



Determining the Knowledge Level and Practices of Nursing Students About Personal Hygiene and the Effect of the Training Given

Aliye Bulut¹, Müge Özgüler²

¹Gaziantep Islamic Science and Technology University Faculty of Medicine, Department of Public Health, Gaziantep, Turkey

²Elazığ Fethi Sekin City Hospital, Department of Infectious Diseases and Clinical Microbiology, Elazığ, Turkey

Abstract

Objective: This study was conducted to evaluate the knowledge and practices of nursing students about personal hygiene and the effectiveness of personal hygiene training given to the students.

Methods: Bingöl University Faculty of Health Sciences Nursing Department of the 2018-2019 academic year, the sample of the study was composed of n=277 students who were in the university during the data collection process and responded to the questionnaire before and after the training.

Results: Two hundred thirty (83.0%) of the students were female and forty-seven (17.0%) were male. When the contribution rates of the training for personal hygiene practices were examined, the first three rates were the item "I change my clothes every day" (35.7%), the item "I use cotton clothes" (30.0%), and the item "I may forget to wash my hands when I come home" (28.9%), which contributed to the nursing students.

Conclusion: It was seen that all students had errors and deficiencies in their attitudes and behaviors toward personal hygiene in the period before training. Positive changes occurred in the post-training period compared with the pre-training period and the participants' rates of applying personal hygiene increased.

Keywords: Hygiene, intervention, nursing students, training

INTRODUCTION

Hygiene is a health science and its main concern is the protection and maintenance of health. Cleaning contributes positively to human health by protecting the body from polluting factors. It has been stated that many health problems today are related to an unhealthy lifestyle. Hospitals not only have many disease factors, but they are also an environment where many people are together. Therefore, it is a place where significant attention should be paid to hygiene (1).

Hygiene, which is a science teaching the healthy living conditions, is also a science complex that applies efficient health-related information in synthesis for the protection and development of human health and long-term continuance of life at a healthy level as an individual and society. According to the areas,

hygiene can be divided into many branches, including social hygiene, work hygiene, school hygiene, environmental hygiene and personal hygiene (2).

Personal hygiene can be defined as all practices an individual makes to keep his/her body clean and healthy. It covers health and healthy behaviors together (3).

Personal hygiene is the practice developed by a person in accordance with his/her beliefs, values and habits. Therefore, personal hygiene practices are affected by cultural, social, familial factors as well as the information level and needs of the person about health and hygiene (4).

This study aimed to evaluate the knowledge and practices of nursing students about personal hygiene and the effectiveness of personal hygiene training given to the students.



Address for Correspondence: Aliye Bulut, Gaziantep Islamic Science and Technology University Faculty of Medicine, Department of Public Health, Gaziantep, Turkey

Phone: +90 342 909 75 00 **E-mail:** aliyedemirok@yahoo.com **ORCID ID:** orcid.org/0000-0002-4326-0000

Cite this article as: Bulut A, Özgüler M. Determining the Knowledge Level and Practices of Nursing Students About Personal Hygiene and the Effect of the Training Given. Eur Arch Med Res 2022;38(4):275-280

©Copyright 2022 by the University of Health Sciences Turkey, Prof. Dr. Cemil Taşcıoğlu City Hospital
European Archives of Medical Research published by Galenos Publishing House.

Received: 11.11.2020

Accepted: 01.04.2022

METHODS

The study was planned in February 2019 upon the request of the nursing students. This intervention study was conducted to compare the knowledge levels of students in the Nursing Department of Bingöl University Faculty of Health Sciences regarding the personal hygiene practices. All procedures performed in the current study were in accordance with the ethical standards of the Institutional Ethics Committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. This study was approved by the Bingöl University Ethics Committee (approval date and number: 15.04.2019; 92342550/044-E.8057). While the population of the study was composed of 283 students studying in the Nursing Department of Bingöl University Faculty of Health Sciences during 2018-2019 academic year, the sample the study was composed of n=277 students who were present at the university during the data collection process and responded the questionnaires before and after the training. The rate of participation in this study was 97.8%.

In data collection, a “questionnaire” with 42 questions prepared by the researchers was used. In the questionnaire prepared after the literature review, there were questions measuring the students’ socio-demographic characteristics, definition of hygiene, the use of personal hygienic products and their knowledge level about their practices for personal hygiene. The questions in the questionnaire consist of open ended and multiple-choice questions with “yes-no,” “right-wrong” answers.

