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Research article

Sexual and reproductive health literacy of the youth in Bandar Abbas

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Abstract: *Objective:* Considering the high prevalence of complications, including unwanted pregnancies and high risk sexual behaviors among the Iranian youth population, the aim of this study was to evaluate the sexual and reproductive health literacy among the youth in Bandar Abbas. *Methods:* This cross-sectional study was conducted in Bandar Abbas in 2018. Sexual and reproductive health literacy information was collected using a researcher-made sexual and reproductive health literacy questionnaire (score range 0 to 100) from 400 young people who referred to Bandar Abbas marriage counseling center. Data was analyzed using SPSS 22 software. *Results:* The mean age of the participants (50.3% male and 49.7% female) was 23 ± 4 years. The mean total sexual and reproductive health literacy score was 54 ± 11, indicating an insufficient overall level of sexual and reproductive health literacy in the population. There was no difference in sexual and reproductive health literacy score between genders ($P = 0.50$). There was a direct correlation between education level and sexual and reproductive health literacy score ($P < 0.001$). The most common ways to access information related to sexual and reproductive health in this study were internet and virtual networks (48%), physicians and health care staff (47%). *Conclusion:* Based on the results of this study, it seems that policy makers should focus on educating health care providers regarding health literacy in order to promote the health literacy of the youth and society through virtual networks and websites affiliated with the health system.

1. Introduction

Having access to information and sexual and reproductive health services is one of the rights of the young people and governments are required to fulfill this right because young people are vulnerable to reproductive and sexual health problems due to lack of information and access to services [1].

Sexual and reproductive health refers to access to information, treatment, and prevention services regarding contraceptive methods, sexually-transmitted diseases, abortion, pregnancy, low-risk and safe deliveries, as well as postpartum services [2]. Results of many previous studies carried out in Iran indicated that individuals have often poor and inaccurate information on reproductive health [3–5]. Health literacy refers to the level of one's ability to understand, retrieve, and provide basic information and services required to contribute to health issues and to make the right decisions. Health literacy is a global issue and, as referred to by World Health Organization (WHO), plays a central role in identifying health inequalities, both in rich and poor countries [6]. According to WHO, sexual and reproductive health can play a role in achieving some of the goals of sustainable development, including gender equality by helping girls stay in school, reducing gender gaps in the education field, etc. [7]. The health literacy rate of most Iranian population has been reported to be low according to previous studies [8,9]. Despite the fact that there has been no study on the assessment of reproductive health literacy in Iran so far, evidence have indicated a high prevalence of complications among the Iranian youth population, including unwanted pregnancies (30.6%) [10], high-risk sexual behaviors (34%), and subsequent susceptibility to sexually-transmitted diseases [11], that can be due to inadequate reproductive health literacy. On the other hand, it has been shown that the nature of the sexual and reproductive health needs of individuals varies with the phenomenon of marriage, and the lack of information or inaccurate information about reproductive health increases the risk of family and marital problems [12]. Furthermore, according to unpublished data by Hormozgan University of Medical Sciences in 2016, about 15% of marriages occurred in people under the age of 18 years old in Bandar Abbas in 2015, of whom 23% had elementary and middle school education and 1% were illiterate, which indicates problems with health literacy. According to the above, the present study was conducted to determine the levels of sexual and reproductive health literacy among young people referring to Bandar Abbas Marriage Counseling and Training Centers.

2. Methods

This cross-sectional study was conducted to determine the sexual and reproductive health literacy (SRHL) of the youth population in Bandar Abbas, South of Iran, from October to December 2018. The research population included all the young individuals (both male and female) who referred to Marriage Counseling and Training Centers in Bandar Abbas based on convenience sampling after obtaining written consent from the clients who referred to the counseling centers. Inclusion criteria were being an Iranian citizen, having at least reading and writing literacy, and first marriage experience. Participants were excluded from the study in case of incomplete questionnaire or unwillingness to continue their participation in the research process. All questionnaires were filled anonymously. A

researcher-made questionnaire was designed based on the framework of the Iranian health literacy (HELIA) [13] to measure sexual and reproductive health.

The questionnaires used in this study underwent psychometric analysis by determining qualitative and quantitative content validity. The content validity index (CVI) and content validity ratio (CVR) of the questionnaire were 0.98 and 0.92 respectively. Then, the reliability of this tool was assessed by calculating the intraclass correlation coefficient (ICC) and Pearson Correlation Coefficient by test-retest method with a two-week interval. The ICC was 0.86 and the correlation coefficient of 0.883 ($P=$ 0.05) were obtained for the questionnaire. The questionnaire was formulated in two parts; the first part consisted of determining the ways of accessing information (9 questions), and the second part assessed the sexual and reproductive health literacy (SRHL) rate in the following 4 dimensions: Reading and understanding (9 questions), access to information (12 questions), evaluation of information (6 questions), and decision making and application (10 questions).

