

## Occupational Health Hazards among Hairdressers in Benha City

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### Abstract

**Background:** A hairdresser centers is a place where a woman can have haircut and styled in order to look more attractive. Hairdressers are exposed to many irritative and allergenic substances, which may cause health problems. **Aim of the study:** This study was conducted to assess occupational health hazards among hairdressers in Benha City. **Setting:** The present study was conducted at hairdresser centers at Benha City. **Sample:** A convenient sample was utilized in this study. Thirty-five hairdressers' centers with the total number of 175 hairdressers. **Tools of data collection:** two tools were used, **Tool (I):** It was comprised three main parts. **A:** composed of socio- demographic characteristics and job characteristics. **B:** It was concerned with common health problems that could be occur among hairdressers. **C:** It was concerned with the studied hairdressers' knowledge about occupational health hazards and preventive measures, **Tool (II):** Observational checklist to assess hairdresser's practices to protect themselves. **Results:** There were highly statistical significant relation between total knowledge level among studied hairdressers and their age and marital status ( $P \leq 0.001$ ), while there was statistically significant relation between total knowledge level among studied hairdressers and their educational level ( $P < 0.05$ ) there was no significant relation between total knowledge level among studied hairdressers and there living place. Also, there was no statistical significant relation between total reported practice level among studied hairdressers and their age, educational level, marital status and residence. Finally, there was statistically significant positive correlation between total reported practice level of studied hairdressers and their total knowledge level. **Conclusion:** Three quarters of the studied hairdressers had occupational health problems and more than two fifth of the studied hairdressers had average knowledge about occupational health hazards .And most of the studied hairdressers had unsatisfactory reported practices regarding prevention of occupational health hazards during work. **Recommendations:** Health education program should be developed and implemented for all hairdressers about occupational health hazards and the methods of prevention.

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**Key words:** Hairdressers, Occupational Health Hazards.

### Introduction

Occupational Health (OH) is a multidisciplinary field concerned with the safety, health, and welfare of people at occupation. The goal of an occupational safety

and health is to foster a safe and healthy occupational environment, maintenance and promotion of workers' health, development of work organizations and working cultures in a

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direction which supports health and safety at work (**International Labour Organization (ILO), 2021**).

Occupational health deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards. Health has been defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity at work, which is concerned with preventing harm from hazards in the Workplace. The main focus of occupational health is on three different objectives which are the maintenance and promotion of workers health, working capacity, and the improvement of working environment; work to become conducive to safety, development of work organizations and cultures in a direction which supports health and safety at work (**World Health Organization (WHO), 2020**).

Hairdresser is a person whose occupation is to cut or style hair in order to change or maintain a person's image. This is achieved using a combination of hair coloring, haircutting, and hair texturing techniques. Hairdressing is a predominantly female profession, with over 80 % women workers. . The sector is also characterized by a young workforce (**Khalaf et al., 2020**)

An Occupational Health Hazard is a hazard experienced in the workplace occupational hazards can encompass many types of hazards including physical hazards, psychological hazards, biological hazards and chemical hazards. Workplace hazards are any aspect of work that causes health and safety risks and have the potential to harm. Workers exposure to health hazards is typically more complex than identifying physical safety hazards (**Office of**

**Disease Prevention and Health Promotion (ODPHP), 2019**).

Hairdressers may be exposed to many a variety of hazards, depending on the occupation such as physical hazards which include noise, vibration, illumination , chemical hazards which include vapors, biological hazards which include infectious diseases, mechanical hazards which include injuries and psychological hazards which include stress, in addition to injuries and accidents that threat hairdresser's health (**BMJ Journal, (2018)**).

Recurrent exposures of hairdressers to cosmetic chemical products and indoor air pollution in beauty centers are considered risk factors for numerous health problems such as respiratory, dermal and various musculoskeletal complaints. Hairdresser's exposure to serious occupational health risks can cause absenteeism from work, early drop-outs and social security applications at a relatively young age (**Occupational Safety and Health Administration (OSHA), 2020**).

