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The effect of sexual health education on sexual myths and sexual health literacy among University students

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Abstract

This research was conducted to evaluate the effect of sexual health education on university students' sexual myths and sexual health literacy. The sample of the quasi-experimental research consisted of 51 students aged 18 and over studying at Toros University Vocational School of Health Services. Personal information form, Sexual Myths Scale, Sexual Health Literacy Scale were used as data collection tools. Students answered questions before and after sexual health education. In our research, before sexual health education, 49% of the students had moderate knowledge about sexuality; after the training, more than half of the students (51%) were found to have sufficient knowledge about sexuality. In order to reduce sexual myths and increase sexual health literacy levels, it is recommended that age-appropriate sexual health education be given by trained people in educational institutions. (*Afr J Reprod Health 2024; 28 [10]:112-121*).

Keywords: Sexual myth, health literacy, sexual health literacy, sexual education, university students

Résumé

Cette recherche a été menée pour évaluer l'effet de l'éducation à la santé sexuelle sur les mythes sexuels et la littératie en matière de santé sexuelle des étudiants universitaires. L'échantillon de la recherche quasi expérimentale était composé de 51 étudiants âgés de 18 ans et plus étudiant à l'École professionnelle des services de santé de l'Université Toros. Le formulaire de renseignements personnels, l'échelle des mythes sexuels et l'échelle de littératie en matière de santé sexuelle ont été utilisés comme outils de collecte de données. Les étudiants ont répondu à des questions avant et après l'éducation en matière de santé sexuelle. Dans notre recherche, avant l'éducation en matière de santé sexuelle, 49 % des étudiants avaient des connaissances modérées sur la sexualité; après la formation, plus de la moitié des étudiants (51 %) se sont avérés avoir des connaissances suffisantes sur la sexualité. Afin de réduire les mythes sexuels et d'augmenter les niveaux de littératie en matière de santé sexuelle, il est recommandé qu'une éducation en matière de santé sexuelle adaptée à l'âge soit dispensée par des personnes formées dans les établissements d'enseignement. (*Afr J Reprod Health 2024; 28 [10]: 112-121*).

Mots-clés: Mythe sexuel, littératie en santé, littératie en santé sexuelle, éducation sexuelle, étudiants universitaires

Introduction

Sexual myth; it is defined as judgements that are believed to be true about sexuality but are exaggerated, not based on science and restrict sexuality^{1,2}. Incorrect information and beliefs such as that men always desire intercourse, that men always initiate intercourse, and that masturbation causes physical and mental diseases are examples of sexual myths³. These myths, which are prevalent in society, vary from culture to culture and even from individual to individual⁴.

Looking at the international literature, one realizes that studies on sexual myths are rather limited⁵⁻⁸. Studies conducted in different years in Turkiye have shown that sexual myths persist from the past to the present and are still widespread in society ⁹⁻¹³. Sexual myths play an important role in the formation of sexual identities and healthy sexuality. This is because these false beliefs make sexual intercourse more difficult and reduce the quality of sexual life¹⁴. For this reason, it is believed that the biggest factor that will destroy sexual myths in society is sexual health education.

Sexual health education; it encompasses the process of teaching and learning about sexuality that has cognitive, emotional, physical and social aspects¹⁵.

According to this definition, it is to be expected that people who receive sexual health education will believe less in sexual myths. This is because the higher the level of education of the individual, the greater the opportunity to access scientifically proven information for a healthy sex life. Individuals with low levels of education may stay away from accurate information about sexual health and are more likely to believe in sexual myths¹⁶. However, studies have shown that sexual myths are prevalent among people with a high level of education or those who are educated about sexual health^{12,17}.

The results of this study show that education should not only be received, but also correctly interpreted and utilised. We can say that this requirement is related to health literacy. The ability to receive, understand, interpret and utilise information in order to protect and improve the health of the individual is defined as health literacy¹⁸. The level of health literacy is important for utilising preventive health services, reducing hospitalisations, lowering hospital costs and reducing mortality and morbidity rates, especially for chronic diseases¹⁹.

