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Comparative study of awareness, attitude, and performance of hairdressers in west regions of Iran in terms of personal hygiene, decontamination of tools and devices, and general status of building

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ABSTRACT

Background: assessment of awareness, attitude, and performance of hairdressers in order to monitoring the effectiveness of health education programs and modifying their weak points is necessary for ensuring public health and safety. Accordingly, the present study was set to investigate and compare the awareness, attitude, and performance of hairdressers regarding personal hygiene, tools and devices hygiene, and general building condition in western regions of Iran.

Material and methods: in the present cross-sectional study, a total number of 75 hairdressers from two cities, Malayer and Kangavar, were selected using a systematic random cluster sampling approach. The data gathering tools were a checklist and a questionnaire containing five main parts: demographic characteristics, personal hygiene, tools and devices hygiene, and general building condition. Required data for completing questionnaires were obtained by interviewing participants and observations from beauty salons. Data were analyzed using SPSS software package developed by IBM.

Results: the average scores of awareness and performance of hairdressers of the two cities investigated in the present study were significantly differed from each other (p-value < 0.05). Whereas, the attitude of hairdressers toward occupational and personal hygiene were the same in the two cities (p-value > 0.05). The high level of awareness among hairdressers from Malayer were consistent with their attitude and performance, however, there was not observed such a consistency among hairdressers from Kangavar (p-value > 0.05).

Conclusion: awareness, attitude, and performance of hairdressers in west regions of Iran were at an acceptable level. However, the presence of problems associated with environment health in these salons was indicative that this good awareness and positive attitude did not lead in an acceptable performance. As a result, all hairdressers should actively participate in training courses held by their guild.

KEY WORDS: awareness, attitude, performance, hairdresser, west of Iran, hygiene

1. INTRODUCTION

The control of hazardous environmental factors is necessary for improving individual health. In fact, environmental pollutants have the ability to initiate a wide range of adverse health effects in all aspects of life, including physical, mental, and social dimensions (Hazrati, 2012). Beauty salons are among establishments that need a special attention in terms of their hygiene. An acceptable level of hygiene in such establishments can promote the general health level of society and prevent many communicable diseases from spreading (Li, 2011, Pirsaheb, 2016). Hairdressing has been regarded as a hazardous profession because a hairdresser is exposed to many hazardous agents, including electrical devices, cosmetics, and various chemical compounds (Nassaji, 2015). People who are working in a beauty salon may be exposed to infected blood or skin. Studies have demonstrated that people in such environments should be careful about hazards posed by these agents, otherwise they would be very vulnerable to blood diseases and bacterial, viral, and fungal infections (Vahabi, 2013, Sayyadi, 2013, Ghannad, 2016). In this regard, it is of vital importance to follow all procedures associated with personal hygiene, decontamination, disinfection, and sterilization of tools and devices, disposal of solid wastes, and housekeeping which are implemented with the aim of protecting people who are working in these places against aforementioned diseases (Releford, 2010; Ronda, 2009). Chemicals with the ability of causing sensitization or allergic reactions in case of frequent use can develop various diseases in hairdressers, including respiratory diseases, asthma, dermatitis, rhinitis, and eye diseases (Lind, 2007). These chemicals contaminate the general environment of salons and even endanger reproductive health of hairdressers and other persons who are present in such environments (Reijula and Sundman-Digert, 2004). Europe union has estimated the cost posed by work-related skin disease as high as five billion euros (Hassan and Bayomy, 2015). A lack of knowledge about self-care and use of improper and unhealthy work practices among hairdresser women can create a basis for developing and spreading various diseases in society (Khan, 2010; Rahimi, 2014).

