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Abstract

Those who work in hairdressers, barbers and beauty centers deal with procedures such as hair cutting, dyeing, permanent straightening, perm, epilation, manicure and pedicure. If they do not pay attention to Hygiene, it is inevitable that they will transmit many diseases to themselves and their customers through contact, breathing or blood. This study was conducted by applying a survey consisting of 25 questions to employees of hairdressers, barbers and beauty centers, in order to reveal occupational Hygiene problems and to see the level of knowledge of the employees on this subject. The population of this research consists of employees working in hairdressers, barbers and beauty centers in the central district of Çorum Province in 2021. The sample consists of a total of 209 people working in hairdressers, barbers and beauty centers, selected randomly. When education levels were examined, it was seen that primary education and below had a rate of 52.2%, and secondary education and above had a rate of 47.8%. The highest yes rate was "Do you wash your hands often?" with 98.6%. The lowest yes rate, 46.6%, was given to the question "Did this profession cause any discomfort for you?" When occupational Hygiene data are compared according to the educational status of the participants, do you know what to do if occupational accidents such as injuries, burns, chemical poisoning occur in the workplace? A statistically significant relationship was found in cases of knowing the question. According to these results, it was determined that the majority of employees had primary education or lower education and that they did not know what to do when work accidents occur, what personal protection means, and the importance of ventilation. It has been observed that their knowledge of what can be done to prevent work accidents or after they occur is low. It was concluded that employees in these lines of business should receive training and the training should be repeated at regular intervals.

Keywords: Occupational Hygiene, Hairdresser, Barber, Beauty Center

INTRODUCTION

Regulations regarding Occupational Hygiene within the scope of Occupational Health and Safety in the world and in Turkey are making rapid progress (Yaman, 2020).

The objectives of Occupational Hygiene include optimizing the physical and mental condition of employees, detecting and eliminating hazards that may occur in the work environment, meeting Hygiene requirements, performing periodic checks, providing occupational Hygiene training to employees, preparing an occupational Hygiene program, controlling epidemiological studies in the work environment, It is necessary to implement, control and improve employee exposure limit values and standards.

Occupational Hygiene is the field of science that enables the prediction, detection, evaluation and control of chemical, physical, biological, ergonomic and psychosocial factors that cause employees to become ill. This area; It conducts studies intertwined with chemistry, physics, biology and microbiology (Girgin, 2019).

According to the Occupational Health and Safety hazard classes notification published in the Official Gazette No. 28509 dated 26/12/2012, hairdressers, barbers and beauty centers are in the dangerous class. While there are nearly one million hairdressers, barbers and beauty centers in Europe, there are nearly 100 thousand hairdressers, barbers and beauty centers in our country (Bulduk, 2018). Lack of attention to necessary Hygiene practices and lack of supervision in hairdressers, barbers and beauty centers increase the risk. Attention should be paid to personal Hygiene, salon Hygiene and equipment Hygiene in hairdressers, barbers and beauty centers (Şenel, 2018). Employees of hairdressers, barbers and beauty centers must receive a Hygiene training certificate and the training must be continuous and detailed in order to protect public health (Şenel, 2018).

Those who work in hairdressers, barbers and beauty centers are very likely to encounter blood-borne diseases. The use of tools by more than one person without providing the necessary Hygiene in procedures such as manicure, pedicure and epilation causes the transmission of blood-borne diseases (HIV-hepatitis group) from person to person due to injuries during the procedure (Boztaş et al., 2006).

Infectious diseases are common and fatal diseases and are caused by inadequate Hygiene and Hygiene habits. It has been observed that in cases where Hygiene habits are acquired, there is a decrease in diseases, a decrease in the rate of visiting a doctor and using medication (Taşkıran et al., 2019).

Health and safety checks should be carried out in accordance with the risk factors that may impair the health of the worker at work and endanger his safety. Physical, biological, chemical, ergonomic and psychosocial risk factors that will harm the health of the worker and endanger his safety in the working environment should be identified and precautions should be taken (Tekkanat, 2013).

Workers in hairdressers, barbers and beauty centers come into contact with materials such as dyes, perm chemicals, sprays and gels, and many cosmetic products used in nail and skin care. During the use of these products, there is serious exposure to chemicals that are skin and respiratory irritants, allergy-causing and carcinogenic (Şüküroğlu and Burgaz, 2018).

