



Original Research / Orijinal Araştırma

The Effectiveness of Genital Hygiene Education Given to Secondary School Girls Ortaöğretim Kız Öğrencilerine Verilen Genital Hijyen Eğitiminin Etkinliği

İlknur GÖKŞİN¹, İlknur DEMİRHAN¹

Abstract

Objective: The study was conducted to examine the effect of genital hygiene education given to adolescent female students on the genital hygiene behaviors of adolescents.

Method: This one-group pre-test post-test quasi-experimental model study was conducted between May 9 - June 7, 2022, with 103 female students who could communicate verbally and who voluntarily agreed to participate in the study. Genital hygiene training was given to the students. Data were collected using a personal information form and genital hygiene behavior scale (GHBS).

Results: The percentage of students who were in the age group of 15-16 years was 64.1%, 75.3% were in the 10th grade, 69.9% had mothers who had completed primary/secondary education, and 50.5% had menarche at the age of 12-13 years. General hygiene, menstrual hygiene, awareness of abnormal findings sub-dimensions and total GHBS scores were found to be statistically significantly higher in the post-test than in the pre-test ($p<0.05$).

Conclusion: As a result of the study, it was determined that students had incorrect, inadequate practices regarding genital hygiene, and the education provided increased the correct hygiene behaviors. In line with these results training should be planned to raise awareness on reproductive health, general hygiene, genital and menstrual hygiene, especially in institutions such as schools, hostels and dormitories where adolescent girls are together collectively.

Keywords: Adolescent, education, genital hygiene

Özet

Amaç: Araştırma adolesan dönemdeki kız öğrencilere verilen genital hijyen eğitiminin adolesanların genital hijyen davranışlarına etkisini incelemek amacıyla yapılmıştır.

Yöntem: Tek gruplu ön test son test yarı deneysel modeldeki çalışma, 9 Mayıs -7 Haziran 2022 tarihleri arasında sözlü iletişim kurabilen ve araştırmaya katılmayı gönüllü olarak kabul eden 103 kız öğrenci ile gerçekleştirildi. Öğrencilere genital hijyen eğitimi verildi. Veriler kişisel bilgi formu ve genital hijyen davranışları ölçeği (GHDÖ) kullanılarak toplanmıştır.

Bulgular: Öğrencilerin %64.1'i 15-16 yaş grubunda, %75.3'ü 10. sınıfta öğrenim görmekte, %69.9'unun annesi ilköğretim mezunu ve %50.5'inin menarş yaşı 12-13 yaşdır. Genel hijyen, adet hijyeni, anormal bulguların farkındalığı alt boyutları ve toplam genital hijyen davranışı ölçeği puanlarının son testte ön teste göre istatistiksel olarak anlamlı düzeyde yüksek olduğu belirlenmiştir ($p<0.05$).

Sonuç: Araştırma sonucunda öğrencilerin genital hijyen konusunda yanlış, yetersiz uygulamalara sahip olduğu, verilen eğitimin doğru hijyen davranışlarını arttırdığı belirlenmiştir. Bu sonuçlar doğrultusunda özellikle adolesan kızların toplu halde bulunduğu okul, pansiyon, yurt gibi kurumlarda üreme sağlığı, genel hijyen, genital ve adet hijyeni konularında farkındalık yaratmaya yönelik eğitimler planlanmalıdır.

Anahtar Kelimeler: Adolesan, eğitim, genital hijyen

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¹ Aksaray Üniversitesi Sağlık Bilimleri Fakültesi Hemşirelik Bölümü

Address for Correspondence / Yazışma Adresi: İlknur GÖKŞİN. Aksaray Üniversitesi Sağlık Bilimleri Fakültesi Hemşirelik Bölümü, Aksaray, Türkiye
E-posta: :ilknurgoksin@hotmail.com Tel: +90 3822882780

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Introduction

Adolescence is a unique period of human development between the ages of 10 and 19, between childhood and adulthood, and is an important time for establishing the foundations of health.¹ During this period of change, when crucial biological, physical, and psychosocial developments occur, health-related attitudes and behaviors are acquired that will last a lifetime. During this period, adolescents may experience health problems such as reproductive system infections and pelvic inflammatory disease due to the reasons such as the onset of menstruation, lack of knowledge about genital hygiene, and inadequate and incorrect hygiene behaviors.² Therefore, protecting and improving adolescent health is of great importance in protecting and improving both the physical and psychosocial health of adolescents.^{3,4}

