

Evaluation of Knowledge and Practice of Hairdressers in Men's Beauty Salons in Makkah about Occupational Health Hazard in 2014 and 2015

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ABSTRACT

Introduction: People used to perform combined haircutting up to the fifteenth century. Subsequently, the hairdressing business appeared and this occupational group consider as a critical because of the spread of blood borne diseases such as HIV, HBV and HCV by reusing the same instruments between customers without sterilization. Hence the awareness about health hazards among barbers was playing a vital part in prevention and control of many infectious diseases. Our study aim to assess awareness and practice of health hazards in salons among barbers profession.

Methodology: A cross sectional study was conducted in Makkah city involving around 232 barbers with help of interview questionnaire, including the personal details, knowledge and practice about health hazards associated with barbers profession, and salon health equipment's check list. Data collected was tabulated in Microsoft excel sheet and statistical analysis was done using Microsoft excel software 2010.

Results: A total of 232 barbers participated in this study. All the 232 participants were males. Out of total participants 144 (62%) were aware about the transmission of blood borne diseases. Out of total participants 187 (80.6%) were knew how to deal with injured customer. Moreover, Out of total participants 94 (40.5%) were not have any organizations to aware them about disease of Barbers. Out of total participants 28 (12%) were used to wear mask during shaving. Out of total participants 172 (74.1%) were repair the ultraviolet lamp but

only 157 (67.6%) were use original ultraviolet lamp. Out of total participants 174 (75%) Care about their health status. Out of total 232 participants 181 (78%) were always wash their hands after every costumer. Out of total participants 32 (13.8%) were not changed the shaving tools to new tools. Out of total participants 122 (52.6%) were use flame or perfume to sterilize the razor.

Conclusion: According to the previous results the health promotion campaigns should be initiated without delay to protect the health of these workers and of the general population.

Key words: Knowledge, Practice, Hairdressers, Occupational Health Hazard.

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INTRODUCTION

People used to perform combined hair cutting up to the fifteenth century. Subsequently, the hairdressing business has appeared. At that time, barbers had many activities as performed circumcision, tooth extraction, bloodletting with leeches and acted as community physicians. The number of barbers opening up barber-shops started increasing gradually with the spread of hair-fashion and the increase in the use of cosmetics.^{1,2} This occupational group considered as a critical group, because of the spread of some health problems among the population. Guidelines were established to improve the health and reliability of performance in barbershops, hairdressing and beauty centers.³ Practitioners in barbershops, hairdressing and beauty centers are more vulnerable to contact with blood through applications such

as shaving, manicure, pedicure and skin care. There are many studies showed that both customers and employees are under the risk of transmission of certain diseases if the necessary care has not applied for individual hygiene, decontamination of working equipment, disinfection and sterilization, disposal of waste and the cleanliness of the work area.^{4,5} In developing countries, it is very important for barber and hairdressing salons not to reuse the same instruments of another customer without sterilization, especially in terms of diseases spread through the blood.^{6,7} In our country, it reported that the carriage-frequency of HBV is between 4–5%.⁸ HCV infection was 0.8% within the normal population in Turkey.⁹ In a study that applied among Chinese barbershops showed that the HBV seropositivity found to be higher in barbers

than in the control group.¹⁰ In a study that applied among Italian barbershops showed that a relationship was found between shaving in barbershops and hepatitis.¹¹ In Italy, in hairdressing care processes the risk of hepatitis B for the population found to be 1.7% and risk of hepatitis C was 1.8%. It was estimated that 15% of acute hepatitis B cases and 11.5% of hepatitis C cases resulted from this type of exposure.¹² The aim of this study is to assess the awareness, practice and attitude of employees at barbershops, hairdressing and beauty centers concerning the occupational risks of blood-borne diseases and the effect of health education on knowledge of hepatitis B and C.