Accordingly, the knowledge hairdressers regarding the hazards of their working environment and methods of controlling such hazards are crucial in protecting them against diseases. Health behavior of a society is mainly influenced by knowledge, awareness, and attitudes of people who belong to that society, so for creating a proper health behavior in people, it is necessary to modify their attitudes and knowledge. Moreover, the performance of related organizations is of vital importance and they should provide all conditions facilitating the achievement of this goal (Amodio, 2010; Bragg, 2011). Considering the importance of hygiene in beauty salons and the knowledge of hairdressers about the ways using which communicable diseases can be controlled, the present study was set to assess the awareness, attitude, and performance of people who working in beauty salons located in the west of Iran. These people constitute an active group of society in terms of their performance regarding personal hygiene and disinfection of tools and devices. The results of the present study can be used for developing and implementing training courses in order to improve the knowledge of these people about the health issues of their working environments.

2. MATERIAL AND METHODS

In the present cross-sectional study, which was separately carried out in two cities of Malayer and Kangaver, both located in the west of Iran, a total number of 75 beauty salons were selected using a systematic random cluster sampling approach (Rasolabadi, 2015). It should be noted that for conducting this step each city were divided into five distinct areas (north, west, south, east, and center). The main data gathering tool used in the present study was a questionnaire containing 57 questions in four parts. The parts of the questionnaire were as follows; demographic information (age, marital status, experience in year, and income), the general condition of the building used as beauty salon, personal hygiene, and hygiene of tools and devices presented in the salon. The questionnaire for each salon was completed based on the hygiene regulations for public places developed by Iran's Ministry of Health and Medical Education. The required information for completing each questionnaire were gathered using direct observations and interview with hairdressers. It should be noted that the questionnaire was also able to measure three domains; the awareness of hairdressers about personal and occupational hygiene, attitude, and hygiene performance of hairdressers.

In order to evaluate the content validity of the questionnaire, the content validity index was employed. To do so, the content of the questionnaire was investigated and modified by five professors of environmental health engineering department of Kermanshah University of medical sciences. The coefficient obtained for each question was between 0.8-1. Moreover, the reliability of the questionnaire was assessed in a preliminary pilot study, in which the validated questionnaire was distributed among 25 percent of the qualified persons and accordingly Cronbach's alpha (85 percent) was determined. An equal value was assigned to each question of the awareness part of the questionnaire, so that value one for a correct answer and score zero for an incorrect one. Regarding the attitude part, each question had two possible answers; agree and disagree. Based on the assigned scale of valuation, the score of awareness part had a range from zero to fifteen, and the ranges of attitude and performance were between zero and twenty one. These ranges were categorized in three sections, based on which the score of each participant, the level of awareness about hygiene issues in beauty salons, hairdressers' attitude and performance were qualitatively determined. If the scores were lower than 50 percent, they were regarded as weak, if the scores were between 50 and 75 percent, the scores were regarded as moderate, and the scores higher than 75 percent were categorized as good. Furthermore, the data were analyzed using SPSS software package developed by IBM. All tests were implemented at the 0.05 level of significance. In comparing the results of two groups, such a statistical test as independent sample T-test was employed. In addition, analysis of variance (ANOVA) was used for comparing the mean values of variables which followed a normal distribution and Kruskal-Wallis test was used for those data which did not follow a normal distribution. It should be noted that the normality of the data was explored using the Shapiro-Wilk test at the 0.05 level of significance.

3. RESULTS

According to the results of the present study, participants aged between 25-35 years old, the experience of participants from Kangavar city was between 1-5 years (56 percent), while the experience of other participants which were from Malayer was 5-10 years (44.5 percent). Moreover, most of the participants (about 66 percent) were married. The monthly income of 54 percent of participants from Kangaver city was lower than five million Rials, whereas, the monthly income of most participants (70 percent) which were from Mlayer city was in a range from five to ten millions Rials (figures 1-4). Awareness, attitude, and performance of both groups were at an acceptable level (the score above 75 percent). Kruskal-Wallis statistical test revealed that the awareness hairdressers from Malayer about the hazards of their working environment and personal hygiene was different in terms of their age, experience, and income ($P<0.05$), so that the highest level of awareness was associated with those participants with an age above 50 years (100 percent), experience above ten years (97 percent), and monthly income above ten millions Rials (95 percent). However, their attitude and performance were not different in terms of their age and marital status ($p>0.05$).