Lower back problems are usually caused when the hairdresser stands for prolonged periods of time. Such problems also occur from spinal twisting or bending. They are further aggravated when the employee is obliged to sit on a chair without leg support or back rest. Shoulder problems occur when the worker constantly holds his or her arms above shoulder level or in abduction (upper arm positioned out to the side) for extended periods of time. This is observed during cutting or styling hair. Neck problems occur as a result of bending the head in the forward position or when turning it constantly from side to side to view the client's hair. Awkward gripping of utensils accompanied by repetitive and a forceful movement normally causes elbow, wrist and hand problems.

Standing for long periods of time can induce problems such as varicose veins, poor circulation and swelling in the feet and legs. In this category of risks manual handling of heavy goods or equipment can be implicated with lower back injuries. Bad organizational procedures such as unclear distribution of responsibilities, extended working hours, especially under intense conditions, and absence of rest periods aggravate the above symptoms (De Smet et al., 2019).

Occupational Health Nurses as the largest single group of health care professionals involved in delivering health care at the work place. Occupational health nurses, working independently or as part of large multiprofessional team, are at the frontline in helping to protect and promote the health of working populations. The most common roles and responsibilities of OHN include environmental auditing, employee wellness program, immunization program, maintain confidentiality safety committee resource, ergonomic program resource, and first aid education (Hardy et al, 2021).

Occupational Health Nurses can contribute by helping manager to manage sickness absence more effectively. They may be involved in helping to train line managers and supervisors at hairdresser centers in how to best use the occupational health service, what to expect from occupational health OHNs with their close relationship with workers, knowledge of the working environment in the centers are often in a good position to advise management on preventing sickness absence. The occupational health nurse is often the key person in the rehabilitation program with the manager and individual employee, complete a risk assessment, monitor progress and communicate

with the individual, the occupational health nurses also become involved in introducing proactive rehabilitation strategies that aim to detect early changes in health before such conditions result in absence from work (Bernard & Oster, 2018).

Prevention and protection must be the aim of occupational health and safety programs. Efforts must be focused on primary prevention at the workplace level. Workplace and working environments should be planned and designed to be safe and healthy, efforts must be made to enhance workers physical, mental, social well-being, protect and promote workers health and improve working conditions. Compensation, rehabilitation and curative services must be made available to workers who suffer occupational injuries, accidents and work-related diseases. Education and training are vital components of safe and healthy working environment (Awosan et al., 2018).

### **Significance of the study**

Hairdressers represent an important occupational group. This group is expected to grow through the coming years, more rapidly than the average of all occupations. The working age in Egypt ranges from 15-60 years old the number of workers in Egypt averaged 23191.11 thousand from 2003 until 2021, reaching an all-time high of 27799 thousand in the fourth quarter of 2020. The largest number of workplace injuries in 2020 was recorded in manufacturing industries with 6,501 cases at 56.5%, followed by health and social services with 946 cases at 8.2% (Central Agency for Public Mobilization and Statistics (CAPMAS), 2021).

### **Aim of the study**

This study aimed to assess occupational health hazards among hairdressers.

### **Research Questions:**

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1. What is the hairdressers knowledge regarding occupational health hazards?
2. What are the hairdressers practices regarding occupational health hazards?
3. What are common health problems among hairdressers?
4. Is there a relation between hair dressers socio demographic characteristics and knowledge?
5. Is there a relation between hair dresser's knowledge and their practices?

### **Tools of data collection**

**Tool I:** A structured interviewing questionnaire was used in this study. It was comprised of three main parts.

**First part:** Socio-demographic characteristics of the hairdressers.

**Second Part:** It was concerned with common problems that could be occur among hair dressers.

**Third part:** It was with knowledge of hair dressers about hazards that could be occur through hair dressers centers.

### **Scoring system:**

The scoring system for studied hairdressers knowledge was calculated as follows 2 given when the answer was complete correct answer, 1 was given for incomplete correct answer, and (0) was given for incorrect answer or don't know. The scores of items were summed-up and the total divided by the number of the items. These scores were converted into a percent score. The total knowledge scores were (18 points) which represent 100% and categorized into three levels as following:-

Good → when the total scores was  $\geq 75\%$  ( $\geq 13.5$ ) points.

