SCHOOL OF PUBLIC HEALTH

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KNOWLEDGE, ATTITUDES, AND PRACTICES ASSOCIATED WITH STREET NAIL TRIMMING AMONG TRADERS IN THE TECHIMAN MUNICIPALITY OF THE BONO EAST REGION.

BY

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DECLARATION

I hereby declare that excluding precise references, which have been duly acknowledged, this proposal is my own work towards my MPH dissertation.

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Date

DEDICATION

I dedicate this thesis to my lovely husband, Mr. Dickson Antwi and my two wonderful kids, Peter-Paul and Lily for their warm companionship.

I love you all.

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I am most grateful to almighty God for His mercy and grace that has brought me this far. I am also grateful to Dr. Benedict Weobong, my supervisor for his patience, directions and sacrifices towards the successful completion of this work.

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ABSTRACT

Introduction: Nail cutting on the street which is sometimes referred to as the roadside trimming, refers to the use of sharp objects and other equipment's by some individuals to trim finger and toenails on the roadside or the streets as their business. The use of sharp objects for cutting nails in towns and cities is very alarming and can be a major risk to the spread of blood borne diseases, and Ghana is not an exception. Whilst there is some evidence regarding safety behaviours in saloons and barbering shops, there is little evidence regarding the burden of street nail trimming and factors associated with this practice.

Objective: this study sought to estimate the Prevalence, Knowledge, Attitudes, correlates (determinants/ factors) and Safety Practices associated with **Street nail trimming (SNT)** among traders in the study area.

Method: A descriptive cross-sectional design employing a mixed method was used. A multi-stage sampling was used to obtain 384 eligible participants. A structured questionnaire, a focus group discussion guide, an observational check list and an interview guide were used. STATA (**version 15.0**) was used for the quantitative analysis. **Bivariate** and multivariate analysis were used to test for association between variables.

Results: Prevalence of street nail trimming was revealed as 69.3%. Prevalence by sex was 68.8% males and 69.8% females, (**p=0.586**). Knowledge was high. Attitudes (traders' likeness): qualitative excepts indicates almost half of participants preferred SNT continue. A few other respondents do not like due to the high risk of disease transmission associated with the activity. Association between patronage of street nail trimming and the factor (correlate /determinants of STN): Participants who perceived SNT as beneficial had an almost 5 times increased odds of **practicing** this **(OR=4.99, 95% CI: 2.51- 9.92, p<0.001)**. Participants who thought/agreed street nail trimming should be discouraged had a reduced

odds of practicing this **(OR=0.40, 95% CI: 0.23 - 0.70, p<0.001)** at a confidence interval of 95%. Most (75%) of the instruments were seen as not being disinfected.

Conclusion: There is a high prevalence of the practice of street nail trimming with more than two thirds of participants taking up this service. This is against the backdrop that knowledge of the risks involved in this service is high. **It appears** knowledge does not always translate into healthy behavioral choices though attitudes might, given the fact that participants perceived the service as convenient. This therefore calls for the Ministry of Health (MOH) and Ghana Health Service (GHS) to implement **Social Behavior Change Communication (SBCC)** strategies. **Also, there should be application of the health belief model to promote safety practices regarding SNT**.

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LIST OF ABBREVIATIONS

FGD	-	Focus group discussion
GHS	-	Ghana Health Service
HBM	-	Health Belief Model
HBV	-	Hepatitis B Virus
HCC	-	Hepatocellular carcinoma
HCV	-	Hepatitis C Virus
HIV	-	Human Immune Deficiency virus
MOH	-	Ministry of Health
SBCC	-	Social Behavior Change Communication
SNT	-	Street nail trimming
WHO	-	World Health Organization

DEFINITIONOF TERMS

1. Street Nail trimming - The act of cutting growing finger and toe nail away

2. Nail trimmers - Persons who walk along public places and trim individuals nails for commercial purposes

CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Most of the health risk considered today through infectious blood borne, transferable illness and other sicknesses that happen to the skin are mostly as a result of nail cutting and hair trimming by barbers through the use of unsafe sharps and other trimming instruments **(Abubakar, Dangana et al 2017)**. Recklessness and mistakes that may occur when these peddlers are using **sharp objects** such as the nail cutter, razors and other equipment that has not been properly sterilized or that has not been sterilized at all may largely contribute to the spread of blood borne disease such as hepatitis B virus (HBV) Hepatitis C Virus (HVC) and Human Immune Deficiency Virus (HIV) which cause some very serious health problems (Abubakar, Dangana et al 2017).

Nail cutting on the street which sometimes refers to as the roadside trimming, refers to the use of sharp objects and other equipment's by some individuals to trim finger and toe nails on the roadside or the streets as their business. This act of trimming on the streets is hard to be seen in the countries of the global north, they are mostly seen in the economies of the global south countries especially Africa which Ghana is no exception. In Ghana, it is becoming very alarming to see boys and young men all over the streets in the various communities, towns, cities and the villages with rudiment tools, equipment's among other sharps for purpose of trimming finger and toenails.

Generally, the use of these sharps and **other** object purported for the trimming of finger and toenails is becoming unbearable in most of the African countries and Ghana. It has been reported that these trimming peddlers use single sharp object on several people which could speed up the rate at which blood borne diseases spread in the country. In Ghana, most of

these trimming peddlers are from Niger, Togo and other African country. This movement of people from other countries to Ghana to do this business is as a result **of** globalization and internationalization which has **paved** way for people goods and services to move from one country to another.

The World Health Organization (WHO) report indicate that the total number of people who have contracted the HBV and the HCV globally is 300 million and 150 million respectively (WHO 2000a, 2000b and 2009). A survey conducted on those who donate blood in Ghana depicted that about 10 - 16% HBV increasing in villages (Allian, et al 2003) and about 4 - 11.6% HCV are still in villages (Nkrumah & Owusu, et al 2011.)

Persons with HBV and HCV are **likely to acquire** Hepatocellular carcinoma (HCC). HCC is said to be the leading cause of death among men in Ghana (Wiredu & Armah 2006). **Vaccination of children against Hepatitis in Ghana begun in 2012 but many adults in Ghana were not vaccinated and also there is no vaccine for HCV till now**. One of the main causes of hepatitis is unsafe blood transfusion practice, shaving from barbering salon, beauty salons and use of non-sterilized surgical objects (Mariano A, 2004, WHO).

The use of sharp objects for cutting nails in towns and cities is very alarming and can be a major risk to the spread of blood borne diseases, despite the need to cut the fingernails and toe nails in order to keep them clean and healthy all the time. Overgrown fingernails and toenails are prone to germs. This is because it has been observed that overgrown fingernails and toenails pile up dirt. Long fingernails and toenails may also harm the fingers, toes and other body parts. One might have been hurt or sustained damage from overgrown fingernails and toenails before (Gbolu Samson, 2017).

As it is important to practice personal hygiene by cutting the fingernails and toenails in order to keep them clean and healthy, it is very devastating to see how people in cities most often

African people recklessly and purposefully using sharp objects to cut fingernails and toenails forgetting that they may contract infections in the process. These infections are the major cause of death and unwholesomeness in male especially in deprived communities where there are financial difficulties and overcrowding. In developing countries, infectious disease claims about 25% human life in a year, infectious disease kill more than 11million people leading to lose of lives and humanity across the world.

Subsequently all death resulting from infectious diseases occurs mostly in developing countries. This is mainly due to lack of awareness and reckless use of sharp objects to cut fingernails and toenails on the streets and the barbering saloons (Ayub Medical College, 2008).

1.1 Problem statement

Generally, it is an undeniable fact that one of the numerous factors that can contribute to the contraction of HIV, HBV, HCV and other infections through blood transfusion is the sharing of sharp instruments among many people.

Research findings indicate that hepatitis B and C and HIV are passed on from one person to another through blood exposure and blood component (Kordi and Wallace 2004). In the fight against personal unhygienic, one may experience a cut in an attempt to bringing out the finger and toenail cuticles and even whiles trimming them. If the equipment used is unsterilized or infected because it has been used on an infected person, there is high tendency of the user to contract the infection or the disease (De Oliveira and Focaccia 2010).

Again, one of the predominant infections or disease today is non tuberculosis mycobacterial. A report published recently indicate that most of the skin diseases are as a result of non-tuberculosis mycobacterial which point to saloon waterspout as the causative factor. If one wants to trim or cut the finger and toenails, the individual will spend approximately 15 – 20

minutes which should not discourage him or her from doing it themselves as compared to the pedicure and Medicare shops which could take longer minutes and hours. This does not support the fact that the saloons and the pedicure shops are safe but could be better than the street trimming

It is becoming more usual these days when young men are all over the streets, communities, towns and cities with the purpose of cutting toe and fingernails at a fee. The most dangerous aspect is that, pathogens are everyday changing their ability to resist disinfectants, as a result, a disinfectant that was able to fight against a pathogen yesterday may not be able to fight it in the future. The trimming peddlers claim they use disinfectant always which they may not even know whether it capable of properly disinfecting their instruments or not. A clear analysis of the situation at hand means that Africa, mother Ghana and the entire Bono East region is at risk of blood and skin borne diseases

Recently the **science daily (2011)** said that there is the need for research to be done on the risk of hepatitis transmission. Thus, using one Sharp objects such as nail files, scissors, and razor blade and so on by different people and in response to report given by American college of Gastroenterology 76th Annual Scientific meeting in Washington DC. It is against this background that this study sort to bring to bear the practices of Street nail trimming in other words called nail cutting among traders in Techiman municipalities of the Bono East Region.

It is well established that multiple use of single objects those for beautification such as in nail cutting is the key factor to the spread of blood borne disease. Some Ghanaians have also taken interest in condescending in "wayside nail cutting and seem not to care about the consequences of being infected with blood borne diseases. These wayside nail cutters use of sharp objects to cuts fingernails and toenails of many people in the street in a day, raises

questions such as: can the potency of the liquid or purported disinfectant they use in disinfecting their objects be guaranteed? Are the disinfectant being used by these boys who engage in this business been accepted by appropriate authority (law).

1.2 Justification

Although the spread of blood borne disease is of public interest but due to limited research in street nail cutting the tendency of the findings to inform public health policy is futile. A study conducted in Techiman showed that about 4.2% of those who donate blood have hepatitis B. So therefore, there is the need for the department of health at the municipality to develop intervention strategy to the situation at hand.

In the year 2016 in Africa, AIDS alone claim about 15,116 lives of Ghanaians and with 20,418 infections were still recorded. This was a report given by the Ghana's AIDS Commission (GAC) in that year. This means that the practice of nail cutting in Techiman may cause increases or facilitate the spread of infectious diseases based on the statistics given by the Ghana AIDS commission in 2016.This gives a clear indication that Techiman is at risk of contracting these infectious diseases when they indulge in nail trimming practices. Up till today there hasn't been enough information on the practices and regulations of this practices though these practices have been going on for some time now but there seems much has not been done on the regulations of these practices.

1.3 Research Questions

a. How common is the practice of street nail among traders in Techiman Municipality?
b. What do traders know about health risks associated with street nail trimming?
c. What explains the patronage of street nail trimming among traders in Techiman Municipality?
d. **Are there correlates in street nail trimming among nail trimming peddlers and users in Techiman Municipality?**

e. Are safety precautions observed in street nail trimming in Techiman Municipality?

1.4 General Objective

To assess the knowledge, attitudes, and practices associated with street nail trimming among traders in the Techiman Municipality of the Bono East Region.

1.5 Specific Objectives

1. To estimate the prevalence of street nail trimming among traders in Techiman Municipality.

2. To assess the perceived health risks and attitudes associated with street nail trimming among traders and nail trimming peddlers in Techiman Municipality

3. To assess the attitudes regarding street nail trimming among traders and nail trimming peddlers in Techiman Municipality

4. To estimate correlates of street nail trimming among nail trimming peddlers and users in Techiman Municipality.

5. To assess the safety practices of street nail trimming among traders and nail trimming peddlers in Techiman Municipality.

1.6 Hypothesis

Ha: The proportion of male traders who patronize street nail trimming is greater than the proportion of females who practice street nail trimming in Techiman Municipality

H0: The proportion of male traders who patronize street nail trimming is the same as the proportion of females who practice street nail trimming in Techiman Municipality

1.7 Conceptual framework of street nail trimming and associated factors

This conceptual framework is supported by health belief model. Thus, the readiness for people to take action is based on the influence of whether or not they are at risk to contract diseases or health problems and their perception of benefit of taking actions to avoid it according to the health model, so based on this, the above framework seeks to explain factors associated with practices of street nail trimming.

The constructs of the Health belief model infers that for individuals to practice a behavior such individuals get sensitive to the problem (perceived susceptibility), then understanding the depth of the risk and the seriousness of its various complications (perceived severity), with positive message that come from their surroundings (cues to action), believing in the usefulness and applicability of preventive behaviors (perceived benefits), not engaging in these behaviors are also less costly than their benefits (perceived barriers) and enabling them to perform actions (self-efficacy) and individuals who patronize street nail trimming go through same behavioral processes.

Socio-demographic characteristics such as age and income situations will largely influence certain behaviors and such person may patronize street nail trimming practices. Individuals with low social statuses are more likely to sit by the roadside and have their nails trimmed by same untreated used- shape objects, Individuals social status affect the kind of public services they use. Persons who are not health literate may not be able to read and interpret literature on health damaging behaviors and their respective health outcomes hence are more likely to patronize street nail trimming services. Such individuals' health belief of pathogens and disease transmission might also be impaired and are more likely to patronize street nail trimming which may come with its attendant health risk. For attitudes individuals' like or dislike influences the practices they indulge in.

