Interdisciplinary Journal of Management and Social Sciences (IJMSS)
Vol. 6, No.1, January 2025. Page: 122–135
ISSN: 2738–9758 (Print), ISSN: 2738–9766 (Online)
DOI: 10.3126/ijmss.v6i1.75398

Knowledge and Practices of Hairdressers about Occupational Safety and Health in Kaski District

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Article History: Received 7 Sept. 2024; Reviewed 13 Oct. 2024; Revised 17 Nov. 2024; Accepted 27 Dec. 2024

Abstract

Hairdressers are exposed to various occupational hazards, including physical, chemical, and biological risks, which can lead to skin disorders, respiratory issues, and communicable diseases. This cross-sectional study assessed the knowledge and practices of hairdressers regarding occupational safety and health (OSH) in Kaski district, Nepal. A total of 60 salon workers from urban and rural areas were surveyed using a semi-structured questionnaire and direct observations. The findings revealed a satisfactory level of OSH awareness overall, with urban workers demonstrating significantly higher awareness compared to their rural counterparts. Most participants (83.3%) acknowledged the role of contaminated tools in spreading skin diseases, and 96.7% identified razors as potential sources of contamination. However, gaps in the use of personal protective equipment (PPE) and adherence to hygiene practices were observed, particularly among rural workers. Musculoskeletal disorders (MSDs) were prevalent due to prolonged standing and repetitive motions, highlighting the need for ergonomic training. Furthermore, the study emphasized the importance of training and education in improving OSH practices, as workers with formal training exhibited better safety practices. The findings align with global research, underscoring the urgent need for targeted interventions, stricter regulations, and comprehensive training programs to enhance workplace safety and health in the hairdressing profession. Future research should explore the long-term impacts of these measures to promote a safer working environment.

Keywords: *Barbers, health hazards, risk and awareness, occupational safety, health*

Introduction

Hair and beauty salon business is a growing business which has played a great role in generating employment for individuals. Hairdressers, barbers and beauticians represent an important occupational group. This group is expected to grow through the coming years, more rapidly than the average of all occupations (Bureau of Labor Statistics, 2009). Hair salon business accounts for a large percentage of small businesses both formal and informal within Nepal. It has grown in recent times. Hundreds of chemicals are included in cosmetic products frequently used by hairdressers such as shampoos, hair

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dyes, sprays, and hair conditioners (Mounier–Geyssant et al., 2006). For making this business more successful, there is a need to meet and maintain high standards of safety, health and hygiene, so that no risk is present to clients and workers. Both barbers and customers should be alert about knowledge of occupational injuries and diseases related to this profession. Hairdressers have a high incidence of occupational skin diseases. Among the most commonly reported skin disorders are allergic and irritant dermatitis, with incidence rates ranging from 27.3% to 72.7% and 20% to 51.1 % respectively (Lyons et al., 2013). Therefore, awareness of OSH and its related injuries and diseases is vital for the success of the hair and beauty profession in Nepal.

Skin disorder is the main common work-related disease and 1⁄4 of them develop respiratory disease as a result of their work. They cause irritant contact dermatitis, allergies to skin and so on and so forth. In addition, persulfate salts, which are inorganic salts used as oxidizing agents in hair bleaches and hair coloring preparations at concentrations up to 60%, have been reported to cause both delayed type and immediate skin reactions including irritant and allergic dermatitis, urticaria and asthma (Hougaard et al., 2012). During hair cutting, hairdressers may be exposed to their clients' blood, accidentally or due to unsafe practices, that may lead to acquiring infections by blood-borne route. In addition, they may transmit their own infections to their clients, or transmit the infection from one client to another (Kose et al., 2011).

Likewise, occupational health and safety awareness is included in the educational curriculum of developed countries but unfortunately it hasn't gained any significant attention in Nepal. It shows that awareness about this subject matter is lacking in Nepal. Keeping all these issues in this research, it has been identified that hairdressers do not pay sufficient attention to the use of protective clothing and gloves, which are highly important for skin and respiratory tract. Some studies found that gloves are often not used during washing customers' hair (Lind et al., 2005). Necessary endeavors should be made in order to wipe out the problems associated with this field.