Average → when the total scores were 50% to less than 75% (9 to  $< 13.5$  points).

Poor → when the total scores was less than 50% ( $< 5$ ).

**Tool II:** An observational checklist used in this study concerned with hair dressers practices related to protect themselves.

### **Scoring system:**

The scoring system for studied hairdresser's practice was calculated as follows (1) score given when practice done (used), (0) score given when practice not done (not used). The total scores of practices were (48) points. The total practices were considered satisfactory if the score of the total practices was  $\geq 60\%$  ( $\geq 28$  points), and considered unsatisfactory if it is less than 60% ( $< 28$  points).

### **Validity of the tools:**

The tools validity was done by five Staff Nursing Experts from Community Health Nursing Specialties in Benha Faculty of Nursing who reviewed the tools for clarity, relevance, comprehensiveness, and applicability.

**Reliability of the tools:** The reliability was done by Cronbach's Alpha coefficient test which revealed that each of the two tools consisted of relatively homogeneous items as indicated by the moderate to high reliability of each tool. The internal consistency of knowledge was 0.716 and the internal consistency of practices was 0.861.

**Ethical considerations:** Permission has been obtained orally from each hairdresser before conducting the interview and given a brief orientation to the purpose of the study. They were also reassured that all information gathered would be confidential and used only for the purpose of the study. No names were required on the forms to ensure anonymity and confidentiality. They were also informed about their right to withdraw at any time from the study without giving any reasons.

### **Pilot Study:**

The pilot study was carried out on 10% of the sample size who represented 18 hairdressers.

The pilot study was aimed to assess the tool clarity, applicability and time needed to fill each sheet, completing the sheet consumed about 15- 20 minutes. No modifications were done, so the pilot study sample was included in the total sample.

**Field work:**

The data was collected from hairdressers who attended in the previously mention setting through the interview with them. Collected data was conducted at a period of 4 months which started from the beginning of September 2021 to the beginning of December 2021. The researcher visited the selected hairdresser centers at Benha City from 11 am to 2 MD two days/ week those days were (Thursday & Tuesday) to collect data from hairdressers. the average time needed for the sheet was around 5-10 minutes, the average number of interviewed of the hairdressers was between 8-9 hairdressers /day depending on their understanding and responses to the interviewers.

Preparation of the study design and data collection tools was based on reviewing current and past available national and international references related to the research title was done., and the theoretical knowledge of various aspects of the study using textbooks, articles, magazines and internet search was done. This was necessary for the investigator to be acquainted with and oriented about aspects of the research problem as well as assist in the development of the data collections tools.

The researcher was attended the previous mentioned study setting after taking the legal aspect from Scientific Research Ethical Committee of faculty of nursing at Banha University, the researchers introduced their selves to the participant and greet with hairdressers, the purpose of the study was explained by the researcher and provided all information about the study, and the process of

the study was explained to gain confidence and trust. An oral consent was taken from participant in the study. Hairdressers were reassured that the obtained data was confidential and hairdressers have a right to withdraw from the study at any time without giving any reason.

**Statistical analysis:**

All data collected were organized, tabulated and analyzed by using the Statistical Package for Social Science (SPSS version 21), which was used frequencies and percentages for qualitative descriptive data, and chi-square coefficient ( $\chi^2$ ) was used for relation tests, mean and standard deviation was used for quantitative data, linear correlation coefficient (r) and matrix correlation to detect the relation between the variables (P value).