The necessary permission and official correspondence from the relevant institution were completed for the application of questionnaires before training and about the planned training process and the appropriate day and time for the training was determined and necessary announcements were then made to the nursing students. After the necessary explanations and information were given to the students before starting the training, they students were asked not to write their names on the questionnaires and to mark the answers as close to their responses as possible with the aim of obtaining more realistic answers. The training program prepared for the students was then presented and the post-training part of the same questionnaire was also applied after the training.

Statistical Analysis

The data obtained in the study were evaluated using the Statistical Program for Social Sciences (SPSS) for the Windows 22 program. In data analysis, descriptive statistics were given as number, percentage, minimum and maximum values, mean

and standard deviation. Significance was evaluated by taking $p < 0.05$.

RESULTS

This study was applied to 277 nursing students. Two hundred thirty (83.0%) of the students were female and forty-seven (17.0%) were male. The mean age of the students was 21+/-2 years. Of the students, 74 (27.0%) were 1st-year students, 72 (26.1%) were 2nd-year students, 65 (23.1%) were 3rd-year students, and 66 (23.8%) were 4th-year students.

To the question “the place where you have lived for the longest time,” 66 (23.8%) of the students stated a village, 17 (6.2%) as town, 53 (19.1%) as districts, and 141 (50.9%) as provinces. When their parents’ education levels were questioned, 141 (50.9%) of the mothers were illiterate, 89 (32.1%) were primary school level, 12 (4.3%) were secondary school level, 3 (1.1%) were high school level and 3 (1.1%) were university and higher education level. When their fathers’ education levels were questioned, 32 (11.6%) of the fathers were illiterate, 19 (6.9%) were literate, 127 (45.8%) were primary school, 38 (13.7%) were secondary school, 44 (15.9%) were high school, and 17 (6.1%) were university and higher education level. It was determined that 214 (77.3%) had a nuclear family type, 61 (22.0%) had extended families and 2 (0.7%) had a broken family structure (Table 1).

Table 2 shows the questions asked the students about the use of personal hygiene products and their answers.

Before providing the training to the students to get information about personal hygiene practices, various questions were asked to them. Table 3 shows personal hygiene practices before and after training.

Post-training responses of the students who responded negatively to the questions before training were evaluated again and the students whose negative practices turned to positive practices were examined again. Table 4 shows the contribution rates of training for personal hygiene practices.

DISCUSSION

Personal hygiene is the most important factor for people to lead a trouble-free life away from diseases. Personal hygiene activities are conducted to prevent most diseases, particularly epidemics. These activities include washing the hands and face, having a proper bath, washing the hands with soap and clean water after the toilet, washing the hands when cooking, before and after eating, keeping the nails clean, brushing the

Table 1. Distribution of the participants socio-demographic characteristics (n=277)

Socio-demographic characteristics	Number (n)	Percentage (%)
Gender		
Female	230	83.0
Male	47	17.0
Mean age		
21+/-1.5 (min: 18-max: 32)		
The place where you have lived for the longest time		
Village	66	23.8
Town	17	6.1
District	53	19.1
Province	141	50.9
Mother's education level		
Illiterate	141	50.9
Literate	29	10.5
Primary school	89	32.1
Secondary school	12	4.3
High school	3	1.1
University and higher	3	1.1
Father's education level		
Illiterate	32	11.6
Literate	19	6.9
Primary school	127	45.8
Secondary school	38	13.7
High school	44	15.9
University and higher	17	6.1
Presence of siblings		
Yes	265	95.7
No	12	4.3
Number of siblings		
No siblings	9	3.2
<5 siblings	176	63.5
6-10 siblings	87	31.4
11-15 siblings	3	1.1
>16 siblings	2	0.7
Total	277	100

teeth, washing the feet, hair cleaning and care, and keeping the personal shoes, towel, laundry, brushes, and slippers clean (5,6). When all personal hygiene practices are examined, not only the body cleaning but also cleaning the environment and items used in hygiene practices and their personal use are important. According to the results of the study by Aydın (7), 94.7% of the primary school students had their own toothbrushes. In a study by Irmak (8), 91.6% of the patients had a personal toothbrush, whereas 8.4% did not. In the study by Kaya et al. (9), to determine the behaviors of students from a high school in Ankara about personal hygiene, 100% of the students stated that they had their own underwear and toothbrushes and 43.2% had their own nail clippers.