Unhealthy practices in this profession expose customers to become the victim of communication diseases. HIV/AIDS can be considered as one of them. HIV/AIDS remains as one of the major public health issues all over the world. It is because there is no way it can be cured once the victim suffers from HIV infection. Infected blood contamination and transfusion is one the major causes. About 90% of HIV/AIDS is caused by transmission of blood. However, using non-sterile equipment in barbering is another cause that is generally undermined. HIV transmission through sharing of infected sharp instruments used for barbering, circumcision, facial scarification, incision, tattooing , skin piercing and acupuncture have been given less attention in the context of Nepal. Due to negligence and ignorance, barbers do not use sterile instruments and they use the same equipment for multiple numbers of clients.

This increases a risk for clients to get infected from viruses. A small nick caused by a razor blade or clipper is enough for the infection to occur. Since the virus can survive on the surfaces of barbering instruments for a long time, using the same instruments again increases risk for transmission to occur. Thus accidental cuts and poor hygiene practices, including low disinfection rate of reusable instruments can't be taken lightly. Furthermore, other particular things are to be considered to prevent such kind of hazards. It has been reported that the inner atmosphere or the hair dressing rooms are chemically unsafe due to high temperature, humidity, lighting and lack of ventilation. Hairdressers and barbers are likely to have contact with blood because of activities like piercing, cutting, manicure, etc. There are un-limited literatures available that can develop awareness and knowledge for OSH and its

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related injuries and diseases in the Hair & Beauty Industry in developed countries. OSH is also the key element in the educational curriculum of the UK as well as in other developed countries but there is no attention about it in developing countries, particularly in Nepal.

The key objectives of the study are to gauge the level of knowledge about risks associated with salons, investigate existing practices for preventing these risks, and provide recommendations to improve risk prevention measures. These efforts aim to ensure the safety of both staff and customers while promoting a safer and more hygienic environment within salon operations.

Literature review

HABIA (2006) estimation there are around 35000 hairdressing and barbers salons operating in the UK. It further states the annual turnover of £3 billion in hairdressing business and £430 million in Barbering business and a workforce of some 230,000 people of which 89% are female. These figures show a significant contribution of this sector in the economic activities of the UK.

Aliye et al., (2009) explored that; "Barbers and Hairdressers are subjected to various occupational health risks. Problems such as poor posture, mechanical loads on the joints, prolonged standing, longer working hours, missed meals, not taking breaks during working, as well as being subjected to physical factors such as noise and higher temperatures are important occupational health risks for these people."

Lind (2005) examined that; "Hairdressers are exposed to extensive wet work that can cause irritant contact dermatitis, and they have daily skin contact with innumerable cosmetic products containing compounds that are known to cause contact allergy."

Unfortunately, there is not any published book or written literature in Nepal that can provide knowledge and promote the importance of OSH in all the work sectors. Even in the educational curriculum, OSH is not included. In this regard, Carter, W.S. (2010) has stated that to date there are no professional occupational health education programs in Nepal and has concluded with recommendation for educating a professional work force as a vital component of OHS in Nepal. So, it is obvious that awareness for OHS specifically in the Hair & Beauty Industry in Nepal is lacking. Highlighting the importance of the awareness, Lugah, V. et al. (2010) write that occurring of accidents and diseases vary significantly among developed and developing countries and in preventing occupational injuries and diseases, awareness plays an important role and in order to fortify safe working behaviors and to reinforce positive attitudes, awareness activities are essential. Discovering this awareness gap, it is realized that research study on this topic will be useful and can improve awareness of OSH and its related injuries and diseases for those engaged in the Hair and Beauty Industry of Nepal.

The knowledge and practices of hairdressers regarding occupational safety and health are critical in mitigating health risks associated with their profession. Research indicates that many hairdressers exhibit inadequate knowledge and practices concerning occupational safety, which can lead to significant health hazards. For instance, a study conducted in Port Said City revealed that hairdressers had a mean score of 18.59±3.24 regarding their practices related to occupational safety, indicating a general lack of effective safety measures (Elsayed, 2023). This finding is echoed by other studies that highlight poor protective practices among hairdressers, particularly concerning exposure to harmful chemicals and physical hazards in salons (Sa & Ma, 2019; Hammam et al., 2014).