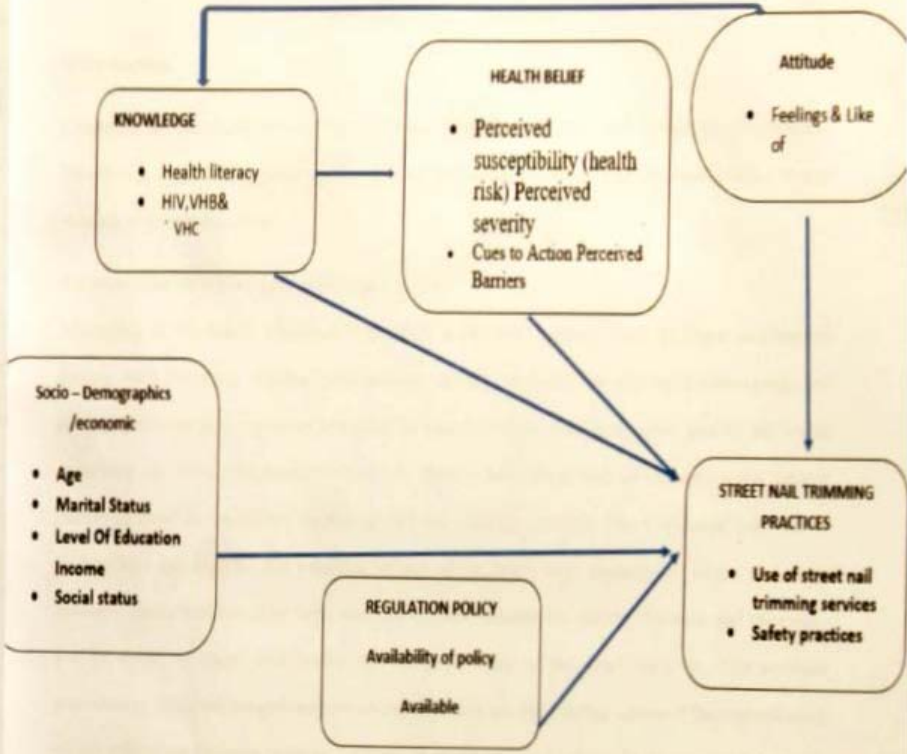

Figure 1 Conceptual Framework of Street Nail Trimming (Batako, 2021)

CHAPTER TWO

LITERATURE REVIEW

Introduction

Literature on the study was reviewed on the overview of street nail trimming, Knowledge, Perception, attitude and practices relating to street nail trimming and the health belief model relating to health behavior.

2.0 Overview of Street nail trimming

According to Abubakar, Dangana et al. (2017), personal hygiene such as finger and toenail cutting, hair trimming, shaving, shampooing, dyeing, styling, face and scalp messaging, nail cutting, pedicure and manicure are done in beauty or hair saloon at some part of the world especially in Africa including Ghana. In Ghana and other part of Africa, some people patronize local or traditional barbering and nail cutting services. The traditional nail cutters and barbers are seen on the roadside of our street. They also circumcise, incise and drain abscess. These traditional or local nail cutters and barbers are mostly illiterate and they may not be aware or know that health risk or implication of the work they do. The services provided by these traditional barbers and nail cutters are the leading cause of the transmission of the infectious diseases such as hepatitis B and hepatitis C virus. In an attempt to remove the cuticles in the fingers and the toenails, sometimes it results in bleeding and without any proper sterilization of the objects used, it can lead to the contraction of viruses and other blood borne pathogens.

Hepatitis B is more pandemic (about 50 – 100 times more than human immunodeficiency virus. Furthermore, its transmission is just like HIV. The service rendered by these nail cutters and barbers expose their clients to other diseases such as skin disorders through

ringworm caused by dermatophytes which is easily transmitted through direct contact. Infections of head louse, staphylococcal infections, scabies through contaminated towels, combs and aprons and HBV, HCV, HIV and tetanus are also transmitted through contaminated blades, clips and the use of other sharps. Moreover, when these items are used on the infected client without proper cleaning, washing and disinfection, before using them on another person, it increases the rate of spreading the infections.

A survey conducted in the Samaru market aimed at finding out the knowledge, attitude and the practice of market men and women toward the health dangers associated with the services they receive from the local or traditional nail cutters and barbers. The survey concluded that, these traditional nail cutters and Berbers do not expose their clients only but also expose themselves to the infections as well. Barbering shops also contribute to the spread of infectious diseases and allergic conditions including scabies and other ringworm and dermatitis infections according to reports on microbiological studies.

Another study undertaken in Morocco concluded that out of 267 barbers and 529 clients, 28.1% of the barbers and 25.1% of the clients were HBV seropositive. Thus 1.9% of the barbers and 1.7% of the clients had HBV infections whilst 1.1% and 1.3% had HCV infections respectively. In another research to find out how those men infected with HCV respond to the antibody treatment, it was found out that 184 men infected with HCV, 38% responded to the HCV antibodies. Thus, both the old and the young are at risk of being infected with HCV when they patronize the services of roadside traditional nail cutters and barbers. Therefore, the problem is often a question of awareness, knowledge, perception, attitude as well as practice.

2.1 Street nail trimming and potential public health risk

In a study conducted by Khairkhah et al. (2016) to analyze the prevalence of hepatitis B and C infections in barbers in Tehran, it was revealed that mere activities of barbers and nail trimmers alone do not pose as a potential risk factor for HBV infection, while Hepatitis B virus (HBV) and hepatitis C virus (HCV) infections are major health problem associated with nail trimming. However, hairdressers and barbers as people can be affected by HBV and HCV.

Research evidence shows that HBV can be acquired through the use of unsterilized objects and this has been affirmed by Oliveira and Focaccia in a study in 2010. According to Oliveira and Focaccia (2010), using unsterilized sharp objects is one of the ways in which hepatitis virus is transmitted. They entreat users and the public to desist from patronizing the services of these roadside nail cutters and public use of sharps to prevent infectious diseases. According to them pathogens are becoming more and more resistant and change every day. Thus, a drug or chemical which was effective against a pathogen some years ago may still not be effective against that same pathogen today. So, there is the need to prevent ourselves from being infected with infectious disease as the saying goes, prevention is better than cure.

Dr. Emmanuel Owusu Danquah who is a medical doctor at pediatric department of cape coast teaching hospital has advised parent to desist from patronizing the service of roadside nail cutters popularly known as "Abochi" because of the health risk involved. In an interview granted by Dr. Danquah to the junior graphic, he said that children have soft or fragile skin that could expose them to infections when they come into contact with contaminated and unsterilized sharp objects. These roadside nail cutters do not sterilize the tools appropriately and the solution they use to sterilize their tools may not be safe. Therefore, the chances of the boys using any form of disinfectant to sterilize their tools is very high which does not guarantee safety. Dr. Danquah also mention that apart from getting infected of HIV and

hepatitis, there is also a chance of getting contracting fungal infection of the toe or fingernail (onychomycosis).

He also advised that the best way to clean the nail by someone else is when the person cleaning the nail is wearing a nose mask and gloves in order to prevent transferring of infections to the clients or from the clients to the person cleaning the nails. Dr. Danquah added that at first only parent patronize the service of these roadside nail cutters but report from Junior Graphic has also shown that some parents allow their children to patronize the service of these roadside nail cutters. About how they sterilize their tools, one of the young men called Abu who engage in roadside nail cutters was questioned how he sterilized his tools. This is what he said "I only sharpen my tools when they get blunt". Speaking to another nail trimmer who was a Nigerian, he also said that indeed the business is very lucrative and that he is also able to make between 150 to 200 cedis in a week. The peddlers compared saying that the business is more lucrative in Ghana than their country.

According to Gittin et al, 1977 barbering and hairdressing expose their client to contracting infectious blood-borne when they are not conducted in safe and hygiene manner. These health risk may be transmitted from the operator to the clients or vice versa. The infectious blood-borne disease can include HIV, hepatitis B and C, warts, bacterial infections such as staphylococcus, streptococcus and pseudomonas, fungal infections such as Tinea Capitis (Scalp fungal infection) (Wayne, 1990). Over the years, beauty salons were given little examination to the spread of infectious disease (HIV/AIDS, HBV, and HCV) during public awareness, but in 1980s an epidemic of blood-borne disease such as HIV and hepatitis brought to the attention of the need to re-examine beauty salons.

Sharing sharp objects such as razors, scissors or clippers contribute to the spread of blood-borne virus such as hepatitis b and c and HIV. Thus, the contaminated sharp objects can

transmit infections from one to the other-(For instance the client to the operator) when that person have open cut or sores or broken skin (Tummineli et al, 1995). The risk of infections after exposure by blood borne pathogens varies. Thus, HBV have higher risk of infection (thus of about 30%) whereas HCV between 3 to 10% and HIV is 0.3% (Gerbiding, 1994) The rate at which men shave or trim at the shop or roadside is very alarming in many parts of Africa and Asia which lead to the wide spread of blood-borne disease (Luby et al, 2003) and (WHO, 2000).

These nail trimmers and barbers have little knowledge about sterilization of their tools (razors, clippers) they tend to increase or facilitate the spread of infectious diseases. According to Hardy 1997, in African countries barbering and trimming expose people to the risk of contracting blood borne infectious disease. For safety to prevail, then there is the need to practice universal precautions and risk assessments. These universal precautions will help to make Street or roadside trimmers know how to carry their services especially when they encounter blood or any blood fluids. These universal precautions will also help them to know how to handle sharp objects thereby ensuring the safety of the clients as well as the operators. So, this means that the street nail cutters should see all their clients as infectious and must observe the proper infection control measures universally in dealing with all their clients (CDC, 2003). Thus, the Centre for Disease Control and prevention (CDC) brought out the concern to prevent the transmission of human immune deficiency virus (HIV) and hepatitis b virus (HBV) in public core setting.

2.2 Sharp objects as risk factors for transmission of infectious diseases

How often hepatitis C virus occurs and its associated risk was assessed in research in Egypt. The research shows that most of the diseases such as HIV, HBV and HCV were transferred from one person to the other through the practices of community shavings, hair trimming, and nail cutting among others by operators who works in the various saloons and the street

trimmers (El-Sadawy et al, 2004). **Other people did a descriptive study in the twin cities of Rawalpindi-Islamabad in Pakistan and they realized that out of the day to day shaving of the face and the trimming of nails by their respective workers was considered to be a risk agent for Hepatitis C virus transmission with about 3% odds in male adults, with attributable population risks of 29.4% (Bari, Akhtar et al, 2001).** One of the most identified important risk factor in association with Hepatitis C virus infection was razor shaving and it included 196 institutionalized patients when a research was done on the risk factors (OR 4.90, 95% CI:1.29-18.86), making use of multiple regression logistical analysis in Japan (Sawayama et al,2000). In Italy, research of how often HBV and NANB revealed that out of the salon shavings, fingernails and toenails trimming were meaningfully related with parenteral transmission of Non-A and -Non-B hepatitis (NANB) and HBV. The commonness at which the trimming and shaving is at risk factor for HBV and NANB were 23.5% and 21.5% respectively compared with background commonness in the general population of 0.9.1.5% (Mele et al 1995).

According to Atusingwize, E., & Musinguzi, G. (2019) in a study to assess the determinants of Exposures to Hazardous Materials among Nail Cosmeticians in the Kampala City, Uganda where they employed a cross-sectional study design among a random sample of 243 participants. The sociodemographic characteristics, education and training status, knowledge about routes of exposure to hazardous chemicals, and personal protective material use of cosmeticians were assessed through face-to-face interviews. Most cosmeticians were aged 18–34 years, and more males were engaged in this work than females. Participants who had attained secondary-level education and above were over three times more likely to wear masks (AOR = 3.19, 95% CI 1.58–6.41) and gloves (AOR = 3.48, 95% CI 1.55–7.81) and over two times more likely to use aprons (AOR = 2.50, 95% CI 1.18–5.32). Participants who had ever received safety training on hazardous chemicals were more likely to wear all four

personal protective equipment: masks (AOR = 3.21, 95% CI 1.61–6.42), gloves (AOR = 4.23, 95% CI 2.05–8.75), goggles (AOR = 4.14, 95% CI 1.25–13.65), and aprons (AOR = 2.73, 95% CI 1.25–5.96). Participants who had spent more than two years in the nail cosmetics business were more likely to wear masks (AOR = 3.37, 95% CI 1.64–6.95). They concluded that with the increasing demand for nail cosmetics, and many people in urban areas of low-income countries engaging in this industry, there is need for training and better workplace policies to promote a healthier urban workforce dealing in cosmetics.

2.3 Centre for Disease Control's Infection Control Audit tool

This review tool for how to control the infection was established to help assist the Infection Control policy in 1999 (Circular 99/87), by means of supporting them with health care facilities using a process of observing local compliance with infection control standards, using controlling and ruling positions as the starting of compliance. In this section of study, we assumed some divisions of the original audit tool that relate to nail trimmers and other beauticians (CDC, 2003).

i. **Universal precautions:** In circumstances where the trimming operator is unprotected exposed to blood, gloves are used as well as presence of facial marks.

ii. **Hand washing:** Plans established for the reasons of educating hand washing and trimming or saloon operator to be aware of when to wash their hands.

iii. **Sharps handling and disposal:** Puncture resistant, waterproof and leak proof container designed for only sharps and being accessible to the trimming peddler should be things each saloon should have.

iv. **The waste disposal and linen handling and disposal:** Salon waste storage facilities are covered, and should be cleaned regularly (at least weekly). And each trimming peddler ensures a waste receptacle is in place.

v. **Processing of instruments and equipment:** Trimming peddlers use disinfectants that are recommended. Material safety data sheets (MSDS) are available in all salons using chemical. And find out whether the salon operator disinfect or sterilize instruments or equipment and their storage afterwards.

vi. **Environment cleanliness, premises:** trimming peddlers change cleaning items, such as solutions, water, buckets, towels, cleaning cloth. Also see storage of cleaning items, i.e., stored dry between uses. Presence of latrine and maintenance of clean environment.

2.4 Knowledge of health risk associated with street nail trimming

Infectious blood-borne communicable diseases and skin conditions are some of the several hazards included in traditional nail cutting and barbering. Carelessness in the use of sharp tools which include nail cutters, razors, shaving blades and clippers can be risks factor responsible for blood-borne infections such as Hepatitis B virus (HBV), Hepatitis C virus (HCV) and Human Immune deficiency virus (HIV), resulting in serious health problems. (Abubakar, Dangana et al. 2017)

According to **Quarm et al, 2020**, in a cross-sectional study conducted to assessed the knowledge, attitudes and prevention practices regarding HIV transmission among barbers in the Ho Municipality –Ghana, where data was collected from 121 participants and analyzed using Stata version 13.0 at the significance level of 0.05. Knowledge was low (63.6%) and was associated with attitude [COR=4.37 (95% CI: 1.98-9.62); p<0.001] and with level of education [COR=4.92 (95% CI: 1.70-14.21); p=0.003]. Attitude was inadequate (58.7%) and was associated with level of education [COR=3.47 (95% CI: 1.18-10.14); p=0.023]. Poor prevention practice was high (87.6%) and was associated with work experience [COR=20.72 (95% CI: 3.86-111.05); p<0.001] and lo- cation of operation [COR=4.92 (95% CI: 1.60-15.14); p=0.006]. The study concluded that Barbering poses risks of HIV transmission if it is

not conducted in a hygienic manner and that Programs aimed at improving knowledge, attitudes and practices should focus on Barbers in urban communities, those without any formal education, and those with less than five years work experience.

