Online Adres http://www.hemarge.org.tr/
Hemşirelikte Araştırma Geliştirme Derneği-HEMAR-G yayın organıdır
ISSN:1307- 9557 (Basılı), ISSN: 1307- 9549 (Online)
Hemşirelikte Araştırma Geliştirme Dergisi 2019; 21(1-2) 12-22

Hemşirelikte Araştırma Geliştirme Dergisi

Genital Hygiene Behaviors Among Married Women and the Outcomes of Counseling Practices

Evli Kadınların Genital Hijyen Davranışları ve Danışmanlık Uygulama Sonuçları

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Abstract

Objective: This study aimed to investigate the genital hygiene behaviors of married women and the counseling provided based on the genital infection data that was obtained.

Methods: This descriptive study was conducted on 146 women of age 18-49 years. The study was conducted in a training and research hospital located in Ankara. Data were collected using a data collection form including questions about socio-demographic characteristics, descriptive characteristics of participants regarding genital hygiene of women (bathing, pad use, vaginal douching) and the Genital Hygiene Behaviors Inventory (GHBI). The GHBI scores were analyzed with the Mann-Whitney U test (age, bathing, cleaning of genital region, using deodorant for genital region, vaginal douche, genital infection history) and the Kruskal-Wallis test (education status, department where employed, type of underwear, frequency of sexual intercourse).

Results: The mean age of the women was 39.0 ± 7.70 years. It was determined that 57.5% of women had a vaginal douching and only 33.6% of women applied to the doctor for complaints of genital infection. The women' mean score on the GHBI was 84.95 ± 9.20. Women at the group of 41 years old and older, who were not having bath every day and who were not performing the genital region cleaning properly were found to have lower GHBI scores (p <0.05). Participants older than 41 years, who tended not to have frequent baths and did not clean the genital region properly, had lower mean GHBI scores (p <0.05).

Conclusions: Despite the high mean Genital Hygiene Behaviors Inventory score, genital hygiene behaviors of women were not at a desired level in our study.

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Geliş Tarihi: 2 Eylül 2019 / **Kabul Tarihi**:22 Şubat 2020

***Keywords*:** Genital, hygiene, women's health, infection, nursing.

Öz

Amaç: Bu çalışmanın amacı, evli kadınların genital hijyen davranışlarının ve genital enfeksiyon bulgularına yönelik verilen danışmanlığın incelenmesidir.

Yöntem: Tanımlayıcı tipte olan araştırma, 15-49 yaş aralığındaki toplam 146 kadınla yürütüldü. Çalışma, Ankara'da bulunan bir eğitim ve araştırma hastanesinde gerçekleştirildi. Veriler kadınların sosyo-demografik özellikleri, genital hijyenine ilişkin tanımlayıcı özelliklerine (banyo yapma, ped kullanma, vajinal duş yapma) yönelik soruları içeren veri toplama formu ve Genital Hijyen Davranışları Envanteri (GHDE) kullanılarak toplandı. GHDE puanları Mann-Whitney U (yaş, banyo yapma sıklığı, genital bölge temizleme şekli, genital bölge deodorant kullanma durumu, vajinal duş yapma, genital enfeksiyon hikayesi) ve Kruskal-Wallis (eğitim durumu, çalıştığı bölüm, iç çamaşırı tipi, cinsel ilişki sıklığı), testleri ile analiz edildi.

Bulgular: Kadınların yaş ortalaması 39.0±7.70 dir. Kadınların %57.5'inin vajinal duş yaptığı ve kadınların genital enfeksiyona şikayetlerine yönelik sadece %33.6'sının doktora başvurdukları belirlenmiştir. Kadınların GHDE puan ortalamasının 84.95 ± 9.20 olduğu belirlenmiştir. Kadınlardan 41 yaş ve üzeri yaş grubunda olanların, hergün banyo yapmayanların ve genital bölge temizliğini doğru yapmayanların GHDE puanları daha düşük bulunmuştur ($p<0.05$).

Sonuç: Çalışmamızda, kadınların GHDE puan ortalamaları yüksek olmasına rağmen, bazı genital hijyen davranışlarının istenilen düzeyde olmadığı saptanmıştır.