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Training and education play a pivotal role in enhancing the knowledge and practices of hairdressers. Evidence suggests that hairdressers who have attended training courses on occupational safety exhibit significantly higher knowledge scores compared to those who have not (Sa & Ma, 2019). Furthermore, interventions such as health education programs have been shown to improve safety practices in hairdressing environments, including the proper use of personal protective equipment and waste disposal methods (Nassaji et al., 2015; Khafagey et al., 2023). The importance of ongoing education cannot be overstated, as it equips hairdressers with the necessary skills to handle chemicals safely and to recognize potential hazards in their work environment (O'Connell et al., 2010).

Occupational health risks in hairdressing are multifaceted, encompassing exposure to hazardous chemicals, ergonomic issues, and the potential for skin disorders. Hairdressers are frequently exposed to airborne chemicals, which can lead to respiratory issues and skin conditions such as dermatitis (Lysdal et al., 2014; Carøe et al., 2016). Studies have documented a high prevalence of occupational contact dermatitis among hairdressers, particularly among apprentices who are often first exposed to these risks during their training (Schwensen et al., 2013). Additionally, musculoskeletal disorders, including carpal tunnel syndrome and lower back pain, are prevalent in this profession due to the physical demands of the job (Demiryürek & Gündoğdu, 2017; Tsegay et al., 2021).

The need for improved safety practices is further underscored by the high incidence of blood-borne diseases and infections due to unsafe practices in salons (Demir et al., 2014). Hairdressers often lack adequate knowledge about the transmission of such diseases, which can pose serious health risks to both workers and clients (Daka, 2017). Therefore, enhancing awareness and implementing strict safety protocols are essential steps in safeguarding the health of hairdressers and their clients.

The knowledge and practices of hairdressers regarding occupational safety and health (OSH) are critical in mitigating health risks associated with their profession. Numerous studies have highlighted the inadequacies in both knowledge and practices among hairdressers, which can lead to significant occupational health hazards.

Research indicates that many hairdressers possess insufficient knowledge about the hazards they face in their work environment. For instance, a study conducted in Port Said City revealed that hairdressers had a mean score of 18.59±3.24 regarding their practices related to occupational safety, indicating inadequate protective measures against hazards (Elsayed, 2023). Similarly, another study found that over half of the participants reported poor practices concerning protection against occupational hazards in hairdressing salons (Elsayed, 2023). This lack of knowledge is concerning, as it has been shown that training significantly improves safety practices. For example, those who attended training courses demonstrated a higher mean knowledge score regarding occupational safety (Sa & Ma, 2019). Furthermore, educational interventions have proven effective in enhancing awareness and practices related to safety measures among hairdressers (Nassaji et al., 2015).

The health risks associated with hairdressing are multifaceted, encompassing exposure to harmful chemicals, ergonomic challenges, and the potential for infectious diseases. Hairdressers are frequently exposed to airborne hazardous chemicals, such as ammonia and formaldehyde, which can lead to respiratory issues, including asthma (Lysdal et al., 2014; Macan et al., 2022). Moreover, the repetitive nature of hairdressing tasks contributes to musculoskeletal disorders, with studies indicating that hairdressers report significantly higher levels of pain and discomfort compared to non-hairdressing controls (Kozak et al., 2019; Tsegay et al., 2021). The prevalence of occupational skin disorders, particularly allergic contact dermatitis, is also notably high among hairdressers due to frequent

exposure to irritants and allergens found in hair products (Schwensen et al., 2013; Archibong et al., 2018; Carøe et al., 2016).

In addition to chemical and physical hazards, the risk of blood-borne diseases is a critical concern. Hairdressers must be aware of the transmission risks associated with their tools, such as razors and needles, which can facilitate the spread of infections like hepatitis B and C (Demir et al., 2014; Daka, 2017). The knowledge and practices surrounding hygiene and the use of personal protective equipment are essential in preventing these health risks.

Despite the evident risks, many hairdressers lack adequate training and awareness of occupational safety measures. Studies have shown that there is a significant gap in knowledge regarding the safe handling of chemicals and the importance of using personal protective equipment (Hammam et al., 2014; Khafagey et al., 2023). This gap underscores the necessity for comprehensive training programs that address both the knowledge and practical aspects of occupational safety in hairdressing.