**Significance levels were considered as follows:**

Highly significant (HS)	P < 0.001**
Significant (S)	P < 0.05*
Not significant (NS)	P > 0.05

**Results**

**Table (1)** clarifies that; 39.4 % of studied hairdressers aged 15years to less than 25years with mean age  $\pm$ SD 27.90  $\pm$ 7.80, 69.1 % of them had secondary education or technical diploma, and 42.3 % of them were married. While 68.0 % of them had enough income per month and 68.0 % of them were lived in urban areas.

**Table (2)** reveals that; 76.0% of the studied hairdressers didn't have respiratory system diseases, 58.9 of them didn't have dermal diseases. While 93.7 % of them had musculoskeletal diseases, 86.9% of them didn't have blood borne diseases and 52.0% of them had vascular diseases.

**Figure (1)** displayed that; 54.3% of the studied hairdressers had average knowledge about occupational health hazards, while 41.1% had

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poor knowledge about occupational health hazards and only 4.6% had good knowledge about occupational health hazards.

**Figure (2)** illustrates that; only 5.1 % of the studied hairdressers had satisfactory practices regarding prevention of occupational health hazards; while 94.9 % had unsatisfactory practices regarding prevention of occupational health hazards during work.

**Table (3)** reveals that; there were highly statistically significant relation between total knowledge level among studied hairdressers and their age and marital status ( $P \leq 0.001$ ), while there was statistical significant relation between total knowledge level among studied

hairdressers and their educational level ( $P < 0.05$ ) and there was no significant relation between total knowledge level among studied hairdressers and their living place.

**Table (4)** reveals that; there was no statistically significant relation between total practice level among studied hair dressers and their age, educational level, marital status and residence.

**Table (5)** reveals that; there was statistically significant positive correlation between total practice level of studied hairdressers and their total knowledge level. (\* $P < 0.05$  statistically significant).

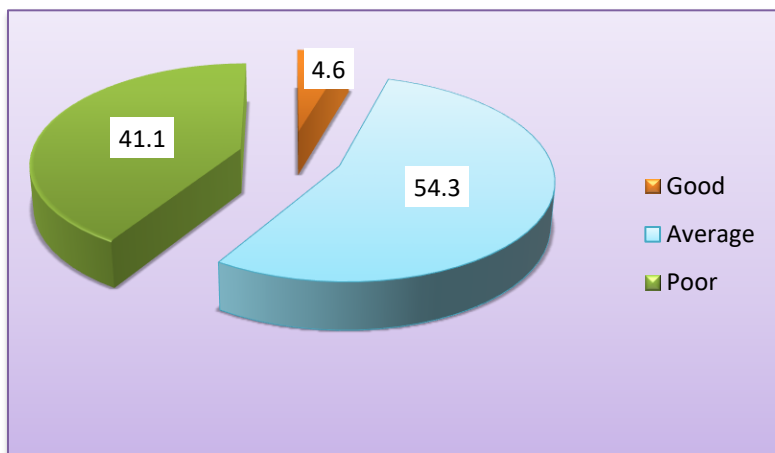
**Table (1): Frequency distribution of studied hairdressers regarding socio-demographic characteristics (n=175)**

Socio Demographic Characteristics	No.	%
<b>Age</b>		
15-<25	69	<b>39.4</b>
25-<35	61	34.9
>35	45	25.7
<b>Min – max</b>	<b>16-47</b>	
<b>Mean ±SD</b>	<b>27.90±7.80</b>	
<b>Educational level</b>		
Primary education	48	27.4
Secondary education or technical diploma	121	<b>69.1</b>
High education	6	3.4
<b>Marital Status</b>		
Single	70	40.0
Divorced	31	17.7
Married	74	<b>42.3</b>
<b>Income</b>		
Enough and saving	8	4.6
Enough	119	<b>68.0</b>
Not enough	48	27.4
<b>Residence</b>		
Urban	119	<b>68.0</b>
rural	56	32.0

