

# Knowledge, Attitudes and Practices of Hand Washing Towards the Prevention of Transmissible Diseases among Hair Dressers in Uyo Metropolis of Akwa Ibom State, Nigeria

Dr. Ukeme E. Eyo and Mrs. E. A. Ukpe.

Department of Physical and Health Education, Faculty of Education, University of Uyo, Akwa Ibom State, Nigeria.

## Abstract

The study was conducted to determine the knowledge, attitude and practices of hand washing towards the prevention of transmissible diseases among hair dressers in Uyo Metropolis, Akwa Ibom State, Nigeria. The specific objectives were to examine the knowledge of transmissible diseases that are associated in hair dressing work, the attitudes of hand washing among hair dressers, the practices of hand washing adopted by hair dressers toward the prevention of transmissible diseases in Uyo Metropolis. Three research questions were raised and two hypotheses were also formulated for testing at .05 alpha level of significance. A cross-sectional survey design was adopted and using sampling techniques. 150 hair dressers were drawn for the study. A multi stage sampling technique was used to pick 7 major roads in Uyo Metropolis, 15 hairdressing salons and 150 hairdressers. A 22 items questionnaire (KAPPTDHQ) was formulated for the study. The questionnaire was pretested and data analyzed using Kuder Richardson 20 formula and a reliability coefficient of .78 was obtained. Frequency and percentage was used to answer the research questions while Chi-square was used to test the null hypotheses at P-value of .05. The findings revealed that knowledge of hairdressers about transmissible diseases were adequate and that knowledge significantly influence practices of hand washing which was also good. It was also noted that attitude of hairdressers towards hand washing do not significantly influence practices of hand washing among hairdressers in Uyo Metropolis. It was recommended that health education to hairdressers should be carried out to create awareness in the need for proper hand washing technique and prescribed standard for hairdressing salons should include adequate hand washing facilities to ensure regular and proper hand washing technique during working hours by hair dressers.

## Introduction

Every occupation is associated with occupational risk that endangers life and wellbeing of the workers and even their clients. The prevention of transmissible diseases during working hours constitutes a public health burden. Occupational health guarantees total safety of the worker physically, mentally and socially. Lack of infection prevention control practice in work places can affect the health of the client as well as a risk to the operator. Poor hygiene practices and inadequate safety measures play major roles in the increase burden of communicable diseases at workplaces. Hairdresser is referred to as any who arranges dressers, curls, outs, weaves, singes bleaches, or colours the hair or treats the scalp, or manicures the nails of any person either with or without compensation or who, by the use of the hands or appliance (Amodio, Antonella, Gennaro, Massimo & Romando, 2014).

Hairdressers; barbers and beauticians represent an important occupational group. This group will grow through 2016, more rapidly than the average of all occupations (Bureau of Labour Statistics, 2009). The hairdressers in beauty salon are chronically exposed to chemical and mechanical hair treatments such as hair dyes, bleaching agents, permanent waves solutions, hair conditioners, hair sprays and perfumes. These substances contain a large number of harmful chemicals. Different mutagenic and carcinogenic compounds have been historically formed in many brand of hair dye products because they contain aromatic amines (Occupational Health and safety Administration 2010). Formaldehyde is used in a wide variety of cosmetics, including hair strengtheners. The World Health Organization (WHO) and the International Agency for Research on Cancer (IARC) classify formaldehyde as a human carcinogen, particularly in the nasal cavity. Formaldehyde exposure is linked to leukemia and lung cancer. According to Hamman, Ghareeb, Arafia and Atteia (2014) evidence of cancer among hairdressers was first reviewed by the International Agency for Research on Cancer which reported an increased risk of urinary bladder cancer, liver cancer, upper aerodigestive tract cancer, breast cancer and non-Hodgkin's lymphoma in these professionals.

Moreover some studies showed an increased risk of cancer among hairdressers that was most prominent in groups with lonest duration on this would cause important public health concern given to the large number of people employed in this sector. According to Amodio, Antonella, Sennaro, Massimo & Romando, (2009) the hairdressing trade may also potentially expose its practitioners and their customers to blood-borne infections such as Human Immune Virus (HIV) and Hepatitis B and C through the use of contaminated needles used in fixing hair. Other diseases that can be transmitted through hands contact in the hair dressing salon include; common cold cough, ring worm, eczema, dandruff, skin scabies, HIV/AIDS Hepatitis B and C and scalp infection etc. (Vivas, Gelayye, Aboset, Kvimie Berhare & Williams, 2011). The European Agency for Safety and Health related, skin risk respiratory and blood borne disease and that improving working conditions must be a major priority (Dontas, Georgiadou, Koukoulaki, 2014). Hand washing is the single most effective way to prevent the spread of germs from one person to another. Germs is a general term for microbes like viruses and bacteria which can be spread casually by touching another person or by touching contaminated objects or surfaces and then touching one's face, mouth eyes and nose (Canada Centre for Occupational Health and Safety, 2015).