Personal hygiene is obtained in accordance with the person's beliefs, value judgments and habits. Thus, personal hygiene applications are affected by not only cultural, familial and social factors, but also by the person's need for health and hygiene and their personal training (10). Before the training was given to the students to get information about their personal hygiene practices, various questions were asked to them. Their responses before and after the training were then compared. Washing hands after the toilet was found to be 98.9% in the study by Şahin et al. (11). In the study by Thumma et al. (12) with the students staying in student dormitories, 84% of the students stated that they washed their hands every time after using the toilet. In another question, while 50.5% of the participants selected the "always" option to the item "I should brush my teeth at least twice a day" before training, 69.3% selected "always" after training. In the study performed by Sefit (13), 29.9% of the university students brushed their teeth twice a day. In the study by Silva et al. (14), entitled as "oral health of quilombola and quilombola rural adolescents: Investigation of hygiene habits

Table 2. Distribution of the participants according to the usage status of personal hygiene products (n=277)

Hygiene product	Used only by me		Used by whole family		I never use		Total n (%)
	Number (n)	Percentage (%)	Number (n)	Percentage (%)	Number (n)	Percentage (%)	
Razor	138	49.9	4	1.4	135	48.7	277 (100)
Toothbrush	264	95.3	13	4.7	0	0	277 (100)
Socks	236	85.2	41	14.8	0	0	277 (100)
Nail clipper	157	56.7	120	43.3	0	0	277 (100)
Comb	185	66.8	87	31.4	5	1.8	277 (100)
Underwear	266	96.0	11	4.0	0	0	277 (100)
Hand towel	134	48.3	141	50.9	2	0.8	277 (100)
Shoes/slippers	215	77.6	61	22.0	1	0.4	277 (100)
Bath towel	208	75.1	68	24.5	1	0.4	277 (100)
Banyo washcloth	218	78.7	52	18.8	7	2.5	277 (100)
Bathroom slippers	100	36.1	177	63.9	0	0	277 (100)

Table 3. Distribution of students' practices regarding the personal hygiene (n=277)

Hygiene application	Always (before training)		Always (after training)		Sometimes (before training)		Sometimes (after training)		Never (before training)		Never (after training)	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)	Number (n)	Percentage (%)	Number (n)	Percentage (%)	Number (n)	Percentage (%)	Number (n)	Percentage (%)
I should wash my hands when I wake up	261	94.3	266	96.0	15	5.3	4	1.5	1	0.4	7	2.5
I should wash my face when I wake up	265	95.7	261	94.3	12	4.3	9	3.2	0	0	7	2.5
I should wash my face before going to bed	121	43.7	190	68.6	144	52.0	73	26.4	12	4.3	14	5.1
I should clean my nose with water	133	48.0	162	58.5	138	49.9	99	35.7	6	2.2	16	5.8
I should wash my hands before and after eating	192	69.3	227	81.9	83	30.0	36	13.0	2	0.7	14	5.1
After the toilet, I should wash my hands with soap	263	95.0	265	95.7	11	4.0	11	4.0	3	1.1	1	0.4
I may forget to wash my hands when I get home	34	12.3	38	13.7	165	59.6	107	38.6	78	28.2	132	47.7
I have just washed my hands with water	20	7.2	50	18.1	116	41.9	88	31.8	140	50.6	139	50.2
I should dry my hands after washing them	216	78.0	237	85.6	59	21.3	24	8.7	1	0.4	16	5.8
I should brush my teeth at least twice a day	140	50.5	192	69.3	126	45.5	72	26.0	11	4.0	13	4.7
I should use as much toothpaste as the lentil size	181	65.3	184	66.4	54	19.5	53	19.1	42	15.2	37	3.4
I should choose my toothbrush medium hard	173	62.5	202	72.9	79	28.5	61	22.0	25	9.0	14	5.1
I should change my toothbrush every 3 months	154	55.6	197	71.1	103	37.2	64	23.1	20	7.2	16	5.8
I should brush my teeth for 4 min	150	50.2	174	62.8	117	42.2	91	32.9	10	3.6	12	4.3
I should see a dentist when I have a toothache	146	52.7	95	34.3	93	33.6	116	41.9	38	13.7	66	23.8
I shouldn't use dental floss	116	41.9	82	29.6	63	22.7	86	31.0	98	35.4	108	39.0
I should cut my fingernails and toenails when they grow	235	84.8	231	83.4	35	12.6	30	10.8	6	2.2	16	5.8
I should cut my fingernails straight	127	45.9	112	40.4	57	20.6	38	13.7	93	33.6	127	45.8
I should wash my feet only in the bath	23	8.3	54	19.5	48	17.3	36	13.0	203	73.3	187	67.5
I should dry my feet after washing them	127	45.8	186	67.1	125	45.1	78	28.2	25	9.0	13	4.7