Anahtar Sözcükler: Genital hijyen, kadın sağlığı, enfeksiyon, hemşirelik.

Introduction

Women face different health problems during different periods of their lifespan. The age period of 15-49 years is a risky time when women become fertile and reproductive health problems increase.[1,2,3] Knowledge concerning genital health is important for women's health, and lack of hygiene gives rise to reproductive system infections.[1,3] Within the scope of reproductive health problems, genital infection is one of the leading causes of hospital admissions. In developing countries, genital infection is an important public health problem, encountered by most of the women at least once in their lifespan.[2,4] Each year, approximately one million women worldwide experience diseases such as urogenital system infections and bacterial vaginosis, excluding venereal diseases, and at least 75% of women have a history of genital infection.[5,6] Genital infection is also a common problem in Turkey, with an incidence of 10%—50%. [7]

There are various factors that contribute to genital infections, which have a deleterious effect on women's health. These factors include childbearing and curettage in unhealthy conditions, nescience on genital hygiene, wrong beliefs and practices concerning genital health, inadequate access to medical services, lack of medical insurance, inadequate economic conditions, shyness on issues related to genitalia, and not visiting a doctor unless it is absolutely necessary.[8,9] Genital hygiene behaviors are crucial in preventing genital infections. The physiological and anatomical features of the female genitalia and wrong practices of women stemming from lack of knowledge on genital hygiene increase the risk of infection. Therefore, adopting genital hygiene behaviors is important for promoting women's health and increasing their quality of life by preventing infections.[10,11,12]

As the approach of focusing on protecting and promoting health rather than treating disease gains popularity worldwide, the training and consulting roles of medical personnel become more important. Health education and counseling are important pillars of nursing care in protecting and promoting women's general health and their reproductive health.[13] To protect women from infections,

women should be educated on contributing risk factors, and problems that predispose a woman to genital infection should be identified. There are some prominent components that should not be omitted: encouraging women to undergo gynecological check-ups, helping women to recognize the importance of personal hygiene, and increasing women's awareness on early check-ups and diagnosis through effective health education.[4,6,14] Unless predisposing conditions and contributing factors are eliminated, relapse of genital infection is always a possibility. Therefore, nurses have a key role in helping women to adopt proper hygiene behaviors and prevent vaginal infections.

Sociocultural factors and social norms and behaviors are also contributing factors that affect the hygiene behaviors of women.[15,16] Hospital staff dealing with housekeeping, catering and care assistance have lower socioeconomical support compared to well-educated healthcare professionals. Nevertheless they spent most of their daily routine worktime beside a nurse, they are mostly neglected and lack of training on health. Shyness of women regarding medical problems of genitalia and common negligence of these medical problems in our society make research studies on women's health important and necessary. Studies have been conducted that highlight the need for identifying problems of women related to genital infections and the trainer-counselor role of nurses.[17,18,19] However, national data, representing Turkey overall, on genital hygiene behaviors of non-medical, female personnel who worked in the hospital is limited. It is hard to conduct studies on genital hygiene behaviors representing the whole community; therefore, it is important to select and focus on some subgroups so that suggestions can be produced for the whole community.

This study aimed to investigate the genital hygiene behaviors of married non-medical, female personnel in the hospital and the counseling provided based on the genital infection data that was obtained.

Research Questions:

1. What is the genital hygiene behavior of married non-medical, female personnel in the hospital?

2. What are the variables that affect the genital hygiene behavior of married non-medical, female personnel in the hospital?

***3. What is the* outcomes of counseling practices?**

Methods

Study Design and Sample

The aim of this descriptive study was to identify the genital hygiene behaviors of married Turkish women aged 18—49 years and to counsel them regarding symptoms of genital infection. The study was conducted in a training and research hospital located in Ankara. The study sample consisted of participants who worked in a patient care, housekeeping (cleaning) and catering company serving a training and research hospital. Eligibility criteria were married status, age 18—49 years, literacy in the Turkish language, not having any communication difficulty, and not being pregnant or menopausal. Thirty-four menopausal women and 13 pregnant women were excluded. In determination of the sample, no sample size estimation was done and it was aimed to reach the whole of the universe (n=194). The study was completed with 146 (%75 of the universe) eligible enrollees who volunteered to participate in the study.

