

Original Article

## Genital Hygiene Behaviors of Midwifery Students

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### Abstract

**Objective:** This study was conducted to determine the genital hygiene behaviors of midwifery students.

**Method:** The sample group of this descriptive study consisted of 175 midwifery students who voluntary to participate in the study among 264 students receiving education in the Department of Midwifery at the Faculty of Health Sciences. The data were collected using the "Personal Information Form" and "Genital Hygiene Behaviors Scale". The data were evaluated with SPSS package program by means of mean, percentage, t test and One-Way ANOVA.

**Findings:** It was determined that the mean total score of the students on the genital hygiene behaviors scale was  $95.25 \pm 8.57$ . 31.3% of students had a vaginal shower, 10.9% did not take a shower in the menstrual period and 15.1% had been cleaning the genital area with soap. It was determined that the students' level of grade, living place and mother education level on the genital hygiene behaviors were effective (respectively;  $p:0.015$ ,  $p:0.030$ ,  $p:0.031$ ) and the family type, economical situation variable was not effective ( $p>0,05$ ).

**Results:** As a result of the study, midwifery student's mean score of the Genital Hygiene Behaviors Inventory was found to be slightly above the medium level. However, especially in the first class, it is determined that there are more deficiencies and errors in the knowledge and behavior related to genital hygiene. In this context, it is important to provide health education in the first semester when the students start school without waiting for the curriculum process.

**Keywords:** Midwifery, Students, Genital Hygiene, Genital Hygiene Behavior

### Introduction

The youth period, defined by the World Health Organization between the ages of 15 and 24, and which is a period between childhood and adulthood, is a long and risky period when the young person investigates his/her place in society and tries to reach physical, psychological and

social maturity (WHO, 2014). In this period, physical risks arising from the anatomical structure appear in young girls together with physiological changes. As a matter of fact, young girls are more at risk of infection than boys due to anatomical factors such as mucosal structure of external genitals, proximity of organs (Topuz et al., 2015;

Bilgic et al. 2018), menstrual period and wrong hygienic habits (WHO, 2014; Topuz et al., 2015).

Genital hygiene is one of the most important factors in protecting women's health. There is a history of genital infection in at least 75% of women worldwide (Mitchell, 2004). Indeed, studies conducted in our country also show that genital infection is a common problem in women (Oner et al., 2004; Karatay & Ozvaris, 2006; Yagmur, 2007; Eksioglu 2010). It is known that genital hygiene habits and inadequate and incorrect hygiene practices in women disrupt the vaginal flora and cause many health problems (Yagmur, 2007). In addition, many situations such as individuals' beliefs, values, habits, body image, income level, cultural characteristics, knowledge level, familial characteristics, physical conditions of the living environment, menstrual periods affect genital hygiene behaviors (Eksioglu 2010). Causes such as lack of hygiene, wrong cleaning of the genital area after toilet, lack of hand washing habit, taking vaginal shower (VD), choosing wrong underwear, not paying attention to hygiene and changing pad during menstruation, make genital infections a common and increasing problem. For this reason, perineum hygiene is extremely important in the prevention of genital infections (Unsal, 2012). Considering that the behaviors towards genital hygiene are settled from an early age, it is important to determine the risky behaviors objectively in young women who are not yet sexually active, in order to take measures to improve genital hygiene. In addition, the youth period has a privileged importance as it is the period when the health habits that people will maintain throughout their lives are shaped and it is a special period that will determine both the health of women and the health of future generations. It is understood how important the subject is, especially considering that these students are also midwife candidates who will bring health habits towards the next generations. Therefore, this study was carried out to determine the genital hygiene behaviors of midwifery students and to determine their educational needs by evaluating these practices.

## Materials and Methods

**Population and Sample of the Study:** The population of the study, which was carried out

descriptively, was the students studying in the first, second and third grade of a Midwifery Department of a public university's Faculty of Health Sciences. No sample selection was made in the study and 175 students who accepted to participate in the study constituted the sample of the study (*Participation Rate: 66%*).

**Data Collection Instruments:** The data were collected using the "Personal Information Form" which was developed by the researchers and "Genital Hygiene Behaviors Scale".

**Personal Information Form:** It is a form developed by researchers and includes questions about students' socio-demographic characteristics and genital hygiene practices.

