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ORIGINAL ARTICLE

A Study on Scientific Orientation of Saloon Workers, in Mukkam Area, Kerala

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ABSTRACT

Background: India accounts for the one of highest number of salons employing the largest number of workers in the sector. Rigorous sterilization procedures are essential to avoid any contamination of blood-borne viruses of therapeutic and beauty instruments, particularly, because hepatitis B virus (HBV) is not easily inactivated by drying, simple detergents, or alcohol and hepatitis C virus (HCV) can survive in plasma, after drying and environmental exposure to room temperature, for at least 16 h. **Aims and Objectives:** The aim of study is to assess the knowledge, attitude, hygiene practices, and risk factors of transmission of infections among hairdressers, saloon workers, and workers at beauty parlors of Mukkam municipality. **Materials and Methods:** The preformed and pretested open-ended questionnaire was used after pilot study in the study area. The hairdressers, saloon workers, and workers at beauty parlors of Mukkam municipality who give consent were included in the study. A total of 150 participants were selected from Mukkam by purposive sampling method. **Results:** Nearly 70% of the participants did not know that their profession can transmit the disease and only 13% knew that blood, contaminated instruments, and sexually transmitted are the ways by which HIV can get transmitted. **Conclusion:** The knowledge, attitude, and practice of the saloon participants was found to be satisfactory and needs to be increased with the help of further health education.

Key words: Barber, hepatitis C virus, HBV, saloon workers

INTRODUCTION

The blood-borne viruses, HIV, hepatitis B virus (HBV), and hepatitis C virus (HCV), infect hundreds of millions of people worldwide and their continuous spread depends on unsafe use of therapeutic injections, blood transfusions, mother-to-child transmission, unsafe sexual practices, and beauty treatments (tattooing, piercing, manicure, pedicure, and barber shop shaving) with instruments which are not properly sterilized.^[1,2] Therefore, rigorous sterilization procedures are essential to avoid any contamination of blood-borne viruses of therapeutic and beauty instruments, particularly, because HBV is not easily inactivated by drying, simple detergents, or alcohol^[3] and HCV can survive in plasma, after drying and environmental

exposure to room temperature, for at least 16 h. In India, the second most populous country with an estimated population of about 1.21 billion accounts for over 40 million HBV carriers and about half a million deaths annually. HBsAg prevalence among general population in India ranges from 0.1% to 11.7%.^[4] In 2016, India had 80,000 new HIV infections compared to 150,000 in 2005, and 62,000 AIDS-related deaths compared to 150,000 in 2005. With an HIV prevalence of 0.26% in the adult population, India has an estimated 2.1 million people living with HIV, shows data from AVERT.^[5] The coinfection of HBV with HIV is common due to their similar routes of transmission. Underlying HIV infection increases the chance of HBV chronicity and antiretroviral treatment regimens have been shown to

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increase the risk of hepatotoxicity. With about 2.09 million (NACO, 2014) people living with HIV/AIDS in India, HBV coinfection is a cause for concern in the management of the HIV infected individuals. The previous studies from India have shown the prevalence of HBsAg in HIV seropositive patients to vary between 7% and 30%.^[6-10]

Razor sharing and shaves from the barbers have been identified as an important risk for blood-borne viruses spread in several investigations carried out all over the world. In many parts of Africa and Asia, the widespread cultural practice of shaving at a shop or roadside barber is an underestimated route of blood-borne viral disease transmission.^[11] Besides therapeutic injections, daily facial shave has also been identified as risk factors for HCV in Pakistan.^[12]

In the past few decades, hairdressing has increased in worldwide popularity. Actually India accounts for the one of highest number of salons employing the largest number of workers in the sector. Moreover, international literature shows a lack of exhaustive data on behaviors and practices related to beauty activities and only few studies were available in developed countries.^[13] The aim of the present study is to examine the knowledge, hygiene practices, and risk factors for blood-borne infections in a randomly selected sample of hairdressers, saloon workers, and beauty parlors of Mukkam municipality.