The knowledge and practices of hairdressers regarding occupational safety and health are essential for safeguarding their well-being and that of their clients. However, there is a pressing need for improved training and education to enhance awareness and the implementation of safety measures in the hairdressing profession. Addressing these issues is crucial not only for reducing health risks associated with their work but also for promoting a safer working environment within the beauty industry. This study aims to measure the work experience, knowledge of practices, and preventive measures employed by hair and beauty salon workers, as well as to compare the differences in occupational safety and health (OSH) awareness, practices, and risks between urban and rural salons. The hypothesis is evaluated in light of the research gap identified in these areas.

Null Hypothesis (H_0): Explanatory variables do not have any significant association with response variables.

Alternative Hypothesis (H_1): Explanatory variables have a significant and predictable association with response variables.

Research Methodology

Study Design

The study adopted a cross-sectional design to evaluate the knowledge and practices of hairdressers regarding occupational safety and health (OSH). This design allowed for the collection of data at a single point in time, enabling a comparison of awareness and practices between urban and rural salons.

Study Location and Sampling

The study was conducted in January 2011 in three purposively selected areas of the Kaski district, Nepal: the urban setting of Pokhara Sub-Metropolitan City and the rural areas of Hemja and Lamachour Village Development Committees (VDCs). The selection aimed to facilitate a comparative analysis of occupational safety and health (OSH) awareness and practices between urban and rural contexts. The research involved a total sample of 60 hair salons, comprising 30 randomly selected salons from the urban area and all 30 salons from the rural areas. The target population included salon workers from these establishments, with participation limited to those who voluntarily consented after being informed about the study's objectives.

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Data Collection Tools and Methods

Data collection for the study utilized a combination of semi-structured interviews and direct observations. The semi-structured interview schedule, pre-tested for clarity and reliability, was designed to capture socio-demographic details, knowledge of health risks, and current preventive practices. Direct observations, conducted in an unstructured manner, provided qualitative insights into workplace practices. Face-to-face interviews ensured a high response rate and allowed for clarification of any ambiguities in participants' responses. Observations were used to validate and complement the self-reported practices, enhancing the overall reliability of the data.

Variables and Measures

The study assessed awareness of occupational safety and health (OSH) through six specific questions focusing on knowledge of chemical toxicity, availability of medical examinations (pre-employment and periodic), identification and notification of workplace hazards, responsibility for purchasing OSH equipment, participation in OSH education programs, and awareness of health risks related to salon activities such as skin diseases, HIV, and hepatitis. Responses were scored to create a Composite Awareness Index, with scores ranging from 11 to 18. Awareness levels were categorized as low (scores 11–14) or high (scores 15–18). Additionally, participants' knowledge of risks was evaluated, including awareness of skin diseases, blood-borne infections like HIV and hepatitis B and C, the role of contaminated tools in disease transmission, and the use of protective equipment such as gloves, aprons, and sterilized tools.

Data Analysis

Data analysis combined quantitative and qualitative methods to provide comprehensive insights. Quantitative data were managed and analyzed using SPSS 16.0, with descriptive statistics summarizing socio-demographic characteristics, knowledge, and practices. The Chi-square test was applied to assess associations between explanatory variables such as education, location, and training, and response variables like OSH awareness, knowledge, and practices. The decision rule stipulated that the null hypothesis would be accepted if the calculated Chi-square value was less than or equal to the tabulated value at the specified significance level; otherwise, it was rejected. Qualitative data from observations and open-ended questions were analyzed descriptively to identify recurring themes and patterns, complementing the quantitative findings.

Chi square test has been used to test whether the explanatory variables exhibit a significant and predictable association with response variables. Chi square test is given by

Chi square test has been used to test whether the explanatory variables exhibit a significant and predictable association with response variables. Chi square test is given by

$$\text{Chi square} = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where O_i = Observed frequencies and

E_i = Expected frequencies

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Ethical Considerations

Ethical considerations were carefully adhered to throughout the study. Participation in the research was entirely voluntary, and informed verbal consent was obtained from all participants before their involvement. The study ensured the confidentiality of participants by safeguarding their personal information, and all collected data were used ethically and responsibly, in line with established ethical guidelines. These measures were taken to respect the rights and privacy of participants while maintaining the integrity of the research process.

Outcome Focus

The methodology of the study was designed with a clear focus on outcomes related to occupational safety and health (OSH) in the hairdressing profession. It aimed to measure the level of knowledge and awareness of OSH risks among salon workers, as well as assess the preventive practices implemented in both urban and rural salons. By comparing the differences between these two settings, the study sought to identify key disparities in safety and health practices. Ultimately, the research intended to provide actionable recommendations that could enhance safety measures and improve overall health practices within the hairdressing industry.