**Genital Hygiene Behavior Scale (GHBS):** The Genital Hygiene Behaviors Scale developed by Karahan (2017) consists of 27 items answered in the five-point Likert type and three sub-dimensions: "general hygiene behaviors", "menstrual hygiene" and "abnormal finding awareness" (Karahana, 2017). The statements in the scale are five-point Likert. The highest score that can be obtained from the scale is 135, and the lowest score is 27. High scores show that genital hygiene behavior is positive. The Cronbach's alpha value of the scale was determined to be 0.80. For this study, the internal consistency coefficient of Cronbach's alpha value of the Genital Hygiene Behavior Scale was found to be 0.72.

**Statistical Analysis:** While evaluating the data obtained from the study, SPSS 16.0 software was used for statistical analysis. The suitability of variables to normal distribution was evaluated with a single-sample Kolmogorov Smirnov Z test, and independent sample t-test and one-way analysis of variance (ANOVA) were used for comparisons between groups.

**Limitations of the Study:** Since this research was conducted with Midwifery Department students studying at a single university, the results obtained from the research cannot be generalized to all Midwifery Department students. In addition, since the university where the research is conducted has a 3-year academic life, the absence of 4th grades is among the limitations of the research.

## Results

It was determined that the average age of the students participating in the study was  $19.83 \pm 1.49$

(min: 18, max: 28) and 84% preferred Midwifery Department according to their own wishes. It has been determined that midwifery students were studying in 30.9% first, 34.9% second and 34.3% third grade. It was determined that the mothers (54.3%) and fathers (37.1%) of the students who participated in the study were mostly primary school graduates and the income of 74.3% corresponded to their expenses. It was determined that 53.7% of the students stayed at home with the family, 16% at the private dormitory, 15.4% at the state dormitory and 14.9% at home with their friends.

When the menstruation characteristics of the students participating in the study were examined, it was determined that 69% of the students' menstruation periods ranged between 21-30 days and the menstruation period lasted an average of  $5.98 \pm 1.55$  days. In addition, 68.6% of the students were found to have dysmenorrhea.

When the genital hygiene practices of midwifery students participating in the study are examined, it was determined that the vast majority used cotton underwear (85.1%), more than half changed their

underwear every day (64%), 16% used the wrong technique in genital cleaning and 82.3% cleaned the perineum with water. It was determined that more than half of the students "sometimes" washed their hands before entering the toilet, and the majority of them "always washed" their hands after the toilet (96.6%). It was determined that 10.9% of the students did not take a shower during the menstrual period and 33.1% had a vaginal shower. During the menstrual period, 61.1% of the students changed pads at 1-4 hour intervals, and 52% of them changed pads between 3-5 per day. It was determined that 80% had vaginal discharge, 14.3% vaginal discharge was white sour milk consistency, 2.3% was greenish yellow, foul smelling and 0.6% was smelly like grayish white fish (Table.1). It was determined that the total mean score of the students' Genital Hygiene Behavior Scale was  $95.25 \pm 8.57$  (Table.2). It was determined that the grade, place of residence, and mother's education level were effective on the genital hygiene behaviors of the students ( $p < 0.05$ ), while the family type and economic status were not effective ( $p > 0.05$ ), (Table 3).

**Table 1. Genital Hygiene Practices of Students Participating in the Study(N:175)**

|  |                    | n   | %    |
|--|--------------------|-----|------|
| <b>The feature of underwear *</b>        | Combing            | 36  | 20.6 |
|  | Synthetic          | 21  | 12   |
|  | Satin              | 5   | 2.9  |
|  | Cotton             | 149 | 85.1 |
| <b>Underwear change frequency</b>        | Everyday           | 112 | 64   |
|  | 2-3 times a week   | 63  | 36   |
| <b>Genital area cleaning method</b>      | Front to back      | 147 | 84   |
|  | From back to front | 18  | 10.3 |
|  | Random             | 10  | 5.7  |
| <b>Products used in genital cleaning</b> | Wet Wipes          | 5   | 2.9  |
|  | Water              | 144 | 82.3 |
|  | Water And Soap     | 29  | 16.6 |
|  | Toilet paper       | 101 | 57.7 |
| <b>Genital area drying status</b>        | Yes                | 159 | 90.9 |
|  | No                 | 16  | 9.1  |