Safety measures such hand washing by hairdressers might alleviate this risk to a measurable extent. Some of the substances used in hairdressing for example hair dyes, can be hazardous to health and in addition for the fact that the hands may be wet or in contact with water for long periods can give risk to skin conditions, contact dermatitis is the most frequently reported skin disease accounting for 80 percent of reports nationally. Hairdressing is the second highest risk occupation with up to 70 percent if hairdressers suffering skin damage at some point in their careers (Hamman, Ghareeb, Arafa & Atteia 2014). In a hair dressing salon, infections may be spread during procedures even when skin perpetration does not occur. Good hand washing techniques include using an adequate amount of soap rubbing the hands together to create friction, and rinsing under running water. Hand washing is a form of hygiene which refers to the act of removing or destroying microorganisms on the hands while maintaining good hand integrity. Hand washing involves cleaning one's hand with or without the use of water or another liquid or with the use of soap for the purpose of removing soil dirty and or micro-organisms. Hand washing practice is an important personal hygiene etiquette that should be adopted to prevent many diseases that can be spread through hands contact. Sometimes the practice of hand washing can be impaired due to lack of knowledge of its importance, lack of clean water and soap and other facilities. Regular and good washing is considered an important measure of preventing cross-infection in a hair dressing salon. This involves a thorough 10-20 second wash of the hands and wrists using water and a liquid soap followed by a thorough drying using single use paper towels. Hand washing should take place prior to and after any physical contact with the client or any possible blood or body fluid explosive. Vivas et al (2012) opined that staff that is knowledgeable consistently practice infection preventive and control measure such as hand washing will significantly reduce the risk of infections being transmitted within the salon. Previous studies have indicated that children with proper hand washing practices are less likely to report gastrointestinal and respiratory symptoms (Ejemot, Ehiri, Meremikwo Vritcheley, 2008). Consequently, hand washing with soap and water has been reported to reduce diarrhea morbidity by 44 percent and respiratory infections by 23 percent (World Health organization, 2014).

However, globally the rates at which hands are washed with soap and clean water range from 0-34 percent (Global Hand washing Day Global Public Private partnership for Hand washing, 2014). Lack of resources namely, soap and water as well as inadequate facilities such as wash hand basin, tap, paper towel may be the main reasons that influence the hand attitude and practices of hair dressers globally. The cost of work-related skin diseases has been estimated to be five million Euros a year in the EU alone (European Framework agreement on the Protection of Occupational Health and Safety in the Hairdressing sector, 2014). In addition, work related contact dermatitis is a serious problem among the hair dressing community. Amodio et al (2014) noted that 89.5 percent of hairdressers practice of hand washing between different clients while other do not and others have good knowledge of proper Hand washing technique toward the prevention of transmissible disease using soap and water prior to eating and after eating in the salon. It is against this background that this study was carried out to examine the level of knowledge, attitude and practices of hand washing toward the prevention of transmissible diseases among hairdressers in Uyo Metropolis in Akwa Ibom State.

### **Objectives of the study**

The general objectives of this study are to determine the knowledge, attitude and practices of hand washing towards the prevention of transmissible diseases among hair dressers in Uyo Metropolis, Akwa Ibom State.

The specific objectives of the study include:

1. To examine the knowledge of hairdressers in Uyo metropolis about transmissible diseases associated with their work.
2. To examine the attitude of hand washing among hair dressers in Uyo Metropolis towards the prevention of transmissible diseases.
3. To determine the practices of hand washing among hairdressers in Uyo Metropolis toward the prevention of transmissible diseases.
4. To determine the influence of knowledge of transmissible diseases associated with hair dressing work on practices of hand washing among hairdressers in Uyo Metropolis.