An article published in Nigeria about traditional nail cutting shows that in addition to the knowledge on street nail trimming, those who responded most (223; 96.5%) have heard of HIV with their where about information being friends or relatives (70.6%), radio (55.4%), television (41.1%), and health workers (26.0%). Most (220; 95.2%) knew sexual contact as the main mode of transmission and blood (197; 85.3%), whereas 175 (75.8%) identified nail cutting and 171 (74%) barbering instrument is also a means of transmission, respectively.

Weight loss was the most frequently cited symptom of HIV by the respondents (214; 92.6%). Few (12; 5.2%) said there is vaccine for HIV, whereas 164 (71%) knew drugs are available for treatment. Unlike a near universal knowledge and awareness of HIV, only a little above one-third of the respondents (85; 36.8%) have heard about HBV and HCV infections, with their sources of information being virtually same as that of HIV: friends and relatives (70.6%), radio (55.4%), television (41.1%), and health workers (26.0%). Majority, that is, 57 (24.7%), 54 (23.4%), 47(20.3%), and 43 (18.6%) mentioned sexual contact, blood transfusion, contaminated nail cutting, and barbering instruments as a means of transmission, respectively. Jaundice was the most frequently cited symptom; 65 (28.1%) and 40 (17.3%) respondents knew that the infections may ultimately lead to liver cancer. Only 24 (10.4%) were aware of HBV vaccine, whereas 50 (21.6%) were aware of any form of drug management for both infections.

After everything, the knowledge score was found to be good for HIV-105(45.5%) of those who responds. This experiment indicates that while there is a high level of responsiveness and good understanding about HIV, the rate at which it is transferred through the

contamination of barbering and nail cutting instruments, there is however, a poor level of awareness and low understanding of other common infectious diseases such as Hepatitis B and C infections. Almost all those who responds to it (223; 96%) had heard about HIV, whiles a related high number (171; 96.5%) have fair to good understanding about the infection. Most (220;95.2%) knew that sexual contact is the main mode of transmission whiles the contaminated nail cutting and barbering instruments are alternate means of transmission to be known as majority, 75.8 and 74.0%. In a sharp contrast, only 85(36.7%) of the respondents have heard about HBV and HCV infections compared with 223(96.5%) for HI. Knowledge was, there is a poor personal risk perception towards these hepatitis infections.

A study in Egypt contrasts the findings in which a high knowledge of hepatitis infections and how they transmit was found in 80% of the respondents. The means of transmission can cause it in this study. Nail cutting and barbering tools were known to be a means of transmission of infection to 20.3 and 18.6%of the respondents.

One of the signs of HIV that the sampled population considered most was the reduction of weight (214; 92.6%). Only few of the respondents claim that there is a medicine for HIV (12; 5.2%) while (164; 71%) were aware of a curing medicine for HIV. Unlike HIV, where a lot of people were aware of its spread and the mood of transmission, it was revealed that only about 36.8% of the respondents prove to have knowledge and the awareness of HBV and HCB which the sources of their knowledge and awareness were almost the same to that of the HIV friends and relatives (70.6%), radio (55.4%), television (41.1%), and health workers (26.0%). Majority, that is, 57 (24.7%), 54 (23.4%), 47(20.3%), and 43 (18.6%) established that sexual contact, blood transfusion and contaminated nail cutting instruments and barbering instruments were the major transmission agents of the diseases respectively. One of the symptoms or diseases mentioned most was Jaundice representing (28.1%) and (17.3%) of

the people also concluded that these infections may finally result in the cancer of the liver. Only 24 (10.4%) were aware of HBV vaccine, whereas 50 (21.6%)

Overall, the knowledge score was found to be fair for HIV 105 (45.5%) of the sampled population; and poor for HBV and HCV 181 (78.4%) of the people sampled. This research conducted depicted that even though the respondent seems not to have enough knowledge on HBV and HCV, how it is transferred from one person to another and also whether there was available treatment or not. But when it comes to HIV, the respondents showed a high level of knowledge, awareness and the possible available treatment. The findings showed that most of the respondents have knowledge or have heard about HIV (223; 96.5%) whiles the rate of knowledge on the infections prove to lower than the later (171; 74.0%). Most of the respondents showed an awareness of sex being the major agent of transmission, whiles the use of disinfected nail cutting and barbering equipment's were considered another major means of transmission with ratio of 75.8% and 74% respectively. But only a few of the people have insight on HBV and HCV and their infectious ways 85 (36.7%) as against that of HIV 223 (96.5%).

2.5 Attitude towards street nail trimming practices

Lack of proper scrutiny of blood before they are been transferred from one person to another, street nail trimming with disinfected instruments, the use of barbering equipment's without sterilization, the beauty salons among others are the major ways through which HBV, HCV, HIV and other viruses are ben transmitted from one person to another (Mariano A, 2004; W.H.O). Many researchers around the globe have conducted surveys on the use of sharps and other instruments used by the barbering operators, nail trimmers and the beauty industries. Most of these researchers concluded that sharps and shaving instruments used by these people are responsible for most of the virus outbreaks (Khaliq & Smego, 2005; N. Z. Janjua, 2004; She SL, 1988).

In a survey conducted on knowledge, attitude and performance of female barbers in relation to job's environmental health: a case study of Malayer city, the study asserted that Hygiene disregarding and usage of contaminated tools leads to viral infections, fungal, bacterial and skin diseases, eczema, warts, tetanus and so on. Thus, assessment of knowledge, attitudes and performance of barbers in order to ensure the security and public health is really necessary. In this descriptive- analytical study, 75 female barbers sampling of Malayer city were selected by clusters – systematic method where the data were obtained through questionnaires for completion and checklist with data analysis performed using SPSS 21 statistical software. The result showed, 92.28% had positive attitude toward regulations. The study concluded that although there was desirable level of attitude and among other important factors of barbers' female in Malayer city, in order to improve the situation, barbers in order words users of sharps on the public should be well trained and regulated seriously.

In Asia and most countries in the global south, street nail trimming and roadside barbering are not regulated properly, they serve as the path through which viruses and other blood-borne diseases are being transferred from one person to another (Khaliq & Smego, 2005). Moreover, the joint use of sharps and other shaving equipment's are considered highly dangerous for the transmission of HBV in Italy (Mele, et al., 1995) and also considered very risky among people with psychiatric issues in Egypt (Habib, et al., 2001).

In Ghana the majority of barbers operate in the informal sector of the economy and the vast majority of barbers are either illiterate or semiliterate who have not been educated beyond the senior secondary school level of education. More so, there is less information on knowledge regarding the spread of blood-borne pathogens and practices of barbers in Ghana. In an article, the awareness and risk factors associated with barbers in the transmission of HBV and HCV were evaluated.

A survey undertaken in Nigeria supported the fact that about 75% of the sampled people among the target population that were interviewed established that the risk and the possibility disease transfer are very high with the instruments used by these street nail peddlers and the barbering operators. Nevertheless, some were of the opinion that it does have any risk of transmission of diseases and viruses. More so, about 86.6% of the respondents wished to be prevented against HBV whiles 4.8% were people who confirm that they have already been vaccinated against this virus. 64.1 % of the people were those who actually ask whether the equipment's possessed by these have been sterilized and also request to be done before they will allow them to trim and only 28.1 % of the people do not trim if they realize that the equipment's have not been treated with disinfectants.

2.6 Practice of street nail trimming

A survey undertaken in Nigeria realized another problem associated with the practice of nail cutting on the street and the local barbers. Even though some of the people understudied (64%) were very conscious of the implication of the use of disinfected instruments which compel them to ask of sterilization before using their services. Another survey conducted in Pakistan also showed a positive correlation where 60.5% reported that they always ask if instruments have been disinfected before they use their services. Nevertheless, the rate at which people confirm as to whether the instruments have been clean being not the only situation but also a number of people also refuse to trim their nails and hairs whenever they realize that the equipment's are not clean or disinfected. The refusal rate of 43% as seen in the survey from Nagpur, India. But only 9% 0f the respondents were those who normally go to the trimmers with their own instruments for trimming.

It quit surprising these days that young and energetic men who could engage in agriculture and other commercial activities are now on the street trimming finger and toe nails with all kinds of instruments in Ghana. But the situation is that a lot of them in the country are now

developing interest in the services of these street trimmers. Persons who are enjoying the services of these are to be prompted since discharge of these practices could result in the risk transmission of infectious blood-borne diseases.

These guys who are in the practice trimming often use sharp equipment's which could be on more than one person a day without any proper maintenance or disinfectants. They claim they have been using soapy water as disinfectants but as to whether this soapy water can really kill viruses is the problem. Furthermore, these young men do have any accreditation or permit from authorities to indicate that they can actually go to the street to trim or whether the so-called disinfectant has been approved by the food and drug authority. It is absolutely true that what they do gives then the opportunity to earn a living, but they cannot do that to the disadvantage of Ghanaians or to put the health of Ghanaians at risk. There is no doubt that one of the ways through which an individual can be affected by HIV and other blood-borne disease is through the common or joint use of sharps.

Research has shown that, one of the major means through which one can contract HBV, HCV and HIV is through the sharing of sharps (Kordi & Wallace, 2004). In an attempt to clean the finger and the toenails or removing of cuticles, sometimes one may experience a cut and if such instruments or equipment's are not disinfected properly, could lead to the transmission of HBV, HCV and HIV when used on another person (Oliveira & Focaccia, 2010). Furthermore, the rate at which non tuberculosis mycobacterial diseases are increasing is very alarming.

Currently, the rate at which Mycobacterium fortuitism is increasing and other mycobacteria have been identified as causing skin and soft-tissue infections as a result of nail saloon whirlpool. Taking into consideration how many minutes or hours it would take someone to trim his or her own nails estimated 15-20 minutes. Therefore, if an individual recognizes this

time as too long, then what happens when it comes to pedicure and Medicare. However, the saloons cannot be considered as the safer place but it could be better than the street nail trimming. (Oliveira & Focaccia, 2010).

So many factors are contributing to the reasons why pathogens become resistance and changes in form all the time. Practice that may stand against or kill a pathogen today may not be able to kill that same pathogen tomorrow. But as the whether the soapy water these men are using as a disinfectant can be effective another day no one knows. Critically analyzing these issues from this perspective is a clear and alarming indication that Africa, Ghana and the entire Bono East region is swatting on a Bomb of high prevalence of Blood and skin born disease.

Recently, the Science Daily of the American College of Gastroenterology's 76th Annual Scientific meeting in Washington, DC reported the need for studies to be conducted on the risk of hepatitis transmission through non-single use instruments such as hair trimmers, nail files, scissors, and razor blades among others. According to the World Health Organization, health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Hygiene refers to practices associated with ensuring good health and cleanliness.

Mutocheluh, M., & Kwarteng, K. (2015) studied the knowledge and risk factors associated with barbers' occupation in the transmission of hepatitis B virus (HBV) and hepatitis C virus (HCV) in a randomized cross-sectional survey of 200 barbershops was conducted in Kumasi between January and August 2013. Barbershops, which operated continuously for more than 8 months, were selected for the study. Structured questionnaires were administered to the study participants. Data was entered and analyzed in Microsoft Excel spread sheet and SPSS v12. The percentage value of each question was calculated. They concluded that all the

barbers involved in this study used a new razor blade on every client and claimed to sterilize the hair trimmers after use on every client. The methods of sterilization; 46.5% of the barbers used the ultraviolet radiation sterilizer cabinet, 29% used 70% alcohol and 23% used antiseptic solutions

In the cross-sectional survey conducted in the South-Western part of Ethiopia by Legesse et al, (20020), the checklist used for the observation depict that most of the traditional nail trimmers and the saloon operators do not sterilize their equipment but they claimed to be using disinfectants to clean germs and other viruses on their sharps after serving each customer.

Again, in the cross-sectional survey conducted by Khandait et al, 2004 in India, it depicted that 81% of the people were selected at a random from the street and the saloons and most of the operators, especially those who are on the street trimming were practicing the single use of razor blades from one person to another without any disinfectants. Further sectional analysis was conducted epidemiologically by Zahraoni Mehadji et al, 2001, which also correlated positively the risk factors associate with the transfer of infections through blood transfusion.

In thenationonlineng.net Sunday magazine News Update (December 9, 2018) Chima Azubuike calls attention to some risky habits that may yet be jeopardizing the success achieved in the fight against HIV. He remarked that, it is important to be wary of some risky practices, one of which is patronizing local nail cutters popularly referred to as 'Mai yankamparichi'. These nail cutters, most of whom are from the northern part of the country, hawk their trade from street to street, market to market, cutting nails for a token fee. According to him, there are also the local barbers, who move about with their soap and scissors of all shapes and razors, offering brisk service and making quick money.

According to Chima Azubuike, those who patronize these 'professionals,' one major advantage of is that they bring out the beauty of your fingers and toe nails, giving them neat shape. They also claim that the local barbers do neater jobs to their scalps.

These local nail-cutters and hawkers go about neighborhoods, constantly making specific sounds with their scissors, which are easily recognized by their customers.

The reporter to this news update moved from the spare parts market in Ladipo, Mushin to the popular Agege Railway market, sampling the views of market men and women on whether they were aware of the theme of this year's HIV celebration, and why they patronize local nail-cutters and barbers, in spite of the risk of HIV/AIDS, hepatitis and other such diseases.

Notably, many of those spoken to claimed they are not interested in knowing their status, as this will heighten their fears. Some however claimed it will be a delight to know their status, since it will help them live a healthy life.

The report added that a young man, Yusuf, in Agege, was quick to say that he enjoys the service of the nail-cutters, as it brings out the aesthetic of his nails, while Okechukwu in Mushin noted that he oftentimes calls for their services, as it saves him the time of looking for blade to cut his nail. "All I need do is beckon on them to do what they like doing best."

Another man was quick to say he enjoys their services. When asked how safe the service is, he claimed that he insists on them burning the scissors, usually with fire from a cigarette lighter.

He however agreed that it takes one that is knowledgeable to insist on such safe measures.

He admits that most of the nail cutters are always in hurry to render service and move on to another customer, without bothering about safety measures.

Although the chunk of the 'Mai yankampari' are northerners, their clientele or customers cut across all tribes and gender.

The writer of this news concluded that other people who are susceptible to health risks are women who patronize pedicure/manicure shops. Although they have argued against being major distributors of the virus, going by their chastity and faithfulness to their spouse, the fact remains that engaging in the practice still poses a great risk.