National and international literature reveals that adolescent female students, one of the major target groups in terms of reproductive health services, do not pay enough attention to their genital hygiene, do not have sufficient genital hygiene behaviors and do not have sufficient information about their genital hygiene. It was also found that the adolescents' behaviors to protect and improve their reproductive health are insufficient and they have incorrect practices in genital and menstrual hygiene which indicate an educational need and risk of genital infections.^{2,4-8} Similarly, other studies determined that 74.8% of adolescent girls had itching in the genital area, 36% had ever had a genital infection, and 60.7% did not engage in any health-seeking behaviors for their current complaints.^{6,9} Places such as schools or dormitories, where adolescents spend a significant amount of time during the day, are risky environments that can harm their health.¹⁰ It has been determined that female students, in particular, experience genital infections and hygiene problems due to the shared use of bathrooms and toilets in these environments; therefore, it is necessary to provide training on genital hygiene practices and reproductive health.^{11,12} Previous studies have showed that if adolescent female students benefit hygiene education and acquire correct behaviors.^{4,13-15} It is important to teach adolescents attitudes and behaviors that will protect their physical health. However, since most of the attitudes and behaviors that will last throughout their lives are formed during the school period, it is believed that the education to be given to female students during this period to acquire correct genital hygiene behaviors and the behavioral changes that will be created by the education will contribute to the prevention of genital infections, the protection and development of reproductive health, and will be effective in protecting general health and genital health. For this reason, the study was conducted to examine the effect of genital hygiene education given to adolescent girls on the genital hygiene behaviors of adolescents.

Material And Methods

Study Design

The study was conducted in a quasi-experimental model with one-group measured before and after the intervention to determine the effectiveness of genital hygiene education given to female students in secondary education.

Place and Time of the Study

The study was carried out between May 9 and June 7, 2022, with 103 female students who were in the 9th, 10th, and 11th grades of a Vocational and Technical Anatolian High School in the center of Aksaray in the spring semester of the 2021-2022 academic year.

Data Collection Tools of the Study

A personal information form and the Genital Hygiene Behavior Scale was used in data collection. The personal information form consisted of 17 questions designed to assess students' descriptive characteristics and personal hygiene practices.

The GHBS is a Likert-type scale, developed and validated by Karahan in 2017, comprising 23 statements scored from 5 to 1, from "strongly agree" to "strongly disagree." The scale has three sub-dimensions: general hygiene (statements 1 to 12), menstrual hygiene (statements 13 to 20), and awareness of abnormal findings (statements 21 to 23). While evaluating the scale, the 7th, 14th, 19th, 20th, and 23rd statements are reverse coded. Scale has the lowest score of 23 and the highest score of 115. Scores increase with good genital hygiene behavior.¹⁶ The Cronbach's alpha value of the original scale is 0.80. In this study, the Cronbach's alpha was 0.71 in the pre-test and 0.77 in the post-test.

Implementation of the Study

Before the intervention, the participants were interviewed in person and informed regarding the research objectives. They were also asked to complete a personal information form and the GHBS, which were administered as a pre-test before the planned genital hygiene education. Subsequently, a 60-minute presentation on genital hygiene was delivered in the school's conference room. The content of the education included hand hygiene, perineal hygiene, personal hygiene, and menstrual hygiene. One month after the training, the GHBS was administered once more to the students in order to evaluate the effectiveness of the training. Despite there were 140 students recruited for the study, data from only 103 participants was analyzed following the intervention. Prior to the intervention, the forms of the 20 students were incomplete and following the intervention, 17 students could not be reached, or their forms

were incomplete. The independent variables of the study were the descriptive characteristics of the participants and the dependent variable was the mean score of the adolescents from the genital hygiene behavior scale.

Data Analysis

SPSS 23.0 was used in analysis. The students' personal characteristics were expressed as descriptive statistics such as number, mean, standard deviation and percentage. Participants' scores before and after the intervention were compared with the "paired-sample t- test" (t-table value) if data distributed normally; if not the non-parametric equivalent of the same test, "Wilcoxon test" (Z-table value) was used.

Ethical Considerations

A written permit for the study is obtained from the Provincial Directorate of National Education and Committee of the Aksaray University Human Research Ethics (protocol number: 2022/02-41). Prior to their recruitment, students were informed about the study and verbal consent was obtained. Permission for the use of the genital hygiene behaviors scale was obtained from the author via e-mail. The study was conducted in accordance with the principles outlined in the Declaration of Helsinki.