### **Research Questions**

1. What is the knowledge of hair dressers in Uyo Metropolis about the transmissible diseases associated with hair dressing work?
2. What are the attitudes of hand washing by hair dressers in Uyo Metropolis towards the prevention of transmissible diseases?
3. What are practices of hand washing adopted by hairdressers in Uyo Metropolis towards the prevention of transmissible diseases?

### **Hypotheses**

1. There is no significant influence of knowledge of transmissible diseases associated with hair dressing work on practices of hand washing towards the prevention of transmissible diseases among hair dressers in Uyo Metropolis.
2. There is no significant influence of hand washing among hair dressers on practices of hand washing towards the prevention of transmissible diseases in Uyo Metropolis.

### **Research Design**

A cross-sectional survey design was used for this study. Udoh and Joseph (2005) opined that where all members of a target population cannot be reached, a survey design makes it possible for inference on the population to be drawn using the sample. The authors are also of the view that it is the most appropriate design to determine the opinions, attitude, preferences and perceptions of persons of interest to the researcher. It is based on the aforementioned attributes of survey research method that the researcher considered it as the most appropriate to be gathering the type of information required for this study.

### **Population for the Study**

The target populations consist of 750 registered hairdressers in Uyo Metropolis.

### **Sample and Sampling Techniques**

A sample size of 150 hairdressers were drawn for the study constituting 20 percent of the target population. A multistage sampling technique was used to draw 150 registered hairdressers in Uyo Metropolis. Firstly, a simple random technique was used through balloting to pick 7 major roads in Uyo Metropolis. Secondly a systematic sampling technique was used to pick 15 hairdressing salon located on each of these roads to make up 105 hairdressing salon. Thirdly, 150 hairdressers were purposively picked in each of hairdressing salon. According Isangedihge, Joshua, Asim and Ekuri (2004) the more sample size approaches 100 percent the better sample the reducing sampling error. Thus Isangedihe et al, (2004) estimated the use of 10 percent and 30 percent as appropriate to represent a large population.

### Instrument for Data Collection

The researcher developed instrument, titled “Knowledge, Attitude and Practices of Hand washing towards the Prevention of Transmissible Disease among Hairdressers Questionnaire (KAPPTDHO) was used as the instrument to elicit information for the study. The questionnaire has four sections. Section A provided information on personal demographic data of the respondents. Section B elicited information on knowledge of respondents on transmissible diseases associated with hairdressing workers while Section C elicited information on attitudes of hand washing among hairdressers towards the prevention of transmissible diseases while section D elicited information on hand washing practices among hairdressers. Section B and C and D used Yes and No options. A total of 22 items were being prepared for this study.

**Table 1:** Distribution of Socio-demographic data of hairdressers in Uyo Metropolis, 2015

<b>Respondent variable</b>	<b>Frequency</b>	<b>Percent (%)</b>
<b>Age in years</b>		
Below 20	35	23.3
21-30	103	68.7
31-40	11	7.3
41-50	1	7
<b>Total</b>	<b>150</b>	<b>100</b>
<b>Educational qualification</b>		
Primary six	9	6.0
JSS 3	9	6.0
SS 3	17	11.3
Diploma	94	62.7
B.SC	21	14.0
Others	-	-
<b>Total</b>	<b>150</b>	<b>100</b>
<b>Marital Status</b>		
Single	108	72.0
Married	40	20.3
Divorced	1	7.0
Widowed	1	7.0
<b>Total</b>	<b>150</b>	<b>100</b>
<b>Gender</b>		
Male	52	34.7
Female	98	65.3
<b>Total</b>	<b>150</b>	<b>100</b>
<b>Working experience in years</b>		
1-5	90	60.0
6-10	42	28.0
11-20	4	2.7
21-25	3	2.0
26-30	9	6.0
31 and above	1	7
<b>Total</b>	<b>150</b>	<b>100</b>

Table 1 shows that out of 150 hairdressers who participated in the study, majority with frequency of 103 and 68.7% are aged 21-30 years while the least was those from 41-50 years with 1 frequency and 7%, those with diploma had the highest frequency of 94 with 62.7%. Most hairdressers 72.0% with the frequency of 108 are single and also majority of hairdressers are female with frequency of 98 and 65.3%. Hairdressers with the highest frequency of 90 and 60.0% had their working experience in the job between 2-5 years duration.

### Research Question 1

What is the knowledge of hairdresser in Uyo Metropolis about the transmissible diseases associated with hair dressing work?

**Table 2:** Frequency and percentage analysis of hairdresser knowledge of transmissible disease 2015, n=150 associated hairdressing.