2.7 Correlates of street nail trimming

2.7.1 Perception on heallth risks associated with street nail trimming

In a cross-sectional descriptive study conducted where interviewer-administered questionnaires were administered to 231 market men in Samaru, Zaria and data collected was coded and analyzed with IBM SPSS 20.0, Abubakar, A. & Shehu, A. U. et al (2017) asserted that several health hazards including infectious blood-borne communicable diseases and skin conditions are associated with traditional nail cutting and barbering. Negligence and accidents during the use of sharp instruments such as nail cutters, razors, shaving blades and clippers may be risk factors for blood-borne infections such as Hepatitis B virus (HBV), Hepatitis C virus (HCV) and Human Immune-deficiency Virus (HIV), causing serious health problems. The Results of the study indicated that of 231 sampled men, 223 (96.5%) were aware of HIV infection and mentioned sexual contact as its main mode of transmission. Similarly, 220 (95.2%) knew HIV could also be transmitted through contaminated barbering and nail cutting instruments. Majority 146 (63.2%) had no knowledge of HBV and HCV infections and did not know there are health hazards associated with nail cutting and barbing. Most 196 (84.8%) think barbers and nail cutters should sterilize their instruments. Personal risk perception and knowledge scores were majorly fair for HIV (45.5%) and poor for HBV and HCV (78.4%). The study concluded that Knowledge of market men in Samaru-Zaria about HIV was found to be higher than that of HBV and HCV infections. They have poor

knowledge about HBV and HCV and their transmission. Majority have good perceptions and fair practices towards health hazards associated with barbering and nail cutting. Health authorities must carry out more health education and sensitization on HBV and HCV among market men (traders).

Considering the rate of knowledge on hepatitis, it clearly shows that the perceived risk of infection is very minimal among the people. This conclusion has an inverse correlation to that of the research conducted in Egypt where the people's insight on hepatitis infections and how it is transferred from one person to another was very high (80%). In the study, 25% of the sampled population considered sexual contact as the way of contracting HBV and HCV. 23% of the respondents also considered blood transfusion as a way contracting the disease and 18.6% of the respondents' claim that disinfected nail cutting and barbering instruments were the agent of transmission of the disease respectively.

More so, jaundice and abdominal pains that occurs at the upper right arm were suggested by the respondents as the symptoms of those are affected by hepatitis in the ratio 28:25 respectively, whilst 21.6% were people who think that there is an availability of vaccine or treatment for them. This depict that those who were having knowledge on the diseases and their symptoms are very few. However, this conclusion of lack of knowledge on the diseases and their symptoms are almost consistent with the surveys conducted in Egypt (23%) and Pakistan (21%). Those who responded that there are vaccines for HIV recorded only 10.4% as compared to the research in Egypt which indicated 40% and a few who supported that there is vaccine for HIV (5.2%)

These outcomes from the various surveys all support the fact that, the rate at which HBV and HCV are spreading in the developing countries are due to the fact that most people in this

country do not have good perception on some of the sources of spread of the diseases, hence could contribute to the rapid spread.

Another cross-sectional survey conducted by Khandait et al, 2004 in India depicted that 81% of the people who were selected at random from the street and the saloons were not having any idea or knowledge as how HIV can be transmitted from one person to the other through the use of sharps hence low perception on possible diseases through the sharing of sharps objects.

According to Rahman, M. O., & Safwath, S. A. (2020). In a study to assess Knowledge, Attitude and Practice about Hepatitis B, Hepatitis C and Human Immunodeficiency Virus among Barbers of Sylhet, Bangladesh where Statistical analysis was done using SPSS 20 version, the results indicated that a total 403 barbers, age from 14 years to 69 years (mean 27.11) were interviewed. In this group 232 (57.6%) had education illiterate to class five level. Among them 245 (60.3%) had income below 10 thousand per month. Blood transfusion could transmit HBV, HCV and HIV was known to be 136 (33.7%), 129 (32.00%) and 247 (61.30%), contaminated syringe sharing could transmit HBV, HCV and HIV respectively was known to 131 (32.5%), 127 (31.50%) and 278 (69.0%) barbers, unsafe sex could transmit HBV, HCV and HIV was known to 166 (41.2%), 158(39.2%) and 317 (78.70%) barbers respectively and Contaminated shaving instruments could transmit HBV, HCV and HIV was known to 101 (25.1%), 96 (23.8%) and 156 (38.7%) barbers respectively. In this series 84 (20.84%) barbers answered correctly. These answers differed significantly within different level of education. Their knowledge of sterilization of shaving instruments was poor. The study concluded that, Knowledge of barbers regarding transmission of HBV, HCV and HIV and sterilization of shaving instruments are inadequate. Institutional education and structured professional training may improve their services and decrease transmission. Educational level; The majority of barbers (63%) had education up to the junior secondary school level. None of

the barbers used a new apron nor washed their hands after work on each client. There is little knowledge about the routes of transmission of blood borne viral hepatitis among barbers in Ghana and the vast majority of them do not know the purpose of sterilizing their instruments. Awareness of barbers about HBV/HCV and job-related factors contributing to spread of infections was very poor for the vast majority of the barbers studied.

2.8 Health Belief Model

The health belief model (HBM) is a social psychological health behavior change model developed to understand and predict health-related behaviours, especially regarding the uptake of health services. The HBM was developed by social psychologists at the U.S. public health service in the 1950s and remains one of the theories of health behaviour research that is best known and most commonly used. The HBM indicates that the perceptions of people about health issues, perceived advantages of action and obstacles to action, and self-efficacy clarify dedication to health-promoting activities (or lack of engagement). To activate health-promoting behaviour, a signal or cue to action must also be present.

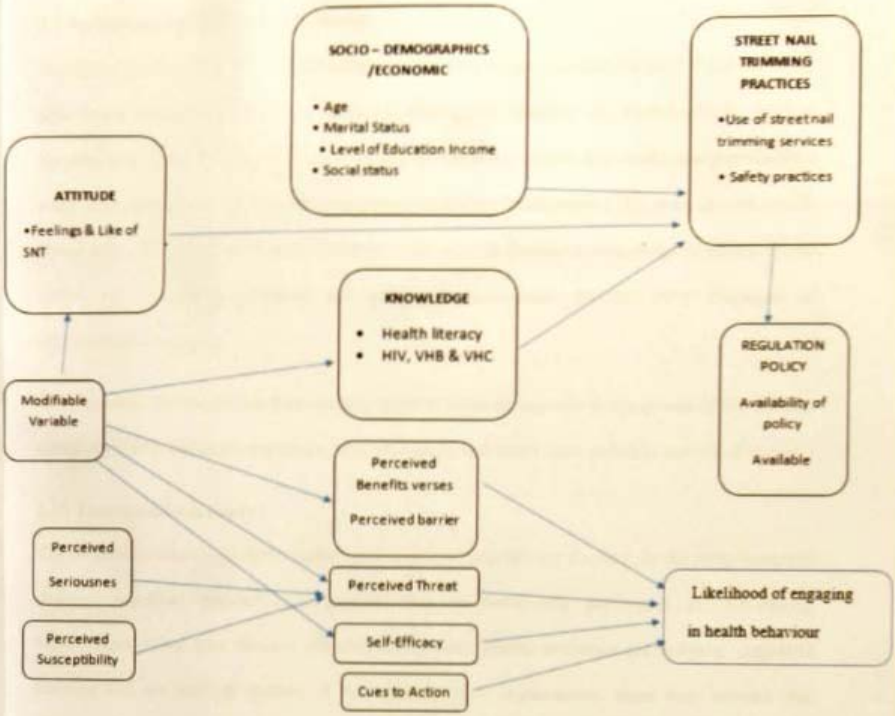

Figure 2. 1 Health Belief Model and nail trimming

2.9 Background of Health Belief Model

The HBM is one of the first health behaviour theories. It was founded by the US public health department clinical psychologists Irwin M. Rosenstock, Godfrey M. Hochbaum, S. Stephen Kegeles, and Howard Leventhal in the 1950s. At the time, experts and healthcare professionals were concerned because few people were being tested for tuberculosis (TB), even though mobile X-ray cars went to neighborhoods. HBM has been used to forecast a wide range of health-related habits, such as being screened and getting immunizations for the early diagnosis of asymptomatic diseases.

More recently, the model has been used to explain patients' response to symptoms of the disease, compliance with treatment regimens, lifestyle habits, and behaviours linked to chronic diseases.

2.10 Theoretical constructs

The theoretical models of HBM derive from cognitive psychology theories. In the early twentieth century, cognitive psychologists claimed that reinforcements performed by influencing expectations rather than directly affecting behaviour. Mental processes are extreme, cognitive theories that are used as models of the importance of expectations, since they indicate that behavior is a function of the degree to which people value the outcome and their estimation of the expectation that any action will lead to that outcome. The benefit in terms of health-related practices is to prevent illness. The expectation is that any action in the health sector will prevent people from thinking that they could be at risk. The following HBM constructs are suggested to differ between individuals and to predict participation in health-related behaviours.

2.11 Perceived susceptibility

Perceived susceptibility relates to a subjective assessment of the likelihood of having a health problem. HBM predicts that individuals who perceive that they are vulnerable to a specific health condition will participate in risk-reduction behaviours. Individuals who think they are at low risk of contracting a disease are more likely to indulge in habits that are harmful or dangerous. Individuals who perceive a high risk that a specific health issue will directly affect them are more likely to participate in activities to reduce their risk of contracting the disorder.

The combination of perceived severity and perceived susceptibility is known as a perceived threat. The perceived severity and susceptibility to the disease depends on the knowledge of the condition. The HBM suggests that a higher perceived threat leads to a higher probability of participation in health-promoting behaviours. Perceive susceptibility will be used in this study to assess how the individuals who practice street nail trimming think that they can easily contract diseases such HIV, HBV and HCV through the use of sharps by these trimming peddlers or whether the individual think that there is no or little chance of contracting these diseases as compared with the benefits associated with the nail trimming as a way of ensuring personal hygiene. How the individual thinks or feel about contracting these diseases and the associated benefits largely depends on the knowledge, attitudes, belief and practices associated with the nail trimming.

2.12 Perceived severity

Perceived severity refers to the subjective evaluation of a health problem's severity and its possible effects. HBM indicates that people who consider a given health condition as severe are more likely to participate in activities to avoid the occurrence of the health problem (or reduce its severity). Perceived severity involves assumptions about the disease itself (e.g., whether it is life-

threatening or can cause disability or pain) as well as wider effects on the functioning of the disease in work and social roles.

For example, a person may perceive that influenza is not medically dangerous, but if he or she perceives that, as a result of being away from work for many days, there may be serious financial implications, then he or she may perceive influenza to be an especially serious illness. Perceive severity will assess in this study how the individuals who patronize street nail trimming sees or considers the health effects associated with the practice, thus, whether the probable diseases that could be contracted from the act could seriously impact negatively on their health as compared to the benefits associated with trimming of the nails. These health and benefit concerns will largely depend on how knowledgeable the individuals are with regards to the practice and its effect, their beliefs, attitudes among other associated practices.

2.13 Perceived benefits

The perceived benefits of taking action are often affected by health-related behaviour. Perceived advantages refer to the evaluation by a person of the benefit or effectiveness of participating in health-promoting actions to reduce the risk of disease. If a person assumes that a particular action can minimize vulnerability to a health condition or decrease its severity, then he or she is likely to participate in that activity regardless of empirical evidence about the efficacy of the action. Perceive benefits will assess how the study population evaluate or see whether the benefits attributable to the practice of street nail trimming is more than the risk of contracting the above-mentioned diseases (HIV, HBV, HCV). Because if the individual thinks that the benefits outweigh the risk, the patronage would be more hence leading to the call of more trimming peddlers. "All things being equal" when the demand is high, the supply will also be high.

2.14 Perceived barriers

Health-related perceptions are often a result of perceived barriers to taking action. Perceived barriers apply to the evaluation by a person of the barriers to behavior change. Even if a person perceives a health condition as threatening and believes that the danger can be effectively reduced by a specific action, obstacles can discourage participation in health-promoting actions. In other words, in order for behavior change to occur, the perceived advantages must outweigh the perceived obstacles. The perceived obstacles to action include the perceived inconvenience, cost, risk (e.g., side effects of a medical procedure) and discomfort (e.g., pain, emotional anger) involved in participating in a medical procedure.

For example, the lack of access to affordable health care and the fear that a flu vaccine would cause serious pain could act as a barrier to obtaining a flu vaccine. Perceived obstacles, such as fear of cancer, shame, fatalistic perceptions of cancer and language, have been shown to hinder screening in a study on breast and cervical cancer screening among Hispanic females. In this study perceive barrier construct would be used to assess whether some challenges prevent the individuals from trimming their nails despite the benefits that may be attributable to it especially those who believe that the benefits associated with street nail trimming outweighs the risk or the danger involve.

2.15 Modifying variables

Individual characteristics can influence perceptions (i.e., perceived severity, susceptibility, advantages, and barriers) of health-related activities, including demographics, psychosocial and structural variables. Among others, demographic variables include age, sex, race, ethnicity, and education. Psychosocial factors include personality, social status, and, among others, peer and comparison group strain. Among other factors, structural variables include information about a

particular disease or procedure and previous experience with the disease. The HBM indicates that by influencing perceived severity, susceptibility, advantages, and obstacles, changing variables indirectly influence health-related behaviours. The study will establish whether modifying variables are having direct or indirect influence on street nail trimming in the study area.

2.16 Cues to action

The HBM claims that a signal or stimulus is important to promote participation in health-promoting behaviours. The acts may be internal or external. Physiological cues (e.g., pain, symptoms) are examples of internal signs of action. External signals include activities or information from people nearby, the media or health care services that encourage involvement in health-related behaviours. A reminder postcard from a dentist, the sickness of a friend or family member, and product health warning labels are examples of cues to action.

The strength of indications required for prompt action differs by perceived susceptibility, severity, advantages, and barriers between individuals. For instance, after seeing a public service announcement, people who believe they are at high risk for a serious disease and who have an existing relationship with a primary care doctor may be easily convinced to get tested for the disease, while people who believe they are at low risk for the same disease and also do not have reliable access to health care may require more intense

2.17 Self-efficacy

The four HBM components (i.e., perceived, severity, benefits and barriers) were added in 1988 to their self-efficacy. Self-efficacy is a belief by a person of his or her ability to perform an action successfully. In order to help illustrate variations in individual health behaviours, self-

efficiency has been applied to the HBM. Initially, the model was developed to explain engagement in one-time health-related activities such as cancer screening or getting an immunization. The HBM was eventually used to change long-term habits more significantly, including diet changes, exercise and smoking. Model developers recognized that confidence in one's ability to improve outcomes (i.e., self-efficacy) is a key element of change in health behaviour. For instance, Schmiege et al. also found that self-efficiency was a more powerful predictor of potential negative health outcomes in terms of calcium intake and weight-bearing exercises. Rosenstock et al. argued that without elaboration of the model's theoretical framework, self-efficacy may be applied to the other HBM constructs. This was, however, considered short-sighted since related research suggested that, as a result of their impact on perceived influence and purpose, main HBM constructs have indirect effects on actions, which could be considered more proximal factors of action.

