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Sexual Health Literacy among Unmarried Men Attending Premarital Counseling Center: A Cross-sectional Study in Northwest Iran

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ABSTRACT

Background: Sexual health literacy (SHL) is an important predictor of an individual's sexual behavior. However, little is known about this issue among Iranian men. This study aimed to determine sexual health literacy in unmarried men attending the premarital counseling center in an Iranian setting.

Methods: This analytic cross-sectional study was conducted in Ardabil Province between April and October 2023 on unmarried men who referred to the only premarital counseling center. A total of 384 eligible men were included in the study via a simple random sampling method. Data were collected using a demographic questionnaire and a standardized SHELA questionnaire and were then analyzed using SPSS software version 27.

Results: Over 50% of the participants had adequate (36%) and excellent (23%) SHL. The results revealed that men's educational level was significantly associated with SHL and all of its dimensions ($P<0.05$). Additionally, there was a significant correlation between men's occupation and their ability to access SHL ($P<0.05$), and urban men had lower SHL levels than rural men ($P<0.05$).

Conclusions: The findings suggest that more than half of the unmarried men had adequate or excellent SHL. Factors such as education, occupation, and place of residence had a significant relationship with SHL. Government organizations and stakeholders should develop policies and programs to improve comprehensive sexual health literacy programs for them.

Keywords: Sexual health, literacy, Men, Counseling

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Introduction

Sexual health literacy (SHL) represents an individual's knowledge, beliefs, attitudes, motivations, and personal skills to access, understand, evaluate, and make the best use of sexual health (SH) information (Gilbert et al., 2015; Lindau & Gavrilova, 2010) as an integral part of general health (Lindau & Gavrilova, 2010). Attaining SHL can strengthen an individual's ability to recognize and assess sexual health risks, delay sexual initiation, reduce the number of sexual partners, prefer low-risk partners, protect sex in first encounters, and reduce the risk of sexually transmitted diseases (STDs). It may also improve knowledge of sexual rights and responsibilities, improve sexual compatibility, find good opportunities to express gender roles plainly, boost SH and, ultimately, promote sexual, family, and social health (Graf & Patrick, 2015; Von Wagner et al., 2007). As confirmed by previous research, inadequate SHL has been associated with low condom use, high probability of risky sex and unintended pregnancy, unsatisfactory sexual performance, challenges in seeking timely treatment, diminished sense of sexual entitlement and lower quality of sexual life, particularly in the younger generation (Gomez & Geneta, 2021; Bahrampour & Lamyian, 2022).

Notably, SHL among men significantly contributes to promoting their quality of life as well as emotional intimacy and sexual relationships between couples, leading to sexual and marital satisfaction (El Kazdouh et al., 2019; Halverson et al., 2015).

Sexual and reproductive health among young adults is a major concern in low-income countries, where teenage pregnancy, child marriage, unsafe abortions, adolescent maternal mortality, sexual violence, and STDs like acquired immune deficiency syndrome (AIDS) are more prevalent, especially in less educated rural populations (Ganchimeg et al., 2013; Vongxay et al., 2019; Zandian et al., 2023; Zare et al., 2022).

Discussions surrounding SH are often constrained by diverse cultural perspectives. In Iran, SH is unfortunately considered taboo, which presents a significant challenge to SHL, with many couples lacking pre-marital awareness in this regard (Ranjbar et al., 2023). Field surveys indicate that inadequate sexual awareness is the primary cause of 78% of divorces (Esmaili A et al., 2014).

The SH landscape in Iran is marked by several significant challenges. These include cultural taboos about sex and sexuality, limited public awareness, the presence of unconventional sexual behaviors, the rise of associated social harm, experiences of stigma and discrimination, a notable absence of political commitment by government bodies, a lack of statistical indicators, and the suboptimal utilization of extant capacities (Damari & Akrami, 2021; Mardi et al., 2019).

Current evidence indicates that educational programs designed to enhance SH outcomes demonstrate greater efficacy when implemented before marriage and the initiation of sexual activity. However, reports suggest that some young adults acquire SH information after becoming sexually active (Nematzadeh et al., 2024; Rose & Friedman, 2017; Shahrahmani et al., 2023).