ITEM	YES		NO		TOTAL	
	f	%	f	%	f	%
Knowledge of hairdressers contacting Serious health problem	99	66.0	51	34	150	100
Knowledge of diseases associated	88	58.7	62	41.3	150	100
With hairdressing work	10	6.7				
Knowledge of list of diseases Associated with hairdressing work	27	18.0				
Cancer	8	5.3				
Malaria	64	42				
Typhoid Fever	2	1.3				
Appendicitis	2	1.3				
HIV/Aids	11	7.3				
Common Cold	1	7				
Diarrhea						
Deafness						
Scabies						
Food Poisoning						
Ring Worm	1	7				
Hepatitis	150	100				
Knowledge of needles used in fixing	114	6.0	35	23.3	150	100
Hair to transmit infection	126	84.0	24	16.0	150	100
Knowledge of important of hand Washing in preventing transmissible Diseases in the hairdressing salon						

Table 2 above shows the frequency and percentage analysis of response on knowledge of transmissible diseases associated with hair dressing work. The response on knowledge of transmissible diseases associated with hair dressing work. The response shows that hairdressers have good knowledge of contacting transmissible diseases during work with the frequency distribution of 99 and 66.0%, good knowledge of the diseases with 88 frequency distribution and 58.7%. The knowledge about HIV/AIDS as the transmissible diseases are not quite know by the hair dressers.

**Research Question 2:** What are the attitudes of hand washing by hair dressers in Uyo Metropolis towards the prevention of transmissible diseases?

**Table 3:** Hairdressers attitude of hand washing towards the prevention of transmissible diseases during work 2015, n=150

ITEM	YES		NO		TOTAL	
	f	%	f	%	f	%
I Prefer to wash my hands at the end of work before I go home.	138	92.0	12	8.0	150	100
I do wash my hands after attending to each customer.	122	81.3	28	18.7	150	100
I do wash my hands before I make phone calls.	72	48.0	78	52.0	150	100
It is important to wash hand before taking snacks at work.	76	50.7	74	49.3	150	100
I only wash my hands after visiting toilet during work.	59	39.3	91	60.7	150	100

Table 3 above shows the frequency distribution and percentage analysis of hairdresser's attitude of hand washing towards the prevention of transmissible disease during work. The result of the Responses show that attitude towards hand washing by hair dressers towards the prevention transmissible diseases was poor. 92.8 prefer to wash their hands at the end of work before they go home with 138 frequencies while others do not hands before picking a phone while at work. However, some wash hand after attending to each customer and taking snacks with 81.3% and 50.3% respectively.

**Research Question 3**

What are the practices of hand washing adopted by hairdressers towards the prevention of transmissible diseases in Uyo Metropolis?

**Table 4:** Practices of hand washing adopted by hairdressers towards the prevention of transmissible diseases in Uyo Metropolis 2015, n=150.

ITEM	YES		NO		TOTAL	
	f	%	f	%	f	%
I always wash my hands With soap and water after Attending work.	134	89.3	16	10.7	150	100
I do not like to apply Soap on my hands When washing.	120	80.0	30	20.0	150	100
I prefer to use sanitizers To clean my hand at work.	73	48.7	77	51.3	150	100
I wash my hands anytime I remove gloves from my hands when working on a customer.	78	52.0	72	48.0	150	100
Rubbing of creams/oil on the hands	62	41.3	88	58.7	150	100
It is not necessary to wash hands at all while at work	80	53.3	70	46.7	150	100
It is very boring to wash one's hands after every customer while at work.	58	38.7	92	61.3	150	100

Table 4 above shows responses on practices of hand washing towards the prevention of transmissible diseases which reveals that majority of hairdresser's washer hands with soap and water after attending to a customer with frequency of 78 and 52%. Other which are majority do not like to apply soap on their hand when at work 120 and 80.05%, majority prefer to use sanitizers with 77 and 5.3%. Among 150 hairdressers who responded 70 with 52.0% wash their hands when working on a customer, while 72 and 48.0% do not. Majority of the respondents do not practice rubbing of cream on the hands as preventive measures while 62 with 41.3% practice that as the best preventive measure towards the preventive of transmissible diseases. However, this table shows that most respondents do not see it necessary to wash hands at all while at work with the frequency of 80 and 53.3% while some hairdressers 92 with 61.3% find it boring to wash their hands after every customer while at work.