Because there was only one hairdresser with an age above 50 years, we made a decision to exclude her from the present study. Based on age, the highest level of awareness was observed among women with an age between 16-25 years (13.8±1.6); based on the marital status, the highest level awareness was among widow or divorced women (13.37±2.2); based on the experience, the highest level of awareness was observed among hairdressers who had an experience above ten years (14.6±1.1); and finally based on income, the highest level of awareness was observed among hairdressers with a monthly income of higher than ten millions Rials (14.22±1.8). Moreover, the highest score of attitude was observed among single hairdressers (20.05±1.2); based on the experience, the highest score of attitude was observed among women with an experience of higher than ten years (14.6±1.1); and based on monthly income, the highest score of attitude was among those with a monthly income of higher that 20.23±1.03). Furthermore, the lowest hygiene performance was associated with widow or divorced hairdressers (17.75±2.1), with an age between 25-35 years (17.85±2.2), an experience between 1-5 years (17.13±2.3), and a monthly income lower than five millions Rials (16±1.8). In addition, the results of ANOVA test demonstrated that there was no difference in the awareness level of participants in terms of their demographic characteristics (p-value>0.05). Whereas, Kruskal-Wallis test demonstrated that the attitude of hairdressers was different based on their demographic characteristics. For example, it was noted that the attitude of hairdressers toward salon and personal hygiene was more unpleasant among the ones who had a lower experience (p-value < 0.05). Further, Kruskal-Wallis test showed that there was no significant difference in hygiene performance of unmarried (single) hairdressers with widows (or divorced), and the married ones from Kangavar (p-value > 0.05), in contrast, the difference between widows or divorced hairdressers and married ones was considered to be significant (p-value<0.05). In Kangavar, the highest levels of awareness, attitude, and performance were associated with hairdressers whose ages were between 25-35 years (12.1±1.9), 16-25 years (20.6±0.5), and 35-50 years (16.91±2.05), respectively. Moreover, the ranges of their awareness, attitude, and performance according to their marital status (single, widow, or divorced, and married) were in order as follows; 11.66-12.12, 19-19.72, and 14.22-17.57. The lowest score of awareness and attitude were observed among hairdressers whit an experience lower than ten years. Furthermore, the lowest level of hygiene performance was equal to 16.35±3.5 and associated with those with an experience between 1-5 years. For determining the correlation between awareness, attitude, and hygiene performance of hairdressers from Kangavar and Malayer, Spearman and Pearson correlation coefficient were applied. This set of investigations showed a significant correlation in Malayer and an insignificant one in Kangavar. In other words, there was a significant correlation between awareness, attitude and performance of hairdressers in Malayer, while such a correlation was not observed in Kangavar. In comparing the results obtained in Malayer with those obtained from Kangavar, we employed independent sample t-test at a level of significance of 0.05. The result of this comparison showed that the differences in awareness and attitude, by considering aforementioned age categories, were not significant between the two cities (P-value > 0.05) but there was observed a significant difference in hygiene performance between hairdressers aged above 50 years of Malayer and hairdressers in the same age category of Kangavar (P-value < 0.05) (please see Figure 5). Accordingly, the level of awareness and hygiene performance were significantly different between two cities, Knagavar and Malayer (p-value < 0.05), while attitude toward hygiene were similar between them (p-value > 0.05).

DISCUSSION

Two populations of the study were composed of mainly young women. The results of the present study showed that awareness, attitude, and hygiene performance of the hairdressers working in the two cities of Malayer and Kangavar are at an acceptable level, which can be due to the participation of them in training courses held by their guild about personal hygiene, decontamination and disinfection of tools and devices. Moreover, these findings emphasize on the appropriate performance of the environmental health unit of health centers in these two cities.