Research Question

To find the scientific health awareness of hairdressers, saloon workers and saloon workers at beauty parlors of Mukkam municipality.

Aims and Objectives

The aim of study is to assess the knowledge, attitude, hygiene practices, and risk factors of transmission of infections among hairdressers, saloon workers, and workers at beauty parlors of Mukkam municipality. The objectives are as follows:

1. To assess the knowledge regarding transmission of infections among hairdressers, saloon workers, and workers at beauty parlors of Mukkam municipality
2. To assess the attitude regarding transmission of infections among hairdressers, saloon workers, and workers at beauty parlors of Mukkam municipality
3. To assess the practice regarding transmission of infections among hairdressers, saloon workers, and workers at beauty parlors of Mukkam municipality.

MATERIALS AND METHODS

After the Institutional Review Board approval and informed written consent, this study was conducted in the Department of Community Medicine, Kunhitharuvai Memorial Charitable Trust (KMCT) Medical College, Manassery, Mukkam.

Study Design

This was a community-based descriptive cross-sectional study.

Study Population

All the hairdressers, saloon workers and saloon workers at beauty parlors of Mukkam municipality were the study population.

Inclusion Criteria

All the hairdressers, saloon workers, and workers at beauty parlors of Mukkam municipality who give consent were included in the study.

Sample Size

All the hairdressers, saloon workers, and workers at beauty parlors (male and female) working in and around Mukkam municipality and suburban and semi-urban areas who gave consent were included in the study. It was a universal sample.

Data Collection

The preformed and pretested open-ended questionnaire was used after pilot study in the study area. The hairdressers, saloon workers, and workers at beauty parlors of Mukkam municipality who give consent were included in the study. A total of 150 participants were selected from Mukkam by purposive sampling method. There are questions regarding knowledge, attitude, and practice transmission of infections among hairdressers, saloon workers, and workers at beauty parlors. Once the data were collected a health education session of 15 min will be given to improve knowledge, attitude, and practice among study participants regarding transmission of infections and risk factors of their occupation.

RESULTS

Table 1 shows that most of the study participants belong to the age group of 31–40 years, that is, 36.6% and majority were male, that is, 91.1%. Table 2 shows the details of

Table 1: Age and gender distribution of the study participants

Particulars	Study participants n=150 (%)
Age group (in years)	
20–30	49 (32.7)
31–40	55 (36.6)
41–50	33 (21.8)
51–60	13 (8.9)
Sex	
Male	137 (91.1)
Female	13 (8.9)

demographic profile of study participants. Majority, that is, 46.5% of the shops were in nearby villages. About 34.7% were located in towns and 18.8% in semi-urban areas. With respect to education, 72.7% had secondary education and 25.7% had primary education while two persons were degree holders.

Nearly 29.7% of spouses of the study participants were working in private set ups while 22.7%, 15.8%, and 9% were housewife, self-employed, and semi-government set ups. About 63% of saloons were exclusive barber shops and 37% were unisex saloons. Most of the saloons had continuous water supply (96%) and most of them had toilet facility also (74.3%).

Table 3 shows the knowledge of study participants. Nearly 70% of the participants did not know that their profession can transmit the disease and only 13% knew that blood, contaminated instruments, and sexually transmitted are the ways by which HIV can get transmitted. Most of them thought that it is only sexually transmitted (68.3%), 7% by blood, 4% by contaminated instruments, and 8% had no idea regarding transmission of HIV. About 53.5% thought sterile instruments only can prevent spreading of infections while 46.5% thought personal cleanliness, sterile instruments, and safe technique all together make a difference. About 70% study participants felt that sterile instruments can prevent

the accidents in their profession while 31% felt that personal hygiene, sterile instruments, and safe technique can prevent the accidents in their profession.

Table 4 shows the attitude of study participants. About 72.3% wished that they would disinfect instrument in each use and give separate towel while 27.7% felt not for both. Most (95%) of the saloon workers did not use near expiry disinfectants. About 73.3% felt that they would not give service to dermal problems while 26.7% felt that they would give service for clients with dermal problem. About 67.3% were ready to welcome government health workers for advice and education while 32.7% were not ready.