**Ho<sub>1</sub>**

**Table 5:** Chi Square Analysis of influence knowledge of transmissible disease associated with hair dressing work on practices of hand washing among hair dressers towards the prevention of transmissible diseases 2015, n: 150

<b>Variable</b>	<b>x<sup>2</sup></b>	<b>df</b>	<b>Critical Value</b>
Knowledge of hairdressers On transmissible disease.	76.989	66	85.965
Practices of hand washing By hair dressers toward Prevention of transmissible Diseases.	59.457	66	85.965
<b>Total Number</b>	<b>150</b>		

\* Significant at 105 alpha level, X<sup>2</sup> – Crit. 85.97; df = 66; n = 150 on knowledge.

\* Significant at 105 alpha level, X<sup>2</sup> – Crit. 85.965; df = 66; n = 150 on practices.

Table 5 shows result of data analysis on influence of knowledge of transmissible diseases associated with their hair dressing work oh practices of hand washing towards the prevention of transmissible diseases. The results reveal that calculated X<sup>2</sup> – value of 76.989 and 59.457 are significant at .05 alpha level with critical value of 85.965 and degrees of freedom = 66. The result shows that there is a significant influence of knowledge on practices of hand washing among hair dressers in Uyo Metropolis.

**Ho<sub>2</sub>**

**Table 6:** Chi Square analysis of influence attitude of hand washing among hairdressers on practices of hand washing towards the prevention of transmissible diseases in Uyo Metropolis 2015, = 150

<b>Variable</b>	<b>x<sup>2</sup></b>	<b>df</b>	<b>Critical Value</b>
Attitude of hand washing Among hairdressers.	161.772	24	36.415
Practices of hand washing Among hair dressers.	85.472	224	36.415
<b>Total</b>	<b>150</b>		

\* Significant at .05 alpha level, X<sup>2</sup> – Crit. 36.415, df = 24; n = 150 on attitude

\* Significant at .05 alpha level, X<sup>2</sup> – Crit. 36.415, df = 24; n = 150 on practices.

Table 6 shows data of influence of attitude of hand washing hair dressers on their practices of hand washing towards the prevention of transmissible diseases in Uyo Metropolis. The results reveal that there is no significant influence of attitude on practices of hand washing among hair dressers in Uyo Metropolis by the calculated X<sup>2</sup> value of 161.772 and 85.472 at .05 alpha level with critical value of 36.445 and degrees of freedom = 24.

## Discussion of Findings

### Influences on Knowledge on Practices of Hand Washing Among Hair Dressers in Uyo Metropolis.

The results of the findings shows that hair dressers in Uyo metropolis have good knowledge of diseases associated with their work which showed significant level on hypothesis tested and their attitude are also good towards the prevention of transmissible diseases which is in line with studies by Vivas et al (2012) which noted adequate knowledge of proper hygiene and practices of hand washing among students in a study of knowledge, attitude and practices (KAP) of hygiene among school children in Angolela, Ethiopia. The result of study is also supported by Arshrafi, Farwa, Mohammad and Sairh (2010) on knowledge of transmissible diseases among barbers but on the contrary reported poor practices of prevention. The author noted that their good knowledge may have been as result of working experiences and level of education which recorded highest in this study up to percent.

### Influence of Attitude on Practices of Hand Washing Among Hair Dressers.

The results of the findings, shows that the attitude by hair dressers in Uyo metropolis towards hand washing does not influence their practices. This result is supported by the work of Morowatis (2010) which showed a negative statistical associated between risky during and road traffic accidents in as study of commercial motorcyclist' belief model to predict risky during behaviors among a sample group of communities in Yazd, Iran.

The poor attitude on practices may be due to lack of hand washing facilities, clean water and soap in a beauty salon which hair dressers work. Ezzati, Lopez, Rodgers and Murray, 2004. Also noted good hand washing practices among health workers in the study of assessment of knowledge, attitude and practices of hand washing.

## Conclusion

Based on the findings of the study, it was concluded that hairdressers have adequate knowledge on transmissible disease associated with the work and good practice to prevent them. However, the influences of attitude on practices of hand washing among hair dressers is not significant.

## Recommendation

The following recommendations were made as follows:

- Health education to hair dressers to create awareness on the need for proper hand washing technique in order to prevent transmissible diseases in hairdressing salons.
- Prescribed standard for hair dressing salons should include adequate hand washing facilities to ensure regular and proper hand washing technique during working hours by hair dressers.

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