The awareness of hairdressers about hygiene issues in a beauty salon was at an acceptable level, so that their score in Kangavar and Malayer were 87.66 and 78.66 percent, respectively. The same study was conducted by Nozari (Nozari, 2014) in Shiraz. In that study, it was reported that the awareness of hairdressers about hygiene issues in beauty salons was decreased as the experience of them was increased, which is in contrast with what was observed in the present study. Considering the relationship between awareness of hairdressers with their age, experience, and income, it seems to be necessary for them to regularly participate in training courses held by related organizations. Participating in such training courses would result in improving their knowledge and awareness about the importance of hygiene issues in beauty salons.

The results of the study carried out by Ghanepour, (Ghanepour, 2010) demonstrated that there was no significant association between age and the level of awareness regarding hygiene issues in beauty salons. The results are in line with the results of the present study. As explained previously, when we dropped the only hairdresser whose age was above 50 years old from the study, the significant relationship between age and awareness was disappeared. In this regard, another study, conducted by Wazir, (Wazir, 2008) in 2008, reported the awareness of hairdressers as seven percent, which is much lesser than that obtained from the present study. Moreover, Zareban, (Salimi, 2007) carried out a similar study in Zabol, a city located in southeast of Iran, and explained that 78.9 percent

of the hairdressers had a moderate and only 17.8 percent of them had a good level of awareness and knowledge about hygiene issues. The results are comparable with those of the present study.

Interestingly, in the present study, we observed two different relationships between experience and attitude in two cities, so that there was a positive association between experience and attitude in Malayer, while the association between these two variables was observed to be negative in Kangavar. The reason behind this finding can be due to a higher desire among Kandavar's hairdressers to learn new things and promote their work practice methods. In recent years and by the expansion of virtual world, there is a considerable information of any kind available at various websites. Given the fact that young populations are more interested in using the internet, so it can be inferred that using various virtual sources of information has improved the attitude of young hairdressers toward personal and occupational hygiene. On the other hand, experience and knowledge have an undeniable impact on the belief and attitude of people, so it can be concluded that a positive attitude among experienced hairdressers in Malayer is because of what they learn during their career. Furthermore, it should be mentioned that independent t-test showed no significant difference in the attitude of hairdressers from two cities of Kangavar and Malayer. This finding can be attributed to the same hygiene policies communicated to the governmental health centers of cities located in the west of Iran. Moreover, compliance with these policies are inspected by officials regularly, which prevent the policies to be ignored by the beauty salons and result in promotion of hairdressers' attitude in the long term. In the study carried out by Zareban, (Salimi, 2007), it was explained that 44.4 percent of the hairdressers had a positive, 31.3 percent had a very good, and others had a negative attitude toward hygiene issues in beauty salons, which is not in agreement with the results of the present study because we observed a positive attitudes among 93 percent of participants. According to the studies conducted in this area, such factors as race, age, profession, gender, financial status, social condition, and so on are important in shaping the behavior of people toward hygiene issues (Shakeri, 2011). It should be stressed that positive attitude is of crucial importance but not the only determinant of performance. Other factors such as environmental conditions and available resources are important in this regard as well (Schlauch, 2013, Jahangiri, 2016). There was a gap of 6 percent and 13.6 percent between attitude and performance of hairdressers from Malayer and Kangavar, respectively, which emphasized on the need of more hygiene training for this group of people. The awareness and knowledge of hairdressers about the hygiene of occupational tools in large and small beauty salons were respectively reported as 60 and 55 percent by Bavani, (Bawany, 2014). Moreover, the performance of these hairdressers with regard to personal and tools hygiene was reported as 40 percent by that study (Bawany, 2014). The results of that study are in contradiction from the results of the present study. In the same vein, other studies also explained that the awareness, attitude, and performance of hairdressers regarding personal hygiene and decontamination of occupational tools and devices have been unacceptably low (Ibrahim, 2007, Janjua and Nizamy, 2004). In contrast, the results of the present study demonstrated an acceptable level of awareness, attitude, and performance regarding these issues. The effect of marital status on awareness, attitude, and performance of hairdressers was considered to be different in two cities of Malayer and Kangavar. It can be inferred that married hairdressers are too busy to consider the principle of personal and occupational hygiene in their working environments. According to this explanation, single hairdressers from Malayer were more responsible for and pay more attention to the personal and occupational hygiene of their working environments. Whereas, among hairdressers from Kangavar, the highest level of attitude and performance were observed among married women, however, the differences were not significant (p-value > 0.05).

