

ORIGINAL ARTICLE

Determining the Genital Hygiene Behaviors and the Possibilities of Maintaining Genital Hygiene among Women in Reproductive Age

Üreme Çağındaki Kadınların Genital Hijyeni Sürdürmedeki Olanakları ve Genital Hijyen Davranışlarının Belirlenmesi

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ABSTRACT

Aim: This study was conducted to determine the possibilities of maintaining genital hygiene and genital hygiene behaviors among women in reproductive age.

Materials and methods: This descriptive study was conducted with 301 women admitted to the gynecology outpatient clinic of a university hospital between August and October 2022. The study data were collected using a descriptive information form and the Genital Hygiene Behavior Scale (GHBS).

Results: Participants' mean scores were found as 50.30±5.10 on the hygiene habits sub-dimension, 33.96±4.32 on the menstrual hygiene sub-dimension, 12.56±2.28 on the abnormal finding awareness sub-dimension, and 96.82±9.04 on the total GHBS. The mean GHBS scores of women who had primary education, lived in a large family, did not work in a paid job, had not received genital hygiene education, found their genital hygiene knowledge inadequate, had financial difficulties and felt embarrassed when purchasing genital hygiene products, had a fear of menstrual blood leakage, and experienced blood leakage accidents were lower ($p<.05$). While the most frequently used product for menstrual hygiene by 97.7% of women was sanitary pads, they also reported using washable pads (.7%), old clothes (.7%), washable period underwear (.3%), cotton (.3%), and toilet paper (.3%). It was determined that all of the women knew sanitary pads, 37.9% vaginal tampons, 27.2% washable pads, 26.2% washable period underwear, 15.3% menstrual cups, and 6% menstrual discs.

Conclusion: In our study, although the mean scores of participants on genital hygiene behavior looked good, it was determined that the scores of some featured groups were low. In addition, it was determined that women did not have enough knowledge about sustainable hygienic products. Nurses and midwives should evaluate the genital hygiene behavior of the women for whom they provide care, and inform and provide them with counseling about deficient or faulty practices in terms of protecting and promoting their health.

Keywords: Menstrual Hygiene Products, Hygiene, Reproductive Period, Genitalia

Öz

Amaç: Bu çalışma üreme çağındaki kadınların genital hijyeni sürdürmedeki olanakları ve genital hijyen davranışlarının belirlenmesi amacıyla yapılmıştır.

Gereç ve Yöntem: Tanımlayıcı tipteki bu araştırma bir üniversite hastanesinin jinekoloji polikliniğe başvuran 301 kadın ile Ağustos- Ekim 2022 tarihleri arasında yürütülmüştür. Araştırmanın verileri Tanıtıcı Bilgi Formu ve Genital Hijyen Davranışları Envanteri (GHDE) ile toplanmıştır.

Bulgular: Katılımcıların GHDE puan ortalamaları; Hijyen Alışkanlıkları 50,30±5,10, Adet Hijyeni 33,96±4,32, Anormal Bulgu Farkındalığı 12,56±2,28, GHBS toplam puan 96,82±9,04 olarak saptanmıştır. İlköğretim düzeyinde öğrenime sahip olan, geniş ailede yaşayan, gelir getiren bir işte çalışmayan, genital hijyen eğitimi almamış, genital hijyen bilgisini yetersiz bulan, genital hijyen ürünlerini almakta maddi olarak zorlanan ve utanan, menstrual kan sızıntısı korkusu yaşayan, kıyafete kan sızma kazası yaşayan kadınların GHDE puan ortalamaları daha düşük bulunmuştur ($p<.05$). Kadınların %97,7'sinin adet hijyeni için en sık kullandığı ürün hijyenik ped iken; %7'si yıkanabilir ped, %7'si eski giysiler, %3'ü yıkanabilir adet külođu, %3'ü pamuk, %3'ü tuvalet kağıdı kullandığını bildirmiştir. Kadınların hepsinin hijyenik pedi, %37,9'unun vajinal tamponu, %27,2'sinin yıkanabilir pedi, %26,2'sinin yıkanabilir adet külođunu, %15,3'ünün menstrüel kabi, %6'sının menstrüel diski bildiği belirlenmiştir.