|   |                                   |     |      |
|---|-----------------------------------|-----|------|
| <b>Hand washing before entering the toilet</b>              | Always                            | 41  | 23.4 |
|   | Sometimes                         | 109 | 62.3 |
|   | No                                | 25  | 14.3 |
| <b>Hand wash after toilet</b>                               | Always                            | 169 | 96.6 |
|   | Sometimes                         | 3   | 1.7  |
|   | No                                | 3   | 1.7  |
| <b>Bathing in the menstrual period</b>                      | Yes                               | 156 | 89.1 |
|   | No                                | 19  | 10.9 |
| <b>Washing hands during menstrual period</b>                | After replacing the pad           | 69  | 39.4 |
|   | Before and after changing pads    | 106 | 60.6 |
| <b>Frequency of pad replacement during menstrual period</b> | 1-4 hour intervals                | 107 | 61.1 |
|   | 5 hours or more                   | 68  | 38.9 |
| <b>Vaginal douching</b>                                     | Yes                               | 58  | 33.1 |
|   | No                                | 117 | 66.9 |
| <b>Underwear cleaning method</b>                            | Boiling                           | 2   | 1.1  |
|   | With soap in hand                 | 12  | 6.9  |
|   | Washing with water                | 1   | 0.6  |
|   | With the machine                  | 160 | 91.4 |
| <b>Ironing underwear</b>                                    | Yes                               | 20  | 11.4 |
|   | No                                | 155 | 88.6 |
| <b>Presence of vaginal discharge</b>                        | Yes                               | 140 | 80   |
|   | No                                | 35  | 20   |
| <b>Vaginal discharge feature</b>                            | A small amount of clear, odorless | 145 | 82.9 |
|   | White, curd, milk-like            | 25  | 14.3 |
|   | Greenish yellow color, smelly     | 4   | 2.3  |
|   | Grayish white, smelly like fish   | 1   | 0.6  |

\*Multiple options are marked.

**Table 2. Students' Total Score and Sub-Scale Mean Scores of Genital Hygiene Behavior Scale**

|                          | <b>Item Number</b> | <b>Min-max</b> | <b>X±SD</b> |
|--------------------------|--------------------|----------------|-------------|
| <b>General Hygiene</b>   | 12                 | 38-60          | 49.26±4.43  |
| <b>Abnormal Finding</b>  | 3                  | 5-15           | 12.21±2.62  |
| <b>Menstrual Hygiene</b> | 8                  | 12-40          | 33.83±4.22  |
| <b>GHBS Total Points</b> | 23                 | 64-115         | 95.25±8.57  |

**Table.3 Comparison of the Total Mean Scores of the Genital Hygiene Behavior Scale According to the Socio-demographic Characteristics of the Student**

|                                 | <b>General Hygiene Subdimension score X±SD</b> | <b>Abnormal Finding Subdimension score X±SD</b> | <b>Menstrual Hygiene Subdimension score X±SD</b> | <b>Genital Hygiene Behavior Scale Total Points X±SD</b> |                          |
|---------------------------------|--|---|--|---|--------------------------|
| <b>Grade Level</b>              | First class                                    | 48.55±5.05                                      | 10.55±1.72                                       | 31.11±4.57  | 84.45±8.75               |
|                                 | Second class                                   | 50.91±3.53                                      | 11,94±3.35                                       | 33.70±4.59  | 92.27±7.65               |
|                                 | Third Class                                    | 51.23±4.34                                      | 13.41±2.84                                       | 35.23±4.33  | 96.11±9.44               |
|                                 |  | F:1.490<br>p:.196                               | F:2.393<br><b>p:.040</b>                         | F:1.945<br>p:.089                                       | F:2.416<br><b>p:.015</b> |
| <b>Family Type</b>              | Extended family                                | 49.37±4.59                                      | 11.76±2.35                                       | 34.19±2.66  | 96.01±8.72               |
|                                 | Nuclear family                                 | 48.85±3.92                                      | 12.47±2.66                                       | 32.55±2.37  | 93.00±7.61               |
|                                 | Fragmented family                              | 49.00±0   | 11.51±2.65                                       | 28.50±0.70  | 87.00±0                  |
|                                 |  | F:.190<br>p:.827                                | F:1.991<br>p:.140                                | F:2.426<br>p:.091                                       | F:2.688<br>p:.071        |
| <b>Mother's Education Level</b> | Illiterate                                     | 48.66±3.50                                      | 12.00±1.50                                       | 31,00±4,21  | 91,66±5,61               |
|                                 | Literate                                       | 48.55±3.53                                      | 10.55±3.35                                       | 31.11±4.59  | 90.22±8.62               |
|                                 | Primary school                                 | 48.95±4.34                                      | 11.94±2.84                                       | 33.70±4.33  | 94.61±8.87               |
|                                 | Middle School                                  | 48.58±4.57                                      | 12.89±1.97                                       | 34.34±3.23  | 95.82±7.65               |
|                                 | High school                                    | 51.23±4.67                                      | 12.57±2.52                                       | 35.23±3.91  | 99.04±9.40               |
|                                 | University                                     | 50.91±5.05                                      | 13.41±1.72                                       | 35.00±4.57  | 99.30±8.77               |
|                                 | F:1.490<br>p:.196                              | F:1.945<br>p:.089                               | F:2.393<br><b>p:.040</b>                         | F:2.548<br><b>p:.030</b>                                |                          |
| <b>Socio-economic situation</b> | Low Income Level                               | 48.20±5.27                                      | 12.17±3.08                                       | 33.00±4,33  | 93.48±10.25              |
|                                 | Medium Income Level                            | 49.41±4.19                                      | 12.10±2.50                                       | 33.97±4,63  | 95.50±8.11               |
|                                 | High Income Level                              | 50.81±4.14                                      | 13.54±2.33                                       | 34,36±4,17  | 98.72±7.86               |
|                                 |  | F:1.732<br>p:.180                               | F:1.529<br>p:.220                                | F:.817<br>p:.443  | F: 1.664<br>p: .192      |
| <b>Accommodation</b>            | Private Dormitory                              | 48.30±4.68                                      | 11.72±2.68                                       | 33.87±4.37  | 82.40±6.58               |

