



MEASURING COVID-19 HYGIENE ATTITUDES OF STUDENTS STUDYING HEALTH SCIENCES: A FOUNDATION UNIVERSITY EXAMPLE

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Abstract:

Covid-19, which emerged in the Wuhan province of China and was diagnosed in January 2020, became a worldwide epidemic and was declared a pandemic by the World Health Organization (WHO) on March 11, 2020. On these dates, the first case was seen in our country. Coronavirus, from person to person, is known that it is transmitted through small droplets that come out with speaking, sneezing, or coughing. It is clear that the issue that health workers and health worker candidates, who take on a great responsibility during the pandemic, will pay the most attention is the issue of hygiene. The importance of this regard should be instilled in students at university desks. The aim of this study is the measurement of hygiene attitudes of students studying in the health departments of Eurasia University during Covid-19. It is thought that the reason for this situation in which students studying in health sciences are more conscious about hygiene is that they work in risky groups in contact with microorganisms. In this context, it is recommended that education related to hygiene should be increased in the future. It is thought that our study, which is thought to contribute to the process, can be applied to larger masses in the future.

Keywords: hygiene, pandemic, Covid-19

1. Introduction

First it was seen in Wuhan, China in 2019 and caused pneumonia outbreaks in humans was defined as Novel Corona Virus, Covid-19/SARS-CoV-2 (Aysan, 2020). WHO announced on 31 December 2019 that there were cases of pneumonia of unknown origin in the city of Wuhan, Hubei province of China. In the statement made by WHO on January 7, 2020, it was stated that a new virus from the coronavirus family infects people and causes disease, and this virus was discovered and the virus was named 2019-nCoV

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on January 12. On the same date, the first confirmed cases outside of China were reported from Thailand and Japan. When we look at the common features of the cases, they were found in Wuhan, China a very short time ago. WHO had no information about the human-to-human contact of the virus. However, in a report, he presented on January 20, he published that the virus can be transmitted from person to person (Özlü & Öztaş, 2020). The epidemic was declared as an international public health emergency on January 30, 2020. As a result of the increase in the rate of spread and contagiousness of the virus, it was declared as a pandemic on March 11, 2020 (TC Ministry of Health, 2020). WHO defined the disease caused by 2019- nCoV as Covid-19 on February 11, 2020, and named it SARS-CoV-2 on February 14, due to the similarity of the virus to SARSCoV. The first case in our country was detected on March 11, 2020, and WHO announced Covid-19 as a pandemic on the same date to the whole world (Özlü & Öztaş, 2020).

On March 10, 2020, one day after the first case of coronavirus was reported in Turkey, a global epidemic (pandemic) was declared by the World Health Organization (WHO) with 118,319 diagnosed cases and 4,292 deaths (WHO, 2020). In Turkey, as in many developed countries, during the pandemic process, most of the procedures in the field of health were suspended in line with the decisions, recommendations and recommendations of the Scientific Committee of the Ministry of Health, only emergency and mandatory ones were carried out (Alharbi, 2020).

In this study, it was aimed to measure the hygiene attitudes of students studying in the Health Sciences departments of Eurasia University, a foundation university in Trabzon, a city in the Eastern Black Sea Region of Turkey, and who will work with the riskiest occupational groups in the future, in the Covid-19 pandemic process. intended.

In the study, it will be tried to measure the hygiene attitudes of students studying in the health sciences departments of a foundation university (Eurasia University) in Trabzon during the Covid-19 pandemic process.

2. Material and Method

Approval for our study was obtained from the Non-Interventional Ethics Committee of Eurasia University at the meeting numbered 10 held on 06.01.2023. Students studying at the Faculty of Health Sciences and Vocational School of Health Services and Graduate School of Education at a foundation university in Trabzon, located in the Eastern Black Sea region of Turkey, were included in the study. This study was carried out between December 2022 and January 2023. Students were included in the survey study on a voluntary basis, taking into account the inclusion criteria of the study.

2.1 Inclusion Criteria for Volunteers

- 1) Ages ranging from 16-35,
- 2) Those who receive or do not receive hygiene training,
- 3) Health students studying in the health departments of a foundation university.

2.2 Exclusion Criteria for Volunteers

- 1) Except for the students studying in the health department,
- 2) Those other than the determined university,
- 3) Those who are not between the ages of 16-35.

According to the inclusion criteria of the research; A questionnaire study created by using a 27-item 5-point Likert scale 'Covid-19 Hygiene Scale' developed by Birgül Çiçek, Hande Şahin, Sibel Erkal, will be applied to people aged 16-35 who are studying in the Health Departments of Eurasia University (Çiçek, 2020).