Sonuç: Araştırmamızda kadınların genital hijyen davranış puan ortalamaları iyi görünmekle birlikte bazı özellikli grupların genital hijyen davranışları puanının düşük olduğu belirlenmiştir. Ayrıca kadınların sürdürülebilir hijyenik ürünler hakkında yeterince bilgi sahibi olmadıkları belirlenmiştir. Hemşire ve ebelerin bakım verdikleri kadınların genital hijyen davranışlarını değerlendirmeleri, eksik ya da hatalı uygulamalar konusunda bilgilendirme ve danışmanlık yapmaları kadın sağlığının korunması ve yükseltilmesi bakımından oldukça önemlidir.

Anahtar kelimeler: Hijyen, Menstrüel Hijyen Ürünleri, Üreme dönemi, Üreme organları

Introduction

Genital infections adversely affect the lives of women, their families, and their sexual health, leading to a decline in the quality of life and creating a predisposition for complications such as infertility, pregnancy issues, and cervical cancer (1, 2). Due to the anatomical proximity of the urethra, anus, and vagina in women, as well as improper hygiene practices, there is a high risk of microorganisms to be easily transmitted from the anus to the vagina/

urethra, resulting in genital infections (3). Indeed, it has been reported that genital infections are among the most common reasons for women of reproductive age to seek gynecology clinics (4, 5). In our country, while genital infections were detected in 65.6% of women aged between 15 and 49 in the health center regions in 2004 (6) the same rate was 78.6% in 2020 (7). Genital infection is a treatable and preventable health issue, and its complications can be controlled through early

diagnosis and treatment. Genital hygiene refers to the maintenance of cleanliness and health of the genital area and plays a pivotal role in preventing genital infections. Genital hygiene practices encompass behaviors that ensure the genital region remains dry and clean. These practices include washing hands before and after each elimination, changing menstrual pads at least 4-6 times a day during menstruation, and cleaning and drying the genital area from front to back (8). Maintaining proper genital hygiene is of utmost importance to safeguard against potential infections and promote overall genital health. By adhering to these practices, individuals can effectively reduce the risk of contracting genital-related illnesses and maintain the well-being of their genital region. The literature demonstrates a relationship between genital hygiene behaviors and genital infections in numerous studies. Hamed showed that women suffering from vaginal infections were less likely to use cotton underwear, changed their underwear less frequently, and were more prone to using incorrect techniques for genital hygiene (9). Çalık et al. found that women with complaints of genital discharge had poorer genital hygiene behaviors compared to those without such complaints (3). A systematic review examining the relationship between genital hygiene behaviors and genital infections highlighted a higher incidence of genital infections among women with inappropriate genital hygiene practices and emphasized the need for healthcare professionals to educate women on proper genital hygiene practices to reduce the rate of genital infections (10). Therefore, it is important to understand women's facilities for maintaining genital hygiene and genital hygiene behaviors among women at reproductive age.

The findings from this study will shed light on the educational interventions planned for the prevention of genital infections and associated complications.

Materials and Methods

This descriptive study was conducted to determine the possibilities of maintaining genital hygiene and genital hygiene behaviors among women in reproductive age. The population of the study consisted of women admitted to the gynecology outpatient clinic of a university's Department of Obstetrics and Gynecology. The sample of the study comprised literate volunteers aged between 18 and 49 years who sought care at the relevant clinic between August and October 2022. A total of 9,591 women visited the clinic between January and June 2022. The sample size for the study was calculated using the Raosoft Sample Size Calculator, an online tool (http://www.raosoft.com/sample_size.html). The minimum required sample size for the study, considering a 90% statistical power and a 0.05 margin of error, was determined as 264. To account for potential data loss, 320 women were invited to participate in the study. Among the invited women, 15 did not meet the inclusion criteria, and 4 declined to participate. Thus, the final sample consisted of 301 women.