|                            |                            |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Government dorm            | 46.68±3.71                 | 10.71±3.07                 | 32.80±4.65                 | 76.37±10.80                |
| Private House with Friends | 49.26±4,43                 | 12.21±2.62                 | 33.81±4.22                 | 88.80±7.48                 |
| With family                | 50.72±4,15                 | 12.61±2.25                 | 34.37±3.87                 | 95.14±8.77                 |
|                            | F: 5.672<br><b>p: .018</b> | F: 1.853<br><b>p: .044</b> | F: 2.751<br><b>p: .041</b> | F: 2.951<br><b>p: .031</b> |

## Discussion

This study was conducted to determine the genital hygiene behaviors and knowledge levels of Midwifery Department students. In the study, it was determined that the total score average of the students' genital hygiene behavior scale was  $95.25 \pm 8.57$ . Given that the lowest score that can be obtained from the scale is 27 and the highest score is 108, it is seen that genital hygiene behaviors are positive. However, it was found that deficiencies in knowledge and behaviors related to genital hygiene were higher, especially in the first-grade students. In the study, according to the genital hygiene behavior scale, it is thought that the difference in level of knowledge that class level affects hygiene behaviors, varies depending on the course content they take. As a matter of fact, it has been determined that as vocational education increases, lack of knowledge and wrong practices about genital hygiene decreases. In this context, it is important to conduct health education in the first semester when students start school without waiting for the curriculum process.

When the genital hygiene habits of young girls were evaluated, it was determined that 85.1% used cotton underwear and 64% changed their underwear every day. The use of synthetic and nylon underwear causes the perineum to remain wet and moist, resulting in allergies and genitourinary infections (Taskin, 2016). In addition, it is very important to change underwear every day in preventing infections and maintaining perineum hygiene (Taskin, 2016). In the study conducted by Ozdemir et al., it was determined that 38.1% of the students were changing their underwear every day while in the study of Bilgic et al., this rate was 44.3% (Ozdemir et al., 2012; Bilgic et al., 2018). In our study, unlike the

literature, high frequency of changing underwear every day suggests that it may be due to students studying in a health-related department.

One of the most important ways to prevent vaginal infections is correct genital hygiene practices. However, it was determined in the study that 16% of the students cleaned the genital area with the wrong technique. In the study of Bilgic et al., it was determined that 29.2% and in the study of Topuz et al. 14% similarly cleaned the genital area with the wrong technique from the back to the front (Topuz et al., 2015; Bilgic et al., 2018). In this context, cleaning the perineum with the right technique is extremely important for the prevention of urogenital infections.

Chemical products used while cleaning the genital area disrupt the vagina flora and increase the risk of infection (Martino&Vermud, 2002; Ozdemir et al., 2012; Arslantas et al., 2010). It was determined that 16.6% of the students in the study performed genital area cleaning with soap. Similarly, in studies conducted in women in our country, it has been reported that approximately 15% of women use soap in various situations (after menstruation, during shower, after toilet) for cleaning the genital area (Yildirim, 2011; Ozer, 2013). Improper hygienic applications (using soap, shower gels for vaginal cleaning) increase the tendency to vaginal infections. It was determined that most of the students (90.9%) cleaned and established the genital area after defecation or micturition. As a matter of fact, it is very important to keep the vulva clean and dry, especially after defecation, to prevent genital infections (Ozer, 20136).