Instruments

Data were collected by a data collection form developed by the researchers, and by the Genital Hygiene Behaviors Inventory (GHBI). The data collection form consisted of 36 questions on socio demographic features, practices on genital hygiene (cleaning of genitalia, bathing, vaginal douching, etc.), and symptoms of genital infection (such as malodorous discharge, rash, pain during or after sexual intercourse, bleeding, irritation). The GHBI consists of 27 items. Its validity was tested by Ege and Eryılmaz (2006), with a Cronbach alpha value of 0.86. Women were asked to give answers on a Likert scale ranging from 1 (never) to 4 (always). The GHBI total score ranges from 27 to 108 points. Higher scores mean better adoption of genital hygiene behaviors.[20]

Data collection

The data for this study were collected face to face by researchers. Verbal and written consents from the participants were obtained after a briefing about the aim and method of our study. The data collection form was given to the participants in an appropriate environment to give them privacy and comfort. The participants were encouraged to ask questions about genital hygiene, and they were briefed on the topics about which they were concerned. Complaints during the previous month such as malodorous discharge, rash, pain during or after sexual intercourse, bleeding, and irritation were accepted as the symptoms of genital infection. After completing the data collection form, participants indicating at least one symptom were counselled by the nurse researchers about symptoms of genital infection individually and referred to a gynecological outpatient clinic. One of the counselling nurse researchers has master science degree in public health nursing while the second researcher has Doctor of Philosophy (PhD) degree in public health nursing. Contact information was collected from the women who were briefed by the nurse researcher, and these women were assessed after a month to learn whether they visited a gynecological outpatient clinic. The participants who were found to be at risk for genital infection but who did not visit a gynecological outpatient clinic were counseled once again to visit a gynecological outpatient clinic.

Data analysis

After the data collection process, the data were analyzed with SPSS version 15.0. Descriptive statistics are presented in numbers, percentages, means±standard deviations, median Interquartile Range (IQR), minimum and maximum values. Normality test for variables was done with Shapiro-Wilks Test. The GHBI scores were analyzed with the Mann-Whitney U test (age, bathing, cleaning of genital region, using deodorant for genital region, vaginal douche, genital infection history) and the Kruskal-Wallis test (education status, department where employed, type of underwear, frequency of sexual intercourse). Values of $p < 0.05$ were accepted as significant.

Ethical Consideration

This study was approved by the ethical review boards at the authors' institution (02.2014.3778). The necessary permissions were obtained so that the study could be conducted in the hospital.

Results

The mean age of the study participants was 39.0 ± 7.70 years. More than a quarter of the participants (27.4%) were 41—46 years of age. Participants, who 36.3% of them were primary and high school graduates, 61.0% of them were employed in housekeeping services, 20.5% were employed in catering and the last 18.5% were employed patient care. The mean age at marriage was 20.2 ± 3.86 years, and the mean duration of marriage was 17.3 ± 9.26 years (Table 1).

Table 1. Socio-demographic characteristics of participants (n=146)

Characteristics	Mean ± SD		n	%
Age	39.0±7.70	years		
23-28 years			18	12.3
29-34 years			27	18.5
35-40 years			38	26.0
41-46 years			40	27.4
Over 47 years			23	15.8
Age at marriage	20.2±3.86	years		
Duration of marriage	17.3±9.26	years		
Educational status				
Literate			6	4.1
Primary school graduate			53	36.3
Secondary school graduate			34	23.3
High school graduate			53	36.3
Department where employed				
Patient care			30	20.5
Housekeeping			89	61.0
Catering			27	18.5
Spouse's occupation				
Official			13	8.9
Private sector			32	21.9
Worker			42	28.8
Freelance			59	40.4

Data are presented as n (%) or mean ± standard deviation

Table 2. Descriptive characteristics of participants regarding genital hygiene (n=146)

Characteristic	n	%
Preferred underwear		
Comfortable	139	95.2
Slim fit or other type	7	4.8
Bathing		
Every day	48	32.9
2-3 times a week	92	63.0
Once a week	6	4.1
Cleaning of genital region		
Front to rear	125	85.6
Rear to front	21	14.4
Using deodorant for genital region		
Yes	19	13.0
No	127	87.0
Preferred color of toilet paper		
White	143	97.9
Colored	3	2.1

