

## THE EFFECT OF PEER EDUCATION PROVIDED UNDER THE GUIDANCE OF HEALTH PROMOTION MODEL TO YOUNG ADULTS ON THEIR GENITAL HYGIENE BEHAVIORS: THE CASE OF TURKEY

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### Abstract

This study was conducted to determine the effect of peer education provided under the guidance of health promotion model to young adults on their genital hygiene behaviors. This quasi-experimental study with a single group pretest-posttest model was conducted. In the study, 50 students studying in the midwifery department of a university in the southeastern Turkey were determined as peer educators. The education was provided to a total of 442 people aged between 18-25 years who were selected with improbable sampling method. It was determined that peer education given under the guidance of the health promotion model was effective and the knowledge level of young adults about genital hygiene behaviors increased. In order to give genital hygiene education to wider masses and groups, peer education based on the health promotion model can be recommended.

**Keywords:** Health promotion model, genital hygiene, peer education, young adults

## GENÇ YETİŞKİNLERE SAĞLIĞI GELİŞTİRME MODELİ REHBERLİĞİNDE VERİLEN AKRAN EĞİTİMİNİN GENİTAL HİJYEN DAVRANIŞLARINA ETKİSİ: TÜRKİYE ÖRNEĞİ

### Öz

Bu araştırma, genç yetişkinlere sağlığı geliştirme modeli rehberliğinde verilen akran eğitiminin genital hijyen davranışlarına etkisini belirlemek amacıyla yapıldı. Bu araştırma tek grup öntest-sontest modeli ile yarı deneysel olarak yapıldı. Araştırmada Türkiye'nin güneydoğusundaki bir üniversitenin ebeklik bölümünde okuyan 50 öğrenci akran eğitimci olarak belirlendi. Olasılıksız örnekleme yöntemiyle seçilen 18-25 yaş arası toplam 442 kişiye eğitim verildi. Sağlığı geliştirme modeli rehberliğinde verilen akran eğitiminin etkili olduğu, genç kızların genital hijyen davranışları hakkında bilgi düzeylerinin arttığı belirlendi. Sağlığı geliştirme modeli rehberliğinde verilen akran eğitiminin etkili olduğu, eğitimde bahsedilen konuların bireylerin genital hijyen davranışlarına ilişkin bilgi düzeylerini artırdığı belirlendi. Genital hijyen eğitiminin daha geniş kitlelere ve gruplara verilebilmesi için sağlığı geliştirme modeline dayalı akran eğitimi önerilebilir.

**Anahtar Kelimeler:** Sağlığı geliştirme modeli, genital hijyen, akran eğitimi, genç yetişkinler

## 1. INTRODUCTION

Genital infections are among the preventable diseases; however, they appear as an important issue for women's health due to their prevalence and complications (1-3). Genital infections can adversely affect woman's fertility, sexual life, family life and mental health and impair the quality of life, it may also cause social isolation (4, 5). In the literature, it is reported that approximately one million women in the world have genital infections every year and 75% of women have a history of vaginal infection (6). In studies on the subject in our country show that women have insufficient/wrongful genital hygiene behaviors and their awareness levels are insufficient (7-9).

Factors such as the anatomical structure of the female genital system, not having enough knowledge to prevent genital infections, low socio-economic level, insufficient / wrong perineal and menstrual hygiene, not washing hands before and after the toilet, not using appropriate underwear cause genital infections (7, 9, 10). In preventing genital infections, the main factor that can be changed is genital and menstrual hygiene deficiencies (11).

Therefore, providing genital hygiene is the most important step to prevent genital infections (12). Acquiring health protection and promotion behaviors during adolescence and young adulthood periods may be effective in preventing reproductive health disorder that may develop in the future as well as many other health problems. Therefore, young adulthood is a risky period, especially when the person is aware of his/her own health and tries to reach physical, psychological and social maturity (13). Acquiring correct behavior change with appropriate training and counseling to be provided about genital hygiene plays an important role both in protecting reproductive health and maintaining general health (10, 14, 15). When the studies are examined, it is seen that young people frequently share issues about reproductive and sexual health with their peers. For this reason, peer education can be benefited in gaining correct genital hygiene behaviors for young adults.