2.3 Statistical Analysis

It will be carried out using the SPSS 22 program. Independent T-tests will be used, considering gender, marital status, the relevance of the profession to the health sector, training on first aid, and being able to be first aid in an accident, $P < 0.05$ is considered statistically significant. In order to analyze family income level, number of family members, place of residence, educational status, and occupation, the 'one-way ANOVA test' was used to analyze the age difference between groups, with $p < 0.05$ considered statistically significant.

3. Findings and Discussion

When the demographic characteristics of the participants are examined, 68.1% of the 474 people participating in the research are female and 31.9% are male. Age ranges of people; 41.6% are 18-20 years old, 43.5% are 21-23 years old, 15% are 24 years old and over. In terms of education degrees, 71.7% are associate degrees, 23.6% are undergraduate, 4.6% are graduate. Looking at the departments they studied; 14.8% anesthesia, 23.6% dental prosthesis technology, 12.7% nursing, 4% physiotherapy, 11.2% child development, 13.9% oral and dental health, 3.2% sports management, 6.8% medical imaging technology, 3.4% sports sciences and 6.5% other departments. In addition, in terms of grades, 47.7% are 1st grade, 34.6% 2nd grade, 6.5% 3rd grade, and 11.2% 4th grade (Table 1).

Table 1: Average Values of the Participants According to Their Demographic Characters

Frequency		Percent	Valid percent	Cumulative percent
By Gender				
Woman	323	68.1	68.1	68.1
Male	151	31.9	31.9	31.9
Total	474	100.0	100.0	100.0
By Age				
18-20 years	197	41.6	41.6	41.6
21-23 years	206	43.4	43.4	43.4
Age 24 and over	71	15.0	15.0	15.0
Total	474	100.0	100.0	100.0
By Education Status				
Associate Degree	340	71.7	71.7	71.7
Licence	112	23.6	23.6	95.4
Degree	22	4.7	4.7	4.7
Total	474	100.0	100.0	100.0
According to the Department of Study Participants				
Anesthesia	70	14.8	14.8	14.8
Dental Prosthesis Technology	112	23.6	23.6	23,6
Nursing	60	12.7	12.7	12,7
Physiotherapy	19	4.0	4.0	4.0
Child Development	53	11.2	11.2	11.2
Mouth and Dental Health	66	13.9	13.9	13.9
Sports Management	15	3.2	3.2	3.2
Medical Imaging Only	32	6.8	6.8	6.8
Sports Science	16	3,3	3,3	3,3
Other	31	6.5	6.5	6.5
Total	474	100.0	100.0	100.0
According to the Class of Study Participants				
1 st Class	226	47.7	47.7	47.7
2 nd Class	164	34.6	34.6	34.6
3 rd Class	31	6.5	6.5	6.5
4 th Grade	53	11.2	11.2	11.2
Total	474	100.0	100.0	100.0

When the sections read by the people participating in the study and the average values of the answers given to the questions in the survey are compared, the questions in the survey of 474 people; 27% yes to the question 'Do you have a health worker in your family, 12% yes to the question of whether you have a chronic disease, 33.1% yes to the question of whether you have a diagnosis of Covid-19, 57% yes to hygiene education, 76.8% 'yes to the effect of public service ads on personal hygiene' answers (Table 2).

Table 2: Average Values of the Participants According to the Departments
They Read and Their Answers to the Questions in the Questionnaire

Frequency		Percent	Valid Percent	Cumulative Percent
Do You Have a Healthcare Worker in Your Family?				
Yes	128	27.0	27.0	27.0
No	346	73.0	73.0	73.0
Total	474	100.0	100.0	100.0
Do You Have any Chronic Diseases?				
Yes	57	12.0	12.0	12.0
No	417	88.0	88.0	88.0
Total	474	100.0	100.0	100.0
Covid Diagnosis				
Yes	157	33.1	33.1	33.1
No	317	66.9	66.9	66.9
Total	474	100.0	100.0	100.0
Hygiene Education				
Yes	270	57.0	57.0	57.0
No	204	43.0	43.0	43.0
Total	474	100.0	100.0	100.0
Hygiene Education EY				
Yes	154	32.5	32.5	48.4
Partially	74	15.6	15.6	71.7
No	90	19.0	19.0	19.0
Total	318	67.1	67.1	67.1
Missing System	156	32.9	32.9	32.9
Total	474	100.0	100.0	100.0
The Effect of Personal Hygiene Measures of Public Ads				
Yes	364	76.8	76.8	76.8
No	110	23.2	23.2	23.2
Total	474	100.0	100.0	100.0

When the answers given by the people participating in the study to the questions in the questionnaire about the Covid-19 Hygiene Scale were compared, the people participating in the study were asked, 'Do you have enough information about Covid-19?' A comparison was made between the answers given to the question. In this context, it can be said that there is a significant relationship between the average hygiene sub-dimension and the question ($p < 0.05$). When Table 10 is examined, it can be said that the difference according to the average hygiene sub-dimension is between yes and no. It can be said that these situations support the difference in means between groups (Table 3).