Approval from the university's ethics committee (Date: 01.08.2022, Number: 13/130) was obtained for the conduction of the research. All participants were informed about the voluntary nature of their participation, and written consent was obtained from each participant.

Data Collection

In this study, the data collection instruments used were the Demographic Information Form and the Genital Hygiene Behavior Inventory.

Demographic Information Form: This form comprises a total of 12 questions, aimed at assessing participants' sociodemographic characteristics through 5 questions (such as age, educational status, employment status, etc.) and evaluating their genital hygiene practices through 7 questions (including knowledge of genital hygiene and usage of menstrual hygiene products, etc.).

Genital Hygiene Behavior Inventory: Developed by Karahan in 2017, this inventory is a five-point Likert-type scale consisting of 23 statements. The inventory items are rated on a scale ranging from "strongly agree" to "strongly disagree." The inventory comprises three subscales: general hygiene (items 1-12), menstrual hygiene (items 13-20), and awareness of abnormal findings (items 21-23). Scores on the inventory can range from 23 to 115, with higher scores indicating better genital hygiene behaviors in women (11). The Cronbach alpha value of the original scale is 0.80. In this study, it was calculated as 0.72.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) 20.0 software package was used to analyze the data obtained from the study. Descriptive statistics were used to assess the normal distribution of the data set. This method considers the skewness and kurtosis values generated from the data set to test normality (12). Skewness and kurtosis values within ± 2 are considered as evidence of normal distribution (13). Therefore, in addition to descriptive statistics, independent samples t-tests were used for comparing two independent groups, and one-way ANOVA was used for comparing more than two groups. Tukey's post-hoc test was employed. A significance level of $p < 0.05$ was considered statistically significant.

Results

The participants had a mean age of 29.02 ± 6.45 (Min: 18, Max: 49). The average scores of the participants in GHBS were as follows: General Hygiene Habits 50.30 ± 5.10 , Menstrual Hygiene 33.96 ± 4.32 , Abnormal Finding Awareness 12.56 ± 2.28 , and the total GHBS score was 96.82 ± 9.04 (Table 1).

The distribution of GHBS scores according to participants' sociodemographic characteristics is presented in Table 2. The participants' educational level influences GHBS, General Hygiene Habits, and Menstrual Hygiene score averages. Participants with primary education have lower scores compared to

those with high school, college, or higher education ($p < 0.05$). The type of family the participants live in affects GHBS and Menstrual Hygiene score averages, with scores being higher among participants from nuclear families ($p < 0.05$). The employment status of the participants, specifically working in a job that generates income, influences GHBS and General Hygiene Habits score averages. Participants who work in income-generating jobs have higher scores compared to those who are not employed ($p < 0.05$). There is no statistically significant difference in terms of marital status in the total GHBS score and its subscales ($p > 0.05$) (Table 2).

The distribution of GHBS scores according to participants' genital hygiene-related characteristics is presented in Table 3. The participants' genital hygiene education status influences GHBS and its subscale score averages. Participants who have received genital hygiene education have higher scores compared to those who have not ($p < 0.05$). The perception of having sufficient knowledge about genital hygiene affects GHBS, General Hygiene and Menstrual Hygiene score averages. Participants who perceive their genital hygiene knowledge as sufficient have higher scores compared to those who do not ($p < 0.05$). The participants' financial difficulties in purchasing genital hygiene products affect the average score of Menstrual Hygiene. Participants who never face financial difficulties in purchasing such products have higher scores compared to those who rarely face difficulties ($p < 0.05$). The embarrassment experienced by participants when purchasing genital hygiene products influences GHBS and its subscale score averages. Scores of participants who feel embarrassed during the purchase are lower than those who do not feel embarrassed ($p < 0.05$). The fear of menstrual blood leakage among participants influences GHBS and Menstrual Hygiene score averages. Scores of

participants who experience fear of menstrual blood leakage are lower than those who do not ($p < 0.05$). The occurrence of clothing staining accidents due to menstrual blood influences GHBS, General Hygiene Habits, and Menstrual Hygiene score averages. Scores of participants who experience clothing staining accidents are lower than those who do not ($p < 0.05$). There is no statistically significant difference in GHBS total score and its subscales regarding opinions about genital hygiene product prices ($p > 0.05$) (Table 3).