I should cut my toenails in the moon shape	110	39.7	118	42.6	89	32.1	56	20.2	78	28.2	103	37.2
I should change my socks every day	176	63.6	204	73.6	97	35.0	61	22.0	4	1.5	12	4.3
I should change my clothes every day	102	36.8	180	65.0	151	54.5	84	30.3	24	8.7	13	4.7
I should use cotton clothes	129	46.6	199	71.8	119	43.0	56	20.2	29	10.5	22	7.9
I should do my ear cleaning with a towel tip	48	17.3	100	36.1	86	31.0	58	20.9	143	51.6	119	43.0
I should use a deodorant every day for body odor	107	38.6	140	50.6	119	43.0	88	31.8	51	18.4	49	17.7

Table 4. Contribution of training on personal hygiene practices (n=277)

Hygiene practice	Contribution of the training (%)
*I should wash my hands when I wake up	4.3
I should wash my face when I wake up	1.1
I should wash my face before going to bed	27.1
I should clean my nose with water	15.1
*I should wash my hands before and after eating	19.5
After the toilet, I should wash my hands with soap	4.3
*I may forget to wash my hands when I get home	28.9
*I should brush my teeth at least twice a day	22.4
*I should use as much toothpaste as my lentil size	15.2
*I should change my toothbrush every 3 months	23.1
*I should brush my teeth for 4 min	18.1
*I should see a dentist when I have a toothache	9.7
*I should just wash my hands with water	15.9
*I should dry my hands after washing them	15.5
*I should cut my fingernails and toenails when they grow	11.6
*I should cut my fingernails straight	24.9
*I should wash my feet only in the bath	9.4
*I should dry my feet after washing them	27.1
*I should cut my toenails in the moon shape	22
I should change my socks every day	16.6
I should change my clothes every day	35.7
*I should use cotton clothes	30.0
I should do my ear cleaning with a towel tip	6.1
*I should use a deodorant every day for body odor	18.8
*p value was determined to <0.05	

and related factors,” 33.3% of the adolescents were seen brush their teeth three times a day.

Responses of the students who responded negatively to the questions before training were evaluated again after training and the students whose negative practices turned into positive practices were examined again. When the contribution rates of training for personal hygiene practices were examined, the first three of them were seen to be the item “I change my clothes every day” with a rate of 35.7%, the item “I use cotton clothes” with a rate of 30.0% and the item “I may forget to wash my hands when I get home” with a rate of 28.9%, which contributed to the nursing students. In the studies conducted with university students in Turkey, 38-47% of the participants changed their underwear daily (15-19). Considering these findings, it is possible to state that students are not adequately aware of the necessity of changing their underwear daily. The color, type, washing, drying and changing frequency of and storage conditions of underwear are crucial. It must choose white underwear made of cotton so that it is appropriate for boiling or washing at a higher temperature (17,20). In the study by Türkmen and Bakır (21) to evaluate the hand-washing applications of health technician candidates, 91.4% of the students stated that they washed their hands when they got home.

CONCLUSION

It was observed that all students included in the study had mistakes and deficiencies in their attitudes and behaviors toward personal hygiene in the pre-training period. Positive changes occurred in students in the post-training period compared with the pre-training period and the participants’ rates of practicing personal hygiene increased.

In accordance with the results obtained from the study, to increase the correct information and behavior of the students, benefits and results of providing hygiene training with the right sources, such as healthcare professionals or specialists who have

special training in this field in a more planned and widespread manner, will be effective and efficient and it is recommended to add them to the curriculum. It may be useful to inform individuals through the mass media. Additionally, without ignoring the effect of families on personal hygiene practices, families should also be trained to hygiene.