Peer education is a teaching and learning strategy in which young adults are in a common and collaborative situation with their peers. Here, based on the fact that peers interact well, have an active and equal status, identify with each other in the discussion and feedback process, it is an educational activity developed based on the social learning theory, to train volunteer and pioneering young people on certain topics and then share the gained knowledge with peers (16, 17). It is very important for young people to know the correct genital hygiene practices and turn them into a healthy lifestyle behavior in terms of their own health (18). Basing the training given on a model increases the effectiveness of the education.

Most young people in our country feel embarrassed when talking about issues such as genital hygiene, so they have difficulty reaching healthcare professionals to learn the correct behavior. Peer education can increase the effectiveness of education as it enables teens to talk more easily with their peers about genital hygiene practices. Therefore, this study was conducted to determine the effect of peer education provided under the guidance of health promotion model to young adults on their genital hygiene behaviors.

### Hypothesis of the study

**H<sub>0</sub>:** The peer education given to young adults guided by the health promotion model does not affect genital hygiene behaviors.

**H<sub>1</sub>:** The peer education given to young adults guided by the health promotion model affects genital hygiene behaviors.

## 2. METHODS

### 2.1. Design and Participants

This is a quasi-experimental study with a single group pretest-posttest model. The study was conducted between June 2019 and December 2019 in a city located in the southeastern Turkey. In the study, 50 students studying in the midwifery department of a university in the southeastern region of

Turkey were determined as peer educators. Snowball sampling method was used in the study. It was aimed to reach a total of 500 people (10 for each student). 500 women aged between 18-25 years selected by the improbable sampling method and living in the city center were included in the sample group who would receive education from peer educators. However, since 58 people withdrew from the study, the study was completed with 442 people. The sample of the study consisted of 442 students who were selected by the improbable sampling method. As a result of retrospective power analysis, the sample size was found to be sufficient at the rate of 100% (Figure I).

### ***Inclusion criteria***

People aged between 18 and 25 living in the city where the study was conducted were included in the study.

### **2.2.Data collection**

The data were collected by the educators by using face-to-face interview method. A Descriptive Questionnaire and the Genital Hygiene Behavior Scale were used to collect the data. The posttest was applied 12 weeks after the pretest. The data were prepared by using "Personal Information Form" with 8 questions prepared by the research and "Genital Hygiene Behavior Scale".

***Personal Information Form:*** This form, which was created by researchers in accordance with the literature is composed of a total of 8 questions about the people's age, marital status, status of receiving information about genital hygiene, and information sources if they received information etc.

***Genital Hygiene Behavior Scale:*** It is a scale developed by Karahan to evaluate genital hygiene behaviors in women (6). It is a five-point Likert type scale consisting of 23 items and three subscales measuring women's genital hygiene behaviors. In the scale, the first 12 items belong to "General Hygiene" subscale, the items 13-20 belong to "Menstrual Hygiene" subscale and the items 21-23 belong to "Abnormal Finding Awareness" subscale. The items 7, 14, 19, 20, and 23 of the scale are reversely scored. The scale items are scored between 5 and 1 ranging from "I strongly agree" to "I strongly disagree". The minimum score of the scale is 23 points and its maximum score is 115 points and high scores signify that the genital hygiene behaviors of women are positive. While the total Cronbach's alpha value of the scale was found as 0.80 (6), total Cronbach's alpha value of the scale was determined as 0.81 in the present study.

### **2.3.Data analysis**

The data obtained in this study were transferred to IBM SPSS 21.0 program and necessary analyses were performed. In the statistical analysis the convenience of the data for normal distribution was evaluated via the Skewness and Kurtosis ( $\pm 1$ ) distribution test and they were found to be normally distributed. As well as descriptive statistics (percentage, frequency, mean, standard deviation, minimum, maximum), Independent t-test in the comparison of two independent variables and Paired t test in the comparison of two dependent variables were used in the data assessment. Descriptive statistics, Independent t-test, Paired t test and correlation were used to assess the data. The results obtained from the present study were evaluated at significance level of  $p < 0.05$  and at confidence interval of 95%.