Although not included in the table, 97.7% of the participants reported using sanitary pads as the most commonly used product for menstrual hygiene while 0.7% used reusable pads, 0.7% used old clothes, 0.3% used reusable menstrual underwear, 0.3% used cotton, and 0.3% used toilet paper. When examining the participants' knowledge and use of menstrual hygiene methods, it was found that all participants were aware of sanitary pads, and 98.7% used them. Additionally, 37.9% knew about vaginal tampons, and 11% used them. Furthermore, 27.2% knew about reusable pads, and 4.3% used them. Among the participants, 26.2% were aware of reusable menstrual underwear, and 2.7% used them. Additionally, 15.3% were familiar with menstrual cups, and 0.3% used them. Lastly, 6% were aware of menstrual discs, and 0.3% used them.

Table 1. Distribution of Participants' GHBS Scores ($n = 301$)

Variables	Mean	SS	Available from scale Min-Max	Taken in research Min- Max
General Hygiene	50.30	5.10	12-60	34-59
Menstrual Hygiene	33.96	4.32	8-40	13-40
Abnormal Finding Awareness	12.56	2.28	3-15	5-15
GHBS	96.82	9.04	23-115	58-114

Table 2. GHBS Scores according to the Sociodemographic Characteristics of the Participants

Variables	n (%)	General Hygiene X ± SD	Menstrual Hygiene X ± SD	Abnormal Finding Awareness X ± SD	GHBS X ± SD
Education level					
Primary (a)	69 (22.9)	48.23±5.306	69±32.41	12.19±2.251	92.83±9.515
High school (b)	121 (40.1)	50.41±5.229	121±34.07	12.55±2.288	97.03±8.877
University and above (c)	111 (36.9)	51.45±4.423	111±34.80	12.81±2.274	99.06±8.102
Analysis#		F=8.996 p=.000** (a-b.c)	F=6.876 p=.001* (a-b.c)	F=1.598 p=.204	F=10.863 p=.000** (a-b.c)
Marital status					
Married	273 (90.7)	50.34±5.105	33.86±4.380	12.53±2.277	96.74±9.070
Single	28 (9.3)	49.86±5.075	34.93±3.600	12.82±2.326	97.61±8.821
Analysis †		t=.478 p=.633	t=-1.247 p=.213	t=-.633 p=.527	t=.527 p=.628
Family type					
Nuclear family	271 (90.0)	50.39±5.030	34.19±4.235	12.58±2.295	97.15±8.960
Extended family	30 (10.0)	49.43±5.673	31.90±4.604	12.43±2.161	93.77±9.302
Analysis †		t=.977 p=.329	t=-2.784 p=.006*	t=.324 p=.746	t=1.958 p=.050*
Working status					
Employed	60 (19.9)	51.73±3.839	34.87±3.981	12.38±2.358	98.98±7.909
Not employed	241 (80.1)	49.94±5.310	33.73±4.378	12.61±2.262	96.28±9.232
Analysis †		t=2.982 p=.003*	t=1.824 p=.069	t=-.676 p=.500	t=2.087 p=.038*

Abbreviations: †Independent t Test; # One-way ANOVA Test. * $p \leq 0$

Table 3. GHBS Scores according to the Genital Hygiene-Related Characteristics of the Participants