Table 3: Comparison of the Responses of the Participants in the Study
to the Questions in the Questionnaire Regarding the Covid Hygiene Scale

Dependent Variable	(I) Covid Information	(J) Covid Info	Mean Difference (IJ)	Std. error	Shallow	95% Confidence Interval	
						Lower Bound	Upper Bound
avg_hij	Yes	No	,41058 *	,15217	,020	,0528	,7684
		I'm undecided	,15986	,08894	,172	-.0493	,3690
	No	Yes	-.41058 *	,15217	,020	-.7684	-.0528
		I'm undecided	-,25071	,16970	,303	-.6497	,1483
	I'm undecided	Yes	-,15986	,08894	,172	-.3690	,0493
		No	,25071	,16970	,303	-,1483	,6497
Changing Hygiene Behaviors in Hygiene Outbreak	Yes	No	,40696 *	,17219	,048	,0021	,8118
		I'm undecided	,13979	,09999	,343	-,0953	,3749
	No	Yes	-.40696 *	,17219	,048	-,8118	-,0021
		I'm undecided	-,26717	,19167	,345	-,7178	,1835
	I'm undecided	Yes	-,13979	,09999	,343	-,3749	,0953
		No	,26717	,19167	,345	-,1835	,7178
hygiene_household	Yes	No	,53956 *	,19051	,013	,0916	,9875
		I'm undecided	,08767	,11063	,708	-,1724	,3478
	No	Yes	-.53956 *	,19051	,013	-.9875	-,0916
		I'm undecided	-,45189	,21207	,085	-,9505	,0467
	I'm undecided	Yes	-,08767	,11063	,708	-,3478	,1724
		No	,45189	,21207	,085	-,0467	,9505
hij_socialdistanceandmaskuse	Yes	No	,46482	,21157	,073	-,0326	,9623
		I'm undecided	,32732 *	,12286	,022	,0385	,6162

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	No	Yes	-.46482	,21157	,073	-,9623	,0326
		I'm undecided	-,13750	,23551	,829	-,6912	,4162
	I'm undecided	Yes	-.32732 *	,12286	,022	-,6162	-,0385
		No	,13750	,23551	,829	-,4162	,6912
hygiene_shoppinghygiene	Yes	No	,13412	,21206	,802	-,3645	,6327
		I'm undecided	,11624	,12314	,613	-,1733	,4058
	No	Yes	-,13412	,21206	,802	-,6327	,3645
		I'm undecided	-,01788	,23606	,997	-,5729	,5371
	I'm undecided	Yes	-,11624	,12314	,613	-,4058	,1733
		No	,01788	,23606	,997	-,5371	,5729
Hygiene_Handhygiene	Yes	No	,60082 *	,18152	,003	,1740	1.0276
		I'm undecided	,14113	,10541	,374	-,1067	,3890
	No	Yes	-,60082 *	,18152	,003	-1.0276	-,1740
		I'm undecided	-,45970	,20206	,060	-,9348	,0154
	I'm undecided	Yes	-,14113	,10541	,374	-,3890	,1067
		No	,45970	,20206	,060	-,0154	,9348
hygiene	Yes	No	,31718	,21086	,290	-,1786	,8130
		I'm undecided	,25708	,12245	,091	-,0308	,5450
	No	Yes	-,31718	,21086	,290	-,8130	,1786
		I'm undecided	-,06010	,23473	,965	-,6120	,4918
	I'm undecided	Yes	-,25708	,12245	,091	-,5450	,0308
		No	,06010	,23473	,965	-,4918	,6120

4. Discussion and Conclusion

In this study, it is aimed to measure the hygiene attitudes of students studying in the Health Sciences departments of Eurasia University, a foundation university in Trabzon, a city in the Eastern Black Sea Region of Turkey, and who will work with the riskiest occupational groups in the Covid-19 outbreak in the future, in the Covid-19 pandemic process. gives an idea.

In a study conducted in our country in 2009, the percentage of people aged 18 years and older and those who applied to the health center and those who did not wash their hands 11 times or more was 58.5%. Considering the daily life of the people, the number of daily handwashing was determined as 11 (Üner, 2009).

On the other hand, in the study conducted with university students, it was seen that 44.5% of the participants washed their hands 6-10 times a day and 27.7% washed their hands 11 times a day or more. In this study, it was found significant in all criteria in terms of hand hygiene as a preventive measure against Covid-19 infection of the respondents. This supports the studies (Ergin, 2011).