The study of health literacy in Greece, Bulgaria, Spain, Ireland, the Netherlands, Germany, Austria and Poland found that the countries have inadequate health literacy²⁰. Türkiye across the General Directorate of Health Promotion in 2020 in his study, when the health literacy levels of the individuals participating in the research were examined, it was determined that 30.9% were insufficient and 38% were problematic or limited. These results show that approximately 7 out of 10 people in Turkey have insufficient or limited health literacy level²¹.People's health literacy, which is important for seeking the right health behaviours, is also important for accessing accurate information about sexuality, which is an important dimension of health. Sexual health literacy is expressed as the ability to read, analyze and use sexual health information in daily life so that individuals can make decisions about and evaluate changes in their sexual lives²².

Therefore, the level of sexual health literacy is important to ensure the continuity of the quality of the individual's sexual life²³. According to the study

conducted by Panahi, Kheiri, Daronkolaei, Arjeini, Taherpour, Dehghankar and Valinezhad the quality of sexual life of women with inadequate sexual health literacy was found to be low ²⁴. Similar results were found in another study conducted in Iran in 2022²⁵.

A review of the literature in Turkey did not find any study dealing with the sexual health literacy of individuals.

Therefore, this study was conducted to determine the impact of sexual health education on sexual myths and sexual health literacy in order to provide university students with a safe and positive perspective on sexuality.

Methods

Study design and participant recruitments

The study was designed as a quasi-experimental study. The sample size of the study was not calculated. 51 students who were at least 18 years old, could read and write Turkish, had no mental or cognitive problems, voluntarily agreed to participate in the study, and had read and signed the informed consent and voluntary participation form were included. Students who had not participated in sex education classes for 2 weeks were informed that they would be excluded from the study.

Scales

Before the start of the training in the first week, the students were given the necessary information about the study and the "Voluntary Consent Form" and the "Data Forms" were distributed to the volunteers. The study data were collected using three data collection instruments: Personal Information Form, Sexual Myths Scale (SMS), Sexual Health Literacy Scale (SHLS) and which were developed to identify the socio-demographic characteristics of the university students.

The data collection instruments took approximately 15 minutes to complete.

Personal information form

Age, gender, marital status, economic income, mother's and father's education level, family type, first source of sexual information, and adequate knowledge about sexuality are determined using the

personal information form. This form consists of 10 questions.

Sexual myths scale

The Sexual Myths Scale (SMS) was developed by Golbasi Evcili, Eroglu, Bircan in 2016, and its validity and reliability have been demonstrated. The Cronbach's alpha coefficient of the SMS was found to be 0.91 and the test-retest reliability coefficient was 0.814. The scale is used to determine the level of people's sexual myths. The SMS consists of a total of 28 questions and 8 different sub-dimensions (sexual orientation, gender, age and sexuality, sexual behaviour, masturbation, sexual violence, sexual intercourse, sexual satisfaction). Each item is rated on a 5-point Likert scale, e.g. "strongly disagree (1)" and "strongly agree (5)". When calculating the scores for the sub-dimensions of the scale, the items belonging to the sub-dimensions are taken into account. When calculating the total score, the points awarded for each item are added together. The highest score is 140, the lowest score is 28. High scores mean that the person has a high level of sexual myths²⁶. In our research, the Cronbach Alpha coefficient of SMS was found to be 0.856.

Sexual health literacy scale

The Sexual Health Literacy Scale (SHLS) Scale was developed by Ustgorul in 2022, and its validity and reliability have been established. The Cronbach alpha coefficient of the SHLS was found to be 0.88. The scale is used to determine and improve people's knowledge of sexual health. The SHLS scale contains a total of 17 items and has a 2-dimensional structure. There are 12 items in the sexual knowledge sub-dimension and 5 items in the sexual attitudes sub-dimension.

Each item is rated on a 5-point Likert scale, e.g. "strongly disagree (1)" and "strongly agree (5)". The highest score in the sexual knowledge subdimension of the scale is 60 and the lowest score is 12. The sexual attitude sub-scale is rated in reverse. The highest score in this section is 25 and the lowest score is 5. Higher scores mean that the person has a negative attitude towards sexual health knowledge. The increase in scores in the subscales and the total score of the SHLS scale indicates that sexual health literacy has increased²⁷. In our research, the Cronbach Alpha coefficient of SHLS was found to be 0.768.