METHOD

A cross sectional study was conducted in Makkah city involving around 232 barbers with the help of pretested questionnaire by

interview method. It was conducted in July 2014. Ethical approval was obtained from the Umm-alqura university ethical committee. The purpose of the study has explained to the participants and it was clear that their participation was voluntary. An informed consent was obtained from the willing participants. Only the consented participants were involved. A structured and pretested questionnaire was used for the study, which included the personal details such as age education, duration of profession and knowledge about health hazards associated with their profession. Data was collected by interview method and by informal inspection of workplace after informed consent was taken. Data collected was tabulated in Microsoft excel sheet and statistical analysis was done using Microsoft excel software. Chi-square test was applied for proportions P <0.05 was considered for level of significance.

Table 1: Sociodemographic factors frequency

Experience	NO
<5 Years	21
5-9 Years	44
10-14 Years	61
15-19 Years	45
>20 Years	50
Regions	NO
Center	10
North	51
East	59
South	66
West	51
Nationality	NO
Moroccan	32
Tunisian	44
Algerian	2
Egyptian	39
Bangladeshi	14
Pakistani	58
Indian	39
Yemeni	4

Table 2: Awareness about biological hazards

Using the towels for once (Nylon)	Yes	221	95.3%
	No	11	4.7%
Chronic diseases e.g.: liver diseases	Yes	22	9.5%
	No	210	90.5%

Table 3: Awareness about biological hazards

Knowledge about the diseases that transmit due to shaving	Yes	144	62.1%
	No	77	33.2%
	Sometimes	11	4.7%
know how to act if the patient get wounded	Yes	187	80.6%
	No	18	7.8%
	Sometimes	27	11.6%
Means of protection from the diseases	Yes	125	53.8%
	No	57	24.5%
	Sometimes	50	21.5%
Any places for awareness about diseases related to shaving	Yes	126	54.3%
	No	94	40.5%
	Sometimes	12	5.2%

RESULTS

Socio Demographic Characteristics of Barbers

A total of 232 barbers participated in this study. All the 232 participants were males. Only 22 (9.4%) out of total barbers were have experience of less than five years. Out of the total participants, 10 were in the Center of Makkah, 51 in the North, 59 in the East, 61 in the South and 51 in the West. 32 of total participants were Moroccan, 44 were Tunisian, 2 were Algerian, 39 were Egyptian, 14 were Bangladeshi, 58 were Pakistani, 39 were Indian and four were Yemini. Only 22 (9.5%) have chronic diseases, more info in Table 1 and Table 2.

Knowledge of Barber's Biological Hazards Related to Their Work

Based on the knowledge questions prepared for biological hazards a 144 (62 %) of total barbers were aware about the

disease that can be transmitted through the Barbershop including HBV, HCV & HIV. Of the total participants 187 (80.6%) were knew how to deal with injured customer. Moreover, 125 (53.8%) of total participants were aware about methods of protection. 94 (40.5%) of total participants were not have any organization to aware them about disease of Barbers. (Table 3)

Practice of the Barbers towards Prevention of Biological Hazards Related to Their Work

179 (77.1%) were always use plastic razors for once. Out of total participants only 28 (12%) were used to wear mask during shave. A 172 (74.1%) of total participants were repair the ultraviolet lamp but 157 (67.6%) were use original ultraviolet lamp. Out of total participants 209 (90.1%) were knew the benefit of the ultraviolet lamp. 174 (75%) were periodically check for their health. (Table 4)

Table 4: Practice of the barbers towards prevention of biological hazards related to their work

Using plastic razors for once	Yes	179	77.3%
	No	53	22.8%
Wearing a mask during the shave	Yes	28	12.2%
	No	204	87.9%
Commit with maintenance of the blue light	Yes	172	74.1%
	No	38	16.4%
	Sometimes	22	9.5%
Blue light original	Yes	157	67.6%
	No	69	29.7%
know the benefit of the blue light UV*	Yes	209	90.1%
	No	20	8.6%
	Sometimes	3	1.3%
Care about your health status (routine check-up)	Yes	174	75%
	No	23	10%
	Sometimes	35	15%