The most important and simplest application for preventing infections is washing hands with soap and water. It was determined that more than half of

the students washed their hands "sometimes" before entering the toilet, while only 23.4% of them were always washing their hands. Most of the students (96.6%) were found to wash their hands after the toilet. In studies investigating the frequency of hand washing before the toilet in university students, the rate varies between 24-42% [Unsal, 2010; Bilgic et al., 2018]. Our findings support the literature.

When genital hygiene behaviors of female students during menstruation period were examined, it was determined that all students were using sanitary pads during menstrual period. The high rate of pad use in our study is a positive result in terms of hygiene. 10.9% of female students do not take a bath during menstruation. This behavior, which is believed to be correct for cultural reasons, is a misunderstood behavior. It was determined that 5.7% of the students did not take a bath during the menstrual period because it would reduce bleeding, 2.8% would increase their pain and 2.3% due to the risk of infection. However, during this period of infection, bathing reduces the risk of infection and provides physical and psychological comfort. Similarly, in the study of Ozdemir et al. (2012), it was determined that 28.1% of university students did not take a shower during the menstrual period (Ozdemir et al., 2012). Again, in the study of Guler et al, the frequency of not taking a bath during menstruation was reported to be 15.1%, similarly to our study (Guler et al., 2005). Elimination of students' misconceptions about not taking a shower in the menstrual period is extremely important for reproductive health.

The youth period is the period when the health habits of the people will be shaped throughout their lives. In addition, the fact that these students are candidates for healthcare professionals has a special importance for the health of future generations. However, it was determined that one fourth of the students (33.1%) participated in the study had a vaginal shower. This practice changes the chemical structure of the vagina, damaging the normal flora, thereby increasing the risk of sexually transmitted diseases, cervical infection, pelvic inflammatory disease and cervical cancer (Martino & Vermud, 2002). The frequency of vaginal shower (VS) in women living in Turkey

varies between 40-81%. Unlike our study, the rate of VS was 51.4% in the study conducted by Hacialioglu et al. in Erzurum, while the rate of VS was 68.4% in the Cankaya and Yilmaz study and the rate of VS in 38.6% in a study conducted in Antalya [Hacialioglu et al., 2009; Erbil et al., 2011; Cankaya&Yilmaz; 2015]. These results are an indication that vaginal douching has also changed from culture to culture in Turkey.

Vaginal discharge is present in 80% of students and 82.9% of them are clear and odorless. Vaginal discharge, which is colorless, odorless, itchy and acidic, plays an important role in natural defense (Ardahan&Bay, 2009). However, 17.2% of the students described vaginal discharge feature, which is a sign of infection. Defining the vaginal discharge, determining the wrong hygiene habits that may be the cause of infection and developing the right health behaviors play a big role in differentiating pathological conditions (Martino&Vermud, 2002; Levin, 2003). One-third of the students taking a vaginal shower and 16% performing the cleaning of the perineum with the wrong technique explains the complaint of infectious discharge. When the genital hygiene behaviors of the students were evaluated according to their socio-demographic characteristics, it was determined that positive genital hygiene behaviors increased as the mother education level increased. The family is the individual's first social circle. It is very important to examine the role of the family in gaining genital hygiene behaviors and maintaining these behaviors correctly and regularly. In this study, it can be said that the level of consciousness and education of the mothers is effective in acquiring the correct genital hygiene habit. When the relationship between students' hygiene behaviors and residences was examined, it was observed that living with the family had a positive effect on genital hygiene behaviors. The fact that students studying at the university were in the dormitory environment and that they used common areas with more people negatively affected their hygiene behaviors.

**Conclusion and Recommendations:** In line with the findings collected in the study, it was determined that the mean score of genital hygiene behaviors was slightly above the average level.

Knowing and applying the right hygienic practices for midwife candidates who will provide healthcare services to society has a key role in being the right role model for the group they serve and delivering the right information. However, it has been determined that there are more deficiencies in the knowledge and behaviors related to genital hygiene, especially in the first years of starting health education. In line with these results, it can be said that genital hygiene education, which is included in many courses in vocational education, is effective in gaining positive genital hygiene behavior. In this context, it is important to conduct health education in the first semester when students start school without waiting for the curriculum process

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