexual health literacy scores (29). In a study by Duffey et al., participation in sports education programs for adolescent girls improved sexual attitudes and behaviors. Although women's employment was not examined, it highlights the importance of participating in regular activities to promote literacy and its application (22). Women working in office or industrial settings may undergo

short-term training or in-service education programs that cover general health concepts, including sexual health. Formal work relationships provide a safe environment for raising sexual health questions (9).

The obtained results revealed that the employment of the spouses was significantly associated with the total sexual health literacy score. Generally, women whose spouses had more stable or professional employment scored higher in sexual health literacy. Ozdemir et al. also demonstrated that the occupation of women and their mothers affects the risk of sexual behavior. Although the focus of their study was on behavior, it showed that formal employment is associated with greater awareness (4). In addition, data analysis showed that economic status is significantly associated with the sexual health literacy score. Nematzadeh et al. showed that poor economic status is associated with a significant decrease in sexual health literacy, and the better the family economy, the higher the sexual health literacy (15). Rahmani et al. also emphasized that social support and the elimination of taboos, which usually occur in middle-class families, increase sexual health literacy (29). Thus, this finding is consistent with the current study. In addition, better economic status is likely to lead to greater attention of women to sexual issues and greater access to reliable information sources, such as reputable books and articles, educational videos, and professionals.

The results revealed that the difference in mean sexual health literacy between Sunni and Shia women was not significant. In other words, religion in this community had no effect on the level of sexual health knowledge and skills. Contrary to the results of the present study, Simpson et al. at the University of Tasmania observed a significant difference in sexual health literacy by religious affiliation, such that followers of non-Christian religions had lower scores. These results are inconsistent with the studied population and indicate cultural differences and the counseling structure in the two countries (16). AlQuaiz et al. in Riyadh also found no difference between Christians and Muslims (26). Therefore, in interpreting this finding, it can be noted that the premarital counseling system and health centers, as well as the family health council, are trying to organize the educational content in a way that includes the jurisprudential considerations of all groups.

In terms of sexual health information sources, the results showed that the use of social networks did not make a significant difference in the overall sexual health literacy score. Seemingly, these sources do not have a direct effect on the level of sexual health literacy of women. Nematzadeh et al. reported that the use of social networks was consistent with an increase in sexual health literacy score (15). Ozdemir et al. reported a negative and significant relationship between risky sexual behavior and sexual health literacy. They pointed out that information from social networks can be misleading; their finding is consistent with the lack of significance of the obtained difference, and emphasizes caution in drawing conclusions from online sources (4). Given the rapid growth of accurate and inaccurate sexual health information in cyberspace (30, 31), and despite the capabilities of cyberspace as a popular platform for obtaining information, low literacy and inadequate skills in searching, finding, and evaluating health information, as key components of web-based information-seeking behavior, can cause irreparable harm to users of the virtual environment (32). Therefore, skills such as online information-seeking behavior, media literacy, and e-literacy, mainly to combat fake health information, should be strengthened among members of society, specifically women.

The obtained results showed that women who had participated in a premarital sexual health education course had higher sexual health literacy scores than women who had not participated in these courses. Furthermore, women who were still single had a higher mean. These findings suggest that participation in a premarital sexual health education course may be associated with improved sexual health literacy, and that single individuals are more likely than married individuals to seek information and skills related to sexual health. Serhatlıoğlu et al. found that receiving sexual health education (academic education) was associated with higher knowledge scores (14). Duffey et al. found that continuous and active participation in the program

was associated with increased scores and improved sexual behavior in a six-month educational sports program; this finding is inconsistent with the negative role of passive participation in our mandatory classes and suggests that continuity, interaction, and the practical aspect of training are essential for effectiveness (22). Targeted educational interventions in relevant settings such as schools, libraries, and premarital centers can play a key role in promoting women's sexual health knowledge. Medical librarians and information specialists can play an essential and influential role in this field by providing access to a variety of information resources such as books, journals, and scientific articles, holding workshops and educational seminars in the library, and providing information consulting services, specifically to retrieve reliable and appropriate resources (33).

The present study has some limitations. One of these limitations relates to the research population. This study was conducted in only one city and with a certain number of women; therefore, generalizing the results to all women in other regions or countries is impossible. Additionally, considering the research method, which was a survey and based on self-declaration, individual differences, accuracy, honesty, and the mental and psychological conditions of the research units in answering the questions affect the results of the study and their control is beyond the researcher's control. Obviously, if performance-based methods are used, different results may be obtained.

Conclusion

This study found that the sexual health literacy level of reproductive age women referring to comprehensive health service centers in Zahedan is insufficient and requires targeted and multifaceted educational interventions. The average standard score of sexual health literacy dimensions in the study population showed that although some women have higher skills in using and accessing sexual health information, a large part of them are weak in reading, understanding, analyzing, and evaluating this information. Overall, this study's findings highlight the need to design interdisciplinary, continuous, and skill-based educational programs that provide valid scientific content. Besides, these programs provide the opportunity for practical practice, resource analysis, and group interaction to improve women's sexual health literacy.

Additionally, paying attention to individual and family characteristics, particularly the level of education and type of employment of women and their husbands is crucial. Furthermore, reviewing the content of pre-marriage classes to meet the real needs of the community, and holding educational workshops, as well as preparing and compiling information resources such as books in public libraries and health libraries for free for access by all segments of society, are requirements for improving the level of sexual health literacy. Implementing such interventions not only increases women's ability to make informed decisions, but can also pave the way for improving protective behaviors, reproductive health, and their quality of life.

Declaration

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Conflict of Interest

The author declared no conflict of interest related to this manuscript.

Ethical Statement

This study is part of a general medicine thesis that has been approved by Zahedan University of Medical Sciences with the ethics code IR.ZAUMS.REC.1402.500.

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Authors' Contribution

Narges Podineh-Moghadam: Student and data collector

Azita Shahraki-Mohammadi: Designing and implementing the study, and writing the article.

Zahra Arab-Borzu: Data analysis and interpretation of results.

Maryam Esmaeilpour: Clinical advisor for student thesis.

Use of Artificial Intelligence

None.

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