*ultraviolet light

Table 5: Practice of the barbers towards prevention of biological hazards related to their work

Care about cleaning the air in the shop	Yes	180	77.5%
	No	33	14.2%
	Sometimes	19	8.2%
Wash your hand after every costumer	Yes	181	78%
	No	15	6.5%
	Sometimes	36	15.5%
Change the shaving tools to new tools	Yes	148	63.8%
	No	32	13.8%
	Sometimes	52	22.4%
Clean the shaving tools after each costumer	Yes	178	76.7%
	No	13	5.6%
	Sometimes	41	17.7%
Using flame or perfume to sterilize the razor	Yes	122	52.6%
	No	94	40.5%
	Sometimes	16	6.9%
Refuse to haircuts to the customer he showed signs of illness	Yes	122	52.6%
	No	70	30.2%

Knowledge of Barbers towards Infectious Control Related to Their Work

A 180 (77.5%) cared about cleaning the air in the shop. Out of total participants, 181 (78%) were always wash their hands after every costumer. 32 (13.8%) of total participants were not changed

the shaving tools to new tools but a 178 (76.7) were always clean the shaving tools after each costumer. Out of total participants, 122 (52.6%) were use flame or perfume to sterilize the razor. 122 (52.6%) refuse to haircuts to the customer he showed any signs of illness. (Table 5)

Knowledge of Barbers towards Infectious Control Related to Their Shop

Out of total participants, 195 (84.1%) clean the hairs that found on the ground after each shave. 194 (64.2%) were always cover the trash when they clean the ground after every customer.

Only 25 (10.8%) of total participants were not have a clear air quality in the shops but 205 (88.4%) said that their shop environment is clean. Out of total participants, 177 (76.3%) said that there is a health follow-up and monitoring from the responsible authority. (Table 6)

Table 6: Knowledge of barbers towards infectious control related to their shop

Cleaning the hairs that found on the ground after each shave	Yes	195	84.1%
	No	6	2.6%
	Sometimes	31	13.4%
He cover the trash when he clean the ground after every customer	Yes	149	64.2%
	No	83	35.8%
Air quality clear or not	Yes	207	89.2%
	No	25	10.8%
Shop environment clean or not	Yes	205	88.4%
	No	27	11.6%
	Sometimes	43	18.5%
Follow-up and monitoring from the responsible authority	Yes	177	76.3%
	No	12	5.2%
	Sometimes	43	18.5%

DISCUSSION

This study disclosed the awareness of barbers regarding diseases transmitted by their profession and their practice, which affect the process of disease transmission. The vast majority of the barbers displayed lack of knowledge about the means of protection from diseases. Moreover, in Bagalkot, Karnataka as 95.6% were of the opinion that necessary precautions by them will make a difference in disease transmission⁷, and lesser in Isfahan as 30.41% of them reported that they beware but 56.25% of them sometimes do.⁸

Out of total study participants those who had awareness about transmitted diseases was close to the study conducted in Isfahan 65% hairdresser were having desirable knowledge level.⁸ In Kharian city of district Gujrat, 42% had heard about hepatitis and AIDS⁹, but higher in Adiyaman Provincial, which 72.9% of the participants knew that HBV infection was a blood-borne disease, 24.4% of them knew that HCV infection was a blood-borne disease and 21.9% of them knew that HIV infection was a blood-borne disease.² In Kumasi, Ghana, 7% who knew HBV could be transmit by sharing razor blades or hair trimmers.¹ In Bahra Kahu, Islamabad–Pakistan, 38% who replied in affirmative when they were asked about their knowledge regarding hepatitis B & C transmission and routes of infection.³ In District of sukkur, Sindh, regarding the knowledge about transmission routes of hepatitis B, 59.0% were knew that hepatitis spreads by contaminated blood.⁶ In Bagalkot, Karnataka 26.7% were aware that their profession had a risk of transmission of diseases.⁷ In Lahore, Pakistan the Knowledge of other diseases transmitted by barber equipments about Ring worm (12%) Head louse (22%) Staphylococcal infection (8%) Scabies (2%) All Diseases+ (48%).⁹ In Izmir, their answers to the hepatitis-B transmission ways jointly used razors, scissors and epilating needles, manicure-pedicure devices.¹¹