Consistent with best practices, effective SH educational programs should incorporate a range of individual and contextual factors, including, but not limited to, gender, age, ethnicity, socioeconomic status, physical and cognitive capacities, education, race, place of residence, religion, field of study and cultural values. Furthermore, initiating such education from an early age within the school system is recommended (Khalesi et al., 2017; Santelli et al., 2017).

In Iran, SHL studies on men are rare, and studies on unmarried men are almost entirely lacking. Consequently, rigorous investigation into the societal prevalence and determinants of SHL is paramount to inform effective health policymaking. Recognizing the profound impact of this issue on individuals' lives and the acknowledged limitations in existing educational programs and reports within Iran, this study aims

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to assess SHL among unmarried men attending a premarital counseling center in an Iranian setting.

Methods

Study design

This analytic cross-sectional study was conducted in Ardabil Province between April and October 2023 with unmarried men referred to the only premarital counseling center affiliated with Ardabil University of Medical Sciences. Ardabil Province is located in northwestern Iran and has an estimated population of 1,300,000 people, the majority of whom are Muslims (Berberian, 1996).

The inclusion criteria were as follows: having received no prior counselling, being an unmarried man with no experience of sex (which was self-declared), and being literate in reading and writing. The exclusion criterion was incomplete completion of the questionnaires.

Study population and sample size

Simple random sampling was used to recruit 384 men from a population of 1320. The sample size was determined via the following formula: p = 50%, according to a pilot study, with a significance level of 5% (α = 0.05) (d = 0.05).

$$n = \frac{z^2_{1-\frac{\alpha}{2}}\, p(1-p)}{d^2}$$

Data collection and measurements

The researcher informed the respondents about the study's purpose. The questionnaires were then administered, and the participants completed a sociodemographic questionnaire and the Sexual Health Literacy Questionnaire for Adults (SHELA). All the data were self-reported.

The SHELA was designed and psychometrically evaluated by Masoumi et al. (Maasoumi et al., 2019). It is a tool designed to measure people's knowledge, attitudes, and understanding of sexual health. Furthermore, it aims to assess people's knowledge and understanding of various aspects of SH, including reproductive health, sexual practices, contraception, sexually transmitted infections (STIs), relationships, etc. SHELA comprises 40 items on a 5-point Likert scale (from completely disagree to completely agree). Additionally, the items covered four dimensions, viz., skills of access (7 items), reading and understanding (18 items), evaluation and analysis (5 items), and application of information (10 items). In accordance with the scoring procedure proposed by its designers, the questionnaire items were rated from 5 (completely agree) to 1 (completely disagree). Scores of 0-50 indicated inadequate SHL, 50.1-66 suggested inadequate SHL, 66.1-84 implied adequate SHL, and 84.1-100 denoted excellent SHL (Maasoumi et al., 2019). In the present study, the Cronbach's alpha coefficient for the questionnaire was 0.89, indicating acceptable internal consistency.

Data analysis

Descriptive indicators, mean (standard deviation) and frequency (percentage), were used to present quantitative and qualitative variables using SPSS Statistics software (version 27). Then, the relationships between age and SHL dimension scores were examined through the Pearson correlation coefficient. In addition, the comparison of means between the SHL dimension scores and occupation, education, and place of residence was calculated through the ANOVA nab t-test. The significance level and confidence interval of statistical tests were also considered to be less than 0.05 and equal to 95%, respectively.

Results

The results revealed that the mean age of the participants was 28.46±6.26 years, ranging from 13 to 47. There was one 13-year-old, one 15-year-old, and five 17-year-old participants.

In addition, 52.6% of the study participants held high school diplomas and undergraduate educations, 87.5% were employed, and 91.4% resided in urban areas.

According to the results of this study,36% and 8% of the participants had adequate and inadequate SHL, respectively. Otherwise, more than 50% of the men attending premarital counseling centers in Ardabil Province, Iran, had adequate and excellent SHL (Table 1).

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Table 1. Overall SHL and its dimensions in the participants

Dimensions score	Skills of access	Reading and understanding	Evaluation and analysis	Overall SHL
Inadequate	50 (13)	34 (9)	69 (18)	31 (8)
Not quite adequate	91 (23.7)	97 (25.3)	115 (30)	127 (33)
Adequate	142 (37)	157 (40.7)	97 (25)	137 (36)
Excellent	101 (26.3)	97 (25)	103 (27)	89 (23)
Total	384 (100)	384 (100)	384 (100)	384 (100)

In addition, there were discrepancies among the men attending the premarital counseling centers in this study with respect to SHL dimensions. In this regard, the majority of the participants had adequate SHL in terms of access (37%) and reading and understanding (40.7%) skills. With respect to evaluation and analysis, these individuals had inadequate SHL (30%). No significant correlation was observed between men's age and SHL (Table 2).