Variables	n (%)	General Hygiene	Menstrual Hygiene	Abnormal Finding Awareness	GHBS
		X ± SD	X ± SD	X ± SD	X ± SD
Status of receiving genital hygiene education					
Received	126 (41.9)	51.15±4.972	34.95±4.164	13.00±2.124	99.10±8.566
Not received	175 (58.1)	49.68±5.109	33.25±4.299	12.25±2.340	95.17±9.032
Analysis †		t=2.492 p=.013*	t=3.442 p=.001*	t=2.867 p=.004*	t=3.807 p=.000**
The state of finding sufficient genital hygiene knowledge find enough					
Find sufficient	234 (77.7)	50.65±5.042	34.43±4.202	12.71±2.187	97.79±8.820
Find insufficient	67 (22.3)	49.06±5.128	32.31±4.353	12.06±2.528	93.43±9.031
Analysis †		t=2.267 p=.024*	t=3.609 p=.000**	t=1.896 p=.061	t=3.543 p=.000**
Financial difficulties in purchasing genital hygiene products					
Often (a)	39 (13.0)	48.95±5.467	33.82±4.160	12.95±1.791	95.72±8.826
Rarely (b)	119 (39.5)	50.29±5.054	33.21±4.692	12.52±2.299	96.02±9.455
Never (c)	143 (47.5)	50.67±5.000	34.62±3.946	12.49±2.382	97.78±8.694
Analysis #		F=1.760 p=.174	F=3.555 p=.030* (b-c)	F=.652 p=.522	F=1.579 p=.208
Opinion on prices for genital hygiene products					
Very expensive	142 (47.2)	50.58±5.087	34.39±4.405	12.68±2.286	97.65±9.238
Expensive	107 (35.5)	50.24±4.954	33.30±4.105	12.55±2.245	96.09±8.769
Normal	52 (17.3)	49.62±5.431	34.15±4.430	12.25±2.342	96.02±8.993
Analysis †		F=.696 p=.501	F=2.013 p=.135	F=.687 p=.504	F=1.157 p=.316
Embarrassed when purchasing a genital hygiene product					
Feel embarrassed	118 (60.8)	49.26±5.150	32.49±4.391	12.09±2.136	93.85±8.953
Not feel embarrassed	183 (39.2)	50.96±4.962	34.91±4.008	12.86±2.322	98.73±8.582
Analysis †		t=-2.857 p=.005*	t=-4.916 p=.000**	t=-2.897 p=.004*	t=-4.740 p=.000**
Fear of menstrual blood leakage					
Fear	267 (88.7)	50.09±5.081	33.70±4.364	12.51±2.300	96.30±9.081
Not fear	34 (11.3)	51.88±5.008	36.03±3.335	13.00±2.089	100.91±7.621
Analysis †		t=-1.936 p=.054	t=-3.005 p=.003*	t=-1.192 p=.234	t=-2.838 p=.005*
The situation of experiencing a blood leakage accident on clothing					
Experienced	230 (76.4)	49.94±5.207	33.50±4.407	12.46±2.240	95.90±9.205
Not experienced	71 (23.6)	51.45±4.563	35.45±3.671	12.89±2.388	99.79±7.814
Analysis †		t=-2.199 p=.029*	t=-3.725 p=.000**	t=-1.380 p=.169	t=-3.509 p=.001*

Abbreviations: †Independent t Test. *p ≤.05. p=.000**

Discussion

The participants' average GHBS score is 96.82±9.04. Sevinç et al. reported an average GHBS score of 56 for women in the reproductive age group, while Gözüyeşil found it as 46, which is lower than the average score observed in our study. These differences may be attributed to various factors such as different study populations, sampling methods, or sociodemographic characteristics. (14, 15).

Çalık et al. reported a GHBS score of 77.41±9.05 while Karadeniz et al. found it 78.5±11.9. (3, 16). In a study conducted in seven different cities of our country to determine women's genital hygiene behaviors, Ankara had the highest average GHBS score (83.15±12.09), whereas Erzurum had the lowest average score (74.12±12.19) (17). The overall average GHBS score for women in the same study was determined as 78.96±11.65. These findings indicate that the scores of women's genital hygiene behaviors vary depending on the population in which the studies are conducted. Studies conducted in rural areas and smaller cities have shown lower genital hygiene scores for women while it is believed that the higher scores in this study may be attributed to the fact that it was conducted in

the country's capital and a centrally located university hospital setting.