2.18 Empirical support

The HBM has gained considerable empirical support since its production in the 1950s. It remains one of the most commonly used and well-tested models for health-related behavior explanation and prediction. An analysis of 18 prospective and 28 retrospective studies in 1984 indicates that there is good support for each component of the HBM. The analysis notes that, considering the diverse demographics, health conditions, and health-related behaviors studied and the different research designs and evaluation methods used to test the model, empirical support for the HBM is particularly notable.

A more recent meta-analysis has found good support for perceived health-related behavioral advantages and perceived obstacles, but poor evidence for the predictive power of perceived severity and perceived vulnerability. The authors of the meta-analysis propose that it is justified

to analyze possible moderate and mediated relationships between model components. From the perspective of many studies, empirical support has been given. The model was used by Becker et al. to predict and describe the commitment of a mother to a diet prescribed for their obese kids. Cerkoney et al. interviewed diabetic individuals treated with insulin during diabetic classes at a community hospital. It empirically tested the HBM's association with the compliance levels of persons chronically illness.

By targeting different aspects of the core constructs of the model, the HBM has been used to develop successful approaches to improve health-related behaviours. HBM-based strategies can seek to increase perceived susceptibility to and perceived seriousness of a health condition by providing information on disease prevalence and incidence, individualized risk estimates, and the implications of disease information (e.g., medical, financial, and social consequences). Interventions can also seek to alter the cost-benefit analysis of engaging in health-promoting behaviours (i.e., increasing perceived benefits and reducing perceived barriers) by providing information on the efficacy of various behaviours in reducing disease risk, identifying common perceived barriers, providing incentives to participate in health-promoting behaviors, and providing social support or participation. In addition, HBM-based strategies can include guidance for action to remind and encourage people to participate in behaviours that promote health. Interventions can also seek to improve self-efficacy by offering training in specific behaviours that promote health, especially for complex changes in lifestyles (e.g., changing diet or physical activity, adhering to a complicated medication regimen). Interventions may be targeted at the person level (i.e., working one-on-one with people to improve involvement in activities related to health) or at the social level (e.g., through legislation, changes to the physical environment).

2.19 Applications of the HBM in Street Nail trimming Behaviors

This conceptual framework is supported by the health belief model. Thus, the readiness for people to take action is based on the influence of whether or not they are at risk to contract diseases or health problems and their perception of benefit of taking actions to avoid it according to the health model. Applying the health belief model in the explaining of framework of the practices of street nail trimming,

The constructs of the health belief model infer that for individuals to practice a behavior such individuals first perceive how susceptible they are to such disease consequences of a particular behavior. In the case of street nail trimming individuals if perceive that they susceptible to any infectious disease through street nail trimming are more likely not to engage the services of street nail trimmer nor render such services. And when they understanding the depth of the risk and the seriousness of possible public health risk associated with the practice of SNT and the various complications of such possible diseases (perceived severity) there are less likely to take up practice of SNT and on the other would engage in street nail trimming if they do not perceive any risk associated to that Also with positive message that come from their surroundings (cues to action) , for example, if individuals are educated on the possible infections of SNT if employs the use of single sharp objects in ST , they are more likely to stop the practice of SNT , believing in the usefulness and applicability of preventive behaviors (perceived benefits):if individuals probably through cues to action see the benefits of being safe from possible infections through SNT are less likely to engage in SNT. However, if there are many challenges to the practice of the desired behavior individuals are less likely to engage in the desired behavior (perceived barriers) and if individuals feel they are able to perform actions a desired behavior (self-efficacy), for instance if they can demand for the use of safe or sterile instruments

on the then they are more likely to insist for safety protocol to be observed before patronizing of SNT services

Modifiable factors: Socio-demographic characteristics such as age and income situations will largely influence certain behaviors and such person may patronize street nail trimming practices. For instance, a District Director of public service is less likely to sit by the way side to use unsterile sharp objects for nail trimming. Individuals with low social statuses are more likely to sit by the roadside and have their nails trimmed by same untreated used- shape objects. Individual's social status affect the kind of public services they use. Persons who are not health literate may not be able to read and interpret literature on health damaging behaviors and their respective health outcomes hence are more likely to patronize street nail trimming services. Such individuals' health belief of pathogens and disease transmission might also be limited and are more likely to patronize street nail trimming which may come with its attendant health risk. For attitudes, individuals' like or dislike are mostly influenced by factors including age, sex, marital statuses and among others educational statuses and their attitudes intend influence their practices.

2.20 Limitations of the HBM

By accounting for individual variations in beliefs and attitudes, the HBM aims to predict health-related behaviors. Nevertheless, it does not account for other factors that affect health habits. Regular health-related habits (e.g., smoking, seatbelt buckling) may become relatively independent of deliberate decision-making processes related to health, for example. In addition, for reasons unrelated to health, people participate in certain health-related habits (e.g., exercising for aesthetic reasons). Environmental variables beyond the control of a person can prevent participation in desirable behaviors. For instance, because of safety issues, a person living in an unsafe neighborhood could be unable to go for a jog outdoors. In addition, the effect of emotions

on health-related actions is not recognized by the HBM. Evidence indicates that fear can be a key factor in the prediction of actions associated with health.

Health behavior may be predicted by alternative variables, such as outcome expectation (i.e., whether the individual believes they will be healthier as a result of their behavior) and self-efficacy (i.e. the confidence of the person in their ability to conduct preventive behavior). Widely described are the theoretical structures that constitute the HBM. In addition, the HBM does not define how the model's constructs communicate with each other. Therefore, the distinct operationalization of the theoretical constructs across studies may not be strictly comparable. There is minimal research examining the contribution of signals to action in predicting health-related behaviors. It is also difficult to determine the references to action, limiting research in this area. For example, individuals could not correctly record signs that caused a change in behavior. Cues such as a television or billboard public service announcement may be brief and individuals may not be aware of their importance in encouraging them to participate in an activity related to health. It is also especially difficult to quantify interpersonal effects as cues. By introducing four more variables, scholars expand the HBM (self-identity, perceived importance, consideration of future consequences and concern for appearance as possible determinants of healthy behavior). They prove that consideration of future consequences, self-identity, concern for appearance, perceived importance, self-efficacy, perceived susceptibility are significant determinants of healthy eating behavior that can be manipulated by healthy eating intervention design.

CHAPTER THREE

METHODS

3.0 Study Design

A cross sectional approach was adopted in this study, which employed both a qualitative and quantitative approach of data collection.

3.1 Study Area

This study was carried on in the Techiman Municipality of the newly created Bono East Region. It was specifically studied in areas where market activities are paramount. The areas were chosen for the study because, they were considered to be the most likely areas where these trimming peddlers concentrate their market due to its overcrowded nature. Because this market is considered the largest growing market in Ghana, many people and for that matter these foreigners who normally intrude the country with this art of trimming settle there to do business.

Many commercial activities which include trading, services, manufacturing among others are always successful in this part of the region which attracts many people from different countries and other regions to do business here in Techiman. According to the 2010 head count of people and houses, the projections estimated that in 2019, the total number of people in the Techiman was 182, 810 which female population stood at 51.5%. According to same Ghana Statistical Service (GSS), the Techiman Municipality was considered to have the highest density in terms of population with 318 per square kilometers at an annual increasing rate of 2.3% in Bono East Region. In terms of urbanization, the Municipality, Techiman is considered the second most with an urbanization rate of 55.7% in the region.

The rate at which people always move in and out of the municipal is very high as compared to other regions or municipalities. this rate at which people move in and out of this part of the country could be as a result of its rich location, close or center of the country, rich natural resources and above all the abundance of agricultural produce. Techiman is one of the popular and well known by most people due its attributable characteristic such as availability of numerous labor force, the largest producer of agriculture yield bringing in over three thousand traders thrice in a week. Also, the rate at which people enter the country is very high estimating about 20% which brings about lower labor rate in the in the area.

Source: Ghana Statistical Service, GIS

Figure 3. 1 Map of Techiman Municipal

3.2 Study Population

This comprise of market men and women in the Techiman Municipality.

Source population: this included traders both men and women who buy and sell or transact business in the central market and other market centers in the Municipality normally referred to us the Central Business area.

3.3 Inclusion Criteria

1. Men and women age 15 years and above who transact or do business in the zones of the Techiman central business area at their business sites

2. Men and women traders who were at their business sites at the time of the study in the zones of the Techiman central business area

3. Men and women traders in the zones of the Techiman Central Business area who give consent for the study.

3.4 Exclusion Criteria

Market men and women who were in their shops but reported to be unwell at the time of the study. This is to prevent putting more stress on them through questioning.

3.5 Study Variables

In this study, the dependent variable is the practice of street nail trimming which will be assign with a feedback of Likert scale of Strongly Disagree, strongly agree (SA, agree (A), Strongly Disagree (SD), Disagree(D), Neutral(N). The independent variable on the other hand are the demographic characteristics such as the age, income, religion, profession, marital status, years of work etc. knowledge on health risk involved in the practice of street nail trimming will also

assess infectious diseases such as HIV, HBV and HCV, their signs, symptoms and the associated risk factors. Attitude will also assess how vulnerable the individuals are to the risk, the individual's welfare or the benefits associated with the practice, how the individuals assess the obstacles associated with the enjoyment of the practice and also the effectiveness of the people towards the practice

Table 1: Variables, data collection strategy and sources

Variable	Most appropriate source	Data Collection strategy
Socio-demographics	Users of street nail trimming	Structured questionnaire
knowledge of health risk associated with street nail trimming (infectious diseases: HIV, HBV and HC)	Users of street nail trimming	Structured questionnaire
Attitude and Correlates (Factors) Health belief: 1. Perceived susceptibility, 2.Perceived benefits, 3. Perceived barriers and self-efficacy which will also bring to bear (Correlates) Factors of street nail trimming will be collected.	Users of street nail trimming practices Eight users of street nail trimming practices	Structured questionnaire Focus group
Patronage of street nail trimming services and safety practices	Users of street nail trimming practices	Structured questionnaire
Safety Practices	a. Peddlers of street nail trimming b. Peddlers of street nail trimming	a. Observational Checklist b. Interview guide

3.6 Sample Size and Power

Assumptions: 1) the sample size and power calculations are based on the test of the primary hypothesis that there will be no difference in the use of street nail trimming between men and women; 2). There are no previous published studies that have clearly investigated the epidemiology of street nail trimming. However, there are studies that have reported on the

epidemiology of the use of hair salons, including barbering shops. Based on these studies, the assumed prevalence of use of street nail trimming services is 35% among women and 50% among men. Applying the STATA formula: **Power two proportions 0.35, 0.50, test (chi2) power (0.80) alpha (0.05)**

With these assumptions, 340 participants were needed to be recruited to detect a prevalence difference of 15% with 80% power and 5% significance for the primary hypothesis. With this sample size, and assuming a 10% refusal rate, 374 adults were targeted for inclusion in the study.

3.7 Sampling Method

3.7.1 Quantitative Sampling approach

A multi-stage **sampling** approach was used. The various catchment areas that were considered were named accordingly. Applying an appropriate sampling technique, the people needed for the study from the various market Centre's as stated were successfully attained. The study also drew support from community stakeholders including assemblymen and volunteer. Systematic random sampling which considers every third chop in a row of respondent from each shop was done of which each of a questionnaire was administered on. Eight street nail trimmers (peddlers of nail trimming) were selected using convenience sampling technique and an observational check list was used to collect data from the individuals that were included in the observation were observed whilst they practiced the nail trimming.

3.7.2 Qualitative approach

An in-depth interview was done to solicit data on the safety practices, experience, and practices of street nail trimming. Again, there was a focused group discussion with eight selected market men and women who normally benefit from the services of these street nail trimmers or the

peddlers. The recordings were transcribed and analyzed and discussed alongside the quantitative where both quantitative and qualitative were measuring the same objective.

3.8 Data Collection Method and Tools

Quantitative tools: Structured questionnaire and an observational check list were employed. With assistance from someone who explained and interpreted the information on the questionnaire to the respondents understanding. The questionnaire captured information relating to the respondents' demographic characteristics, their patronage of the trimming services, the concern towards their safety practices, as to whether they have any knowledge concerning the risk involve in that street nail trimming they enjoy in relation to the possible infectious diseases such as HIV, HBV, and HCV, symptoms among others. Their attitudes and perceptions were also being assessed considering the Health Belief Model (perceived susceptibility, perceived benefits, perceived barriers and self-efficacy) and other factors (correlates) towards street nail trimming was also be looked at.

Qualitative tools: Eight respondents among the street nail peddlers were observed while on the job using the non-participant's observational technique and observational check list was used. This was backed up by an in-depth interview on those three respondents. The tools that aided the collection of these data included observational check list, interview guide and focused group discussion. The observational check list would be used on the selected street nail peddlers' whiles on the job. The interview guide and other tools such as recorder and note pad were used for the interview and lastly the focused group discussion **was also conducted** using the focus group guide, note pad and a recorder.

3.9 Training of Field Workers

Five field assistants of whom four were Physician Assistants one public health officer were engaged to assist in the administration of the questionnaires. They helped in the administration of the questionnaires only. They were trained intensively for one week prior to data collection on the proper collection of the data and interview techniques, as well as on the ethical guidelines.

3.10 Quality Control

Quality control of this study was ensured via:

Pre-test: The attached questionnaire, observational checklist, interview guide and focus group discussion guide were pre-tested among salespersons at shops prior to final administration to the participants. Ambiguity pre-verification was considered.

Editing completed questionnaires: Errors and inconsistencies that aroused during pre-testing were corrected before the actual study was done.

Data transcription: The data obtained from the conducted interviews were transcribed on the same day.

3.11 Data Processing

At the end of every data collection day, questionnaires were examined for completeness. The principal investigator called participants to fill any gap on the questionnaires.