Table 5 shows practice of study participants in their saloon. All of them used single razor for each client. About 73.3% washed hand after each client while 26.7% did not wash after each client. Most (82.3%) of the saloons had sterilizer and used separately for each client. Nearly 73.3% of saloon workers used washed towels and 26.7% did not used washed towels for each client. About 50.5% kept their sharp tools before disposal in plastic cover while only 34.7% stored in yellow container. About 56.4% of saloon workers stopped using disinfectant after there was a color change while still 39.6% used disinfectant after expiry date.

Table 2: Demographic and basic facilities distribution of the study participants

Particulars	Study participants <i>n</i> =150 (%)
Location of shop	
Village	80 (46.5)
Town	42 (34.7)
Semi-urban	29 (18.8)
Education	
Primary	38 (25.7)
Secondary	109 (72.7)
Degree	3 (2)
Occupation of spouse	
Housewife	49 (32.5)
Self-employed	28 (18.8)
Semi-government	13 (9)
Private	60 (39.7)
Type of saloon	
Barber shop	94 (62.9)
Barber shop and beauty parlor	56 (37.6)
Continuous water supply	
Yes	144 (96)
No	6 (4)
Toilet facility	
Yes	112 (74.3)
No	38 (25.7)

DISCUSSION

Various national and international literature have shown that many blood-borne diseases can spread through the use of unsterilized equipment used by the saloon workers and assistants. However, there are few studies which focus on the knowledge, hygiene practices, and risk factors for blood-borne infections in a randomly selected sample of hairdressers, saloon workers, and beauty parlors, especially in this part of Kerala. Hence, this study will be undertaken to fill this gap of knowledge.

The age and gender distribution of the study participants show one-third of participants belong to the age group of 31–40 years and most of them were male, that is, 91.1% [Table 1]. Nearly half of the study participants had saloons in villages while one-third in towns and one-fifth in semi-urban areas. Most of them had secondary education (72.7%) and one-fourth had primary education, two persons had degree holders. Most of the spouses worked in private setups (22.7%) and 63% of saloons were exclusive barber shops and 37% were unisex saloons.

Table 3 shows knowledge of study participants that two-thirds of the study participants did not knew about their profession can cause disease transmission, 13% knew that blood contaminated instruments and sexual transmitted are ways by which HIV can get transmitted.

Table 3: Knowledge of the study participants

S. No.	Question	Responses (%)
1	In your work do you expect infection to spread from client to client?	
	Yes	44 (30.7)
	No	104 (69.3)
2	How is HIV transmitted through?	
	Blood	10 (6.9)
	Contaminated instrument	6 (4)
	Sexually transmitted	102 (68.3)
	All the above	19 (12.9)
	I do not know	13 (7.9)
3	How can you prevent spreading of infections to your clients?	
	Personal cleanliness + sterile instruments + safe technique	60 (46.5)
	Sterile instruments	80 (53.5)
4	What are the ways for disinfection and maintain hygiene in your saloon/parlor?	
	Sterilization	73 (48.5)
	Not sharing instrument	60 (39.6)
	Use gloves	13 (8.9)
	No idea	4 (3)
5	How you can prevent the accidents in your profession	
	Sterile Instruments	104 (69.3)
	Personal hygiene + sterile instruments + safe technique	46 (30.7)

Table 4: Attitude of the study participants

S. No.	Question	Responses (%)
1	Would you wish to disinfect instrument in each use?	
	Yes	109 (72.3)
	No	41 (27.7)
2	Would you wish to give separate towel for each client?	
	Yes	109 (72.3)
	No	41 (27.7)
3	Do you use near expiry disinfectants in your saloon?	
	Yes	8 (5)
	No	142 (95)
4	Are you ready to give service to clients with dermal problems?	
	Yes	40 (26.7)
	No	110 (73.3)
5	Are you ready to welcome government health workers for advice and education?	
	Yes	101 (67.3)
	No	49 (32.7)

Table 4 shows attitude of study participants that nearly two-third wished that they would like to disinfect interments in each use and would like to give separate towel. Most of them did not use near expired disinfectants (95%). Three-fourth of the study participants did not want to service clients with dermal problem.