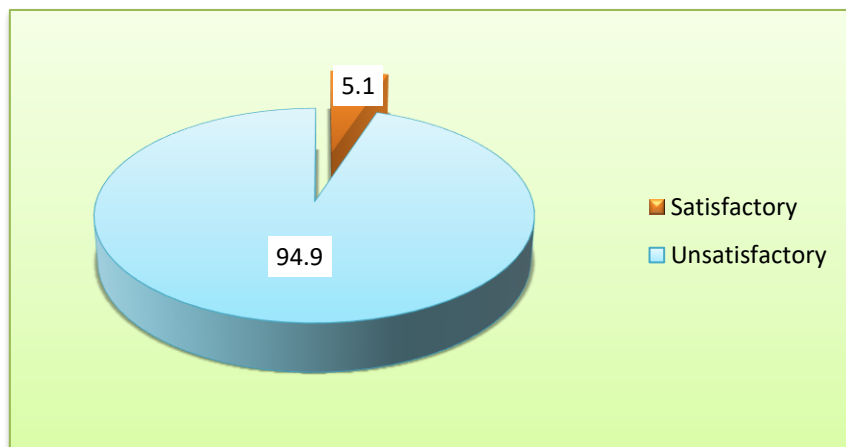


**Table (2): Frequency distribution of studied hairdressers regarding health problems (n=175).**

Health Problems	Yes.		No.	
	No.	%.	No.	%.
<b>Respiratory system problems</b>	42	24.0	133	<b>76.0</b>
<b>Dermal problems</b>	72	41.1	103	<b>58.9</b>
<b>Musculoskeletal problems</b>	164	<b>93.7</b>	11	6.3
<b>Blood borne problems</b>	23	13.1	152	<b>86.9</b>
<b>Vascular problems</b>	91	<b>52.0</b>	84	48.0



**Figure (1) Percentage distribution of studied hairdressers regarding their total knowledge level (n=175).**



**Figure (2): Percentage distribution of studied hairdressers regarding their total practices level (n=175).**

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**Table (3): Statistically relation between total knowledge level and socio demographic characteristics among studied hairdressers**

Socio demographic characteristics	Total Knowledge						X <sup>2</sup>	p-value
	Poor (n=72)		Average (n=95)		Good (n=8)			
	No	%	No	%	No	%		
<b>Age</b>								
15-<25	47	65.3	19	20.0	3	37.5	42.421	<b>.000**</b>
25-<35	20	27.8	37	38.9	4	50.0		
>35	5	6.9	39	41.1	1	12.5		
<b>Educational level</b>								
Primary education	30	41.7	17	17.9	1	12.5	16.512	<b>.002*</b>
Secondary education or technical diploma	42	58.3	73	76.8	6	75.0		
High education	0	0.0	5	5.3	1	12.5		
<b>Marital Status</b>								
Single	46	63.9	21	22.1	3	37.5	34.715	<b>.000**</b>
Divorced	3	4.2	27	28.4	1	12.5		
Married	23	31.9	47	49.5	4	50.0		
<b>Residence</b>								
Urban	51	70.8	64	67.4	4	50.0	1.474	<b>0.478</b>
Rural	21	29.2	31	32.6	4	50.0		

\*P < 0.05 statistically significant

\*\* P ≤ 0.001 highly statistical significance



**Table (4): Statistically relation between total practices level and demographic characteristics among studied hairdressers**

	Unsatisfactory (n=166).		Satisfactory (n=9).		X <sup>2</sup>	p-value
	No	%	No	%		
<b>Age</b>						
15-<25	66	39.8	3	33.3	0.385	<b>0.825</b>
25-<35	57	34.3	4	44.5		
>35	43	25.9	2	22.2		
<b>Educational Level</b>						
Primary education	46	27.7	2	22.2	0.521	<b>0.771</b>
Secondary education or technical diploma	114	68.7	7	77.8		
High education	6	3.6	0	0.0		
<b>Marital Status</b>						
Single	67	40.4	3	33.3	0.225	<b>0.894</b>
Divorced	29	17.5	2	22.2		
Married	70	42.1	4	44.5		
<b>Residence</b>						
Urban	113	68.1	6	66.7	0.008	<b>0.93</b>
Rural	53	31.9	3	33.3		