Type of underwear		
White cotton	86	58.9
Colored synthetic	15	10.3
Not paying attention	45	30.8
Frequency of sexual intercourse (n=130)		
Less than once a week	21	14.4
Once a week	40	27.4
2-3 times a week or more	69	44.5
Vaginal douche		
Yes	84	57.5
No	62	42.5
Frequency of vaginal douche (n=84)		
At least once every day	53	36.3
Once a week	17	11.6
Once a month or less	14	9.6
Reason for vaginal douche (n=82)		
General cleaning	61	41.8
Minimizing vaginal rash	2	1.4
Preventing infection	9	6.2
Cleaning after sexual intercourse	10	6.8
Prior information about genital hygiene		
Yes	87	59.6
No	59	40.4
Source of prior information about genital hygiene (n=87)		
Written visual media	17	11.6
Medical personnel	52	35.6
In-service training	4	2.7
Friend or relative	18	12.3

The majority of the participants (63.0%) were having a bath 2—3 times a week, 85.6% of them were performing vaginal cleaning properly, and almost all of them were using comfortable underwear, not using vaginal deodorant, and were using white toilet paper. Nearly half of the participants (44.5%) were having sexual intercourse 2—3 times a week. More than half of the participants (57.5%) performed vaginal douching; the most frequent reason (41.8%) was general cleaning.

The majority of the participants (59.6%) had received prior information on genital hygiene; the main source of information (35.6%) was medical personnel (Table 2).

Table 3. Complaints of women related to genital infection (n=146)

Item	**n**	**%**
History of at least one complaint, such as malodorous discharge, rash, pain during sexual intercourse, or irritation		
Yes	74	50.7
No	72	49.3
Possible reason for complaint (participant's belief) (n=46)		
Infection	40	27.4
Frequent sexual intercourse	6	4.1

Participant's solution for the complaint (n=74)		
Nothing	8	5.5
Self-care	17	11.6
Visit a physician	49	33.6
At least one complaint in the previous month		
Yes	21	14.4
No	125	85.6
Participant's solution for the complaint in the previous month (n=21)		
Nothing	5	3.4
Self-care	9	6.2
Visit a physician	7	4.8

Half of the study participants (50.7%) stated that they had complaints related to genital infection. However, only one third (33.6%) of the participants reported that they had visited a physician for the complaint. Within the last month, 14.4% of the participants had complaints related to genital infection, and only 4.8% had visited a physician (Table 3). Fourteen participants who had a complaint related to genital infection within the last month but did not visit a physician were briefed and counseled to visit a physician; nevertheless, only four of them visited a physician.

Table 4. Genital Hygiene Behaviors Inventory (GHBI) scores of participants and comparison of mean scores and descriptive features (n=146)

	Minimum	**Maximum**		**Mean ± SD**
GHBI score	58	104		84.95 ± 9.20
Descriptive Feature	**n**	**Mean ± SD**	**Median (IQR)**	**Test Statistics p**
Age				
23-40 years	83	86.81±8.08	87.0 (12.00)	z = -2.758
41 years or more	63	82.49±10.04	82.0 (14.00)	p = 0.006*
Education status				
Literate or primary school graduate	59	83.52±10.20	84.0 (22.50)	X^2 = 2.761
Secondary school graduate	34	87.00±8.82	82.0 (13.00)	p = 0.251
High school graduate	53	85.22±8.10	87.0 (12.50)	
Department where employed				
Patient care	30	86.83±8.01	86.0 (11.25)	X^2= 3.596
Housekeeping	89	83.55±9.67	85.0 (13.00)	p = 0.166
Catering	27	87.48±8.16	87.0 (12.00)	
Type of underwear				
White cotton	86	84.94±9.17	85.0 (12.00)	X^2= 0.499
Colored synthetic	15	83.80±7.73	85.0 (10.00)	p = 0.779
Not paying attention	45	85.35±9.85	87.0 (15.00)	
Bathing				

