

Determination Of Hygiene Knowledge Levels Of Butcher And Delicatessen Employees In Şanlıurfa Province

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Abstract: Butcher and delicatessen employees can be directly or indirectly infected with many bacterial, parasitic, fungal, viral agents through direct contact, aerosols, contaminated instruments, and surfaces. For this reason, it is important to determine and inform employees about their level of infection and protection methods. This study was carried out to evaluate the awareness of the butchers and delicatessen employees on this issue. A questionnaire was prepared to evaluate the awareness of the butchers and delicatessen employees. The study is a descriptive study conducted in Şanlıurfa. A total of 82 people in the town center of Şanlıurfa were involved in the retail butcher and delicatessen business. A questionnaire that evaluates the knowledge, attitudes, and behaviors of the participants about the socio-demographic characteristics and the choice of disinfectants and detergents was applied by face-to-face interviews. Statistical analysis of the study was performed by using SPSS package program. When we examine the educational status of the participants, 3 (3.64%) of the employees were university graduates and 25 (30.48%) were primary school graduates. The average age of the employees was 38.80 ± 9.77 and the average work experience was 21.39 ± 10.52 (min = 3, max = 50) years. In the question of whether there are medicine cabinets in the workplace, 72 (87.80%) of the employees answered yes and 10 (12.19%) answered no. How often do you clean the tools and equipment you use? 56 people (68.29%) daily, 10 people (12.19%) day excess, 6 people (7.31%) gave the answer in three days. For this purpose, most of the detergent used, only 2 companies using biocidal product information was collected. 89.02% of the employees stated that they did not have any health problems related to their work. 68.29% of the enterprises reported that they had been fighting with insects and 50% were fighting rodents. 81.7% of the employees reported that they did not receive any training related to their work and 17.07% stated that they did not use gloves while working. It has been concluded that butcher and delicatessen employees do not have sufficient knowledge about biocidal products due to differences in knowledge and skill levels of hygiene and negative physical conditions of workplaces. All personnel working in butchers and delicatessens must be certified, standardized and disseminated throughout the country.

Index Terms: Disinfection, awareness tests, hygiene, butchers and delicatessen

1 INTRODUCTION

Meat products are widely consumed in human nutrition throughout history. Because meat and meat products contain high levels of protein, mineral substances and vitamins. Healthy nutrition is essential for a healthy life. Therefore, the hygiene of the food products used is important for public health. Contaminated meat and meat products pose a threat to human health. The concept of hygiene in meat and meat products; It covers a wide range including the slaughtered animal, slaughterhouse, the places where the products are produced, stored and sold, the equipment used, the personnel working in the enterprises [1]. When healthy animals are cut under favorable conditions and carcasses are processed under favorable conditions, meat and meat products are microbially safe. The increase in the number of pathogenic microorganisms that pose a risk to human health in meat and meat products arises from the lack of taking necessary precautions in slaughtering animals and cutting operations [2].

Raw materials, workplace conditions, equipment, and personnel have been identified in some studies involving many substances and substances that are harmful to meat and meat products, including biological, chemical and physical origin [3], [4], [5], [6]. Studies have shown that raw materials, workplace conditions, equipment, and workplace personnel using meat and meat products harmful to the biological, chemical and physical origin of many factors and substances are infected [3], [4], [5], [6]. The consumption of foods contaminated by these agents and substances may lead to diseases such as food infections, intoxications, toxico-infections, cancer, and death in some cases [7], [8]. One of the important factors that increase the possibility of foodborne diseases is the hands of the personnel working in food enterprises. Some bacteria, especially *Staphylococcus* and *Micrococcus* species, are found in portraits on the skin. The oil and sweat secretions in the skin, especially with dust and dirt, form a suitable environment for the development of these bacteria. For this reason, the staff should clean their hands thoroughly before and after working in food establishments [9]. Ünlütürk and Turantaş [10] reported that 60% of the personnel working in food establishments could not wash their hands properly and 25-40% of foodborne diseases were caused by people working in food processing and food service. Butchers and delicatessens can be directly or indirectly infected by many bacterial, parasitic, fungal, viral agents through direct contact, aerosols, contaminated instruments, and surfaces. For this reason, it is important to determine and inform employees about their level of infection and protection methods. Biocides are agents used to maintain standard hygiene conditions. Phenolic and phenol compounds, chlorine and chlorine compounds, iodine and iodine compounds, aldehydes, quaternary ammonium compounds, alcohols, hydrogen peroxide, ethylene oxide, sodium benzoate, benzoic acid, phenoxyethanol, various disinfectants such as triazines are

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used for disinfection. For the personal hygiene of the butchers and delicatessens and the chemicals used in the disinfection of tools and equipment cause serious damage to human health. These damages are various damages in the skin, mucous membranes, eyes, irritation in the respiratory system and cancer [11]. This study was carried out to evaluate the awareness of the butchers and delicatessen employees on this issue.