Sexual health education

Before participating in the sexual health education programme, students were given the personal information form, the SMS and the SHLS scale. After a total of 10 weeks (2 hours per week) of sexual health education, the SMS and the SHLS scale were presented again to the same students. Sexual health education was conducted online using presentations prepared by Y.S., a specialist in obstetrics and gynecology nursing. The online sexual health training lasted a total of 20 hours, 2 hours per week, over a total period of 10 weeks. Content of sexuality education: The concept of sexuality and sexual health, anatomy and physiology of sexuality, introduction to sexual health, sexual health assessment, sexual identity development, sexually transmitted infections, factors affecting sexual health, sexual health/reproductive health problems in the world and in Turkey and family planning.

Analysing data

The data was divided into pre- and post-training groups. The data collected during the study was analyzed using the SPSS (Statistical Package for Social Sciences for Windows 26.0). Parametric methods were used for normally distributed measured values. Student's t-test was used to compare the measured values of two independent groups, and repeated measures analysis of variance (ANOVA test with repeated measures) was used to compare more than two groups of dependent variables. Arithmetic mean and standard deviation were used as descriptive statistics. A value of p <0.05 was considered statistically significant.

Ethical committee approval

Approval was obtained from the Ethics Committee for Scientific Research and Publications of the University of Toros before the study began (23.06.2023/72). The study data was collected online between 02/07/2023 and 03/09/2023 from students studying at Toros University Vocational School of Health Services who volunteered for online sexual health education. They were also assured of confidentiality. The study adhered to the principles of the Declaration of Helsinki

Results

Some characteristics of the students are shown in Table 1. It was found that the mean age of the students was 19.8 ± 1.37 years, 15.7% of the students were male, 60% had an income equal to their expenses and 84.3% had a nuclear family structure. When the educational status of the students' parents was examined, it was found that almost half of the mother had a primary school degree (41.2%) and almost half of the father had a high school degree (47.1%). When asked about the first source of sexual information, it was also found that 7.8% of the students received information from their families and the majority of them (80.4%) had no sexual experience.

The results regarding the definition of the students' level of knowledge about sexuality before and after the training are shown in Table 2. Before sexual health education, 49% of the students had moderate knowledge about sexuality and 5.9% had no knowledge about sexuality. After sexual health education, it was found that more than half of the students (51%) had adequate knowledge about sexuality and the percentage of students who had no idea about sexuality decreased to zero.

Table 3 shows the distribution of students' mean scores on the SMS and its subscales before and after the training. It was found that there was no significant difference between the SMS sexual orientation, gender, age and sexuality, sexual behavior, masturbation, sexual violence, sexual satisfaction sub-dimensions and the SMS total score of the students before and after the training (p>0.05).

Table 4 shows the distribution of the students' mean scores on the SHLS and its subdimensions before and after the training. It was found that there was a significant difference between the sexual knowledge subscale of the SHLS and the overall mean scores of the SHLS of the students before and after the training (p<0.05).Table 5 shows the distribution of students' mean scores on the SMS before and after the course according to their various demographic characteristics. For this scale, no statistically significant difference was found between the variables of gender, socio-economic level, family type, first source of sexual information, and sexual experience before and after the training (p>0.05).