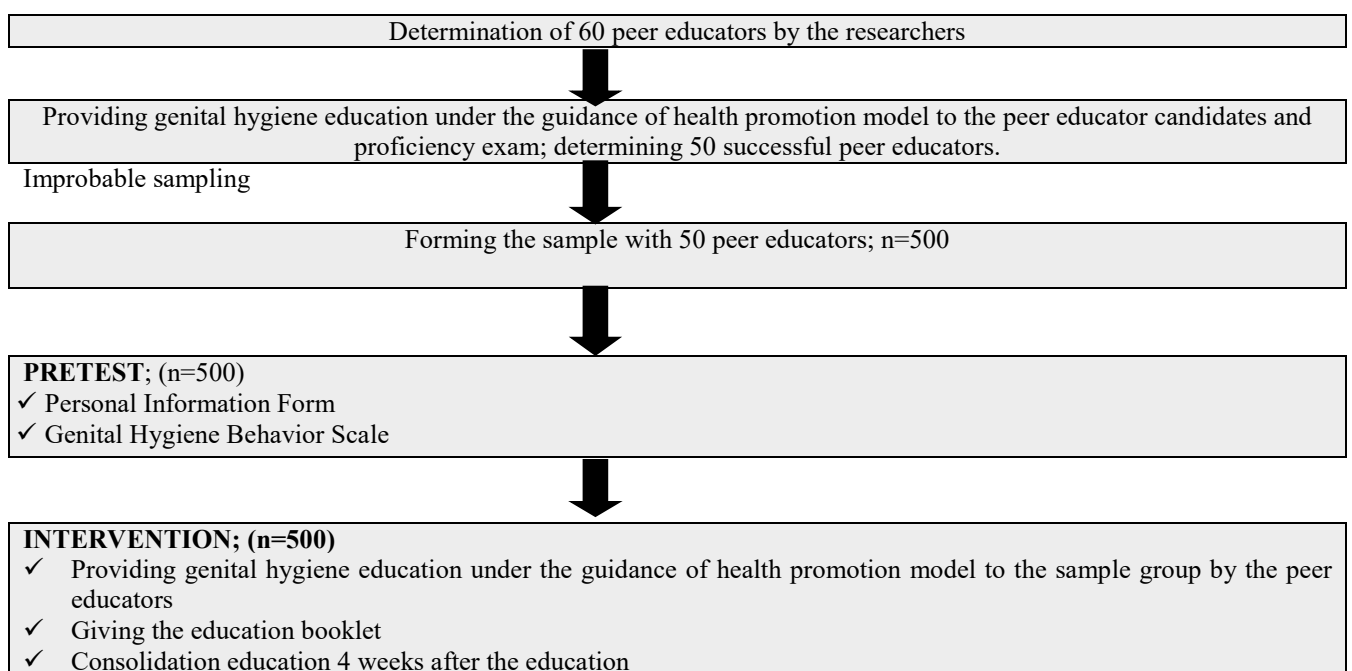
### **2.4.Ethical considerations**

Ethics committee approval was obtained from a University Faculty of Health Sciences Ethics Committee (Decision No. 2019/89) and institutional permission was obtained. Written and verbal consent was obtained from the volunteer peer educator students and participants to conduct the study. This study was conducted in accordance with the Principles of Helsinki Declaration.

### **2.5. Peer Education Practice**

The content of the education was composed of genital hygiene and its importance, things to do in providing and maintaining genital hygiene according to the health promotion model components and the problems to be experienced if these practices are not implemented.

- 60 students who applied to the research team voluntarily, who had the characteristics of being leaders, strong interpersonal communication, had the necessary time and energy, and had the characteristics of being exemplary individuals for their peers, were determined as peer educator candidate. Peer educator candidates were divided into 6 groups of 10 people.
- Genital hygiene training prepared by the instructors responsible for the study in accordance with the health promotion model was given to each group. The educations were given by the researchers as one-hour sessions for three days in the skill laboratory using computer-aided method of narration, question-answer and discussion education methods.
- At the end of the education, the "Genital Hygiene Peer Educator Proficiency Exam based on the Health Promotion Model", consisting of 20 questions and being prepared by the researcher instructors was applied to measure the knowledge level of 60 candidate students. 50 students who got 70 points and higher over 100 points in exam were included in Peer Educator Group. 10 peer educator candidates were not included in the peer educator team since they got a score less than 70 in the proficiency exam and failed.
- The education booklets prepared by the researchers under the guidance of the health promotion model were delivered to the students included in the peer educator team so that they can distribute to the people they will teach.
- The people determined as peer educators determined the people they would teach and formed their education groups. They were not assigned to groups by the researchers.
- Peer educators determined the individuals to give education and pretest was applied to a total of 500 people. After the pretest, peer educator students transferred genital hygiene education prepared in accordance with the health promotion model to their peer group. At the end of the peer educations, the education booklets prepared by the researchers were given to the trainees by the peer educators.
- One month after the peer education, peer educators and trainees came together to reinforce the education and repeated the important points in the implementation of genital hygiene behaviors according to the health promotion model. It was questioned whether the participants had problems with genital hygiene and they answered the questions, if any.
- Posttest was applied to the trainees after twelve weeks of follow-up. However, since 58 people withdrew from the study, the posttests were applied to 442 people. In this process, peer educators and researchers came together once a month to evaluate the education process (Figure I).