In the study carried out by Gheyasi, (Feizzadeh, 2010), no significant association was reported among age and marital status with the level of attitude, awareness, and performance of hairdressers, which is in line with the results obtained in Kangavar city. The study carried out by Karimi, (Karimi, 2001) reported that the awareness level of 76 percent of hairdressers participated in their study was considered to be good, as well as 49 percent of them had a positive attitude, and 58 percent of them also had a good performance regarding personal and occupational hygiene issues. In the study carried out by Abdollahi, (Abdollahi, 2003), there was not observed a significant relationship among awareness, attitude, and performance of hairdressers, which is in contradiction with the results obtained in the present study from Malayer city. However, in that study a significant relationship was observed between attitude and hygiene performance, which is in line with that of the present study. Considering the fact that sharp instrument soaked in blood such blade, needle, and brush is a main root of transferring infectious diseases, promotion of hairdressers' knowledge about these issues can prevent such diseases from spreading to a great extent.

4. CONCLUSION

In the present study, it was observed that beauty salons located in the western regions of Iran had an acceptable level of awareness and knowledge about hygiene issues, their attitude toward such issues was nearly positive, and they had an acceptable level of hygiene performance as well. These findings are indicative of proper performance of the environmental health unit of the health centers located in these regions. However, it seems to be still necessary to hold regular training courses to maintain the performance of these salons at an acceptable level. Given that the awareness and knowledge of the hairdressers were acceptable, it is possible to improve their

performance by holding additional and more serious training courses. Accordingly, the present study strongly emphasizes on holding regular training courses to improve awareness, attitude, and performance of hairdressers.

Table.1. the level of awareness, attitude, and performance of hairdressers working in the west regions of Iran according to their demographic characteristics

Variables		Awareness		Attitude		Performance	
		Kangavar	Malayer	Kangavar	Malayer	Kangavar	Malayer
Age (year)	16-25	11.5±1.7	13.8±1.6	19.7±2.4	20.6±0.5	16.5±3.5	19±2.34
	25-35	12.1±1.9	12.3±2.3	19.5±1.7	19.02±1.8	16.65±3.3	17.85±2.2
	35-50	11.25±2.3	13.7±2	19.33±1.7	19.56±1.8	16.91±2.05	18.34±2.5
	>50	12±0.6	15±0.5	20±0.99	19±1	19±0.5	21±0.4
Marital status	Single	12.12±1.7	13.23±1.9	19.37±1.8	20.05±1.2	16.12±3.2	19.05±1.9
	Married	11.75±2.07	12.77±2.3	19.72±1.6	19±1.9	17.57±2.6	17.9±2.4
	Widow or divorced	11.66±2	13.37±2.2	19±2.6	19.71±1.7	14.22±3.9	17.75±2.1
Experience (year)	1-5	11.92±1.7	11.6±2.4	20±1.7	18.72±2.05	16.35±3.5	17.13±2.3
	5-10	12.5±2.3	13.5±1.7	19±2	19.51±1.5	17.2±2.4	18.54±2.2
	>10	10.9±2.06	14.6±1.1	18.91±1.8	20.27±1.1	17.2±3.01	19.5±1.7
Monthly income (million Rials)	<5	11.81±1.9	10.7±1.2	19.51±1.9	18.25±1.7	16.37±3.6	16±1.8
	5-10	11.64±2	12.72±2.2	19.58±1.7	19.19±1.7	16.7±2.7	17.86±2.3
	>10	12.16±2.5	14.22±1.8	19.5±1.6	20.23±1.03	18.5±1.6	19.6±1.7