Results

The percentage of students who were 15 and 16 years of age was 64.1% while 57.3% were in the 10th grade. The majority of the students' mothers were unemployed and had completed primary or secondary education with the rates of 94.2% and 69.9%, respectively. Menarche age of the 50.5% were 12-13 years. The proportion of the participants who had three to four siblings was 45.6% (Table 1).

Table 1. Distribution of sociodemographic characteristics of students

Variable (n=103)	n	%
Age groups [$\bar{x}\pm SD=15.82\pm 1.02$ (age)]		
13-14	10	9.7
15-16	66	64.1
17-18	27	26.2
Class		
9th grade	16	15.5
10th grade	59	57.3
11th grade	28	27.2
Number of siblings		
No siblings	4	3.9
1-2	45	43.7
3-4	47	45.6
>4	7	6.8
Mother's education level		
Illiterate	10	9.7
Can only read and write	15	14.6
Primary school/middle school graduate	72	69.9
High school graduate	6	5.8
Mother's employment status		
Yes	6	5.8
No	97	94.2
Father's education level		
Illiterate	4	3.9
Can only read and write	7	6.8
Primary school/middle school graduate	73	70.9
High school graduate	17	16.5
University graduate	2	1.9
Father's employment status		
Yes	90	87.4
No	13	12.6
Menarche age [$\bar{X}\pm SD =13.25\pm 1.06$ (age)]		
10-11	5	4.8
12-13	52	50.5
14-15	46	44.7

Results showed that 94.2% of the female students were able to meet their need for sanitary pads, 84.5% showered standing up, 81.6% did not receive any hygiene education before, 99.0% used soap when washing their hands, 71.8% cleaned their perineum with only water, 57.3% performed genital cleaning more than once from front to back, and 84.5% dried their perineum with toilet paper (Table 2).

Table 2. Distribution of students' genital hygiene behaviors

Variable (n=103)	n	%
Meets the need for pads for menstruation		
Yes	97	94.2
No	6	5.8
Bathroom position		
Sitting	16	15.5
Standing	87	84.5
Previous training on genital hygiene		
Yes	19	18.4
No	84	81.6
Use of soap when washing hands		
Yes	102	99.0
No	1	1.0
Perineum cleaning method		
Wet wipes	2	1.9
With water	74	71.8
Water and soap	3	2.9
With toilet paper	24	23.4
Direction of genital cleansing		
Once from front to back	10	9.7
Multiple times from front to back	59	57.3
From back to front	24	23.3
Random	10	9.7
Drying the perineum		
With toilet paper	87	84.5
Cloth	2	1.9
Doesn't dry	14	13.6

A statistically significant difference was found between the pre- and post-test scores for general hygiene, menstrual hygiene, awareness of abnormal findings sub-dimensions, and total GHBS scores ($p < 0.05$). Results showed that general hygiene, menstrual hygiene, awareness of abnormal findings, and total GHBS scores were significantly higher in the post-test than in the pre-test (Table 3).

Table 3. Comparison of pre-test and post-test mean scores of students' genital hygiene behaviors scale (n=103)

Variable	Pre-test		Post-test		Statistical analysis *
	$\bar{X} \pm S.D$	Median [Min-Max]	$\bar{X} \pm S.D$	Median [Min-Max]	
General hygiene	45.09 \pm 5.56	45.0 [29.0-58.0]	48.36 \pm 6.06	49.0 [30.0-60.0]	Z=-5.858 p<0.001
Menstrual hygiene	32.99 \pm 3.75	33.0 [24.0-40.0]	34.09 \pm 4.36	35.0 [20.0-40.0]	Z=-3.760 p<0.001
Awareness of abnormal findings	10.23 \pm 2.91	11.0 [3.0-15.0]	11.49 \pm 3.08	12.0 [3.0-15.0]	Z=-4.099 p<0.001
GHBS - Total	88.31 \pm 9.59	89.0 [62.0-106.0]	93.94 \pm 10.61	94.0 [61.0-115.0]	t=-8.439 p<0.001

*The paired-sample test (t-table value) statistic was used to compare the measurements of two dependent groups for normally distributed data. Wilcoxon signed rank test (Z-score) statistics were used to compare measurements between two dependent groups for data that were not normally distributed

Discussion

Hygiene habits acquired during adolescence play a crucial role in the protection and development of lifelong health.¹⁰ Women are particularly in need of information on personal and genital health and hygiene during this period.^{17,18} In our study, it was determined that 81.6% of female students did not receive hygiene education. In Yıldız and Kahraman's (2019) study, it was found that 35% of female high school students had not received information about genital hygiene, similar to another study, which also showed 38.5% of university students did not receive genital hygiene education.^{9,19} It is believed that the establishment of educational programs on genital hygiene during the school period will contribute to both adolescent health and public health in order to form correct hygiene behaviors.