Table 5 shows practice of study participants used single razor for each client. One-third washed hands after giving service to each client while one-third did not wash after each client. About 82% used sterilizer and used separately for each client.

Observations of the study done by Jokhio *et al.*^[11] showed that 96.2% washed razors with antiseptic after each client and 95.7% used a replacement blade with new clients. However, knowledge about the diseases and modes of transmission were poor and only 36.6% knew that hepatitis is often transmitted through shaving instruments. Only 3.2% of 186 barbers were vaccinated against HBV. Similar results were found by Khaliq *et al.*^[12] Bari^[13] and Johnson *et al.*^[14] Similar study by Aziz *et al.*^[15] found that only 39% of the barbers had knowledge about different aspects of HBV and HBC (sterilization of instruments before using on next client, mode of transmission, signs and symptoms, treatment, vaccination, and which organ is effected most). There is an enormous gap in knowledge about HBV and HBC transmission amongst barbers which highlights the importance of health education and different awareness raising campaigns to focus on this issue and bridge the gap. A study in Egypt done by Abdelrahim *et al.*^[16] found that majority of barbers and their customers (88.6% and 80.6%, respectively) had poor knowledge regarding HCV and HBV. Overall prevalence of HBV and/or HCV among the participated sample was 8.6%. To conclude, the bulk of the seropositive barbers had a history of exposure to blood during their work. These above studies are in concurrence with current study of poor knowledge among the saloon workers. However,

Table 5: Practice of the study participants

S. No.	Question	Responses (%)
1	You are using one razor as single use?	
	Yes	100 (100)
	No	0 (0)
2	Do you wash your hand after each client?	
	Yes	110 (73.3)
	No	40 (26.7)
3	Is there sterilizer in your saloon?	
	Yes	124 (82.3)
	No	26 (17.7)
4	Are you using sterilizer continuously in your shop?	
	Only once in the morning	28 (18.8)
	Separately for each client	122 (81.2)
5	Do you use washed towels for each client?	
	Yes	110 (73.3)
	No	40 (26.7)
6	Where you will store sharp tools before disposal?	
	Yellow container	52 (34.7)
	Plastic cover	75 (50.5)
	In one corner inside the shop	23 (14.9)
7	When you will stop using the disinfectant?	
	When there is a color change.	85 (56.4)
	After expiry date	60 (39.6)
	Other reasons	5 (4)

a study was done by Amodio *et al.*^[17] on knowledge, attitudes, and risk of HIV, HBV, and HCV infections in hairdressers of Palermo city (South Italy) found that most of hairdressers (93.3%) knew that HIV and hepatitis are transmitted through parenteral route and will even be transmitted by razors. The supply of gloves was inadequate, up to 30% of the participants never used them and up to 50% usually reused them. In total, 90 respondents stated to perform a sterilization process of the cutting instruments by ultraviolet, but only 70 sterilized the articles between two customers and only 34.3% executed a daily disinfection of the hair brushes. Statistical analysis showed that younger age and post-primary school instruction were significantly related to knowledge and procedures that would prevent transmission of blood-borne virus ($P = 0.01$ and $P < 0.01$, respectively). Moreover, only 32 hairdressers agreed to participate to a free specific course on occupational risk offered by the University of Palermo. Although the extent of awareness among hairdressers about HIV, hepatitis, and risk of transmission was good, there have been some unsafe practices which will cause infections thanks to blood-borne viruses. This study was in not in concurrence with current study due to high literacy rates among the population and also being a developed nation.

To conclude, there is a requirement for the event of infection control protocols for manicure and pedicure establishments since the potential for transmission of infectious diseases does exist.

CONCLUSION

The knowledge, attitude, and practice of the saloon participants was found to be satisfactory and needs to be increased with the help of further health education.

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