Every day	48	87.29±9.79	87.0 (11.75)	z = -2.153
2-3 times a week or less	98	83.80±8.72	83.5 (13.00)	p = 0.031*
Cleaning of genital region				
Front to rear	125	85.41±9.56	86.0 (13.50)	z = -1.987
Rear to front	21	82.19±6.11	81.0 (9.50)	p = 0.047*
Using deodorant for genital region				
Yes	19	87.15±9.46	87.0 (10.00)	z = 0.902
No	127	84.62±7.04	86.0 (14.00)	p = 0.367
Frequency of sexual intercourse (n=126)				
Less than once a week	41	83.78±9.54	84.0 (13.50)	X^2 = 3.403
Once a week	40	83.65±8.59	85.0 (11.75)	p = 0.182
2-3 times a week or more	65	86.49±9.25	87.0 (13.00)	
Vaginal douche				
Yes	81	85.23±8.32	85.0 (11.50)	z = 0.051
No	65	84.60±10.25	87.0 (14.50)	p = 0.959
Genital infection history				
Yes	74	85.02± 8.69	86.0 (10.25)	z = -0.980
No	72	84.87±9.76	85.0 (15.75)	p = 0.922
Genital infection within the last month				
Yes	20	85.55±9.09	85.0 (13.50)	z = -0.137
No	126	84.85± 9.25	86.0 (13.25)	p = 0.891

*z= Mann-Whitney U test, x^2= Kruskal-Wallis test, IQR=Interquartile Range, * p<0.05*

The GHBI scores of participants, comparisons of the mean GHBI scores, and descriptive features are given in Table 4. The mean GHBI score was 84.5 ± 9.20 out of 108 points. The mean GHBI score of participants aged ≤40 years was statistically significantly higher than the mean GHBI score of participants aged >41 years (respectively, 86.81 ± 8.08 and 82.49 ± 10.04; z = -2.758; p = 0.006). The mean GHBI score of participants having a bath less than 2—3 times a week was statistically significantly lower than the mean GHBI score of participants having a bath every day (respectively, 83.80 ± 8.72 and 87.29 ± 9.79; z = -2.153; p = 0.031). The mean GHBI score of participants cleaning the genital region from rear to front was statistically significantly lower than the mean GHBI score of the participants cleaning from front to rear (respectively, 82.19 ± 6.11 and 85.41 ± 9.56; z = 1.987; p = 0.047). There were no statistically significant differences in mean GHBI scores with regard to educational status, department where the participant worked, type of underwear, deodorant use for the genital region, frequency of sexual intercourse, performance of vaginal douching, or genital infection within the last month (p >0.05, Table 4).

Discussion

The aim of this study was to define the genital hygiene behaviors of non-medical, female personnel who worked in a medical institution. In general, the mean GHBI score of the study participants was satisfyingly high. However, participants older than 41 years, those not having frequent baths, and subjects not cleaning the genital region properly had lower mean GHBI scores. It is suggested that the high mean GHBI score of the participants overall may be based on the fact that they worked in

a medical institution. Mean GHBI scores have been found to be similarly high in studies on working women.[21,22] The risk for vaginal infection in unemployed women has been found to be 2.5 times higher, and genital hygiene behaviors are reported to be unsatisfactory in women living under poor socioeconomic conditions.[1,12] The educational status, self-care behaviors, and social status of Turkish women are reported to be low. [19,20,21] Therefore, generalized genital hygiene training for women in a society and raising their awareness of genital infection is important, especially in developing countries like Turkey.[23]

There are some factors, such as preferred type of underwear, method of genital cleaning, deodorant use in the genital region, and frequency of bathing, that have been reported to affect the predisposition to genital infection.[24] Having a bath 2—3 times a week has been reported to range from 41.20% to 80.60% in different populations.[14,19,24] Improper cleaning of the genital region has been reported in 38.5% of university students and in 26.10% of women aged 15—49 years.[14,24] The present study found the majority of the subjects to have a bath twice a week or more, practice proper genital cleaning, prefer comfortable underwear, use white toilet paper, and not use deodorant for the genital region (Table 2). These findings suggested that our target population had the desired awareness on genital hygiene for proper behaviors and choices for preventing genital infection in women.