Table 2. Relationships between SHL and the age of the participants

SHL Dimensions / Variable	Skills of access	Reading and understanding	Evaluation and analysis	Overall SHL
	r P-value	r P-value	r P-value	r P-value
Age	-0.014 0.785	0.005 0.985	0.006- 0.911	-0.005 0.923

A one-way ANOVA was used to compare the means of SHL and its dimensions according to men's education levels, while t-tests were used to compare SHL and its dimensions by occupation and residence. The findings showed that higher education levels were associated with an increase in the mean scores of SHL and its dimensions. Moreover, the mean score of access dimension was higher among employed men compared with unemployed ones, and rural men had higher mean scores in SHL and its dimensions compared to urban men (Table 3).

Table 3. Comparison of means between SHL and the demographic characteristics of the participants

SHL Dimensions / Variables	n	Skills of access μ±δ	Reading and understanding μ±δ	Evaluation and analysis μ±δ	Overall SHL μ±δ
Education					
Master's degree≤	72		42.6±11.21	12±3.46	71.24±18.13
Bachelor's degree	202	16.67±4.76 14.98±5.08	37.49±11.94	11.1±4	63.6±19.7
High school diploma	86	13.67±4.96 12.04±5.38	34.78±11.11	10.71±3.77	59.16±18.52
sig	24	0.001	30±9.75	7.62±3.14	49.67±16.48
Below high school diploma			0.001	0.01	0.02
Occupation					
Unemployed	336	12.72±5.28	37.05±12.05	10.96±3.96	62.73±19.9
Employed	48	15.54±3.96 0.022	39.6±10.5	10.94±3.56	66.1±16.5

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Table 3. Comparison of means between SHL and the demographic characteristics of the participants

SHL Dimensions		Skills of access	Reading and understanding	Evaluation and analysis	Overall SHL
Variables	**n**	**μ±δ**	**μ±δ**	**μ±δ**	**μ±δ**
sig			0.641	0.751	0.285
Place of residence					
Urbon	351	14.67±5.06	37.02±11.78	10.88±3.89	62.57±19.4
Rural	33	16.48±5.7	41±12.61	11.82±4.11	69.3±21.36
sig		0.276	0.169	0.187	0.011

Discussion

The present study revealed that more than 50% of the men attending premarital counseling centers in Ardabil Province had adequate and excellent SHL; this was in line with the results from similar studies. (Celik & Yesildere Saglam, 2026; Dehghankar et al. 2022; Bilişli ,2026; Vakili et al, 2025).

The findings indicated that SHL is associated with several demographic characteristics. In this way, no significant correlation was found between overall SHL and age. In line with these findings, Sánchez et al. reported that age could not affect SHL among Latin men, but gender had a leading role in this sense (Graf & Patrick, 2015; Sanchez et al., 2023; Von Wagner et al., 2007). In addition, Arasteh et al. (2022) reported that age was not significantly associated with SHL among the men living in Razavi Khorasan Province, Iran (Araste et al., 2022). However, McElvaney et al. (2020) reported that SHL and age are interconnected. This difference could be attributed to the statistical populations, i.e., a group of children who had been recruited as the main participants (McElvaney et al., 2020). Moreover, Wångdahl et al. (2014) reported an inverse relationship between SHL and age in Sweden (Wångdahl et al., 2014).

According to a review study, the levels of SHL could be influenced by age, gender, educational attainment, sexual relationships, place of birth or residence, and even religious beliefs (Rakhshaee et al., 2020). In contrast to the findings of the present study, Velardo et al. (2015) reported that age could be related to improvements in the dimensions of reading and understanding within SHL among Australian respondents (Velardo, 2015).