3.12 Data Analysis

Data collected was analyzed using STATA version 15.0. Statistical tests such as Chi- square tests was run to assess associations between some variables and also **logistic regression was performed to predict the probability of occurrence of the outcome variable. Thematic analysis of qualitative data was done.**

3.13 Ethical Consideration

Ethical clearance was sought from the Ghana Health Service Ethical Review Board with **reference number (GHS-ERC053/11/19)**. A letter of introduction was obtained from the University before going to the field. Permission was sought from the Techiman Municipal **Assembly**. Permission to carry out the study was obtained from the Techiman Municipal and from the Assembly members of the zones involved before the study was commenced in the facilities. The purpose of the study was explained to each participant after which they were presented with an informed consent form. **Informed assent was obtained from participants less than 18 years**. A participant was enrolled only after they agreed to the terms stipulated on the informed consent form.

The confidentiality of the respondents concerning the information they provided was assured. The participants were made aware before the questioning began of their right to exit the study anytime, they felt uncomfortable with how the study or questions involved were proceeding. Interviewing of participants was done at locations where others did not overhear them so that everything said would remain confidential between the researcher and the particular participant. That also prevented contamination of the data and reduced socially desirable answer.

Participants' identifiable information **was** kept to the minimum and is only be visible to the principal investigator after the data collection process. Data will be kept under lock and key once obtained to prevent unauthorized people from getting access to it. The dataset **was** stripped of all identifying information, stored on a compact disc, and submitted to the School of Public Health's Department of Social Behavioral Sciences.

CHAPTER FOUR

RESULTS

4.0 Introduction

Data collected from the questionnaires were analyzed with respect to the research objectives. The analyzed data was presented, described and interpreted in this section. This included the socio-demographic information of the respondents as well as the main issues of the study and results of hypothesis tested. The socio-demographic information of the respondents was expressed statistically **as frequencies and percentage**. The information included age and gender distribution, level of education, marital status and religion. Data on the main issue which pertains to assessing the prevalence of street nail trimming, Knowledge of perceived health risks associated with street nail trimming, was also presented in this chapter, Attitudes regarding street nail trimming among traders and nail trimming peddlers, Safety practices of street nail trimming among traders and nail trimming peddlers and determinants (correlates) of street nail trimming among nail.

4.1 Socio-demographic characteristics

Majority (27%) of the respondents interviewed were between the ages of 31 to 40. Males formed the majority (54.81%) of the respondents interviewed. For educational status, majority (37.97%) of respondents had at least attained JHS/Middle school certificate, and only 13% had no formal education. Most (55.61%) of the respondents interviewed were married. Christians emerged as majority (62.03%) in terms of respondent's religious affiliation with a little above 3.0% being traditional.

Table 4.1: Socio-demographic characteristics of respondents

Variable	Frequency (n=374)	Percent (%)
Age		
15 – 20	45	12.0
21 – 30	81	21.7
31 – 40	101	27.0
41 – 50	90	24.1
51 – 60	57	15.2
Sex		
Male	205	54.81
Female	169	45.19
Educational level		
No formal education	52	13.9
Primary	70	18.72
JHS/Middle School	142	37.97
SHS/Technical/Vocational	73	19.52
Tertiary	37	9.89
Marital status		
Single	133	35.56
Married	208	55.61
Divorced	16.428	4.28
Widowed	17	4.55
Religion		
Christian	232	62.03
Muslim	130	34.76
Traditionalist	12	3.21

4.2 The prevalence of street nail trimming among traders in Techiman Municipality

The results from the study revealed prevalence of 69.3% of street nail trimming among traders in Techiman **(95% CI: 64.4% - 73.7%).**

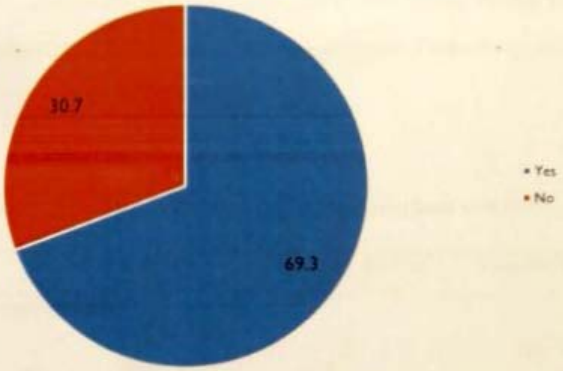

Figure 4.1: prevalence of street nail trimming among traders in Techiman Municipality

This study hypothesized that there is no statistical difference in the use of street nail trimming between men and women. The data indeed revealed that there is no significant difference in the proportions of males and female who practiced street nail trimming [68.8% for males and 69.8% for females, p=0.586]

4.3 Knowledge of perceived health risks associated with street nail trimming among traders and nail trimming peddlers in Techiman Municipality.

The results from the study showed that, majority (98.4%) of the respondents knew of street nail trimming. Additionally, majority (82.35%) perceived that nail trimming can introduce germs into their bodies. 86.99% affirmed that HIV is a possible blood borne disease through street nail trimming. For hepatitis B, 80.16% indicated nail trimming as a mode of transmission of Hepatitis B.

Table 4.2: Respondent's knowledge of perceived health risks associated with street nail trimming

Variable	Frequency (n=374)	Percent (%)
Know about street nail trimming		
No	0	0.0
Yes	368	98.4
Don't know	6	1.6
Nail trimming is likely to introduce germs into my body		
No	7	1.87
Yes	308	82.35
Don't know	59	15.78
HIV is a possible blood borne disease through street nail trimming		
No	4	1.08
Yes	321	86.99
Don't know	44	11.92

Variable	Frequency (n=374)	Percent (%)
Nail trimming as a mode of transmission of Hepatitis B		
No	11	2.99
Yes	295	80.16
Don't Know	62	16.85
Hepatitis B transmissible through barbering		
No	14	3.84
Yes	292	80.0

4.4 Attitudes regarding street nail trimming among traders and nail trimming peddlers in Techiman Municipality.

Table 4.3 indicates that majority (67.02) agreed to have had the opportunity to patronize street nail trimming. 54.57% being the majority disagree that perceive benefits of street nail trimming outweighs the risk involve. Majority (48.25) agree that street nail trimming should be discouraged. Majority (50. 14%) agreed that someone else helps in trimming one's nails better than ones' self. Most respondents (80.86%) responded agreed on Perceived Susceptibility-(One can be infected through contaminated nail trimming instruments), 28% disagreed and 43% were undecided. Majority (85.60) of respondents agreed that nail trimming peddlers should sterilize their instruments after use on each person before use on another, minority (5.43%) disagreed and (8.97%) responded undecided. Most respondents (82.31) also agreed to the question that individuals who trim their nails should be screened for any of the diseases related to street nail trimming and an even proportion (8.85) each responded agreed and disagree to same question.

Table 4.3: Attitudes regarding street nail trimming among traders and nail trimming peddlers in Techiman Municipality

Variable	Frequency (n=374)	Percent (%)
Have had the opportunity to patronize street nail trimming		
Disagree	76	20.38
Undecided	47	12.60
Agree	250	67.02
Perceived Benefits-Benefits of street nail trimming outweighs risk		
Disagree	203	54.57
Undecided	70	18.82
Agree	99	26.61
Discourage street nail trimming		
Disagree	119	32.25
Undecided	72	19.51
Agree	178	48.24
Someone else helps in trimming nails better than ones' self		
Disagree	127	34.42
Undecided	57	15.45
Agree	185	50.14
There are better ways of trimming nails than from street nail trimming peddlers		
Disagree	112	30.27
Undecided	60	16.22
Agree	198	53.51
Perceived Susceptibility-One can be infected through contaminated nail trimming instruments		
Disagree	28	7.55
Undecided	43	11.59
Agree	300	80.86
Nail trimming peddlers should sterilize their instruments after use on each person before use on another		
Disagree	20	5.43
Undecided	33	8.97
Agree	315	85.60

Variable	Frequency (n=374)	Percent (%)
Individuals who trim their nails should be screened for any of the diseases related to street nail trimming		
Disagree	33	8.85
Undecided	33	8.85
Agree	307	82.31
I have easy access to street nail trimming peddlers		
No	104	28.89
Yes	256	71.11
It is stress free to trim your nails from street nail trimmers than self		
No	112	31.02
Yes	249	68.98
Nail trimming Peddlers trim nails better for me		
No	101	28.13
Yes	258	71.87
Nail trimming peddlers' charges are cheap.		
No	135	37.92
Yes	221	62.08
It feels lazy in trimming one's own nails		
No	171	37.92
Yes	188	**62.08**
Self-efficacy: Just can't trim my own nails well		
No	196	55.21
Yes	159	44.79
Will cut myself when trimming nails by self		
No	158	44.26
Yes	199	55.74
Don't have time to clean my nails by self		
No	162	45.89
Yes	191	54.11

4.5 Determinants of street nail trimming

To assess determinants of street nail trimming some responses were obtained.

Most despondence (71.11) said yes item that they had easy access to street nail trimmers, 68.98% being majority said yes to the item that it is **stress** free to trim ones nails from street nail trimmers(peddlers), majority (71.87%) of responses were yes to the item nail trimmers /peddlers trim nails better (nicer), most of the respondents (62.08) said yes to the item that street nail trimmers/peddlers charges are cheap, majority (62.08) responded that it feels lazy to trim ones' own nails, on the issue of self-efficacy (just can't trim my own nails well) majority(55.21%) said no and 44.79 being the minority said yes, most respondents(55.74) said yes they will cut themselves when trimming their own nails and 54.11 being the majority said yes to the to the item that they do not have the luxury of time to trim their own nails.

4.6 Safety practices regarding street nail trimming among traders and nail trimming peddlers in Techiman Municipality

The study revealed that majority (55.9%) said no when asked if they do bother to ask if instruments were disinfected before, minority (41.13%) siad they do request that instruments be disinfected before use on them, the majority 61.29% responded no when they were asked if they refuse to trim their nails with non-disinfcted tools/or instruments, minority 29.46% said said yes they give their personal insruments to nail trimmers to trim their nails for them **(Table 4.5).** On the item of hand washing before trimming custommers nails, majority (66.49%) responded no. **Also most traders (60.54%) when asked if they have ever experienced cut from strret nail trimmers responded no.**

Table 4.4: Safety practices of street nail trimming among traders and nail trimming peddlers in Techiman Municipality

Variable	Frequency (n=374)	Percent (%)
Ask about disinfection of instruments		
No	207	55.9
Yes	163	44.1
Request that instruments be disinfected		
No	219	58.87
Yes	153	41.13
Refuse to trim nails with non-disinfected instruments		
No	228	61.29
Yes	144	38.71
Give personal nail trimming instruments to peddlers to your nails		
No	261	70.54
Yes	109	29.46
Street nail trimmers wash hands before trimming		
No	248	66.49
Yes	125	33.51
Trimmers brush off debris after scrubbing cuticles out (after trimming)		
No	237	64.23
Yes	132	35.77
Change foams used in brushing debris off after use on each person		
No	245	66.04
Yes	126	33.96
Ever experiencing a cut from street nail trimming		
No	224	60.54
Yes	146	39.46

4.7 Safety practices of street nail trimming among traders and nail trimming peddlers in Techiman Municipality (results of observational analysis)

Results from the observations done indicate that most(75%) of the instruments were seen as not being disinfected against 25% who responded yes to have observed some form of disinfection of nail trimming instruments/tools. For the item on traders asking nail trimmers to disinfect instruments, majority (75%)of the observations were responded as no against 25% who respondes as yes. On the item of traders refusal to trim their nails with non disinfected instruments most (87.5) observations were no against 12.5 % who respondes yes . For the item that asked if traders give personal instruments to peddlers for their nails' trimming majority (87.5%)of the observations reported were no and that of yes was 12.5%. With regards to observations on street nail trimmers wash of hands before trimming nails, all (100%) of the observations were no. The responses on change of foam after each use were mostly (87.5%) indicated as no and few (12.5 %) observations recorded yes. When asked if nail trimmers brush off debris from hands and feet of clients using forms after trimming the majority of observations were yes 87.5% against 12.5 which were no. With regards to traders' experience of cuts during street nail trimming, all (100%) observations recorded no. 39.46. **Details can be observed in Table 4.4.**

Table 4.5: Safety practices of street nail trimming among traders and nail trimming peddlers in Techiman Municipality

Observation of safety practices of street nail trimmers	Frequency (N=8)	Percentage
Are the instrument use for street nail trimming being disinfected?		
Yes	2	25
No	6	75
Do traders ask nail trimmers to disinfect instruments?		
Yes	2	25
No	6	75
Do traders refuse to trim with non-disinfected instruments?		
Yes	7	87.5
No	1	12.5
Do traders give personal instruments to peddlers for their nails' trimming?		
Yes	1	12.5
No	7	87.5
Do street nail trimmers wash hands before trimming nails?		
Yes	0	0
No	8	100
Change of foam after each use		
Yes	7	87.5
No	1	12.5
Brush off debris from hands and feet of clients after trimming?		
Yes	7	87.5
No	1	12.5
Did trader experience cut during trimming?		
Yes	0	0
No	8	100

4.8 Determinants (correlates) of street nail trimming among nail trimming among traders in Techiman Municipality

4.8.1 Socio-demographic determinants of street nail trimming among nail trimming

The study found no significant association between demographic factors of respondents and use of street nail trimming in a chi-square test done at 95% confidence interval as presented in table 4.6. Respondents who however were at age 31-40 years were at an increased odds of patronizing

street nail trimming than those aged 15-20years **(OR=1.30, 95% CI: 0.59 – 2.87, p< 0.511)**. Males' respondents were found to have an increased odds of patronage than their female counterparts **(OR=1.05, 95% CI: 0.68- 1.633, p<0.828)**. There was reduced odd of patronage of street nail trimming among Respondents with Tertiary educational qualification **(OR=0.53, 95% CI: 0.22-1.29, p<0. 162)** and also, among primary school leavers **(OR=0.73, 95% CI: 0.34-1.58, p<0.425)** as compared to JHS/Middle School leavers **(OR=1.10, 95% CI: 0.55- 2.25, p<0.773)** and SHS/Technical/Vocational **(OR=1.00, 95% CI: 0.46- 2.20, p< 0.992)**.