The GHBS, Hygiene Habits, and Menstrual Hygiene average scores of individuals with primary education level are lower than those with high school and university education or above. Kurt Durmuş and Zengin (18) reported that illiterate women had statistically significantly lower GHBS scores compared to literate women with primary school, high school, and higher education levels. (18). Similarly, Sevinç et al. (15) found that women with a university degree had significantly higher GHBS scores compared to women with primary school and high school education. (15). It is believed that women's educational status enhances their potential to access accurate information, positively influencing their genital hygiene behaviors. According to our research results, individuals who are employed in income-generating jobs have higher average GHBS and Hygiene Habits scores compared to those who are unemployed. Women's participation in the workforce generally corresponds to their educational level, with higher education levels associated with increased workforce participation. Additionally, their employment status contributes to improving their

financial resources and facilitating the provision of genital hygiene conditions. The literature also suggests that education, economic status, and social status are reported as conditions that positively influence genital hygiene behaviors (19, 20).

In our study, it was determined that individuals living in nuclear families have higher average GHBS and Menstrual Hygiene scores compared to those living in extended families. Previous studies have also shown that individuals living in extended families have lower GHBS scores compared to those living in nuclear families (15, 16). Living in an extended family setting, where a shared toilet and bathroom facilities are used by multiple individuals, may present challenges for women, especially during their menstrual periods, in maintaining hygiene practices such as frequent changing of sanitary pads, washing hands before and after pad changes, and taking showers while menstruating.

The participants' attendance of genital hygiene education influences the GHBS and subscale mean scores. Those who received genital hygiene education had higher scores compared to those who did not receive such education. Furthermore, participants who perceive their genital hygiene knowledge as sufficient have higher mean scores in GHBS, Hygiene Habits, and Menstrual Hygiene compared to those who do not perceive their knowledge as sufficient. Uzun et al. also demonstrated, similar to our study, that individuals who received information on genital hygiene have higher GHBS and subscale mean scores than those who did not receive such information. (21). Being knowledgeable about a subject is an important factor in adopting correct behaviors related to that subject. For women to have proper genital hygiene practices, they need to be adequately and accurately informed. In this regard, nurses and midwives have significant responsibilities in providing the necessary guidance and information. Nurses and midwives can provide information and counseling to women in gynecology clinics by assessing their knowledge of genital hygiene and offering this service to women in need of guidance.

The average menstrual hygiene scores of participants who never experience financial difficulties in purchasing genital hygiene products are higher than those who rarely experience such difficulties. In addition to accessing accurate information, having sufficient financial means is crucial in maintaining genital hygiene. Particularly, during menstruation, access to the necessary hygienic products is essential for maintaining genital hygiene. However, our research indicates that approximately half of the women consider genital hygiene products to be expensive. In such circumstances, it becomes challenging to maintain menstrual hygiene in the absence of financial resources. Almost all participants use hygienic pads for menstrual hygiene while a small portion resorts to unhygienic alternatives such as old clothes or cotton. Furthermore, while all women are knowledgeable about hygienic pads, only a few are aware of or

use reusable pads, menstrual underwear, menstrual cups/disks, and other sustainable menstrual hygiene products. Sustainable menstrual hygiene products have gained increasing acceptance in recent years due to their effectiveness, safety, reusability, affordability, and environmental friendliness (22, 23, 24, 25). It is important to educate women, especially those with limited financial resources, about these products because they serve as viable alternatives. Providing information about these products plays a crucial role in enabling women to maintain and ensure their genital hygiene.