The wording of the questionnaire items was formulated based on the reproductive health definition offered by WHO [14]. This questionnaire collected information using a 5-point Likert scale, with minimum and maximum scores of 37 and 185 points respectively. In this study, the score for each dimension of health literacy and consequently the total health literacy score were converted to a standard score of 0 to 100. The score range of 0 to 50 was considered as inadequate SRHL, 50.1–66 slightly adequate, 66.1–84 adequate, and 84.1–100 excellent SRHL. The inadequate and slightly adequate levels were combined and named "limited SRHL" while adequate and excellent levels were combined into "optimum SRHL" group. The Cochran formula was used to calculate the sample size according to the total target population who attended the marriage counseling and training classes in the past year. The study was approved by the Ethics Committee of Shahid Beheshti University of Medical Sciences (ethics code: IR.SBMU.PHNM.1395.692). Data analysis was carried out using descriptive statistics including mean, standard deviation, chi-square, independent t test, and the analysis of variance (ANOVA) using the statistical package for social sciences (SPSS) software version 22. Statistical significant level was considered as $P < 0.05$.

3. Results

A total of 400 individuals (199 (49.7%) female and 201 (50.3%) male) participated in this study. Thirty-five individual were excluded from study, due to incomplete questionnaire. Table 1 illustrates the demographic characteristics of the subjects. The average total SRHL score was 54 ± 11, which indicated inadequate overall level of SRHL in the studied population. There was no statistically significant difference between genders in this regard. Table 2 shows the mean score of SRHL dimensions based on gender.

The results of the present study showed that the majority of the population had inadequate or slightly inadequate SRHL, with the highest scores related to reading and understanding dimension (slightly adequate) and the lowest score were related to the level of access to information. Moreover, there was no significant difference between genders in this respect (Table 2). Table 3 shows the different levels of the dimensions of SRHL. More than half of the subjects had an optimal SRHL in reading and understanding dimension; however, they had limited SRHL in other dimensions. The majority of participants obtained the lowest scores in the access and assessment of information dimension (Table 3).

Table 1. Demographic characteristics of participants in this study.

Variables Number (%)		Female 199(49.75)	Male 201(50.25)	Total 400(100)	P-value
Age	(Mean ± SD)	21 ± 4	25 ± 3	23 ± 4	$P < 0.000$
Education level	Elementary	18 (9.05)	4 (2)	20 (5.5)	$P = 0.25$
	Middle school	27 (13.55)	20 (10)	47 (11.75)	
	Secondary and Diploma	109 (54.8)	121 (60)	230 (57.5)	
	college/university education	45 (22.6)	56 (28)	101 (25.25)	
Occupation status	Housewife/Unemployed (male)	126 (63)	5 (2.5)	131 (32.75)	$P < 0.000$
	Manual workers	8 (4)	11 (5.5)	19 (4.75)	
	Self-employment	9 (4.5)	127 (63.5)	136 (34)	
	Student	24 (12.5)	2 (1)	26 (6.5)	
	University student	20 (10)	11 (5.5)	31 (7.75)	
	Employee	12 (6)	45 (22.5)	57 (14.25)	

Table 2. Average score (out of 100) of sexual and reproductive health literacy, differentiated by gender in the present study.

Dimensions	Female Mean ± SD	Male Mean ± SD	P-value[a]
Reading and understanding the information	63 ± 15	66 ± 15	$P = 0.068$
Access to information	48 ± 15	48 ± 13	$P = 0.954$
Evaluation of information	50.1 ± 14	49 ± 14.5	$P = 0.835$
Decision-making and use of information	52 ± 14	53 ± 12	$P = 0.842$
SRHL score	53 ± 14	54 ± 10	$P = 0.506$

[a]Note: Independent t test.

Table 3. Levels of sexual and reproductive health literacy by its dimensions in present study.

Levels of reproductive health literacy / Dimensions	Inadequate SRHL: Number (percent)	slightly adequate SRHL: Number (percent)	Adequate SRHL: Number (percent)	Excellent SRHL: Number (percent)	limited SRHL*: Number (percent)	Optimum SRHL[!]: Number (percent)
Reading and understanding	80 (20)	107 (26.75)	189 (47.25)	24 (6)	187 (46.75)	213 (53.25)
Access to information	223 (55.75)	122 (30.5)	50 (12.5)	5 (1.25)	345 (86.25)	55 (13.75)
Evaluation of information	237 (59.25)	108 (27)	50 (12.5)	5 (1.25)	345 (86.25)	55 (13.75)
Decision- making and use of information	185 (46.25)	148 (37)	62 (15.5)	5 (1.25)	333 (83.25)	67 (16.75)
SRHL score	120 (30)	220 (55)	55 (13.75)	5 (1.25)	340 (85)	60 (15)

*Note: Sum of inadequate and slightly adequate levels; [!]: Sum of adequate and Excellent adequate levels.