The results revealed that higher education levels were associated with an increase in the mean scores of SHL and its dimensions, which is congruent with the results of similar studies in Iran (Dabiri et al., 2019; Jamali et al., 2020; Vakili et al., 2025). Therefore, SHL was lower in participants with primary and secondary education than in those with graduate education (Jamali et al., 2020). In Dabiri et al. (2019), SHL was further found to be significantly correlated with educational attainment to the extent that inadequate SHL was more common in cases with lower levels of education (Dabiri et al., 2019). In addition, Leiser et al. (2017) and Kimberly et al. (2016), in their studies in North Carolina, the United States, concluded that educational attainment and the levels of SHL were correlated (Kilfoyle et al., 2016; Layzer et al., 2017). Nelson et al. (2019) reported that educational attainment could be associated with SH information and highlighted the effective role of learning approaches in SH education (Nelson et al., 2019). Similarly, Adekola et al. (2022) showed that individuals with higher levels of education had better capacities to recognize authenticated resources, evaluate content validity, and merge relevant literacy, so they were able to make more informed decisions (Adekola & Mavhandu-Mudzusi, 2022). Celic et al. declared that even parental education was significantly associated with SHL among young people aged 18–30 in Türkiye (Celic et al. 2026). These results were in line with those of the present study. Nonetheless, Ankoma et al. (2021) reported no relationship between SHL and educational attainment, but reflected the significant function of mothers in this domain

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(Ankomah et al., 2021). Mustanski et al. (2011) reported no relationship between SHL and educational attainment, but the Internet was assumed to be much more important (Mustanski et al., 2011).

Moreover, the present study revealed that the mean score of the access dimension was higher among employed men than unemployed men. In line with these findings, some studies noted that occupation could have a high impact on SHL among women, and such a relationship has been observed between occupation and socioeconomic status on the reading and understanding within SHL(Panahi, Kheiri, et al., 2021; Panahi, Namdar, et al., 2021). In contrast to these findings, an Iranian study reported no significant relationship in this regard (Araste et al., 2022). Meanwhile, a survey in the United States reported that occupation could play a key role in accessing SH information, although sexual education in the workplace was mentioned as influential; this could have led to a variation in these studies (Craig-Kuhn et al., 2021). Additionally, another study found that employment may improve SHL by providing the financial resources and time-related conditions necessary for its development. (Starrs et al., 2018).

According to the results of the present study, rural men had higher mean scores in SHL and its dimensions compared to urban men. These findings align not only with prior research conducted in Iran (Nematzadeh et al., 2024), but also with studies from other nations.(Vongxay et al., 2019). SHL was further at higher levels in adolescents attending urban schools. In this context, more access to the available online facilities for searching for different resources has been effective (Vongxay et al., 2019). The urban or rural areas could have a significant effect on SHL among those living in Canada (Brennan et al., 2022). Moreover, Mustanski reported that patients living in urban areas had higher SHL, among others, which was at odds with the findings of the present study (Mustanski et al., 2020). Jafari et al. (2021) and Dehghankar et al. argued that individuals living in rural areas had lower SHLs, particularly in terms of their reading and understanding (Dehghankar et al., 2022; Jafari et al., 2020). The differences in demographic characteristics might have affected the results, but further research is recommended to confirm these findings. One possible explanation for these findings is that SHL might have been shaped by other factors, such as cultural beliefs, social norms, and personal experiences. It was also reasonable that individuals might have acquired SHL from other resources, not merely written materials, e.g., peer communication, online resources, or educational programs.

Conclusions

The study results indicated no significant correlation between the unmarried men's age and their levels of SHL, whereas educational attainment had a significant relationship with all dimensions of SHL, including the skills of access, reading and understanding, and evaluation and analysis. Moreover, a significant relationship was observed between occupation and access skills among the participants. Interestingly, the levels of SHL were lower in urban men than in rural men, which challenged the preconceptions about the impact of geographic disparities in this domain. The reason can usually be a combination of cultural, social, and lifestyle factors in rural men, not just the factor of being more literate. In rural areas, the social network is closer, communication with health houses and health workers is more active, and social norms are more restrictive than in urban areas, therefore, risky sexual behaviors are less frequently reported, and responses tend to be more conservative (Cosco et al., 2025) Also, the ratio of rural men to urban men was much lower, which could also be one of the possible reasons.

These findings highlight the utmost importance of developing appropriate educational initiatives to increase SHL information in all demographic and occupational populations, especially before marriage; moreover, they stress the need to design and implement educational interventions to empower men and improve their SHL.