**P >0.05 statistically in significant**

**Table (5): Correlation between total knowledge and total practices among studied hairdressers**

Parameter	Total knowledge	
	r	p-value
<b>Total practices</b>	0.650	<b>0.011*</b>

\*P< 0.05 statistically significant

### Discussion

Occupational health hazards are any material, processes, activities that can result in accidents or diseases at the workplace. Occupational hazards can make a cause of a number of health problems for workers. These health hazards can fall under one of the six primary hazard categories: physical hazards, chemical hazards, biological hazards, ergonomic hazards, and behavioral hazards. Health

problems among workers in hairdressers' centers can arise due to contact with chemicals and absence of personal protective equipment (Eliwa et al 2018).

Hairdressers are exposed to many occupational health hazards as a result of working as hairdressers. To reduce the occupational health hazards that threatens the hairdressers health, it is important to identify the

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occupational hazards, and define which hazards are predominant and in priority. Training approaches should be developed and appropriate prevention strategies to minimize occupational health hazards (Tomar et al., 2020).

This study aimed to assess occupational health hazards among hairdressers. According to socio demographic characteristics of studied hairdressers, the finding of the present study showed that; the studied hairdressers age; more than fifth of the studied were in the age category 15-<25 years with mean age  $27.90 \pm 7.80$ . (table1) This finding was in congruent with a study conducted by khalaf et al., (2020) who studied " Occupational Health Risks of Female Hairdressers: Knowledge, Practice, and Self-Reported Symptoms". In Assiut city. Also, Norway, on sample 151 female hairdressers as reported that the mean age was  $27.42 \pm 8.196$  years. On other hand this result contradicted with Mekonnen et al., (2019) who studied "Prevalence and healthcare seeking practice of work-related musculoskeletal disorders among informal sectors of hairdressers in Ethiopia On sample 699 and found that the majority of studied hairdresser's age mean SD  $33.19 \pm 9.639$ . This might be due to the need for money as the majority of them life needs.

In relation to studied hairdressers' education, the present study revealed that, more than three fifth of studied hairdressers had secondary education, these findings agree with Quarm et al., (2021) in study about Knowledge, attitudes and prevention practices regarding HIV/AIDS among barbers in Ho municipality, Ghana ". On sample 121 female hairdressers, and found that the majority of hairdressers were schooled until secondary level. This might be due to sequential financial problem.

Regarding marital status, the current study demonstrates that, more than two fifths of studied hairdressers were married; this finding was supportive with the study conducted by Tagesse et al., (2021) who studied "Non-Combustible Source Indoor Air Pollutants Concentration in Beauty Salons and Associated Self-Reported Health Problems among the Beauty Salon Workers". In Jimma town. On sample 87 hairdressers. This might be due to sequential financial problem and social needs.

In relation to monthly income, the present study revealed that more than three fifth of studied hairdressers monthly income enough this result was same in line with Lydia et al., (2021) in study about "Bio monitoring of volatile organic compounds (VOCs) among hairdressers in salons primarily serving women of color". In Maryland and the Washington D. C. metropolitan area. On sample 40 hairdressers and mentioned that the majority of studied hairdressers' monthly income had enough for their living. Also this result in same line with Abia et al., (2016) who conducted study about "Assessment of Occupational Health Hazards Practices amongst Barbers and Hairdressers". In Cameroon. On sample 118 participants and found that the majority of participants and mentioned that the majority of studied hairdressers' monthly income had enough for their living.

Regarding residence, the present study revealed that more than three fifths of studied hairdressers live in urban areas. This study was similar with Quarm et al., (2021) who studied about Knowledge, attitudes and prevention practices regarding HIV/AIDS among barbers in Ho municipality, Ghana ". On sample 121 female hairdressers. This might be the hairdresser centers are near where they live.