Table 4.6: Socio-demographic determinants of street nail trimming among nail trimming

/ariables	Prevalence of street nail trimming		χ2	p-value	Crude OR [95% CI],	p-value
	No n= (%)	Yes n= (%)				
\ge						
5 – 20	13 (11.3)	32 (12.4)			1	
1 – 30	33 (28.7)	48 (18.5)			0.59 [0.27 – 1.29]	0.187
1 – 40	24 (20.9)	77 (29.7)			1.30 [0.59 – 2.87]	0.511
1 – 50	23 (20.0)	67 (25.9)			1.18 [0.53 – 2.63]	0.680
1 – 60	22 (19.1)	35 (13.5)	8.97	0.062	0.65 [0.28 – 1.49]	0.307
ex						
lale	64(55.65)	141(54.4)			1.05 [0.68- 1.633]	0.828
emale	51(44.35)	118(45.5)	0.047	0.828		
ducational level						
lo formal education	15(13.04)	37(14.29)				
rimary	25(21.74)	45(17.37)			0.73[0.34- 1.58]	0.425
HS/Middle School	38(33.04)	104(40.1)			1.10[0.55- 2.25]	0.773
HS/Technical/Vocational	21(18.26	52(20.08)			1.00[0.46- 2.20]	0.992
ertiary	16(.13.91)	21(8.11)	4.81	0.308	0.53[0.22-1.29]	0.162
larital status						
ingle	45(39.13)	146(56.4)				
larried	62(53.91)	146(56.3)			1.20[0.76- 1.92]	0.435
ivorced	4(3.48)	12(4.63)			1.53[0.47- 5.03]	0.480
/idowed	4(3.48)	13(5.02)	1.346	0.718	1.66[0.51- 5.39]	0.398
eligion						
hristian	67(58.26)	165(63.7)				
luslim	44(38.26)	86(33.20)			0.79 [0.50-1.26]	0.326
raditionalist	4(3.48)	12(3.09)	1.004	0.605	0.81[0.24- 2.79]	0.741

4.8.2 Knowledge of perceived health risk and attitudinal determinants of street nail trimming

Other factors and use of street nail trimming

In addition to demographic characteristics other factors and use of street nail trimming were accessed and results indicated in table 4.6. The bivariate analysis indicates that there was no statistically significant difference in having some knowledge of perceived health risk among users and not having knowledge on perceived health risk. Some of the perceived knowledge of health risk and attitudinal determinants were statistically significant at the bivariate analysis. For most of the attitudinal determinants, they **were statistically significant**. Those factors that the bivariate analysis indicates that there was statistically significant difference included: having easy access to nail trimmers among traders who use street nail trimmers services and not having easy access **(chi 2=263.7; p-value<0.001).** Those who responded yes to easy access to nail trimmers were the majority (97.18%) against (2.82%). With regards to the factor of stress free as a reason for nail trimming among users and non-users **(chi 2 = 230.39; p-value <0.001).**

Participants who knew street nail trimming Nail trimming is likely to transmit germs had a reduced odd of practicing this **(OR=0.45, 95% CI: 0.54- 3.81, p=0.465)** at a confidence interval of 95%.

Participants who perceived SNT as beneficial had an almost 5 times increased odds of practicing this **(OR=4.99, 95% CI: 2.5 1- 9.92, p<0.001)**. Participants who thought/agreed street nail trimming should be discouraged had a reduced odd of practicing this **(OR=0.40, 95% CI: 0.23 - 0.70, p<0.001)** at a confidence interval of 95%.

Table 4.7: Univariate analysis of Knowledge of perceived health risk and attitudinal determinants of street nail trimming

Variables	Prevalence of street nail trimming		Univariate	p-value
	No n= (%)	Yes n= (%)	COR [95% CI]	
Nail trimming is likely to transmit germs				
No	1(0.87)	6 (2.32)	1	
Yes	83(72.17)	225(86.8)	0.45[0.54- 3.81]	0.465
Don't know	32(26.96)	28(10.81)	0.15[0.02- 1.33]	0.088
HIV is a possible disease to acquire through street nail trimming				
No	1(0.88)	3(1.17)	1	
Yes	90(79.65)	231(90.23)	0.86[0.087- 8.33]	0.893
Don't know	22(19.47)	22(8.59)	0.33[0.032- 3.46]	0.357
Hepatitis B is transmissible through street nail trimming				
No	2(1.74)	11(4.33)	1	
Yes	76(66.09)	197(77.56)	0.47[0 .10- 2.18]	0.335
Don't Know	37(32.17)	46(18.11)	0.22 [0.05 - 1.08]	0.063
Hepatitis C is transmissible through street nail trimming				
No	3(2.61)	16(6.25)	1	
Yes	64(55.65)	177(69.14)	0.52[0.15- 1.84]	0.309
Don't Know	48(41.74)	63(24.61)	0.25 [0.07 - 0 .89]	**0.033**
Attitudinal determinants of street nail trimming				
Easy access to street nail trimmers				
No	97(86.61)	7(2.82)	1	
Yes	15(13.39)	241(97.18)	0.004[.002- 0 .01]	**<0.001**
Stress free				
No	96(86.49)	16(6.40)	1	
Yes	15(13.51)	234(93.60)	0.01[.01-.02]	**<0.001**
Feel peddlers do trim my nails better (nicely)				
No	99(89.19)	2(0.81)	1	
Yes	12(10.81)	246(99.19)	0.001[0.0002- .0045]	**<0.001**
Nail Trimmers' charges are cheap				
No	97(88.18)	38(15.45)	1	

Variables	Prevalence of street nail trimming		Univariate	p-value
	No n= (%)	Yes n= (%)	COR [95% CI]	
Yes	13(11.82)	208(84.55)	0.02[0.01- 0.05]	**< 0.001**
Feel lazy in trimming own nails				
No	100(89.29)	71(28.74)	1	
Yes	12(10.71)	176(71.26)	0.05[.03 - .09]	**<0.001**
Can't trim own nails well by self				
No	102(91.07)	94(38.68)	1	
Yes	10(8.93)	149(61.32)	0.06 [0.03 - 0 .12]	**<0.001**
Will have myself cut if engage in self-trimming				
No	100(90.91)	58(23.48)	1	
Yes	10(9.09)	189(76.52)	0.03 [0.02 - 0 .06]	**<0.001**
Have no time to trim own nails				
No	96(88.07)	66(27.05)	1	
Yes	13(11.93)	178(72.95	0.05 [.03 - 0 .10]	**<0.001**
Street nail trimming is beneficial				
Disagree	78(69.03)	46(17.76)	1	
Undecided	24(21.24)	46(17.76)	1.20 [0.68 - 2.11]	0.537
Agree	11(9.73)	88(33.98)	4.99 [2.5 1- 9.92]	**<0.001**
Street nail trimming should be discouraged				
Disagree	22(19.64)	97(37.74)	1	
Undecided	26(23.21)	46(17.90)	0.40 [0.21 - 0.78]	**0.007**
Agree	64(57.14)	114(44.36)	0.40 [0.23 - 0.70]	0.001
Someone else can trim your nails better than your self				
Disagree	72(63.16)	55(21.57)	1	
Undecided	17(14.91)	40(15.69)	3.08 [1.58 - 6.00]	**0.001**
Agree	25(21.93)	160(62.75)	8.38 [4.84 - 14.50]	**<0.001**
There better ways to trim nails than that of nail trimmers				
Disagree	23(20.54)	89(34.50)	1	
Undecided	20(17.86)	40(15.50)	0.516[0 .26 - 1.05]	0.067
Agree	69(61.61)	129(50.00)	0.48 [0.28 - 0 .83]	**0.009**
One can be infected with germs through contaminated nail trimming instruments				
Disagree	13(11.3)	15(5.86)	1	
Undecided	17(14.78)	26(10.16)	1.33 [0.56 - 0.51]	0.57
Agree	85(73.91)	215(83.98	2.19 [0.51 - 3.47]	**0.050**
Nail trimming peddlers should sterilize or disinfect their instruments				

'ariables	Prevalence of street nail trimming		Univariate	p-value
	No n= (%)	Yes n= (%)	COR [95% CI]	
isagree	8(7.08)	12(4.71)	1	
ndecided	14(12.39)	19(7.45)	0.90 [0.29 – 2.80]	0.862
gree	91(80.53)	224(87.84)	1.64 [0.61 – 3.67]	0.295
ıdividuals who trim their nails ith nail trimming peddlers ıould get themselves screen for ıy of the diseases related to reet nail trimming				
isagree	15(13.04)	18(6.98)	1	
ndecided	13(11.3)	20(7.75)	1.28 [0.48 – 3.41]	0.619
gree	87(75.65)	20(7.75)	2.11 [1.02 – 4.37]	**0.045**

4.3.3 Multivariate analysis of Knowledge of perceived health risk and attitudinal determinants of street nail trimming

At the multi variate level of the analysis, there **were** Participants who perceived the cost of SNT as cheap had more than 5 times increased odds of practicing street nail trimming **(OR=5.26, 95% CI: 0.32 - 87.69, p=0.25).**

Table 4.8: Multivariate analysis of Knowledge of perceived health risk and attitudinal determinants of street nail trimming

Variables	Prevalence of street nail trimming		Multivariate	p-value
	No n= (%)	Yes n= (%)	AOR [95% CI]	
Easy access to street nail trimmers				
No	97(86.61)	7(2.82)	1	
Yes	15(13.39)	241(97.18)	0.03 [0002 – 5.19]	0.184
Stress free				
No	96(86.49)	16(6.40)	1	
Yes	15(13.51)	234(93.60)	0.48[0.03 -7. 56]	0.606
Feel peddlers do trim my nails better (nicely)				
No	99(89.19)	2(0.81)	1	
Yes	12(10.81)	246(99.19)	0.001[0.01-0.66]	**0.001**
Nail Trimmers' charges are cheap				
No	97(88.18)	38(15.45)	1	
Yes	13(11.82)	208(84.55)	5.26[0.32 - 87.69]	0.25
Feel lazy in trimming own nails				
No	100(89.29)	71(28.74)	1	
Yes	12(10.71)	176(71.26)	2.96 [0.27-32.35]	
Can't trim own nails well by self				
No	102(91.07)	94(38.68)	1	
Yes	10(8.93)	149(61.32)	0.13[.02- 1.09]	0.060
Will have myself cut if engage in self-trimming				
No	100(90.91)	58(23.48)	1	
Yes	10(9.09)	189(76.52)	0.31[0.04-2.61]	0.281
Have no time to trim own nails				
No	96(88.07)	66(27.05)	1	
Yes	13(11.93)	178(72.95	2.0522.77 [0.18 – 22.92]	
Street nail trimming is beneficial				
Disagree	78(69.03)	46(17.76)	1	
Undecided	24(21.24)	46(17.76)	22.7 [0.92 – 567.19]	0.057
Agree	11(9.73)	88(33.98)	16.49 [0.98 – 278.74]	0.052
Street nail trimming should be discouraged				
Disagree	22(19.64)	97(37.74)	1	
Undecided	26(23.21)	46(17.90)	0.572 [0.04 -7.51]	0.671
Agree	64(57.14)	114(44.36)	2.21 [0.26 -18.7]	0.468

Variables	Prevalence of street nail trimming		Multivariate	p-value
	No n= (%)	Yes n= (%)	AOR [95% CI]	
Someone else can trim your nails better than your self				
Disagree	72(63.16)	55(21.57)	1	
Undecided	17(14.91)	40(15.69)	24.53 [1.51- 398.52]	**0.024**
Agree	25(21.93)	160(62.75)	5.74[.920 – 35.75]	
There better ways to trim nails than that of nail trimmers				
Disagree	23(20.54)	89(34.50)	1	
Undecided	20(17.86)	40(15.50)	0.094 [0.004-2.28]	0.146
Agree	69(61.61)	129(50.00)	0.30 [0.02 – 5.65]	0.420
One can be infected with germs through contaminated nail trimming instruments				
Disagree	13(11.3)	15(5.86)	1	
Undecided	17(14.78)	26(10.16)	0.31[0.003-31.382]	0.621
Agree	85(73.91)	215(83.98	0.34 [0.005 - 25.27]	0.627
Individuals who trim their nails with nail trimming peddlers should get themselves screen for any of the diseases related to street nail trimming				
Disagree	15(13.04)	18(6.98)	1	
Undecided	13(11.3)	20(7.75)	10.02[0.08-1336.67]	0.356
Agree	87(75.65)	20(7.75)	4.22[0 .065-275.71]	0.499

4.9 Qualitative Analysis

This section of the chapter presents the analysis of the data obtained from the interview and the focus group discussion. A total of 8 street nail peddlers were interviewed to assess their experiences about street nail trimming and safety practices.

4.9.1 Interview analysis

This section presents the analysis of the interview gathered among eight street nail peddlers in the Techiman municipality. Its emphasis was placed on the major practices of the peddlers in relation to their activity and how it influences their customers.

Table 4.9: Demographic analysis of respondent

Characteristics	Categories	Number	Percentage
Gender	Male	8	100
	Female	0	0
Age	13- 17	1	12.5
	18- 22	3	37.5
	23- 30	4	50
Educational level	No formal education	6	75
	Primary	2	25
	secondary	0	0
Religion	Christianity	0	0
	Muslim	8	100

4.9.2 Knowledge on perceive health risks associated with street nail trimming

The researcher intends finding out whether peddlers are aware of possible health related problems that are associated to street nail trimming. The responses given indicated that most of them are aware of such problems. According to them, people do attack them on no basis.

'Some people always raise allegations against us that the work we are doing is a major form of disease transmission' (inter 1)

From the data although some of them have an idea or are aware of the problems that are associated to their work, other peddles seem not to have identified any possible health related risk associated to their nail trimming practices.

'With me I don't see any problem with what we do. It is safe, fast and we do it better than they themselves do' (inter 7).

'There is no problem in this our work. We make sure we do it better to prevent cutting. The problem comes when you cut someone and with that, is will not be easy for you' (inter 4).

From the above results, it indicates that, the major problem associated to the trimming practice is the disease transmission aspect of it and that of the wounds you can get.

4.9.3 Attitudes of Traders towards street nail trimming from peddler's practices

The researcher intends identifying what customers often request from peddlers in their attempt to access their service. However, almost all the responses were geared toward extra carefulness. According to one of the respondents, **'***the only time you see the aggressiveness of a customer is when you do not trim well '(inter 5).*

From one of the respondents, he said, "*most of the customers expects us to do it well nicely and also makes sure we do not hurt them" (inter 2)*

"They only tell us not to cut them and some of them want us to clean our tools before using them on them" (inter 8)

"Often when we meet people as our clients, they often want to know how long we have been doing this. They also ask whether we clean the instrument often or not" (inter 3).

However, unlike the other respondents, a respondent stated that, *"customers do not ask of anything, we just start our work immediately we are called to do so" (inter 1).*

An important component of the study was to find out how this problem can be addressed from the perspective of the peddlers. From the responses given, it was indicated that, individuals who have interest in the patronage of the service could get their personal instrument.