Limitations

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One of the main limitations of this study was the use of self-reported data, which may not fully reflect the participants' true perspectives and could introduce bias in the interpretation of the questions. Another limitation of the study was its cross-sectional nature, which precluded causal inferences. It is recommended to use a combination of quantitative and qualitative methods to reduce reliance on self-report and the limitations of a cross-sectional study.

Furthermore, as a male researcher, surveying women attending premarital counseling centers was not feasible due to sociocultural constraints, so the study population included only men. Another study by a female researcher on women is currently underway.

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Conflict of Interest

The authors declared no conflicts of interest.

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Ethical considerations

Participation was voluntary, and all respondents provided written informed consent prior to the study. Participants were assured that their data would remain confidential and anonymous.

Code of Ethics

(IR.ARUMS.REC.1401.124).

Authors' Contributions

A.M. and N.R. designed the initial proposal and manuscript. M.M was responsible for data collection and analysis. A.M. and A.S. wrote the main manuscript text and all authors reviewed the manuscript.

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References

Adekola, A. P., & Mavhandu-Mudzusi, A. H. (2022). Advancing sexual and reproductive health outcomes in rural schools with the use of a sexuality education enhancement model: learners' perspectives. *Heliyon*, *8*(10).

Ankomah, S., Jahanfar, S., & Inungu, J. (2021). A study of sexual health information among Central Michigan University students. *Journal of Public Health*, *29*, 913–919.

Araste, A., Donyaee, M., Khosravi, M., & Afrazandeh, S. (2022). Surveying the level of sexual health literacy of pre-marriage couples referred to the selected health centers south Khorasan. *Journal of Health Literacy*, *7*(3), 53–62.

Berberian, H. (1996). Azerbaijan: Ethnicity and Autonomy in Twentieth-Century Iran, Touraj Atabaki, London: British Academic Press, 1993, xiv+ 238 pp. *Iranian Studies*, *29*(3-4), 367–371.

Brennan, D. J., Kesler, M. A., Davies, A. W. J., Ablona, A., & Collict, D. (2022). Online Sexual Health Information Seeking Patterns Differentiated by Social Location and Physical Location among Gay and Bisexual Men in Ontario, Canada. *Int J Sex Health*, *34*(4), 627–643. https://doi.org/10.1080/19317611.2022.2091076

Craig-Kuhn, M. C., Schmidt, N., Lederer, A., Gomes, G., Watson, S., Scott Jr, G., Martin, D. H., & Kissinger, P. (2021). Sex education and STI fatalism, testing and infection among young African American men who have sex with women. *Sex education*, *21*(4), 404–416.

Dabiri, F., Hajian, S., Ebadi, A., Zayeri, F., & Abedini, S. (2019). Sexual and reproductive health literacy of the youth in Bandar Abbas. *AIMS Medical Science*, *6*(4), 318–325.

Damari, B., & Akrami, F. (2021). Sexual health challenges in Iran and the strategies for its improvement. *Iranian Journal of Psychiatry and Clinical Psychology*, *27*(2), 216–233.

Dehghankar, L., Panahi, R., Khatooni, M., Fallah,

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[DOI: 10.18502/jsbch.v10i1.23003]

S., Moafi, F., Anbari, M., & Siboni, F. S. (2022). The association between sexual health literacy and sexual function of women in Iran. *Journal of Education and Health Promotion*, *11*(1), 11.

El Kazdouh, H., El-Ammari, A., Bouftini, S., El Fakir, S., & El Achhab, Y. (2019). Perceptions and intervention preferences of Moroccan adolescents, parents, and teachers regarding risks and protective factors for risky sexual behaviors leading to sexually transmitted infections in adolescents: qualitative findings. *Reproductive health*, *16*, 1–17.

Esmaili A, Asadollahi A, & M., B. (2014). Examining the function of sexual activity in mutual marital relations of Ahwazi spouses. *Sociological studies*, *7*(22), 79–89.

Ganchimeg, T., Mori, R., Ota, E., Koyanagi, A., Gilmour, S., Shibuya, K., Torloni, M., Betran, A., Seuc, A., & Vogel, J. (2013). Maternal and perinatal outcomes among nulliparous adolescents in low- and middle- income countries: a multi- country study. *BJOG: An International Journal of Obstetrics & Gynaecology*, *120*(13), 1622–1630.