Products such as shampoos, hair sprays, perm solutions, perfumes, oxidants, hair dyes, solutions and creams contain chemicals. Exposure to chemicals by employees in hairdressers, barbers and beauty centers can often cause skin irritation, allergies and eczema through skin absorption and repeated contact. Irritating and allergenic chemicals often have harmful effects such as respiratory infections, dermatitis,

asthma, rhinitis and eye diseases (Bulduk, 2018).

The most commonly used products are chemical hair dye and hair spray. The chemicals used in hair dyes and sprays are quite dangerous. The chemicals it contains cause respiratory diseases and damage the heart and liver. In one of the studies, it was found that a substance found in hair dye in the urine and uterus of women had a carcinogenic effect (Şüküroğlu and Burgaz, 2018).

In another study, it was stated that the risk of bladder cancer increased by 50% after 1 year in hairdressers who had frequent contact with hair dyes. Hydrogen peroxide found in hair dyes consists of damaging radicals. For this reason, contact of these products with the scalp should be avoided and the employee should use gloves (Yenilmez, 2009).

Cell cultures, microorganisms, human parasites, bacteria, viruses and fungi that cause allergy, infection or poisoning are biological factors. Biological risks, which can enter the body through inhalation, digestive tract or absorption through the skin, eyes or wounds, have a higher mortality rate than chemical risks. This group includes viruses such as hepatitis B, C, HIV virus and acute liver inflammation (Baştaş Öz, 2018). Noise is an important risk factor in hairdressers, barbers and beauty centers (Bulduk, 2021). Medical treatment is not possible for hearing loss caused by noise (Yıldırım, 2017). Where hair dryers and steam devices are used together, consequences such as communication obstruction or hearing impairment may occur (Bulduk, 2018). Noise can cause physiological effects such as increased blood pressure, changes in heart rate, accelerated breathing, nausea, increased sweating, headaches and dilated pupils. This situation affects performance, leading to a decrease in efficiency and quality and impaired concentration (Şahin, 2021).

If Hygiene is not taken into consideration in hairdressers, barbershops and beauty centers, customers may be infected with immune deficiency virus (HIV), Hepatitis C (HCV), Hepatitis B (HBV), Human papillomavirus (HPV), impetigo, skin, nail and scalp fungal diseases and pediculosis. and employees may become infected. Viruses such as HIV, HBV, HCV can be transmitted through nails, hair follicles, blood and body fluids that are visible or visible through a microscope, and fungi can be transmitted through direct contact or the use of a material. The use of personal protection and protection methods, especially the use of gloves, are very important (Özaras et al., 2013).

If the equipment used in hairdressers, barbers and beauty centers is not disinfected, infections on the hands, body or scalp can be transmitted through contact. Infections such as head lice, scabies, staphylococcal infections such as impetigo, fungal candida albicans infections, fungal infections of the scalp such as tinea capitis (fringe) and bacteria pose risks (Şenel, 2018).

Diseases transmitted through blood or body fluids are among the serious health problems in our country and around the world. Using equipment contaminated with blood without sterilization causes the transmission and spread of infections. In a study, when people with Hepatitis B were compared with

those with Hepatitis A infection, it was reported that those with Hepatitis B had more manicures and pedicures. (Togan ve ark., 2014). Therefore, employees should pay due attention to their personal Hygiene, equipment Hygiene (sterilization, decontamination and disinfection) and salon Hygiene (Güney, 2016).

For infection control, a safe working environment must be provided and adequate personnel training must be provided. Workplace procedures should include hand Hygiene methods, handling and disposal of sharp equipment, cleaning procedures for used towels and aprons, what to do in case of cuts or exposure to blood, and informing staff about vaccination.

Material safety data sheets for all chemicals used, including cleaning products and hair dyes, should be easily accessible. Hand Hygiene should be provided before and after contact with the client, after eating and using the toilet, after going to the toilet, after coughing or sneezing, after contact with blood and other bodily substances, and after removing gloves (Hairdressing Guidelines, 2015).

Equipment such as razors, scissors, combs, clippers, epilation devices, nail files, nail clippers and applicators used during procedures in hairdressers, barbers and beauty centers pose a risk of infection.

MATERIAL AND METHODS

209 people working in hairdressers, barbers and beauty centers in Çorum Central district participated in this study voluntarily. A survey was prepared including the concept of Hygiene, questions to know and do about Hygiene.

In order to conduct the study, ethics committee approval was received from Hitit University Non-Interventional Ethics Committee with decision number 2021-66 dated 30.04.2021.