Table 1: Some characteristics of students

Average age 19.84 ± 1.37 n%Gender*********************************	Characteristics	<u>x</u> ±S	SD					
n%Gender4384.3Female4384.3Male815.7Marital status100Ever married $ -$ Socio-economic level $ -$ Income is less than expenses713.7Income equals expenses3160.8Income exceeds expenses1325.5Family type $ -$ Nuclear family4384.3Extended family815.7Education level of the mother $-$ Primary2141.2Sekondary1121.6High school1529.4Graduated from a universty47.8Education level of the father $-$ Primary1223.5High school2447.1Graduated from a universty47.8The first source of sexual knowledge $-$	Average age	19.84±1.37						
GenderFemale4384.3Male815.7Marital status815.7Marital status51100Ever marriedSocio-economic level-Income is less than expenses713.7Income equals expenses3160.8Income exceeds expenses1325.5Family type-Nuclear family4384.3Extended family815.7Education level of the mother-Primary2141.2Sekondary1121.6High school1529.4Graduated from a universty47.8Education level of the father-Primary1223.5High school2447.1Graduated from a universty47.8The first source of sexual knowledge-		n	%					
Female4384.3Male815.7Marital status 15.7 Never married 51 100Ever married $ -$ Socio-economic level $-$ Income is less than expenses 7 13.7Income equals expenses 31 60.8 Income exceeds expenses 13 25.5 Family type $ -$ Nuclear family 43 84.3 Extended family 8 15.7 Education level of the mother $-$ Primary 21 41.2 Sekondary 11 21.6 High school 15 29.4 Graduated from a universty 4 7.8 Education level of the father $-$ Primary 11 21.6 Sekondary 12 23.5 High school 24 47.1 Graduated from a universty 4 7.8 The first source of sexual knowledge $-$	Gender							
Male815.7Marital status100Ever married51100Ever marriedSocio-economic level13.7Income is less than expenses713.7Income equals expenses3160.8Income exceeds expenses1325.5Family type2Nuclear family4384.3Extended family815.7Education level of the mother21Primary2141.2Sekondary1121.6High school1529.4Graduated from a universty47.8Education level of the father1121.6Sekondary1223.5High school2447.1Graduated from a universty47.8The first source of sexual knowledge2447.1	Female	43	84.3					
Marital statusNever married51100Ever marriedSocio-economic level-Income is less than expenses713.7Income equals expenses3160.8Income exceeds expenses1325.5Family type-Nuclear family4384.3Extended family815.7Education level of the mother-Primary2141.2Sekondary1121.6High school1529.4Graduated from a universty47.8Education level of the father-Primary1121.6Sekondary1223.5High school2447.1Graduated from a universty47.8The first source of sexual knowledge	Male	8	15.7					
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Income exceeds expenses1325.5Family type	Income equals expenses	31	60.8					
Family type 43 84.3 Nuclear family 8 15.7 Extended family 8 15.7 Education level of the mother 7 Primary 21 41.2 Sekondary 11 21.6 High school 15 29.4 Graduated from a universty 4 7.8 Education level of the father 7 Primary 11 21.6 Sekondary 12 23.5 High school 24 47.1 Graduated from a universty 4 7.8 The first source of sexual knowledge 5	Income exceeds expenses	13	25.5					
Nuclear family4384.3Extended family815.7Education level of the mother7Primary2141.2Sekondary1121.6High school1529.4Graduated from a universty47.8Education level of the father7Primary1121.6Sekondary1223.5High school2447.1Graduated from a universty47.8The first source of sexual knowledge7	Family type							
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Education level of the motherPrimary2141.2Sekondary1121.6High school1529.4Graduated from a universty47.8Education level of the fatherPrimary1121.6Sekondary1223.5High school2447.1Graduated from a universty47.8The first source of sexual knowledge	Extended family	8	15.7					
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Graduated from a university47.8Education level of the father7Primary1121.6Sekondary1223.5High school2447.1Graduated from a university47.8The first source of sexual knowledge7	High school	15	29.4					
Education level of the fatherPrimary1121.6Sekondary1223.5High school2447.1Graduated from a university47.8The first source of sexual knowledge	Graduated from a universty	4	7.8					
Primary1121.6Sekondary1223.5High school2447.1Graduated from a university47.8The first source of sexual knowledge	Education level of the father							
Sekondary1223.5High school2447.1Graduated from a university47.8The first source of sexual knowledge	Primary	11	21.6					
High school2447.1Graduated from a university47.8The first source of sexual knowledge	Sekondary	12	23.5					
Graduated from a university 4 7.8 The first source of sexual knowledge	High school	24	47.1					
The first source of sexual knowledge	Graduated from a universty	4	7.8					
	The first source of sexual knowledge							
Internet 16 31.4	Internet	16	31.4					
Friend 9 17.6	Friend	9	17.6					
Scientific publications 5 9.8	Scientific publications	5	98					
School term 17 22.4	School term	17	22.4					
Family 1/ 55.4	Family	1 /	33.4 7 0					
Having a servel experience	Having a sayual avnoriance	4	/.0					
Ves 10 10 6	Ves	10	10.6					
No 41 80.4	No	41	80.4					

Discussion

In our study, we examined the impact of sexual health education on the sexual myths and sexual health literacy of university students. It was found that students' knowledge of sexual health was at an intermediate level before the training (49%), and after the training, their knowledge of sexual health increased and was sufficient (51%). In addition, it was found that the students' mean total sexual myth score (57.10 ± 17.82) decreased after the training (54.40 ± 17.56).