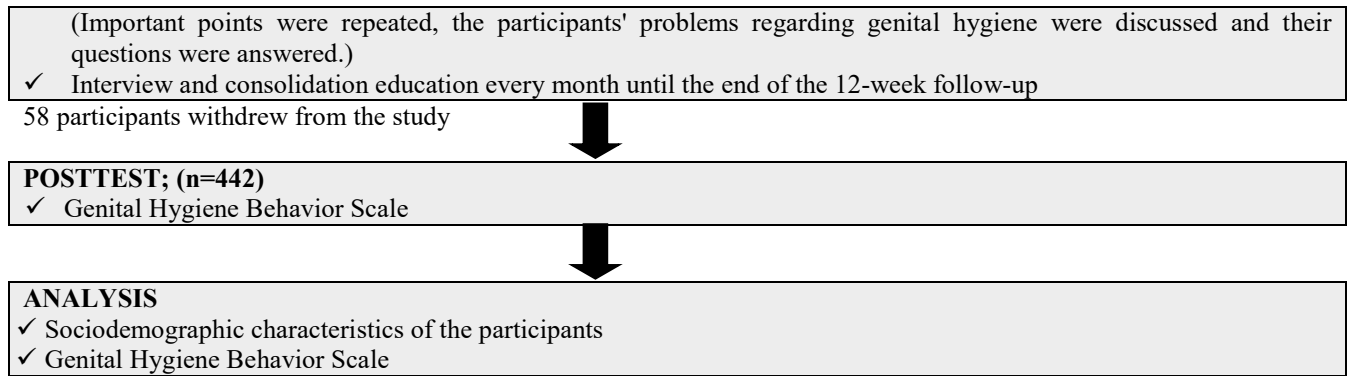


FIGURE I : Flowchart of the study participant

## 2.6. The education booklet

In the preparation of the education booklet, studies and other studies with high evidence value that peer education is effective have been used (19, 20, 21, 22). In the education booklet, the practices that individuals should do to ensure genital hygiene were prepared according to the components of the health promotion model (Table I).

**Table 1. Content of the genital hygiene education booklet given according to the health promotion model**

<b>Individual characteristics and experiences</b>	After their training in general hygiene, the young people were asked to evaluate themselves by considering how much they attach importance to your genital area cleaning, how much they have knowledge about it, and their wrong or incomplete behavior. It was suggested that they apply the correct behaviors completely.
<b>Perception of Benefit</b>	The benefits of genital hygiene were explained. Cleansing of the genital area may include infection, reproductive problems, frequent miscarriages, menstruation and sexual problems, ectopic pregnancy, sepsis, cervical cancer etc. They have been told that they must believe they can be protected from situations like. In addition, it was shared that their social life will not be adversely affected since there will be no bad odor and itching in the genital area.
<b>Perception of obstacle</b>	First of all, they were told to make genital hygiene behavior a part of their lives. If there were false beliefs and practices, they were suggested to replace them with the right ones.
<b>Self-efficacy</b>	It was said that they should not be a problem if they do not have knowledge about genital area cleaning or if they have not paid attention to genital hygiene before. From now on, they were advised to think that any right action would be beneficial, continue their practice and trust themselves.
<b>Personal Effects</b>	They were told to inform people around them about their genital hygiene behavior. It was suggested that they could support each other in implementing the right behaviors and share the information they gained by reading books and magazines on this subject.
<b>Situational Effects</b>	If there are unsanitary environmental conditions, they were told to fix them. They were advised to comply with hygiene rules, especially in public toilets, and to turn the taps on and off with a napkin. In the presence of genital infection, they were advised to go to the doctor without shame for treatment.
<b>Activity related impact</b>	It was stated that thinking that they will be protected from infections when they pay attention to the cleanliness of the genital area will contribute to their health by ensuring the continuity of their behavior.
<b>Behavior Output</b>	They were advised to review their genital hygiene behavior and evaluate whether they were successful or not. It was said that when the genital infection develops, they should find the missing and wrong applications and replace them with the correct ones.