2 MATERIALS AND METHODS

2.1 Study design

It is a descriptive study to determine the hygiene knowledge levels of the butchers and delicatessen employees in Şanlıurfa.

2.2 Location and Time Characteristics

A total of 82 people engaged in retail butchers and delicatessen in the city center of Şanlıurfa between February and March 2018.

2.3 Sampling

When the number of individuals in the universe is known, the formula used in sampling was used. There are a total of 4100 people working in the retail butcher and delicatessen sector in the province of Şanlıurfa. The confidence level of 0.95 was taken as 0.05 and the minimum sample size was calculated rated as 82 persons.

2.4 Data Collection

A questionnaire evaluating the information, attitudes, and behaviors of the participants about the socio-demographic

characteristics and the disinfectant selection was applied to the participants by face-to-face interviews.

2.5 Evaluation of Data

Statistical analysis of the study was performed by using SPSS package program. Variance analysis, percentage distributions, and averages were used in the evaluation of the data.

2.6 The Ethical Dimension of Research

Ethics Committee approval was obtained from Medical Faculty of Harran University (date 01.03.2018, session 03/ 23).

3 RESULTS

When we examine the educational status of the participants, 3 (3.64%) of the employees were college and university graduates, and 25 (30.48%) were primary school graduates. The average age of the employees was 38.80 ± 9.77 and the average work experience was 21.39 ± 10.52 (min = 3, max = 50) years. In the question of whether there are medicine cabinets in their workplace, 72 (87.80%) of the employees answered yes and 10 (12.19%) answered no. How often do you clean the tools and equipment you use? 56 people (68.29%) daily, 10 people (12.19%) day excess, 6 people (7.31%) gave the answer in three days. For this purpose, most of the detergent used, only 2 companies using biocidal product information was collected. 89.02% of the employees stated that they did not experience any health problems related to their work. 68.29% of enterprises reported that they were fighting insects and 50% of them struggled with rodents. 81.7% of the employees reported that they did not receive any training related to their work and 17.07% stated that they did not use gloves while working.

Table 1. Responses of the Butcher and Delicatessen Employees to the Survey Questions

PREVALENCE OF HANDS CLEANING									
Once a day		Twice a day		Three times a day		Four times a day			
n	%	n	%	n	%	n	%		
0	0	4	4.9	22	26.8	56	68.3		
WASHING FREQUENCY OF THE SMOCK									
Everyday		Every other day		Once in three days		Once a week		Less than a week	
n	%	n	%	n	%	n	%	n	%
17	20.7	13	15.9	22	26.8	28	34.1	2	2.4
FREQUENCY OF CLEANING THE TOOL AND EQUIPMENT									
Everyday		Every other day		Once in three days		Once a week		Less than a week	
n	%	n	%	n	%	n	%	n	%
56	68.3	10	12.2	6	7.3	2	2.4	8	9.8
WHAT DO YOU USE WITH THE CLEANING OF THE MACHINE AND THE WORKBENCH IN YOUR WORKPLACE?									
Sodium Hypochlorite		Detergent		Liquid detergent		Disinfectant		Other (salt water, etc.)	
n	%	n	%	n	%	n	%	n	%
15	18.3	36	43.9	12	14.7	2	2.4	17	20.7
DO YOU HAVE A FIGHT PROGRAM FOR HOUSEFLIES AND MOSQUITOS?									
Yes		No							
n	%	n	%						
56	68.2	26	31.8						
DO YOU HAVE A FIGHT PROGRAM FOR RODENTS?									
Yes		No							
n	%	n	%						
41	50.0	41	50.0						
ARE YOU USING GLOVES?									
Yes		No							
n	%	n	%						
68	82.9	14	17.1						