Poor genital hygiene is known to lead to vaginal infections; therefore, proper genital hygiene practices, such as cleaning the perineum by wiping from front to back and by using water after each urination and defecation are important to prevent or reduce the risk of infection.²⁰ Our study results showed that 57.3% of female students performed genital cleansing from front to back more than once. Bilgiç et al. (2019) found in their study that 29.2% of the students staying in a university dormitories applied the wrong technique when cleaning their genital area, and almost half of the students (41.8%) did not wash their hands before entering the toilet.⁶ In similar studies in the literature, it was found that 54.9%, 59.6%, 61.5%, and 80.8% of adolescents were found to perform genital hygiene from front to back.^{9,11,17,19} The prevalence of poor genital hygiene practices nearly half of the students in the literature indicates a clear need for genital hygiene education to be provided during adolescence.

In this study, it was found that although the genital hygiene behaviors of female students were at a moderate level (88.31 ± 9.59), the mean score increased significantly after the training (93.94 ± 10.61). In a study conducted by Göger and Tuncay (2021) on female students residing in a boarding school during adolescence, genital hygiene behavior was found to be at moderate level (85.30 ± 10.10).¹² In different studies, the overall mean score of the GHBS of nursing students was found to be 95.50 ± 9.42 and 87.60 ± 8.97 , and the genital hygiene behaviors were found to be positive.^{18,21}

The results of this study indicate that the provision of genital hygiene education to female students improved the mean scores of general hygiene (45.09 ± 5.56), menstrual hygiene (32.99 ± 3.75), and awareness of abnormal findings (10.23 ± 2.91). Although studies measuring the effectiveness of genital hygiene education given to adolescent female students are limited in the literature, it has been shown that such education has the potential to enhance students' genital hygiene knowledge and the prevalence of correct genital hygiene behaviors. Küçükkeleşçe et al. (2019) demonstrated that the genital hygiene education increased the rate of cleaning the perineum from front to back from 52.4% to 78.1% in secondary school female students. In the study, the students' menstrual hygiene behaviors and awareness of abnormal findings in the genital area were evaluated before the genital hygiene training and in the second month after the training. The results indicated that correct genital hygiene behaviors increased after the training and that the training was effective in protecting and improving reproductive health.⁴ In a study conducted by Gedik and Şahin in 2017, it was found that the genital hygiene education increase the rate of adolescent female students cleaning the genital area from front to back from 16.1% to 90.4% so that the students gained correct habits to ensure genital hygiene with the education.²² In Altundağ's (2022) study, results showed that the rate of cleaning the genital area from front to back, which was 65.4% before the education, increased to 86.5% after the education among female students attending a special education center on genital hygiene.²³ Agbede and Ekeanyanwu (2021) found that menstrual hygiene education given to adolescent girls significantly increased the level of menstrual hygiene behaviors.¹³ Their study was conducted with a sample of 2332 adolescent female students and emphasized the importance of menstrual hygiene education, Alam et al. (2017) highlighted that nearly half of the students are absent from school because they feel uncomfortable during menstruation, therefore there is a need for awareness-raising activities in terms of genital hygiene practices among students.²⁴

The findings of our study are consistent with those of previous research, indicating that training adolescents on the correct methods of genital hygiene can lead to behavioral changes that prevent genital infections, protect reproductive health, and enhance overall well-being.

Limitations

The study was conducted at a single center, the data were obtained from female students at a high school in one province. The study excluded 12th-grade students since they were preparing for university exams. The results of the study cannot be generalized to the whole population, but can be generalized to group of adolescents in which the study was conducted.

Conclusion

The study revealed that students had incorrect and inadequate practices with regard to genital hygiene. In light of these findings, studies with larger sample sizes and different demographic groups should be conducted for longer periods of time to determine the level of general and genital hygiene knowledge of adolescents. Additionally, educational initiatives should be implemented to raise awareness on reproductive health, general hygiene, and

genital and menstrual hygiene, especially in institutions such as schools, hostels and dormitories where adolescent girls reside in close proximity.

Conflict of Interest Statement: There is no conflict of interest.

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