The average GHBS and subscale scores of individuals who feel embarrassed when purchasing genital hygiene products are lower compared to those who do not feel embarrassed. Despite being essential products for women's natural needs, genital hygiene products, especially during menstruation, are often perceived as embarrassing or secretive due to societal attitudes (26). In our study, nearly seven out of ten women reported feeling embarrassed when buying these products, and this embarrassment has had an impact on their genital hygiene behaviors. The sense of embarrassment is significant in deterring women from purchasing necessary genital hygiene products when needed. In the domain of women's health, it is essential for nurses providing services to women to create opportunities for them to express their feelings related to the matter and to plan initiatives that foster positive attitudes.

The average GHBS and menstrual hygiene scores of individuals who experience fear of menstrual blood leakage are lower compared to those who do not experience this fear. Additionally, participants who have experienced clothing staining accidents during menstruation have lower GHBS, general hygiene, and menstrual hygiene scores compared to those who have not experienced such accidents. The selection, frequency of changing, and proper use of menstrual hygiene products are important in preventing the fear of blood leakage and accidents during the menstrual period. In this regard, the contribution of healthcare professionals in providing accurate information and education to women starting from adolescence is crucial.

In conclusion, our study revealed that although women's genital hygiene behavior scores appear good overall, those with lower educational levels, unemployed status, living in extended families, not receiving genital hygiene education, perceiving insufficient knowledge on the subject, facing financial constraints in purchasing genital hygiene products, experiencing embarrassment, and fearing or experiencing menstrual blood leakage accidents had lower genital hygiene behavior scores. Furthermore, it was determined that women lacked sufficient knowledge about sustainable hygiene products with reusable features. Considering these specific groups, it is crucial for midwives and nurses actively involved in women's health to assess the genital hygiene behaviors of the women under their care,

provide information and counseling regarding any deficiencies or incorrect practices, and contribute to the preservation and improvement of women's health.

It is recommended that healthcare professionals, particularly nurses and midwives, assess women's behaviors concerning genital hygiene and the available resources, and provide information and counseling when necessary. In situations where the opportunities for maintaining genital hygiene are inadequate, it is essential to direct women towards receiving support from institutions such as local authorities and non-governmental organizations. Furthermore, conducting studies with larger samples, especially among women residing in rural areas with lower socioeconomic status, is advised to address this issue comprehensively.

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Author contributions

NYS : Project administration, Conceptualization, Data curation, Investigation, Methodology, Writing – review & editing.

MNA: Conceptualization, Data curation, Investigation, Methodology, Writing – review & editing.