Population of the Research and Sample

The population of this research consists of a total of 488 workplaces, including 140 hairdressers, 260 barbers and 88 beauty centers, located in the Central district of Çorum province. (One person from each workplace was interviewed). The study was conducted in 2021, 282 employees were reached due to the pandemic, and the employees were selected by a simple random method. 58% of my sample was reached. Dikmen et al. In their study, they stated that they reached 38% of the sample (Dikmen, 2022). Alan et al. In the research article, 37% of the universe was reached and the health sensitivities of nursing students were examined (Alan, 2019). The fact that we reached 58% of the universe in our study is in accordance with the literature.

Data Collection and Analysis

The survey was answered by employees of hairdressers, barbers and beauty centers and at their workplaces. Due to the Covid-19 outbreak, the study was conducted when workplaces were open, the participation rate decreased and it took a long time to collect data.

Analyzes of the data obtained from the research were made

through the IBM SPSS® Statistics v.26 package program. Kuder-Richardson 20 (KR-20) method was used for the reliability of the measurements. Reliability is defined as the consistency between responses to survey items. The KR-20 method is used for the reliability of yes/no measurements, and it is considered sufficient for these coefficients to be 0.70 and above (Büyükoztürk 2019:183). Therefore, the reliability of the measurements in this study was evaluated using the KR-20 reliability coefficient and $KR-20 = 0.808$. It can be said that the measurements are reliable.

In reporting the data, descriptive information is presented in the form of number-percentage distributions and visualized with pie charts. Differences between groups in terms of categorical variables were examined with Pearson Chi-square, Yates-corrected Chi-square and Fisher's Exact Chi-square test. The statistical significance level for the tests was accepted as 0.05.

Pearson Chi-square is a statistical analysis method used to examine the relationship between categorical variables and is one of the widely used nonparametric tests. On the other hand, if the number observed in any eye of the cross table is less than 25, the Yates corrected Chi-square value is used. Additionally, if it is not possible to ensure that at least 80% of the eyes of the cross table are greater than 5, Fisher's Exact Chi-square test is used (Vurgun and Evliyaoğlu, 2017).

RESULTS AND DISCUSSION

Content and Implementation of the Survey Study

The results obtained from 209 people who participated voluntarily within the scope of the survey were created with pie chart (circular chart), frequency tables and Chi-square test (cross tables).

Graphic Applications Prepared in SPSS Statistics Program

The tabular rates and percentages of the answers given by the participants to the questions prepared with the SPSS statistics 22 package software are shown in the form of a pie chart. In addition, cross-tabulations of the answers given to each question were created using the chi-square test, based on sociodemographic characteristics.

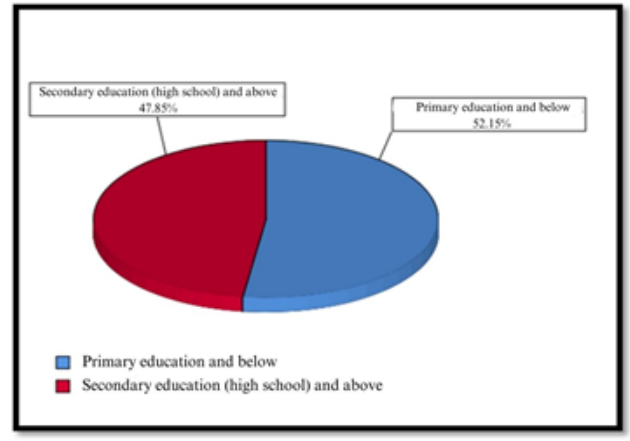


Figure 1 Pie chart showing the distribution of educational status of the participants

Of the participants (209 people) working in hairdressers, barbers and beauty centers, 109 people have primary education or lower education level, while 100 people have secondary education or higher education level. This shows that 52.15% have primary education and below, and 47.85% have secondary education and above.

Table 1 Educational status distribution of the participants

Your educational status			
		Frequency (n)	Percentage (%)
Valid	Primary education and below education level	109	52.2
	Secondary education (High School) and above education level	100	47.8
	Total	209	100.0