Many reasons could be listed for such a difference; few of them state worthy are educational status, exposure to media and cultural beliefs. No statistical significance has seen regarding awareness about diseases transmitted among different age group barbers and with different education level.

The shop environment was observed by the data collectors, which most of the barbershops had satisfactory cleanliness and the

remaining were ranked poor in cleanliness. Altogether, regarding Pakistan only 36% had clean environment and 16% considered not clean at all.¹⁰

Hairdressing salons should have mechanical ventilation to reduce exposure to hazardous substances throughout the salon. Regarding having an air conditioning or proper mechanical ventilation beyond windows, we had nearly the same result of female Palestinian hairdressers which 77% of their salons had a ventilation system, while only 23% salons had no mechanical ventilation at all; the ventilation method included windows (84%), air conditioning (14%) and small openings, such as holes in the walls (2%).⁵

It was noteworthy that in our study, the subjects know how to act well if the patient got wounded. Unlike in Adiyaman, Province only 33.6% had first aid cabinets in their work places to manage injuries immediately.² The result of study conducted in Izmir, 35.9% those who using bloodstone for coagulation, 44.4% those who applying dry cotton and 19.7% those who applying cologne with cotton.¹¹ The study conducted in District of Sukkur, Sindh, 66.4% those who clean with an antiseptic and 30.6% those who apply a cotton swab.⁶

In our study, those who clean the shaving tools after each costumer was the highest number among the other studies. In Adiyaman Province 23.8% those reported using different materials for each customer and washing the materials with detergent solution after use. It was noteworthy that 23.1% of the participants reported using the same materials on all customers until the materials get dirty.² But in Bagalkot, Karnataka, 71.1% disinfect the instruments after use.⁷ In Kharian city, Pakistan, 48% neither used new blades neither used sterilized instruments for next customer.⁹ In Pakistan, disinfection of clippers and combs, use of neat and clean towels and aprons for customers and wearing of neat and clean clothes were seen in 52%.¹⁰

The sterilization method of the razor in our sample was mostly by using the flame and perfume, note that the majority knows the benefit of the blue light UV, but in Kumasi, Ghana, 46.5% of barbers using ultra violet (UV) radiation, 29% used 70% alcohol, and 23 % used antiseptic solution.¹ In Bagalkot, Karnataka, 45%

those who disinfect the instruments after use.⁷ In Isfahan, 30.4% use alcohol burner for disinfection of the tools and 80.8% use alcohol for disinfection of the tools.⁸ In Izmir, use of ultraviolet cleaner (80.9%), washing and soaking (9.2%), boiling (13.9%), immersion in disinfectant (12.7%). The use of dry heat sterilization was very low.⁸ Personal protective equipment was found in most of the salons that the barbers are wearing a mask during the shave, but few provided masks or goggles by 7% of female hairdressers in Palestine.⁵

It has observed that much of the barbers were using new apron for each customer. In contrast, in Kharian city Pakistan, they did not change the apron.⁹ In Iran, 60% of participants are using fresh towel or tissue for each client.⁸ None of the participants stated that they used single-use towels in each of Ghana¹ Adiyaman Province² and Bagalkot, Karnataka.⁷

CONCLUSION

Our study reveals that most of the participants had low knowledge about disease transmission. Majority of them do not aware about unhealthy working practices in barbering and transmission of infection to their customers. They are also not aware about disease transmission from their customers. A behavioral change communication campaign should be initiated without delay to protect the health of these workers and of the general population.

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