It was also observed in the study conducted by the participants that the habit of handwashing increased by 77.8% and the frequency of handwashing increased by 89.4% during the Covid-19 pandemic process. Participants' knowledge and positive behaviors about handwashing were evaluated in terms of socio-demographic characteristics such as age, income level, marital status, gender, and place of residence. It was observed that women and people with a university and higher education level had a higher knowledge score average. On the other hand, it was determined that the average attitude score of women with houses and income levels of 4000-6000 TL was higher. With these results, it was seen that women were more knowledgeable about hand washing than men and reflected this information in practice (Ergin, 2011).

According to the results, while the knowledge score rate in women did not differ compared to men, it was seen that the positive attitude score was significantly higher than that of men (Öztürk, 2017).

In a similar study, there was a statistically significant difference between the two groups. In our study, according to the answers given by the people who participated in the survey, it was determined that women were more knowledgeable about hand hygiene than men and gave more positive answers, and there was a statistically significant difference (Üner, 2009).

It has been seen that there are different ways of entering the infection into the body. It has been determined that tuberculosis, which causes lung infection, enters the body via droplets (Jawetz, 1995). The risk of catching diseases transmitted by droplets and the ventilation of people in the same and closed environment increases (Vaizoğlu, 1999).

It is of great importance to prevent infections that may arise from social and working environments and to prevent the risk of infection by contact. Many precautions can be taken to reduce the risk of transmission of infection. This situation; It can be

achieved by correct hygiene practices and avoiding situations where infection can be obtained. In our research, it has been studied to measure the attitudes and awareness levels of people for personal hygiene throughout their daily life activities.

Satisfactory results have been obtained regarding knowledge levels of Covid-19 and hygiene attitudes. It has been observed that the symptoms of the incubation period of the disease, transmission routes, necessary equipment to prevent infection, hygiene and taking preventive protective measures are reflected in the level of knowledge.

It was stated by the answers given to the questions in the questionnaire that the health sciences students participating in the study had enough knowledge about Covid 19 and hygiene. The implementation of psychological coping mechanisms and strategies is very important for the majority of the respondents to stay calm and work efficiently against Covid-19.

As with the current SARS-CoV2 outbreak and associated coronavirus disease, which can be life-threatening for susceptible patients, they need to be conscious and prepared to tackle any impending infectious disease threat. Due to the limitations of this study, it only includes a certain part of Trabzon, and the results were not spread to the general, so results were obtained in a narrow area. Reaching more people, institutions and organizations of such surveys is protective and important in terms of a new pandemic and hygiene issues.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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References

- Alharbi A., Alharbi S., Alqaidi S. (2020). Guidelines for dentalcare provision during the COVID-19 pandemic. Saudi Dental Journal, 32: 181-186. doi: 10.1016/j.sdentj.2020.04.001
- Aysan A. F., Balci E., Karagöl E. (2020). Covid-19 Pandemic Evaluation Report. Ed: Şeker, M., Ozer. A., Tosun, Z., Korkut, C., Doğrul, M., Ankara: Turkish Academy of Sciences Publications, TÜBA Reports No: 34;

- Çiçek, B., Şahin, H., and Erkal, S. (2020). Covid-19 Hygiene Scale: A scale development study. *TurkishStudies*, 15(6), 339-350.
<https://dx.doi.org/10.7827/TurkishStudies.45906>
- Ergin A., Bostanci M., Onal O., Bozkurt A. I., Ergin N. (2011). Evaluation of students' social handwashing knowledge, practices, and skills in a university setting. *Cent Eur J Public Health* 2011;19(4):222-6
- Jawetz, Melnick & Adelberg's (1995). *Medical Microbiology* 20th Edition Lange, Mycobacterium tuberculosis, pp.263-270.
- Özlü A., Öztaş D. (2020). Learning lessons from the past in the fight against the new corona pandemic (Covid-19). *Ankara Medical Journal*. 2:468-81.
- Öztürk M., Saraçoğlu G. V., Bostancıoğlu D. (2017). Determining the knowledge and attitudes of a college students about hand washing. *Turkiye Klinikleri J HealthSci*2(3):136-46.
- TR Ministry of Health. (2020). Covid-19 General information, epidemiology and diagnosis. General Directorate of Public Health, 19:1–32. Available from: <https://covid19.saglik.gov.tr/TR-66337/genel-bilgiler-epidemioloji-vetani.html>.
- Uner S., Funda S., Erdem B., Cafer B., Burcu B. (2009). To determine some knowledge and attitudes ial handwashing of individuals who apply to a primary health center. *TAF Preventive Medicine Bulletin*; 8(3):207-16
- World Health Organization (WHO), (2020). <https://www.who.int/publications/i/item/10665-331501>, Accessed: 25.12.2022.
- Vaizoglu S. A., Yılmaz O., Özen Ç., Özel E. T., Kızıl Y., Güler Ç. (1999). Evaluation of Drivers Working in a Tourism Company in Ankara in Terms of Tuberculosis Infection, *Hacettepe Community Health Bulletin*, vol.1-6.

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