Measuring OSH Awareness

Occupational health and safety is a cross-disciplinary span concerned with protecting the safety, health and welfare of the worker engaged in work. It mainly fosters a safe work environment in the place. It may also protect co-workers, clients, family members, employers, nearby communities, and other members of the public who are impacted by the workplace environment. That is why the salon/parlor workers must have the OSH awareness which promotes them to be safe and healthy. The salon owner should ensure the health safety and welfare of their workers and clients. A total of 6 questions (Table 1) addressed OSH awareness, including responsibility for buying OSH equipment, knowledge about the name and potential toxicity of the chemicals used, pre-employment and periodical medical examination facility, notify hazards in the salon and assigning staff to take part in OSH education program.

Table 1: Knowledge about Risk of salon workers by their responses

Questionnaire items	Response	
	Yes	**No**
Knowledge about skin diseases	1	0
Knowledge about HIV related diseases	1	0
Knowledge about Hepatitis B or C	1	0
Knowledge about MSD	1	0
Knowledge about the role of contaminated blades, clippers, towels, aprons and combs in causing skin disease	1	0
Knowledge about the razor\blades are potential sources of contamination	1	0

On adding all these awareness questions, a composite index is formed in which the sum ranges from 11 to 18. This composite value is divided in two categories, low and high. Low ranges from (11-14) and high ranges from (15-18).

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Decision rule

The decision rule for hypothesis testing in this study is based on comparing the calculated value with the tabulated value of the test statistic. Specifically, the null hypothesis is accepted if the calculated value is less than or equal to the tabulated value, which is determined based on the degrees of freedom, calculated as (c-1) (r-1), where 'c' represents the number of categories and 'r' represents the number of rows. This comparison is made at a given level of significance. If the calculated value exceeds the tabulated value, the null hypothesis is rejected. This decision rule ensures that the hypothesis test is consistent with the statistical significance of the results.

Results and Analysis

Table 2: Knowledge about Risk related to salon

Questionnaire items	Rural (%)		urban (%)		Total (%)	
	yes	no	yes	no	yes	no
Knowledge about skin disease	40	60	80	20	60	40
Knowledge about HIV related diseases	66.7	33.3	100	0	83.3	16.7
Knowledge about Hepatitis B / C	40	60	66.7	33.3	53.3	46.7
Knowledge about MSD	40	60	66.7	33.3	53.3	46.7
Knowledge about the role of contaminated tools (blades, comb, etc).	73.3	26.7	93.3	6.7	83.3	16.7
Knowledge about the razor /blades are potential sources of contamination	93.3	6.7	100	0	96.7	3.3

One of the objectives of this study is to gauge the level of knowledge about risks related to salon/parlor workers. This section deals with the salon and beauty parlor worker's knowledge of skin diseases such as allergies, irritation, infection, skin cancer, HIV related diseases, Hepatitis B or C, MSD such as joint pain, repetitive strain injury, role of contaminated blades, clippers, towels, aprons and combs in causing skin diseases, whether the razor/blades are potential source of contamination in the salon and beauty parlor.

Knowledge about the role of contaminated blades, clippers, towels, aprons and combs in causing skin disease. Vast majority (83.3%) of the salon/parlor workers reported that they have the knowledge about the role of contaminated blades, clippers, towels, aprons and combs in causing skin diseases and problems while few other (16.7%) reported that they did not have any knowledge about the role of contaminated blades, clippers, towels, aprons and combs in causing skin disease. The rural salon workers' (26.7%) knowledge about the role of contaminated blades, clippers, towels, aprons and combs in causing skin problems was slightly lower than the urban salon workers (6.7%).

Knowledge about the razor/blades as the potential sources of contamination vast majority (96.7%) of the salon/parlor workers knew that the razor/blades were potential sources of contamination. Cent percent of the urban salon workers knew that the razor blades are potential sources of contamination while 93.3 percent of the rural salon workers knew about this. 8.3 percent of the salon/parlor workers did not use new razor/blade on new clients while the vast majority (91.7%) of the workers used new

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razor/blade on new clients. The study revealed that more rural workers (13.3%) than urban workers (3.3%) did not use the new razor/blade on new clients.