Gilbert, M., Ferlatte, O., Michelow, W., Martin, S., Young, I., Donelle, L., Rootman, I., McDaid, L., & Flowers, P. (2015). P02. 05 Sexual health literacy–an emerging framework for research and intervention to improve sexual health for gay men. In: BMJ Publishing Group Ltd.

Graf, A. S., & Patrick, J. H. (2015). Foundations of life-long sexual health literacy. *Health Education*, *115*(1), 56–70.

Halverson, J. L., Martinez-Donate, A. P., Palta, M., Leal, T., Lubner, S., Walsh, M. C., Schaaf Strickland, J., Smith, P. D., & Trentham-Dietz, A. (2015). Health literacy and health-related quality of life among a population-based sample of cancer patients. *Journal of health communication*, *20*(11), 1320–1329.

Jafari, Y., Tehrani, H., Esmaily, H., Shariati, M., & Vahedian- shahroodi, M. (2020). Family-centred empowerment program for health literacy and self- efficacy in family caregivers of patients with multiple sclerosis. *Scandinavian journal of caring sciences*, *34*(4), 956–963.

Jamali, B., Maasoumi, R., Tavousi, M., & Haeri Mehrizi, A. A. (2020). Women's sexual health literacy and related factors: a population-based study from Iran. *International Journal of Sexual Health*, *32*(4), 433–442.

Khalesi, Z. B., Simbar, M., & Azin, S. A. (2017). A qualitative study of sexual health education among Iranian engaged couples. *African health sciences*, *17*(2), 382–390.

Kilfoyle, K. A., Vitko, M., O'Conor, R., & Bailey, S. C. (2016). Health literacy and women's reproductive health: a systematic review. *Journal of women's health*, *25*(12), 1237–1255.

Layzer, C., Rosapep, L., & Barr, S. (2017). Student voices: perspectives on peer- to- peer sexual health education. *Journal of School Health*, *87*(7), 513–523.

Lindau, S. T., & Gavrilova, N. (2010). Sex, health, and years of sexually active life gained due to good health: evidence from two US population based cross sectional surveys of ageing. *BMj*, *340*.

Maasoumi, R., Tavousi, M., & Zarei, F. (2019). Development and psychometric properties of sexual health literacy for adults (SHELA) questionnaire.

Mardi, A., Moghadam, Z. B., Ghafoori, F., & Refahi, S. (2019). Sexual activity, interest and satisfaction in older women in Iran. *Journal of Biostatistics and Epidemiology*.

McElvaney, R., Moore, K., O'Reilly, K., Turner, R., Walsh, B., & Guerin, S. (2020). Child sexual abuse disclosures: Does age make a difference? *Child abuse & neglect*, *99*, 104121.

Mustanski, B., Lyons, T., & Garcia, S. C. (2011). Internet use and sexual health of young men who have sex with men: A mixed-methods study. *Archives of sexual behavior*, *40*, 289–300.

Mustanski, B., Moskowitz, D. A., Moran, K. O., Newcomb, M. E., Macapagal, K., Rodriguez-Díaz, C., Rendina, H. J., Laber, E. B., Li, D. H., & Matson, M. (2020). Evaluation of a stepped-care eHealth HIV prevention program for diverse adolescent men who have sex with men: protocol

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[Downloaded from sbrh.ssu.ac.ir on 2026-11-08]

[DOI: 10.18502/jsbch.v10i1.23003]

for a hybrid type 1 effectiveness implementation trial of SMART. *JMIR Research Protocols*, *9*(8), e19701.

Nelson, K. M., Pantalone, D. W., & Carey, M. P. (2019). Sexual health education for adolescent males who are interested in sex with males: An investigation of experiences, preferences, and needs. *Journal of Adolescent Health*, *64*(1), 36–42.

Nematzadeh, S., Shahhosseini, Z., Moosazadeh, M., & Hamzehgardeshi, Z. (2024). Sexual health literacy level and its related factors among married medical sciences college students in an Iranian setting: a web‐based cross‐sectional study. *Reproductive Health*, *21*(1), 53.