**According to hairdressers health problems:**

In relation to respiratory diseases the current study revealed that more than fifth of studied hairdressers had respiratory problems. This finding is supported by **Andarini et al., (2019)**, who studied "Occupational Respiratory Symptoms Caused by Chemical Hazard on Hairdresser Workers in Palembang". On sample 150 hairdressers. This might be due to exposure to some chemicals and vapors' during made hair steamer.

Regarding dermal diseases the current study revealed that two fifth of studied hairdressers had dermal problems. This result was in the same line with, **Pesonen et al., (2020)** in a study entitled " Hairdressers' occupational skin diseases in the Finnish Register of Occupational Diseases in a period of 14 years".In Finland On sample 290 hairdressers. This might be due to exposure to some chemical during made hair dying or hair spa.

The current study revealed that most of studied hairdressers had musculoskeletal diseases, this result was in congruent with a study conducted by **Salimi et al., (2021)** who studied "Risk Assessment of Musculoskeletal Disorders Prevalence in Female Hairdressers using RULA and NERPA Techniques".In Sabzevar, Iran On sample 70 female hairdressers.

In relation to blood borne diseases the current study revealed that less than quarter of the studied hairdressers had blood borne diseases. This result was in congruent with a study conducted by **Hakim& Abdel- Hamid, (2019)**. This might be due to exposure of them to acupuncture.

The current study revealed that more than two fifth of studied hairdressers had vascular problems. This result was similar with a study conducted by **Beydokhti et al., (2021)** who studied "Prevalence of foot varicose veins in hairdressers and some related factors in Gonabad". On sample 90 hairdressers'. This might be due to the hairdressers didn't follow body mechanic technique.

The current study displayed that; More than two fifth of the studied hairdressers had average knowledge about occupational health hazards; (figure1) this result was not supportive with the study conducted with **Titilayo et al (2019)** Hairdressers' Knowledge, Perception and Self- Protective Measures towards Harmful Chemical Exposure in Ilishan-Remo, Ogun State. On sample 140 as found that the majority of studied hairdressers had poor knowledge. This might be due to the level of education among hairdressers and public awareness advertisements on television.

The present study illustrated that the total practices levels of the studied hairdressers were poor practices, this result not supportive with the study conducted by **Sarkar et al., (2020)** who studied "Current status of knowledge, attitudes, and practices of barbers regarding transmission and prevention of hepatitis B and C virus in the north-west part of Bangladesh: A cross-sectional study in 2020". On sample 403 barbers and found that the total practices items of the studied hairdressers were good practices. This might be due to absence of self-preservation culture among occupational hazards.

As regards the statistical relation between the studied hairdresser's socio-demographic characteristics and their total score of knowledge, the present study revealed that there

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were highly statistical significant relation between the studied hairdressers socio-demographic characteristics (age) and the total score of their knowledge, and there were statistical significant relation between the studied hairdressers socio-demographic characteristics (Educational level) and the total score of their knowledge, this result not supportive by the study conducted by **Hakim& Abdel- Hamid, (2019)** who found that the mean knowledge score was significantly higher among those who attended training courses on skill development and some occupational safety aspects. This might be due to gaining knowledge and training during work.

In relation the statistical relation between the studied hairdressers' socio-demographic characteristics and their total score of practice, the present study revealed that there were statistical insignificant relation between the studied hairdressers socio-demographic characteristics (age, educational level, marital status, residence) and the total score of their practice, this result supportive by the study conducted by **Dehvari et al.,(2018)** who studied " Knowledge, Attitudes and Practice of Women About Adverse Effects of Cosmetics in Yazd City, Iran. On sample 200 hairdressers. This might be due to decrease level of education.

In relation the statistically correlation between the total score of knowledge and the total score of practice of the studied hairdressers' the present study revealed that there were statistically significant correlation between the total reported practice level of studied hairdressers and their total knowledge level, this result supportive with the study conducted by **Hakim& Abdel- Hamid, (2019)** on another hand this result was not similar to the study conducted by **Dehvari et al., (2018)** who found

that there wasn't a significant correlation between participants' knowledge and practice. This might be due to absence of self-preservation culture among occupational hazards.