Table 1 Results of participants' occupational Hygiene problems data

Questions		n	%	Total
Q1) Do you know what the word hygiene means?	Yes	204	97.6	209
	No	5	2.4	
Q2) Have you heard the expression Occupational Hygiene before?	Yes	198	94.7	209
	No	11	5.3	
Q3) Do you wash your hands often?	Yes	206	98.6	209
	No	3	1.4	
Q4) Do you do daily workplace cleaning?	Yes	200	95.7	209
	No	9	4.3	
Q5) Do you use bleach and other detergents for cleaning the toilet?	Yes	188	90.0	209
	No	21	10.0	
Q6) Do you clean frequently touched surfaces (such as door handles, phone handsets, and desk surfaces) daily?"	Yes	184	88.0	209
	No	25	12.0	
Q7) Are workbenches, equipment and tools disinfected?	Yes	203	97.1	209
	No	6	2.9	
Q8) If there is blood on the material or equipment, do you know how to clean it?	Yes	193	92.3	209
	No	16	7.7	
Q9) Do you ventilate the workplace regularly?	Yes	192	92.3	208
	No	16	7.7	
Q10) Do you use an apron during hair cutting, washing and dyeing services?	Yes	181	86.6	209
	No	28	13.4	
Q11) Are the towels you use during hair cutting, washing and dyeing services personalized?	Yes	168	80.4	209
	No	41	19.6	
Q12) If your answer to the question above is "No", can you provide sterile towels to every customer?	Yes	36	73.5	49
	No	13	26.5	
Q13) Do you use a face shield or mask?	Yes	169	81.3	208
	No	39	18.8	
Q14) Do you think you are aware of the problems that may arise from cuts or bleeding while working?	Yes	182	87.1	209
	No	27	12.9	
Q15) Do you use gloves while working?	Yes	136	65.1	209
	No	73	34.9	
Q16) If your answer to the question above is "Yes", are the gloves disposable?	Yes	132	88.6	149
	No	17	11.4	
Q17) Do you know what to do if work accidents such as injuries, burns, or chemical poisoning occur at work?	Yes	178	85.2	209
	No	31	14.8	
Q18) Do you know whether the work you do poses a risk of causing infectious diseases?	Yes	185	88.5	209
	No	24	11.5	
Q19) Do you serve customers with wounds, cuts or itching?	Yes	117	56.0	209
	No	92	44.0	
Q20) Are disposable materials properly disposed of in the waste bin after use?	Yes	168	80.4	209
	No	41	19.6	
Q21) Are disposable materials properly disposed of in the waste bin after use?	Yes	144	68.9	209
	No	65	31.1	
S22) Has this profession caused any discomfort in you?	Yes	97	46.6	208
	No	111	53.4	
S23) Do you have any customers who object to the use of masks and disinfectants and temperature measurement and recording due to Covid-19?	Evet	111	53,1	209
	Hayır	98	46,9	
S24) Do you or any of your employees have a "Hygiene Training Competence Certificate"?	Evet	131	62,7	209
	Hayır	78	37,3	
S25) Do you know that the materials you use during your operations, such as gloves, masks and aprons, are called personal protective equipment?	Evet	184	88,0	209
	Hayır	25	12,0	

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ANNEX 1

Survey Questions

- Q1) Do you know what the word Hygiene means?
- Q2) Have you heard the expression Occupational Hygiene before?
- Q3) Do you wash your hands often?
- Q4) Do you do daily workplace cleaning?
- Q5) Do you use bleach and other detergents for cleaning the toilet?
- Q6) Do you clean frequently touched surfaces (such as door handles, phone handsets, and desk surfaces) daily?"
- Q7) Are workbenches, equipment and tools disinfected?
- Q8) If there is blood on the material or equipment, do you know how to clean it?
- Q9) Do you ventilate the workplace regularly?
- Q10) Do you use an apron during hair cutting, washing and dyeing services?
- Q11) Are the towels you use during hair cutting, washing and dyeing services personalized?
- Q12) If your answer to the question above is "No", can you provide sterile towels to every customer?
- Q13) Do you use a face shield or mask?
- Q14) Do you think you are aware of the problems that may arise from cuts or bleeding while working?
- Q15) Do you use gloves while working?
- Q16) If your answer to the question above is "Yes", are the gloves disposable?
- Q17) Do you know what to do if work accidents such as injuries, burns, or chemical poisoning occur at work?
- Q18) Do you know whether the work you do poses a risk of causing infectious diseases?
- Q19) Do you serve customers with wounds, cuts or itching?
- Q20) Are disposable materials properly disposed of in the waste bin after use?
- Q21) Are disposable materials properly disposed of in the waste bin after use?
- Q22) Has this profession caused any discomfort in you?
- Q23) Do you have any customers who object to the use of masks and disinfectants and temperature measurement and recording due to Covid-19?
- Q24) Do you or any of your employees have a "Hygiene Training Competence Certificate"?
- Q25) Do you know that the materials you use during your operations, such as gloves, masks and aprons, are called personal protective equipment?

PERSONAL INFORMATION

Your educational status

q Primary education level and below

q Secondary education (High School) and above education level