The present study showed a significant correlation between the education level and the mean SRHL score, which means that there was a direct relation between education level and health literacy score ($P < 0.001$). Also Multiple regression tests to examine the effect of age, gender, and education level on SRHL in this study showed that education level was a predictor of SRHL (B = 0/38, $P > 0.001$). The most commonly used health information sources were internet and virtual networks, including Telegram, Instagram and etc. (48%), physicians and healthcare staff (47%). Subjects reported that they referred to internet and virtual (59%) as the most available sources for seeking health information followed by. However, they preferred to attain such information from doctors and healthcare staff (54%) and then the Internet (39%).

4. Discussion

The present study was the first study that examined the SRHL in the Iranian population (both women and men). The results showed that 85% of the subjects had limited SRHL. However, when each dimension of the SRHL was examined separately, it was shown that more than half of the participants (53.25%) had optimum SRHL in understanding level; however, they had limited levels of SRHL in access, evaluation, decision-making, and application dimensions. Furthermore, there were no differences between genders in all SRHL dimensions in this study. A meta-analysis conducted by Dadipoor et al. [15], showed that Iranians' health literacy was inadequate and interstitial. A total of 44% of the subjects had limited health literacy in a national study carried out by Tavousi et al. using the HELIA tool [8]. In a study on women using the HELIA tool, Askariyan-tondari et al., reported that 43.4% of women had inadequate health literacy [16]. Similarly, in a study on the health literacy of

cervical cancer in women of reproductive age, using a tool in the HELIA framework, Bazaz et al. found that 42.7% of the participants had limited health literacy [17]. The results of all the mentioned studies were consistent with the results of the present study. However, Ansari et al. [18], who used the HELIA tool on a young population (18–30 years old), stated that 82.9% of the population had adequate health literacy. This discrepancy can be attributed to the fact that participants in the study by Ansari et al. had high school diploma and above and there were no participants having education level below diploma, and that the study was conducted in a region with a high socioeconomic status in Tehran. However, a lower percentage of the subjects had graduate and university degree in the present study (25.25%). In our study, as expected, there was a direct correlation between education level and average health literacy score, which means that the mean health literacy score increased with an increase in education level. These results were consistent with other studies conducted in the country [8,15–17]. The most available sources of health-related information were Internet and virtual networks and health professionals. In the study by Ansari et. al, Internet was identified as the most used source of information; however, Tavousi et al. referred to Internet as the second source of information [8,18]. Overall, the most important ways to obtain health information in this study were consistent with other previous studies. Shaygan-mehr & Hazrati revealed that levels of accessibility and reading skill subscales of the health literacy among young social network members, including Telegram, were higher than those who were not the members of such social networks [5].

Such a high inclination to use the Internet and virtual networks might be due to the ease of access of the youth to high volume of information, as in the present study, participants considered virtual networks as the most accessible source for health-related information. However, they preferred to receive information from physicians and healthcare staff than Internet and virtual networks. This study participants considered information provided by healthcare staff more credible than information received from cyberspace. For this reason, health care policy makers of the community should consider the appropriate use of these opportunities for promoting health literacy and improving the health status of the young population by ensuring that the information content is monitored and directed to the appropriate path.

On the other hand, participants referred to physicians and healthcare staff as the most trusted source of information in the present study. Previous studies have shown that most health service providers have little knowledge about the effect of health literacy of recipients of services on their level of follow-up and compliance with services and recommendations [19]. Hence, health literacy is considered as a hidden need, which is often ignored by the policy makers and service providers [20]. For the same reason, it seems that the next important step that should be considered by healthcare policy makers of the country is to present updated education materials based on scientific evidence, which is tailored for the needs of today's society, so as to enhance health literacy and utilization of health services by health services recipients. This study examined the SRHL for the first time, which can be considered as the strength of this study. One of the limitations of the present research is its cross-sectional nature in young couples in Bandar Abbas. Consequently, the findings of this study regarding health literacy should be interpreted with auction in other parts of the country. Furthermore, it is recommended that studies should be performed on different population groups of the country to determine the SRHL and its consequences in the Iranian population.

5. Conclusion

The results of the present study revealed that the youth in Bandar Abbas had inadequate SRHL. Therefore, it is essential to take measures to promote sexual and reproductive health and, as a result, to promote community health and the easy access to valid and reliable information through providing reliable, accessible, cost-effective services, and intersectoral collaboration.

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Conflict of interest

The authors declare no conflict of interest.

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