### **Conclusion**

Three quarters of the studied hairdressers had occupational health problems, as musculoskeletal problems. More than two fifths of the studied hairdressers had average knowledge about occupational health hazards. And most of the studied hairdressers had unsatisfactory reported practices regarding prevention of occupational health hazards during work.

The present study revealed that there were highly statistical significant relation between the studied hairdressers socio-demographic characteristics (age) and the total score of their knowledge, and there were statistical significant relation between the studied hairdressers socio-demographic characteristics (Educational level) and the total score of their knowledge. The present study revealed that there were statistical insignificant relation between the studied hairdressers' socio-demographic characteristics (age, educational level, marital status, residence) and the total score of their practice. The present study revealed that there were statistical significant correlation between the total reported practice level of studied hairdressers and their total knowledge level.

### **Recommendation**

- 1- Continuous Health education program for all hairdressers about occupational health hazards and preventive measures.
- 2- Regular periodic screening for all hairdressers for early detection of any health problems and providing management.

**Further study need to be performed:**

- Develop and implement training program for hairdressers to improve their knowledge and practices to avoid occupational health hazards

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## مخاطر الصحة المهنية بين مصنفات الشعر في مدينة بنها

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مراكز تصفيف الشعر هي مكان يمكن للمرأة أن تقوم فيه بقص شعرها وتصفيفه لتبدو أكثر جاذبية. تتعرض مصنفات الشعر للعديد من المواد المسببة للحساسية والتي قد تسبب مشاكل صحية كثيرة. لذلك هدفت هذه الدراسة الى تقييم مخاطر الصحة المهنية لدى مصنفات الشعر في مدينة بنها. وقد أجريت الدراسة في مراكز تصفيف الشعر في مدينته بنها على 35 مركزاً من مراكز تصفيف الشعر بإجمالي 175 من مصنفات الشعر تم اختيارهم بشكل عشوائي من 70 مركزاً من مراكز تصفيف الشعر. حيث اسفرت نتائج الدراسة الحالية وجود علاقة ذات دلالة إحصائية عالية بين مستوى المعرفة الكلي لدى مصنفات الشعر المدروسين وعمرهم وحالتهم الاجتماعية ، بينما توجد علاقة ذات دلالة إحصائية بين مستوى المعرفة الكلي لدى مصنفات الشعر الخاضعين للدراسة وبينهم. المستوى التعليمي ، بينما يوجد علاقة غير معنوية بين الخصائص الاجتماعية والديموغرافية لمصنفات الشعر عينه الدراسة (العمر، المستوى التعليمي، الحالة الاجتماعية، الإقامة) والحاصل الكلي لممارستهم. أظهرت الدراسة الحالية وجود علاقة ذات دلالة إحصائية عالية بين المشاكل الصحية لمصنفات الشعر وممارساتهم المتعلقة بإجراءات السلامة لمخاطر الصحة المهنية. أوضحت الدراسة الحالية وجود علاقة ارتباطية ذات دلالة إحصائية بين مستوى الممارسة الإجمالي لمصنفات الشعر عينه الدراسة ومستوى معرفتهم الكلي كما كشفت الدراسة الحالية أن ثلاثة أرباع مصنفات الشعر عينه الدراسة يعانون من مشاكل صحية مهنية. وأكثر من خمس مصنفات الشعر عينه الدراسة لديهم معرفة متوسطة بمخاطر الصحة المهنية ، وكان لدى معظم مصنفات الشعر عينه الدراسة ممارسات غير مرضية فيما يتعلق بالوقاية من مخاطر الصحة المهنية أثناء العمل. كما اوصت الدراسة بضرورة التثقيف الصحي لجميع مصنفات الشعر حول مخاطر الصحة المهنية وطرق الوقاية منها.