	n	%
Before training		
Sufficient knowledge	14	27.5
Intermediate knowledge	25	49.0
Does not have enough information	9	17.6
She/He has no idea about sexuality	3	
		5.9
After training		
Sufficient knowledge	26	51.0
Intermediate knowledge	20	39.2
Does not have enough information	5	9.8
She/He has no idea about sexuality	-	-
Total	51	100.0
n: Number of Participants, % : Percent		

Table 2: Students' knowledge level about sexuality

Table 3: Distribution of students' average scores from the Sexual Myths Scale and its subscales before and after education

		x ±SD	sh	t Test		
				t	Р	
	Before training	11.76±4.97	.69	.413	.681	
Sexual orientation	After training	11.50±3.72	.52			
	Before training	9.64±4.16	.582	.190	.850	
Gender	After training	9.50±4.03	.565			
	Before training	8.43 ± 3.40	.476	.592	.556	
Age and sexuality	After training	8.00 ± 3.82	.535			
	Before training	5.43±2.55	.357	.866	.391	
Sexual behavior	After training	5.00 ± 2.70	.378			
	Before training	4.47±1.96	.274	.000	1.00	
Masturbation	After training	4.47±1.84	.258			
	Before training	6.50±2.91	.408	.285	.777	
Sexual violence	After training	6.37±2.78	.390			
	Before training	5.74±2.18	.305	1.431	.159	
Sexual intercourse	After training	5.07±2.69	.377			
	Before training	5.17±2.06	.289	1.587	.119	
Sexual satisfaction	After training	4.52±2.33	.327			
	Before training	57.10±17.82	2.49	.904	.370	
Sexual Myths Scale	After training	54.40±17.56	2.45			
Total	-					
n: Number of Participants. \bar{x} : Mean, sd: Standard Deviation, sh: Standard Error, p < 0.05.						

Table 4: Distribution of students' mean scores from the sexual health literacy scale and its sub-dimensions before and after training

		x ±SD	sh	t Test	
				t	р
Sexual knowledge	Before training	32.25±7.66	1.07	-3.43	.001
	After training	38.09±8.20	1.14		
Sexual attitude	Before training	18.23±3.29	0.46	745	.460
	After training	18.66 ± 3.00	0.42		
Sexual Health Literacy	Before training	50.49±8.43	1.18	-3.44	.001
Scale Total	After training	56.76±8.77	1.22		

n: Number of Participants. \bar{x} : Mean, SD: Standard Deviation, sh: Standard Error, p < 0.05.

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Table 5: Distribution of students' mean scores on the sexual myth scale and sexual health literacy Scale before and after training according to some characteristics (n=51)

Characteristics			Before training SMS	After training SMS		Before training SHLS	After training SHLS	
	n	%	$\overline{X} \pm SD$	$\overline{X} \pm SD$	р	$\overline{X} \pm SD$	$\overline{X} \pm SD$	р
Gender								
Female	43	84.3	54.97±16.91	51.18 ± 15.50	.220	49.83±8.54	56.53±8.99	.002
Male	8	15.7	68.62±19.28	72.12±18.37	.717	54.00 ± 7.30	58.00 ± 7.92	.393
Socio-economic level								
Income is less than	7	13.7	56.50±31.04	50.33±12.20	.689	47.00±13.7	56.50 ± 7.86	.225
expenses								
Income equals expenses	31	60.8	56.29±15.22	54.52±16.63	.609	51.29±7.03	56.55 ± 8.91	.016
Income exceeds	13	25.5	60.00±18.14	56.54±23.23	.471	49.90±9.38	57.54±9.53	.108
expenses								
Family type								
Nuclear family	43	84.3	56.89±16.53	55.23±17.71	.592	51.05 ± 8.43	56.25±9.64	.021
Extended family	8	15.7	57.83±22.31	52.00±17.56	.459	48.66 ± 8.54	58.41±4.96	.011
The first source of sexual								
knowledge								
Internet	16	31.4	59.31±24.59	60.56±19.52	.870	53.50±9.19	56.06 ± 8.20	.479
Friend	9	17.6	62.80±10.84	57.40 ± 5.12	.290	42.00±3.53	59.20±6.26	.007
Scientific publications	5	9.8	45.80±15.05	50.20±29.50	.543	54.20±11.0	55.20±12.69	.902
School term	17	33.3	55.00±13.80	48.90±11.00	.081	49.47±6.99	57.23±8.55	.005
Family	4	7.8	66.50±9.814	61.00 ± 26.72	.668	49.75±7.71	56.00±13.14	.442
Having a sexual experience								
Yes	10	19.6	59.25±18.87	60.00±20.54	.900	53.91±7.03	58.16±9.70	.229
No	41	80.4	56.46±17.68	52.76±16.45	.285	49.43±8.62	56.33 ± 8.56	.003