Ethics

Ethics Committee Approval: This study was approved by the Bingol University Ethics Committee (approval date and number: 15.04.2019; 92342550/044-E.8057).

Informed Consent: All participants were informed and consents forms were obtained.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: A.B., M.Ö., Concept: A.B., Design: A.B., M.Ö., Data Collection or Processing: A.B., M.Ö., Analysis or Interpretation: A.B., M.Ö., Literature Search: A.B., M.Ö., Writing: A.B., M.Ö.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

REFERENCES

- Şimşek AÇ. The Investigation of 11th Level Students' Habits in Terms of Personal Care and Health Protection (Three High Schools - Ankara), Non-Thesis Master's Term Project, Ankara University Institute of Health Sciences, Ankara 2006, 87.
- Yumurtuğ S. Public Health Textbook. Ankara University Faculty of Pharmacy publications. Ankara, 1988.
- Güler Ç. Personal hygiene environment and health. Ankara, 2008.
- Yavuz Ş. Personal hygiene habits in private and public schools. Marmara University Faculty of Health Education, Graduation Thesis. 2000.
- Önsüz MF, Hıdıroğlu S. Determining personal hygiene practices of students in two different primary school in İstanbul. Journal of Adnan Menderes University Health Sciences Faculty 2008;9:9-17.
- Yılmaz S. Determination of Mid-Level Manpower Needs of the Health Sector, T.C. Ministry of National Education Education Research and Development Department (EARGED). Ankara, 2009.
- Aydın A. Determination of nutrition, oral and general body hygiene practices and related health problems of school-age children. Hacettepe University Institute of Health Sciences, Science Expertise Thesis. 1996.
- Irmak HY. The evaluation of the attitude and the behaviour of the patients with the information about personal hygiene. Cumhuriyet University Institute of Health Sciences, Master Thesis. 2015.
- Kaya M, Büyükşerbetçi M, Meriç MB, Çelebi AE, Bozbeyi Ö, Işık A, et al. Determination of the behaviours of ninth and tenth grade high school students about personal hygiene in Ankara. STED 2006;15:167-71.
- Pepe K, Kara D, Konar N, Vardar T. Investigation of the individual hygiene routine and self care methods of sportsmen. Nigde University Journal of Physical Education and Sport Sciences 2012;6:42-55.
- Şahin MM, Vural S, Vuralı D, Yüksel S, Yıldız F, Aslan D. An intervention study on hand washing among 6-14 years of age children. TAF Prev Med Bull 2008;7:65-70.
- Thumma J, Aiello AE, Foxman B. The association between handwashing practices and illness symptoms among college students living in a university dormitory. Am J Infect Control 2009;37:70-2.
- Sefit Ü. Determination of personal hygiene knowledge of Kocaeli University Vocational School students. Master Thesis. 1996.
- Silva EKP, Santos PRD, Chequer TPR, Melo CMA, Santana KC, Amorim MM, et al. Oral health of quilombola and non-quilombola rural adolescents: a study of hygiene habits and associated factors. Cien Saude Colet 2018;23:2963-78.
- 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.
- Özdemir S, Ortabağ T, Tosun B, Özdemir Ö, Bebiş H. Assessment of the knowledge level and behaviors of students in school of nursing about genital hygiene. Gulhane Med J 2012;54:120-8.
- Ünal KS. Determination of knowledge levels of genital hygiene behaviors of nursing students. Journal of Current Researches on Health Sector 2017;7:23-36.
- Bilgiç D, Yüksel P, Gülhan H, Şirin F, Uygun H. Genital hygiene behaviors and resulting health status of female students staying in a university dormitory. ACU Sağlık Bil Derg 2019;10:478-85.
- Topuz Ş, Büyükkayacı Duman N, Güneş A. Genital hygiene practices of female students at first class in the faculty of health sciences. Turkish Journal of Clinics and Laboratory 2015;6:85-90.
- Kısa S, Taşkın L. Behavioral and socio-demographic risk factors that affect vaginal infections among married women aged 15-49 who applied to a maternal-child health/family planning center in Ankara. Health and Society Journal 2007;17:69-84.
- Türkmen L, Bakır B. Evaluation of knowledge, attitude and practices of hand hygiene (routine / hand washing) of health technician candidates. GUSBD 2017;6:122-7.