### 3. RESULTS

It was determined that 53.2% of the participants were in the age group of 18-21 years, 76.5% were university students, 86.9% were single, 79.6% were unemployed, and 72.9% were university student/graduate. It was found that 72.4% of the participants stated that they received information about genital hygiene before, 59.3% of them stated that they received the information from school. 59.3% of the participants expressed that they took a bath while standing (Table 2).

**Table 2. Distribution of sociodemographic and genital hygiene behavior characteristics of the participants (n=442)**

	Number (n)	Percentage (%)
<b>Age</b>		
18-21	235	53.2
22-25	207	46.8
<b>Education Level</b>		
Primary school	19	4.3
High school	85	19.2
University student / graduate	338	76.5
<b>Marital status</b>		
Married	58	13.1
Single	384	86.9
<b>Working status</b>		
Employed	90	20.4
Unemployed	352	79.6
<b>Occupation</b>		
Student	322	72.9
Housewife	37	8.4
Artisan	32	7.2
Civil servant	51	11.5
<b>Status of receiving information about genital hygiene</b>		
Yes	320	72.4
No	122	27.6
<b>*Source Information</b>		
School	262	59.3
Mother	118	16.7
Healthcare personnel	45	8.2
Social media	79	15.8
<b>Bathing type</b>		
Standing	262	59.3
Sitting	61	40.7
<b>Year (Age)</b>	18-25	<b>X± SD</b> 21.3±2.0

It was determined that the difference between the pretest and posttest mean scores of the participants who received information about genital hygiene before and those who did not in terms of age, educational status, marital status, working status, profession was significant ( $p=0.000$ ) (Table 3).

**Table 3. Comparison of Genital Hygiene Behavior Scale pretest-posttest mean scores of the participants based on some socio-demographic characteristics (n=442)**

	n	Pretest X± SD	Posttest X± SD	Significance	
Age				t	p
18-21	235	87.8±10.8	96.1±10.4	-10.209	<b>0.000</b>
22-25	207	90.5±10.6	98.4±11.3	-9.487	<b>0.000</b>
<b>Educational Status</b>					
Primary school	19	86.0±11.5	95.3±13.0	-3.197	<b>0.005</b>
High school	85	87.9±12.2	97.2±10.6	-7.550	<b>0.000</b>
University Student	338	89.6±10.3	97.2±10.8	-1.451	<b>0.000</b>
<b>Marital status</b>					
Married	58	91.4±12.0	99.9±11.1	-5.216	<b>0.000</b>
Single	384	88.7±10.6	96.7±10.8	-12.921	<b>0.000</b>
<b>Working status</b>					
Employed	90	92.5±10.7	100.6±9.5	-7.767	<b>0.000</b>
Unemployed	352	88.2±10.6	96.3±11.0	-11.926	<b>0.000</b>
<b>Profession</b>					
Student	322	88.3±10.4	96.6± 10.6	-12.1	<b>0.000</b>
Housewife	37	86.9±10.8	97.2±11.7	-4.837	<b>0.000</b>
Artisan	32	92.0±12.1	98.7±10.7	-3.805	<b>0.001</b>
Civil Servant	51	93.7±10.8	99.4±11.9	-3.459	<b>0.001</b>
<b>Status of receiving information about genital hygiene</b>					
Yes	320	90.1 ±10.5	97.7±11.1	-11.209	<b>0.000</b>
No	122	86.4±11.0	95.7±10.1	-8.409	<b>0.000</b>

Independent sample t test, p&lt;0.05

It was determined that Pretest Genital Hygiene Behavior Scale Total mean score of the participants was 89.1±10.8 and posttest mean score was 97.1±10.9. The posttest mean score of the participants increased positively and the difference between two points was statistically significant (p=0.000) (Table 4).