n: Number of Participants, %: Percent, \bar{x} : Mean, SD: Standard Deviation, SMC: Sexual Myths Scale, SHLS: Sexual Health Literacy Scale, p < 0.05.

In the study by Gonenc, Alan Dikmen and Golbasi. in which the effect of sexual health education via WhatsApp on midwifery students' sexual knowledge and sexual myths was examined, it was found that the students' sexual health knowledge test scores were low before the training and the sexual myth scores were quite high. After sexuality education, students' sexual health knowledge test scores increased and sexual myth scores decreased²⁸. In Sarpkaya Guder and Tektas's study, in which they examined the effects of the level of sexual myth beliefs of students who participated in a sexual health course, it was found that the average sexual myth scores of the students decreased after the course compared to before the course²⁹. In their 2017 study, in which Ozsoy and Bulut examined students' beliefs about sexual myths before and after the sexual health course, it was found that students' sexual myth scale scores were higher before starting the course³⁰. Our research results show that sexual health education is effective in reducing sexual myths. Table 3. In our study, it was found that the SHLS sexual knowledge subscale score and total score increased after the training and the difference between the scores before and after the training was significant (p<0.001). No significant difference was found in the sexual knowledge subscale score of the SMS before and after the training (p>0.05).

No study was found in the literature review that examined the impact of sexual health education on sexual health literacy. It seems that the studies were only conducted to determine the level of sexual health literacy or the factors that influence this level³¹⁻³³. However, sexual health literacy is important for protecting sexual health, maintaining the quality of sexual life, preventing sexually transmitted diseases, and early diagnosis and treatment of sexual health problems²³. Therefore, it is believed that our research findings will make a significant contribution to the literature. In our study, it was found that the SMS total score before sexual health education was 57.1 ± 17.82 on average. In the study of nursing students conducted by Duman, Dinc Kaya and Günaydın 2023, the mean SMS score was 57.48±15.31³⁴. In their study of students in the Faculty of Literature and Business and Administrative Sciences, Evcili and Golbasi found an average SMS score of 82.21±17.37. While our research findings are similar to the study of

Duman, Dinc Kaya and Günaydın the level of belief in sexual myths is lower than that of Evcili and Golbasi's study³⁵. This could be due to the fact that the participants were students studying for a job in the healthcare sector. In addition, in our study, it was found that there was no significant difference between the mean score of the sexual myth subscale and the mean score of the total sexual myth scale of the students before and after the training (p>0.05). Considering this result that the proportion of students with sexual experience among the students in our study is less than 20%, it can be said that the belief in sexual myths persists to a small extent, this belief is culturally conditioned, and the education imparted partially affects the change in cultural myths.

Limitations

The study is limited to Toros University Vocational School of Health Services. For this reason, young people who were not at university and did not have sufficient knowledge about sexual health were excluded from the study. These limitations may have led to selection bias in our study. Another limitation is that the teaching content is determined by the educators participating in the study.

Conclusion

Our research findings show that students' sexual knowledge improved after the training, that their mean scores on myths about sexuality decreased and that their mean scores on sexual health literacy increased. Sexual health education plays an important role in improving the sexual health of individuals in society. For this reason, private and public institutions should provide sexual health education and support this education. It is recommended to provide age-appropriate sexuality education in schools to dispel sexual myths and increase sexual health literacy.

Contributions of authors

YS, CY, ÜY, and ÖG conceptualized and designed the study; YS, CY, ÜY, and ÖG collected data; YS, CY prepared the manuscript; ÜY and ÖG performed statistics; YS, CY interpreted the analyses. All authors read and approved the manuscript.

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