Panahi, R., Kheiri, M., Daronkolaei, Z. A., Arjeini, Z., Taherpour, M., Dehghankar, L., & Valinezhad, S. (2021). The effect of sexual health literacy on the sexual life quality of women referring to healthcare centers in Qazvin, Iran. *Journal of Education and Health Promotion*, *10*.

Panahi, R., Namdar, P., Nayebi, N., Anbari, M., Yekefallah, L., & Dehghankar, L. (2021). Sexual health literacy and the related factors among women in Qazvin, Iran. *Journal of Education and Community Health*, *8*(4), 265–270.

Rakhshaee, Z., Maasoumi, R., Nedjat, S., & Khakbazan, Z. (2020). Sexual health literacy, a strategy for the challenges of sexual life of infertile women: a qualitative study. *Galen medical journal*, *9*, e1862.

Ranjbar, F., Khalajabadi Farahani, F., Montazeri, M., Jahanfar, S., & Gharacheh, M. (2023). Sexual and reproductive health‐related questions and concerns of newly married couples: A qualitative content analysis. *Health Science Reports*, *6*(8), e1479.

Rose, I. D., & Friedman, D. B. (2017). Schools: A missed opportunity to inform African American sexual and gender minority youth about sexual health education and services. *The Journal of School Nursing*, *33*(2), 109–115.

Sanchez, D., Wagner, K. M., Hamilton, E., & Singletary, M. (2023). Where you learn about sex matters: Sexual information sources during adolescence and current sexual values and sexual behaviors in Latinx emerging adults. *Journal of Latinx Psychology*.

Santelli, J. S., Kantor, L. M., Grilo, S. A., Speizer, I. S., Lindberg, L. D., Heitel, J., Schalet, A. T., Lyon, M. E., Mason-Jones, A. J., & McGovern, T. (2017). Abstinence-only-until-marriage: An updated review of US policies and programs and their impact. *Journal of Adolescent Health*, *61*(3), 273–280.

Shahrahmani, H., Kariman, N., Keshavarz, Z., Ahmadi, A., & Nasiri, M. (2023). Sexual health literacy and its related factors among couples: A population-based study in Iran. *PloS one*, *18*(11), e0293279.

Starrs, A. M., Ezeh, A. C., Barker, G., Basu, A., Bertrand, J. T., Blum, R., Coll-Seck, A. M., Grover, A., Laski, L., Roa, M., Sathar, Z. A., Say, L., Serour, G. I., Singh, S., Stenberg, K., Temmerman, M., Biddlecom, A., Popinchalk, A., Summers, C., & Ashford, L. S. (2018). Accelerate progress-sexual and reproductive health and rights for all: report of the Guttmacher-Lancet Commission. *Lancet*, *391*(10140), 2642–2692. https://doi.org/10.1016/s0140-6736(18)30293-9

Velardo, S. (2015). *Understanding preadolescent nutrition literacy in a low socio-economic region of South Australia* Flinders University, School of Education.[PhD Thesis]

Von Wagner, C., Knight, K., Steptoe, A., & Wardle, J. (2007). Functional health literacy and health-promoting behaviour in a national sample of British adults. *Journal of Epidemiology & Community Health*, *61*(12), 1086–1090.

Vongxay, V., Albers, F., Thongmixay, S., Thongsombath, M., Broerse, J. E., Sychareun, V., & Essink, D. R. (2019). Sexual and reproductive health literacy of school adolescents in Lao PDR. *PloS one*, *14*(1), e0209675.

Wångdahl, J., Lytsy, P., Mårtensson, L., & Westerling, R. (2014). Health literacy among refugees in Sweden–a cross-sectional study. *BMC public health*, *14*, 1–12.

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Zandian, H., Pourfarzi, F., Mardi, A., Zahirian, T., & Shadman, A. (2023). The socio-economic status predicting women's reproductive health: a prospective cohort study in Ardabil City, Iran, 2017-2020. *Journal of Research and Health*, *13*(1), 19–26.

Zare, M., Mardi, A., Gaffari-Moggadam, M., Nezhad-Dadgar, N., Abazari, M., Shadman, A., & Ziapour, A. (2022). Reproductive health status of adolescent mothers in an Iranian setting: a cross-sectional study. *Reproductive Health*, *19*(1), 89.

[Downloaded from sbrh.ssu.ac.ir on 2026-11-08]

[DOI: 10.18502/jsbch.v10i1.23003]

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