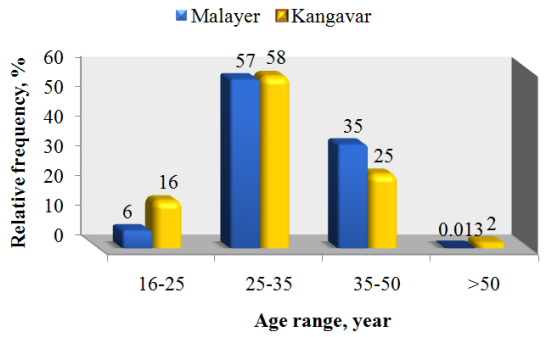

Figure.1. The distribution of participants' as among various age categories (numbers in the Figure represent the relative frequency of that age category in the associated city)

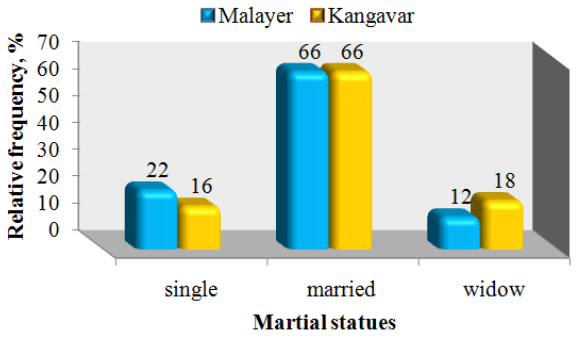

Figure.2. Marital status of the participants (the numbers above columns represent the relative frequency of that category in the associated city)

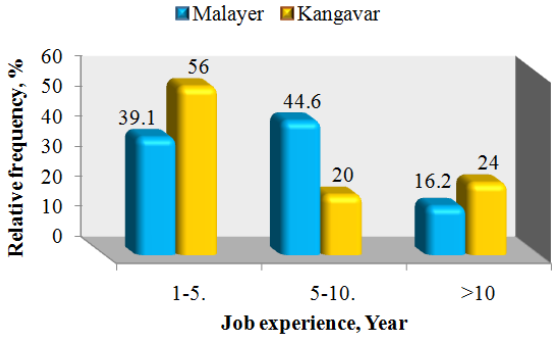

Figure.3. The distribution of job experience of participants (the numbers above columns represent the relative frequency of that category in the associated city)

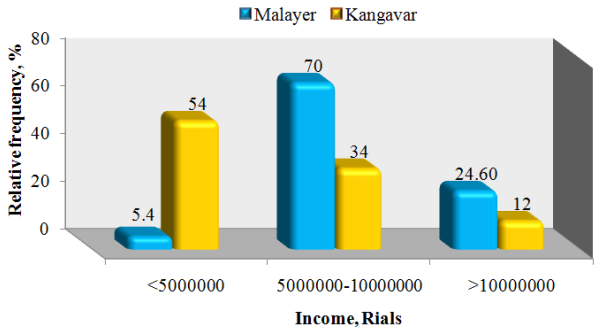

Figure.4. Tthe distribution of monthly income of the participants (the numbers above columns represent the relative frequency of that category in the associated city)

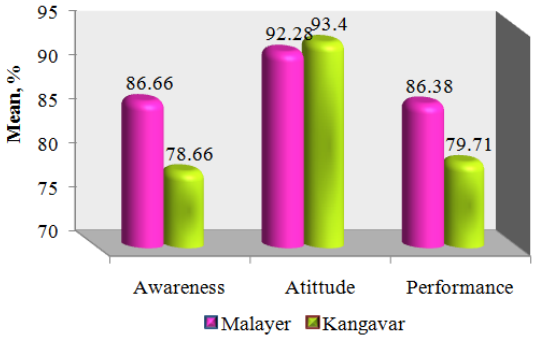

Figure.5. The total average of the level of awareness, attitude, and performance of hairdressers

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