There is no significant difference between urban and rural salons with regards to their knowledge and practices on risk prevention. The relationship which is significant up to 10.0 percent of level of significance are explained.

Knowledge of the risk among the salon/parlor workers by selected background characteristics

Table 38 reveals the percentage of respondents' knowledge of the risks by selected background characteristics. The relationship which is significant up to 10.0 percent of level of significance are explained. In all the awareness assessed items, more urban salon workers reported yes in all the positive ranking items than the rural salon workers. It means higher percent of urban salon workers were knowledgeable about these risks than the rural salon workers.

Among the variables included in bivariate analyses, location, gender, education, professional training, sources of information regarding OSH, source of knowledge, legal requirements regarding OHS are significantly associated with knowledge about risks. For example, location is positively associated with the knowledge of the risks.

Table 3: Knowledge of the risk among the salon/parlor workers by selected background characteristics

Characteristics	**Percent**	**Percent**	**Characteristics**	**Percent**	**Percent**
Interview Location **	Low	High	Professional	Low	High
			Training ***		
Rural	41.9	70.6	Hair Stylist	11.6	0
Urban	58.1	29.4	Beautician	41.9	0
Gender ***			Barbering	20.9	41.2
Women	51.2	0	Hair and Beauty	14	23.5
Men	48.8	100	Self-learner	11.6	35.3
Religion**			Work Experience (in year)		
Hindu	79.1	100	< 2 years	42.2	23.5
Other	20.9	0	3-5 years	7	0
Age			Above 5 years	48.8	76.5
14-24	44.2	35.3	Source of information regarding OHS***		
25-39	51.2	52.9	Employers	34.9	11.8
40 + above	4.7	11.8	Colleague's	0	35.2
Marital Status			Training	53.5	5.9
Married	58.8	55.8	No any	11.6	47.1
Unmarried	42.2	44.2	Source of knowing legal requirement regarding OHS		
Education ***			Municipality law	20.9	11.8

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Characteristics	Percent	Percent	Characteristics	Percent	Percent
Illiterate	9.3	11.8	National law	4.7	0
Literate	9.3	23.5	International law	4.7	0
Primary Level	18.6	44.7	Any Local regulatory bodies	39.5	76.5
Secondary Level	20.9	0	No any	30.2	11.8
Higher secondary level and above	41.9	0	N	60	

*p<0.10 **p<0.05 ***P<0.01(p value is based on Chi- square statistics)

The knowledge of the salon workers about the risk related to the salon was also satisfactory but the knowledge about risk related to the salon was different among the rural and urban salon workers. Majority of the salon/parlor workers were knowledgeable about skin diseases such as allergies, irritation, skin cancer, infection and dermatitis (60%), HIV related disease (83.3%), hepatitis B or C (53.3%) and MSD such as joint pain, and repetitive strain injury (53.3%) but the significantly higher percentage of urban salon workers have such knowledge than the rural salon workers. The study also revealed that the vast majority of the salon workers were knowledgeable about the role of contaminated blades, clippers, towels, aprons and combs in causing skin disease (83.3%) and knowledge about the razor/blades as the potential sources of contamination (96.7%) but slightly higher percentage of urban salon workers have such knowledge than the rural salon workers.

Discussion

This study provides significant insights into the knowledge and practices of hairdressers regarding occupational safety and health (OSH) in the Kaski district, Nepal. The findings highlight disparities in OSH awareness and practices between urban and rural salon workers, emphasizing the need for targeted interventions to address these gaps.

The overall level of OSH awareness among salon workers was found to be satisfactory, yet urban workers demonstrated higher awareness compared to their rural counterparts. Similar findings were reported by Aliye et al. (2009), who noted that urban hairdressers benefited from better access to information and resources. The current study showed that 83.3% of participants recognized the role of contaminated tools in spreading diseases, aligning with Demir et al. (2014), who identified poor hygiene practices as a critical factor in the transmission of blood-borne infections.

The study revealed significant gaps in the use of personal protective equipment (PPE) such as gloves and aprons, particularly in rural areas. This observation concurs with Lind (2005), who documented low usage rates of PPE among hairdressers, resulting in high incidences of occupational skin disorders. Lyons et al. (2013) also emphasized the prevalence of allergic and irritant dermatitis due to insufficient protective measures.