4 DISCUSSION

Food-borne diseases are generally known to be caused by extraneous food processes [12]. Foodborne illnesses pose a threat to public health despite technological food processing practices and consumer awareness [13]. Food hygiene; In terms of public health, it is essential for all processes to be carried out from farm to table in order not to harm food health of consumers [14]. World Health Organization (WHO) food safety committee reports that foodborne diseases caused by contaminated food consumption are the most common public health problem in the world [15]. Foods sold in the workplaces with insufficient hygiene offer a risk to public health. In a study conducted in Istanbul in 2007, it was found that 80% of the grocery stores were adequate for general cleaning, 40% of the meat and meat products were displayed in the sales departments were clean, 20% of the tools and equipment were cleaned regularly, 10% it was reported that disinfectant was used in the cleaning of the equipment, 50% was sufficient in the fight against pest, none of the enterprises had any problem with the mouse and none of the grocery stores had any hygiene related plates [2]. In a study conducted on the microbiological quality of cattle carcasses sold in butchers in 2008, the number of coliform bacteria in 64% of the samples in the range of 10^2 - 10^3 cfu / cm^2 , in 88% of samples more than 10^2 cfu / cm^2 , in 26.6% of the samples, the number of psychrotrophic bacteria was reported to be more than 10^2 cfu / cm^2 . Researchers have reported that inadequate hygiene of butchers can be caused by insufficient hygiene, lack of attention to personal hygiene of personnel and inadequate hygiene in the tools and equipment it uses [16]. In a study conducted by Erbil in 2000, according to the survey data conducted in 15 food factories in Istanbul; It is reported that 80% of the workplaces have hand-washing rules and 33% of them use solid soap in handwashing, 67% of them use liquid soap and 80% of the smock. In order to evaluate the information of the personnel about sanitation and hygiene, when asked about sanitation and hygiene, it was stated that 39.3% of 112 employees did not know at all, 4.5% knew less and 56.3% knew about it [17]. In this study, the mean age (38.8 ± 9.8 years) of the butcher and delicatessen workers was similar to the average age of the thesis study performed by Demirel [18]. When we examine the educational status of the participants, 3 (3.64%) of the employees were graduated from college and university and 25 (30.48%) of them were from primary school. Koçoğlu et al. [19] reported that knowledge of hygiene is not relevant to education, but staff with higher levels of education are more regular in appearance. In a similar study, Demirel (2009) reported that the level of knowledge of the personnel with a high level of education is high [18]. In this study, the average work experience of the participants was 21.39 ± 10.52 (min = 3, max = 50) years. In a study conducted in Istanbul, 18.6% of the participants were reported to have less than 1 year, 43.4% to 1-5 years and 38.1% to have more than 5 years of work experience. The researcher reports that the level of knowledge will increase as the work experience increases [18]. In food contamination of foodborne pathogens, the lack of hygiene knowledge of the staff working in food enterprises plays a major role [20]. When asked whether they received hygiene training or not, 18.3% of them answered 'yes', 81.7% had 'no' answer. In a study by Özmen (2009), 48% of some butchers and delicatessens in Istanbul reported that they did not receive hygiene education [21]. The findings of the researcher are

considerably lower than the values in this study. In a study conducted in Muğla, it is reported that there is a proportion of the number of the person receiving hygiene education and the proportion of sanitation [22]. In our study, 68.3% of the participants declared that they had washed their hands four times a day. 68.3% of the participants reported that they cleaned the tools and equipment used in the workplaces. In a study conducted in the restaurants in the province of Ağrı, high levels of *E. coli*, total aerobic mesophilic bacteria, and fecal coliform were isolated on the surface of the tools and equipment [23]. The findings of the researchers reveal the importance of both hand hygiene and instrument cleaning. 82.9% of the surveyed personnel in the study of the data I use gloves, is higher than the data of Özmens' in 2009, 72% of surveyed personnel does not use gloves [21]. 68.2% of the participants stated that they had fought with houseflies and mosquitoes and 50% of them fought with rodents. In food companies, houseflies, mosquitoes, and rodents are important because they are portraits. For this reason, an effective and continuous program should be implemented to fight against the company [2].

5 CONCLUSION

According to the results of this study conducted in order to determine the knowledge and skill levels of the butchers and delicatessen employees in Şanlıurfa. It has been found that the education level of the personnel working in this sector is low. It was revealed that very few of the employees had hygiene education but they did not have sufficient knowledge in terms of hygiene education. It has been concluded that the employees of the butchers and delicatessens do not have sufficient knowledge about biocidal products due to the differences in their knowledge and skill levels about hygiene and the negative physical conditions of the workplaces. All personnel working in butchers and delicatessens must be certified, standardized and disseminated throughout the country.

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