**Table 4. Comparison of Genital Hygiene Behavior Scale pretest-posttest mean scores of the participants (n=442)**

Scales	Pretest		Posttest		t	p
	Min- Max	X± SD	Min- Max	X± SD		
<b>Genital Hygiene Behavior Scale Total</b>	61-115	89.1±10.8	55-115	97.1±10.9	-13.949	<b>0.000</b>
<b>General Hygiene Subscale</b>	28-60	46.6±6.2	25-60	50.4±5.8	-12.382	<b>0.000</b>
<b>Menstrual Hygiene Subscale</b>	19-40	31.7±4.6	17-40	34.6±4.5	-10.064	<b>0.000</b>
<b>Abnormal Finding Awareness Subscale</b>	3-15	10.7±2.9	3-15	12.1±2.4	-9.221	<b>0.000</b>

Paired t test, p&lt;0.05



#### 4. DISCUSSION

We conducted this research so that young people can talk more easily about genital hygiene problems with their peers, interact well and increase the effectiveness of education. Since studies in which genital hygiene education based on health promotion model has been given according to peer education model could not be reached in the literature, the present study was discussed with the related studies.

It was determined in this study that posttest mean score of the participants according to their age, educational status, marital status, working status, profession, and status of receiving information about genital hygiene before increased after the education and the difference between their pretest and posttest mean scores was significant (Table 3). In this study, the peer education given in accordance with the health promotion model was seen to be effective. Among studies using peer education method, it was determined in the study by Güclü et al., that the students' knowledge levels about reproductive health increased significantly (20), it was effective in enhancing the quality of life of the adolescents in the study by Diao et al., (21), young people's knowledge and behaviors about protection from sexually transmitted infections and reproductive health changed positively in the study by Kırmızıtoprak and Şimşek (17), and adolescents' knowledge levels about sexual health increased significantly in the study by Dağ et al., (23). In the study of Janoowalla et al., it was stated that there was a decrease in the risk of vulvovaginal symptoms in young people after menstrual hygiene management (24). It was also concluded that the reproductive health education was effective in the study by Aşçı et al., (19), adolescents' knowledge about menstrual health increased in the study by Gölbaşı et al., (25). The results of this study are similar to the studies reporting that peer education is effective. The facts that health promotion model helps gaining awareness of health responsibility for individuals, it is a stress-free environment, peers can talk with, ask to, and discuss with each other more comfortably, establish a good communication by talking the same language and affect each other more easily, peers support each other, and there is a non-hierarchical educational environment increase the effectiveness of the education. Through health lifestyle behaviors, a person takes responsibility to protect his/her health and bring it to a better level, controls his/her all behaviors and selects appropriate behaviors for his/her health (22). Peer education is based on the fact that a person is affected more from the knowledge, behaviors, and thoughts of the individuals in his/her age group. As young people share knowledge and behavior with their friends, reaching them with their peers is accepted as an appropriate education model (17).

It was determined that pretest Genital Hygiene Behaviors Scale total mean score of the individuals was  $89.1 \pm 10.8$ , the posttest mean score increased positively to  $97.1 \pm 10.9$  and also the pretest and posttest mean scores of all subscales of the scale increased positively (Table 4). In the study, the peer education given under the guidance of health promotion model was observed to be effective for young people to develop genital hygiene behaviors. It is a pleasing result that the subjects given in the education caused a significant increase in the knowledge score in young people. In the literature, there are studies reporting that trainings supported by health promotion model are effective. In the study by Geçkil et al., adolescents' health behavior mean scores were observed to increase after the training (26). It is believed that giving peer education in a certain discipline by adapting it to the components of health promotion model increased the effectiveness of the education through the model giving the individual the responsibility of protecting and promoting his/her own health. The health promotion model enables people to be aware of the importance of health lifestyle behaviors and guides people about adapting, improving, and protecting these behaviors (22).

#### 5. CONCLUSIONS

At the end of this study, it was determined that peer education given under the guidance of health promotion model was effective, the subjects given in the education increased the knowledge levels of the individuals about genital hygiene behaviors. As a result, the  $H_1$  hypothesis "The peer education given to young adults guided by the health promotion model affects genital hygiene behaviors" is supported.



The results obtained from this study are important in terms of increasing the knowledge levels of young people forming the healthy communities of the future and guiding new peer education to be held. In line with the results obtained from the research, the education of peer educators should be expanded. In order to provide genital hygiene education to wider masses and groups, it can be recommended to cooperate with different disciplines and to conduct peer education based on the health promotion model.

### 5.1. Study limitations and strengths

Our research is a quasi-experimental study showing that peer education guided by a health promotion model is effective. The limitations of the research; It was made with women aged 18-25 living in the city center in a certain date range. However, the results of the research can be generalized to this sample group.

### Funding

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### Conflict of Interest Statement

There is no conflict of interest.

### Acknowledgment

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