Musculoskeletal disorders (MSDs) were another critical concern identified in this study, with prolonged standing and repetitive motions contributing to these issues. Similar findings were reported by Tsegay et al. (2021), who observed a high prevalence of MSDs among hairdressers in Ethiopia. Ergonomic interventions, as suggested by Kozak et al. (2019), are necessary to mitigate these physical health risks.

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The risk of blood-borne infections, such as hepatitis B and C and HIV, was found to be significant due to the frequent use of sharp instruments. Kose et al. (2011) similarly highlighted the dangers posed by unsterilized tools. The need for strict hygiene standards and regular monitoring, as suggested by Hammam et al. (2014), is essential to reduce these risks.

Training and education emerged as critical factors in improving OSH practices. Hairdressers who received formal training exhibited better knowledge and safer practices, which is consistent with findings by Nassaji et al. (2015) and Sa & Ma (2019). These studies demonstrated that training programs significantly enhance awareness and promote the adoption of protective measures.

Globally, the lack of OSH awareness in the hairdressing profession is a pervasive issue, especially in developing countries. Studies in Nigeria (Archibong et al., 2018) and Ethiopia (Daka, 2017) also reported inadequate compliance with safety practices. These findings underscore the need for comprehensive approaches that include education, regulatory enforcement, and community engagement to address OSH challenges effectively.

While the level of OSH awareness and practices among salon workers in Kaski district is commendable, significant areas for improvement remain, particularly in rural regions. Enhanced training programs, stricter enforcement of hygiene standards, and increased access to PPE are critical steps toward creating a safer working environment. Future research should focus on longitudinal studies to evaluate the long-term impact of these interventions and explore innovative strategies to promote OSH in the hairdressing profession.

Conclusion

The level of OSH awareness, knowledge of risk and risk prevention practices among salon /parlor workers associated with their profession is satisfactory. But, the level of awareness among urban salon /parlor workers about OSH awareness, knowledge of risk and risk prevention practices associated with their profession is higher to the rural salon/parlor workers. There is a highly significant difference between urban and rural salons with regards to their knowledge of risks. The sources of information regarding OSH were training and their employers and the main source of knowing legal requirements regarding OSH was their professional union such as Nai Sangh and Parlor union. In conclusion, there were relative differences between urban and rural salons in OSH awareness, practices and risks to staff and customers. The entire null hypothesis is rejected. There was a significant difference between urban and rural salons with regards to their OHS awareness, knowledge of risks and practices on risk prevention.

Area of further researches

Most of the rural and urban salon workers did not have proper knowledge of sterilization, reuse towels and did not change the apron for each client, which may cause skin diseases, HIV, Hepatitis B and so on. Of these all, urban salon workers have higher knowledge than rural salon workers. It means the higher percentages of the rural clients are at risk than the urban clients. Most of the workers did not wear gloves, rubber shoes and aprons while they were at work. The study revealed that the rural staff and customers were at more risk than the urban staff and customers. The result of this analysis has provided information to promote interventions for improving risk prevention of salon/parlors workers in the future. Based on the findings of the study, following recommendations/suggestions are made:

The promotion of risk prevention practices and the strategies are needed for raising awareness and regulations of salon works practices, especially in rural areas. In addition, the comparative study between urban and rural salon workers indicated that more attention needs to be paid to the practices on the risk prevention among the salon workers in rural areas. Practical-oriented training should be organized for the salon/parlor workers on equipment decontamination with emphasis on the use of correct procedure and potent decontaminant.

Messages about skin diseases, HIV and hepatitis B or C need to be incorporated in media campaigns, in addition to regulation of risk prevention practices. Salon/parlor workers and clients must be aware of the possible transmission of HIV, Aids and Hepatitis B or C and skin diseases. Further separate depth study is needed about the knowledge of skin disease, HIV and hepatitis B among the salon/parlor workers. Musculoskeletal Disorders (MSDs) are problems affecting the muscles, tendons and ligaments, nerves or other soft tissues and joints. Whilst MSDs can happen inside or outside the work environment and they are often made worse by work activities. Majority of the salon workers did have knowledge about the MSD. Such knowledge was also lower in rural areas than urban areas. Therefore, more attention needs to be paid to raise awareness of MSD, especially in rural areas.

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