References

- Rostami MN, Rashidi BH, Habibi A, Nazari R, Dolati M. Genital infections and reproductive complications associated with *Trichomonas vaginalis*, *Neisseria gonorrhoeae*, and *Streptococcus agalactiae* in women of Qom, central Iran. *International Journal of Reproductive Biomedicine*. 2017;15(6):357.
- Sevil S, Kevser O, Aleattin U, Dilek A, Tijen N. An evaluation of the relationship between genital hygiene practices, genital infection. *Gynecol Obstet*. 2013;3(6):1-5.
- Calık KY, Erkaya R, Gülnur İ, Yıldız NK. Genital hygiene behaviors of women and their effect on vaginal infections. *Clinical and Experimental Health Sciences*. 2020;10(3):210-6
- Koştu N, Beydağ KD. Genital hygiene practices of women who present to a gynecology clinic. *Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi*. 2009;12(2):105-10.
- Daşkan Z, Kılıç B, Baytok C, Kocairi H, Kuzu S. The genital hygiene practices of women who have genital discharge gynecology outpatient clinic. *Gümüşhane University Journal of Health Sciences*. 2015;4(1):113-24.
- Öner S, Demirhindi H, Erdoğan Ş, Tuncer İ, Şaşmaz T, Sütölük Z, et al. Doğanşehir Sağlık Ocağı Bölgesinde 15-49 yaş arası kadınlarda genital enfeksiyon prevalansı. *MEÜ Tıp Fak Derg*. 2004;5(2):138-44.
- Yuttaş Akar ÇB. Prevalence of vaginitis among 15-49 age women registered in a family health center. *J Midwifery and Health Sci*. 2020;3(2):100-14.
- Chen Y, Bruning E, Rubino J, Eder SE. Role of female intimate hygiene in vulvovaginal health: Global hygiene practices and product usage. *Women's Health*. 2017;13(3):58-67.
- Hamed A. The impact of genital hygiene practices on the occurrence of vaginal infection and the development of a nursing fact sheet as prevention massage for vulnerable women. *IOSR-JNHs*. 2015;4(6):55-64.
- Umami A, Paulik E, Molnár R, Bhisma M. The relationship between genital hygiene behaviors and genital infections among women: A systematic review. *Jurnal Ners*. 2022;17(1):89-101.
- Karahan N. Development of a Genital Hygiene Behavior Scale: validity and reliability study. *Istanbul Medical Journal*. 2017;18(3).
- Tabachnick B, Fidell L. *Using Multivariate Statistics* (ed., Vol. 6). Boston, Amerika. USA: Pearson Education, Inc; 2013.
- Mallery P, George D. *SPSS for windows step by step: Allyn & Bacon, Inc.*; 2000.
- Gözüyeşil E. Investigation of genital hygiene behavior: An example of slum area. *Ortadogu Medical Journal*. 2020;12(2):186-93.
- Sevinç N, Korkut B, OB. Genital hygiene behavior and quality of sexual life in married women of reproductive age. *Journal of Harran University Medical Faculty*. 2021;18(2):256-61.
- Karadeniz H, Ozturk, Ertem G. Analysis of genital hygiene behaviors of women who applied to women's illnesses and birth policlinic. *Erciyes Medical Journal*. 2019;41(4):402-9.
- Apay SE, Özdemir F, Nazik E, Potur DC, Hadımlı A, Tanrıverdi D, et al. Determination of the genital hygiene behaviours of women in seven different provinces: a multicentred cross-sectional study. *Journal of Anatolia Nursing and Health Sciences*. 2014;17(4):245-52.
- Kurt Durmuş M, Zengin N. Investigation of genital hygiene behaviors of women. *J Health Pro Res*. 2020;2(3):113-20.
- Adıbelli D, Kılıç NÖ, Akpak YK, Kılıç D. Genital hygiene behaviors and associated factors in women living in rural areas of Turkey. *Elective Medicine Journal*. 2014;2(3):210-4.
- Cemek F, Odabaş D, Şenel Ü, Kocaman AT. Personal hygiene and vulvovaginitis in prepubertal children. *Journal of pediatric and adolescent gynecology*. 2016;29(3):223-7.
- Uzun A, Öztürk GZ, Aksu SB. Evaluation of the genital hygiene behavior and related factors of women aged 15-49. *Eurasian Journal of Family Medicine*. 2022.
- Beksinska ME, Smit J, Greener R, Todd CS, Lee M-IT, Maphumulo V, et al. Acceptability and performance of the menstrual cup in South Africa: a randomized crossover trial comparing the menstrual cup to tampons or sanitary pads. *Journal of Women's Health*. 2015;24(2):151-8.
- Madziyire MG, Magure TM, Madziwa CF. Menstrual cups as a menstrual management method for low socioeconomic status women and girls in Zimbabwe: a pilot study. *Women's Reproductive Health*. 2018;5(1):59-65.
- Van Eijk AM, Jayasinghe N, Zulaika G, Mason L, Sivakami M, Unger HW, et al. Exploring menstrual products: A systematic review and meta-analysis of reusable menstrual pads for public health internationally. *PLoS one*. 2021;16(9):e0257610.
- Yuliana F, Aprilina HD. The CENAME (Menstrual Panties). *Proceedings Series on Health & Medical Sciences*. 2021;2:226-30.
- Kaur N, Bedi SP. Comparison of menstrual attitudes among active and inactive female university students. *Age (yrs)*. 2019;21:21.06.