In our study population, the mean GHBI score of women aged ≤40 years was higher than of women aged >41 years (Table 4). This finding implies a negative correlation between age and the mean GHBI score. Better genital hygiene behaviors in younger women may be associated with higher individual awareness. Genital infections are reported to increase according to age, [10,25] with the peak occurrence at age ≥35 years.[26] The diversity in this finding may originate from cultural and economic factors, and emphasizes the importance of planning interventions in accordance with the need for promoting genital hygiene behaviors in women. Furthermore, it is suggested that the association between age and poor genital hygiene behavior may have been overlooked in previous studies that enrolled younger populations and excluded women of menopausal age.[11,17]

It has been reported that more than half of women and university students who experience abnormal vaginal discharge problems do not visit a physician.[8,17,24] The present study investigated the genital infection history of the participants, and found that nearly half of the participants had experienced genital infection but only a minority of them had visited a physician (Table 3). This fact may originate not only from lack of information on genital infection but also cultural factors, a sense of shame, and neglect of medical problems. However, women with a history of genital infection were found by the present study to have higher mean GHBI scores (see Table 4). This finding may represent the increased sentience after a genital infection experience.

To prevent genital infection, it is important for women to be informed on genital hygiene by a health worker. The present study found that more than half of the participants had been informed on genital hygiene; the leading source was medical personnel (see Table 2). This finding may be explained by the shared workplace with health workers. Low rates of being informed on genital hygiene (8%—40%) are reported in the literature, with the leading source of information being the written or visual media such as newspapers and television.[14,19] These findings highlight the poor rate of informing women on the topic of genital hygiene and prevention of genital infection in Turkey, and emphasize the need for an effective training/consulting program to achieve effective instruction.

The present study found the mean GHBI scores to be higher in women who had a daily bath, practiced genital cleaning from front to rear and had sexual intercourse 2—3 times or more in a week

(Table 4). These findings suggest that individual awareness on proper hygiene behaviors and frequency of sexual intercourse have an influence on genital hygiene behaviors. Washing the whole body after sexual intercourse is a religious necessity in Islam, and it is suggested that this may be a contributor for better genital hygiene in a Muslim society. However, similar studies have reported no relationship between frequency of sexual intercourse and genital infection.[2,9]

Vaginal douching after sexual intercourse, which is a persisting traditional practice, may be the riskiest practice for genital infection. This is a common practice adopted by women as a natural element of genital hygiene in many countries, especially in Muslim societies.[15,16] However, this practice deteriorates the normal vagina flora by altering the chemical structure of the vagina, and increases the risk of venereal diseases, cervical infection, pelvic inflammatory disease and cervical cancer.[5,27] The present study found that more than half of the participants practiced vaginal douching; yet, there was no statistically significant difference in the mean GHBI scores between participants performing or not performing vaginal douching. This finding may suggest that women regard vaginal douching as a hygienic behavior even though it is harmful, and shows that the knowledge of the study participants on genital hygiene behavior was not sufficient. In the literature, the mean GHBI scores of women practicing vaginal douching are reported to be lower, and there is a reported statistically significant relationship between vaginal douching and genital infection.[21] These findings suggest that although women have differences in their mean GHBI scores, vaginal douching remains a persistant practice among women, and knowledge concerning vaginal douching is not sufficient.

Conclusions

The results of the present study suggest that the genital hygiene behaviors of the study participants were at the desired level, perhaps because this study population worked with healthcare personnel in a medical institution. From the public health perspective, these results show the importance of defining the knowledge level of women concerning genital hygiene behaviors, establishing their service needs, providing instruction, and limiting current medical problems before they progress to serious diseases — all in an approach disregarding where the women work. As working women can be accessed at the same time and in a group, they are an advantageous population for receiving health education classes or instructional meetings on genital hygiene. Moreover, these group trainings can be part of occupational health and safety trainings and the participants who may have any genital infection sign and symptom can be tracked by the occupational health nurse. Information can be provided in attractive and informative brochures. Our findings also recommend that every woman should be provided with information and awareness on the women's genital hygiene, the signs and symptoms of genital infection, and proper treatment alternatives.

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