"Now that we know sanitizer can kill germs, one best solution is for every peddler to get a sanitizer to disinfect the instrument immediately used on a customer before going to the other" Inter 8).

"The instrument we use are costly so we can buy several of them but if everybody can get one, this would have solved the problem completely" (Inter 6).

Safety Practices in street nail trimming among traders in the Techiman Municipality

(Safety concerns raised by customers)

Safety is an important concern to human wellbeing and livelihood. The researcher went further to find out the safety measures customers raise when assessing service from peddlers. The results indicated that customer often raise several safety measures when they go out to work. Some of these concerns include carefulness, cleanliness and disinfection.

"At times when we move to a customer, he or she wants to see us cleaning the instrument before we use it on them" (inter 6).

"Customers will tell you if you hurt me with your tool I will take to same tool and do the same to you" (inter 3). This signifies that, customers' demands extra carefulness from peddlers so that they do not harm them.

"As for safety measures, we have been receiving a lot of them from our customers but they often do that in the form of warning. The common language customer use is; if you don't know and you do this to me." (Inter 7).

Personal trimming instrument used

The researcher intends finding out whether customers give out their personal instruments to the peddlers for service. From the responses given, it was indicated that most of the people do not have these instruments at their disposal; they always depend on the tools of the peddlers. However, according to the peddlers, few of their customers have their own instruments.

Instances where there has been a cut in the course of the trimming

There is high risk of associated to cuts in the course of the trimming especially when the instrument used have not been disinfected. From the study, the researcher intends identifying whether there have been situations where there has been a cut on a customer. From the responses given, it indicated that, there are few times where there has been such situation. On this issue, a respondent indicated that ***"I have seen such situation but that was when I started this work. During that time, I had no experience and due to that, I do hurt people but not now that I have done this for three years" (inter 4).***

"Some of the people shiver a lot especially when trimming so at times you end up hurting them. However, this do not happen on regular basis" (inter 3).

However, other respondents indicated that, there have not been any instances of such nature since they started this work. According to one of the respondents, this happens because they do it with extra carefulness.

Reaction from customers when there is a cut

The researcher intends finding out the reactions from the perspective of the customers who have been in such situation. From the responses given, it was indicated that, customers do not take it easy on them; however, they only apologize and clean it for them. To some of them, some customers even refuse to pay us because of the cut and they will tell you, they are going to use the money to buy medicine. From the respondent's perspective, they only clean the blood with the soapy water.

Detergent used before trimming

The results obtained from the respondents indicated that the main detergent used in carrying out their activity is a soapy water. From the respondents, they mix water with powdered soap. They then carry out this throughout their day's activity and use to clean the nails of their customer before they start trimming. It was also indicated by the respondent that; they disinfect their instrument with the soapy water immediately they finish with a customer.

"What we often do is to clean the instrument with the soapy water by currently, due to the global pandemic; a customer may want to see you disinfecting the instrument. Therefore, we use sanitizers to disinfect the tools" (inter 7).

4.9.4 Approved working license and Regulation

The study went further to find out whether the activities of these peddlers are approved and as such they have a working license. The responses given indicated that, there is no one among these peddlers who have a license to carry out such work. This has resulted in low level of monitoring their activities as well as regulating it. The respondent went further to indicate that

"the only license you need is to get your instrument and you can walk. Nobody will ask you of anything" (inter 2).

"But this work too, do we need to have license before? From who and where? Nobody in this country doing peddling can say he has license" (inter 1).

4.10 Focus Group Discussion

This section presents the analysis of the data obtained from the focus group discussion. A total of 16 participants was used for this study. The respondents were grouped at one place where the discussion took place and were coded (FGD 1- 16). The codes were used to represent the identity of the respondents instead of their names for the purpose of confidentiality. The discussion was made around some critical issues surrounding street nail trimming. These areas included their knowledge on health risk, attitudes and health beliefs as well as safety practices of street nail trimming.

4.10.1 Knowledge of Perceived Health Risk among traders in Techiman Municipal

Knowledge on the health of the individual is very essential in improving the wellbeing of such persons. However, there are various risks associated to the health of a person when such risks are not controlled. Having knowledge concerning the risk associated to the activity helps one to put preventive measures in place to avoid the occurrence. On the issue of the procedure been healthy, majority of the participants indicated it as not healthy. This was because, it is a means by which blood related disease could be transmitted.

"The trimming procedures by these peddlers are very dangerous and can cause so many diseases. This is because they do not disinfect their instrument before usage (FGD 5)".

On the other hand, a participant also mentioned to the fact that the procedures used are safe.

"I have been relying on these peddlers for a very long time and have not even tested positive to malaria how much more HIV/AIDS. This is because the procedures used in the activity is very safe and clean (FGD 11)".

The researcher intended identifying their knowledge on some of the common disease that can be acquire through the patronage of street nail trimming. The results indicated that there is high knowledge on some of the common disease that that could be contracted. Majority of the participants mentioned HIV/AIDS, and Hepatitis B. However, a few added respiratory diseases including flue diseases the most common disease the most common disease through trimmers closeness to the costumer.

Perceived Susceptibility

The discussion went further to identify different ways through which these diseases can be contracted. The participants indicated several ways.

"One of the most serious ways through which one can contract these diseases is by having sex with an infected person (FGD 7)".

"A person can be infected with this disease when you trim your nails from the street nail trimming peddlers who do not disinfect their instrument and common clod if you are near the trimmer (FGD 15)".

One of the participants also indicated that, sharing sharp objects such as blades and other instruments like cooking utensils put one at a high risk of been infected when the opponent has the disease.

4.10.2 Attitudes and Subjective norms among traders in Techiman Municipal

The study sought to identify the attitudes and subjective norms of the participants. On the issue of their likeness concerning street nail trimming and why, it was indicated that, few of the participants like the trimming activity whiles other respondents do not and from them, this is due to the high risk of disease transmission associated to the activity.

Perceived susceptibility

"As for me, I seriously like the trimming activity because it is easy, fast and the peddlers do it better than I can do* (FGD 11)". *"The activity of the peddlers is very professional and it prevents me from the stress I would have gone through. I often find it difficult to bend down so I enjoy their service just because of these things (FGD 3)".

Perceived benefits

The study also intended finding out from the perspective of the participants if they consider the benefits derived from the trimming to be **higher** than that of the risk. Different views were shared as part of the participants agreed whiles others disagreed that benefits derived from the trimming were high than the risk involved.

"As I said earlier, I have been enjoying the services of these peddlers for long time and have never encounter any problem. I only enjoy the stress I would have gone through, the professionalism attached to their work, the fear of hurting others and myself. This indicated that, I have been enjoying the benefits paaa (FGD 11)".

"There is no way the benefit can outweigh the risk. Life is more precious than anything. When you have life, you have everything. However, by the time you are infected, your lifespan

reduced drastically and the fear of it will even kill you faster than you think. Immediately you are infected, people begin to disassociate themselves. In fact, the risk is high than that of the benefits (FGD 1)".

On the issue of street nail trimming being discouraged, the discussion participants could not agree on the same platform. Part of the participants agreed and emphasis on the need to discourage the act whiles other participant disagreed and made judgement on the need to maintain the act. Part of the respondents argue that, the practice is causing more harm than good as many lives are in danger today because of their involvement in the act. Many hearts and homes are broken because one party contacted a blood borne disease through services of these kind. On the other hand, part of the participants also argued that, this business has been going on in the system for over years and have been identified as the main source of living for some group of individuals. In instances where the act is discouraging, it will however increase the dependency ratio that will lead to bad social activities like robbery.

"The peddlers should be allowed to do their work. If they are not in the system, some of us may find it difficult to trim our nails and cost of living will be too high for such people as well (FGD 14).

4.10.3 Safety practice of street nail trimming.

Safety practice of street mail trimming seeks to ensure that, those who acquire these services put measures in place to ensure that they are safe. The discussion indicated that part of the participants has at once in their life time access the services of these peddlers whiles few of them have never access street nail trimming services before. It was therefor of essence to find out for those who have obtained these services before what they often do to ensure that the instruments

used by the peddlers are safe. The responses given indicated that some of them makes sure that the peddlers clean the instrument before they use on them and clean their feet immediately after trimming. From the responses, some of them also go to the extent of giving out their own cutting instruments to the peddlers which they see as safer.

The majority of the participant also indicated that, there is no proper hand washing before, during or after the activity. They wet the nails with soapy like liquid that is believed to be powdered soap dissolved in water, scrub out the cuticles and only rob the nails with a commonly used foam and then move on to different or next client person.

4.10.4 Summary of Findings

The study found that, there is high awareness of possible health problems associated to street nail trimming. However, some of these problems have been overlooked by both peddlers and their customers.

The data also revealed that, most often the focus of the customers in the act turns to be on the peddlers not to hurt them and as such, they are very mindful in the course of the activity although few trimmers sometimes cut into the tissues around the cuticles which poses some risk of disease transmissions.

The study also found that there is high level of knowledge on the effects and the diseases that can be obtained from the act. However, some people give less attention to them.

Concerning practice, the study also indicated that, there is no proper way of disinfecting the instruments they used. The study reveals that, they only clean the instrument with their foams and nothing else and that soapy water is just used in wetting users nails to soften them for trimming.

The study also reveals that there is high perception that HIV/AIDS and Hepatitis B are the common blood related diseases that one can obtain through street nail trimming.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.0 Discussion

This chapter showed the findings of the study and makes efforts to relate to the few other related studies that have been identified in the subject of the nail trimmings and public use of same sharps especially for beautification purposes with the view of finding the similarities, disparities and fill gap in the literature.

Socio-demographic characteristics

The study participants comprised of traders, both men and women age 15 years and above who buy and sell or transact business in the central market area and other market areas in the Municipality normally referred to us the Central Business area and Nail trimmers (peddlers) who move around the major streets to render the nail trimming services in the named area of traders. Majority of the participants were males (54.81) and (45.19%) males.

Prevalence of street nail trimming

The results from the study revealed a prevalence of 69.3% of street nail trimming among traders in Techiman Municipality. On the face value use of street nail trimming among male traders are slightly lower (68.8%) than their female counterparts (69.8%). However, with a p – value of 0.586, the difference in male use of street nail trimming is statistically not significant. Based on the primary hypothesis of this study we fail to reject the null hypothesis that there will be no difference in the use of street nail trimming between men and women.

Knowledge of perceived health risks associated with street nail trimming among traders and nail trimming peddlers in Techiman Municipality.

A study conducted by El-Sadawy et al (2004) on the incidence and associated risks of infectious diseases showed that transmission of infectious diseases particularly hepatitis b, hepatitis c and HIV were common amongst the following practices; community shavings, hair trimming, nail cutting and street trimmers. The findings of a study by Bari, Akhtar et al (2001) realized a population risks of 29.4% on hepatitis c infection on the day to day shaving of face and trimming of nails.

In this current study the results showed that, majority (98.4%) of the respondents knew of street nail trimming. Also, most (82.35%) of the participants were aware that nail trimming could introduce germs into the bodies. Majority of the respondents indicated that HIV and hepatitis b are likely transmitted through nail trimming; 86.99% and 80.16 respectively. Comparably, most of the respondents (about 87%) were much aware of HIV transmission than hepatitis b infection (about 80%). Even though knowledge in this regard is high it did not translate into safety practices in all case as far as uptake of street nail trimming is concerned. This could be explained by a construct in the health belief model which admonishes that a stimulus or cues to action must be present to in order to trigger the health enhancing behavior. Perhaps public health educators are required to help render needful cues to help enhance Knowledge the severity of the unsafe aspect of street nail trimming in this regard to translate into practices.

This relatively high level of awareness on the health risk of nail trimming among the study subjects is likely as a result of exposure to formal education. It was observed in the study that majority, about 86%, have had varying levels of formal education.

Attitudes regarding street nail trimming among traders and nail trimming peddlers in Techiman Municipality and some constructs of the health belief model.

Perceived Susceptibility: Susceptibility of an individual towards a practice is important in influencing behavioral or attitudinal change. With regards to street nail trimming, individuals who perceive to be susceptible to infectious diseases are likely not to engage in such services than those who perceive to be insusceptible as asserted by the health belief model. However, individuals who perceive street nail trimming may engage if they feel they are able to perform actions or desired behavior such as demanding for the usage of safe, disinfected or sterile instruments or insisting for safety protocol to be observed before patronizing of SNT services.

Perceived Benefit: Participants who perceived street nail trimming as beneficial had an almost 5 times increased odds of practicing this **(OR=4.99, 95% CI: 2.5 1- 9.92, p<0.001).** Participants who thought/agreed street nail trimming should be discouraged had a reduced odd of practicing this **(OR=0.40, 95% CI: 0.23 - 0.70, p<0.001).**

Modifiable factor: Socio-demographic and socioeconomic characteristics are also influential factors on the use of street nail trimming services. People with low socioeconomic status are more likely to engage the services of street nail trimming as compared to those with high level socioeconomic status.

Lack of proper disinfection of instruments in street nail trimming and the use of barbering equipment's without sterilization are the major ways through which hepatitis b, hepatitis c, HIV and other viruses are transmitted from one person to another (Mariano A, 2004). There has been consensus on the findings on the usage of sharps and other instruments used by the barbering operators, nail trimmers and the beauty industries by some researchers. Most of these researchers

concluded that these instruments used by these people is a contributing factor towards the outbreak of viral infections (Khaliq & Smego, 2005; N. Z. Janjua, 2004).

Self-efficacy: From the study, though majority of the respondents (50.14%) agreed that someone else helps in trimming one's nails better than ones' self, majority (54.57%) disagreed that perceive benefits of street nail trimming outweighs the risk involve. Most of the respondents (80.86%) agreed that street nail trimming expose them to infectious diseases and about 86% indicated that street nail peddlers should properly disinfect or sterilize their instruments after and before usage. With the high infection susceptibility to street nail trimming, adequate disinfection and sterilization of instrument should be required since some individuals continuously engage in the service. only about 39% refused to trim their nails with unsterilized or non-disinfected tools.

Correlates of street nail trimming among nail trimming peddlers and users in Techiman Municipality.

Street nail trimming has become popular especially in urban dwellings in Ghana. The popularity is apparent due to their high demand as well as the lucrative nature of the activity. The high demand is also witnessed among both males and females. This study revealed a prevalence rate of 69.3% in the usage of street nail trimming services. Also, a prevalence rate of 68.8% and 69.8% was respectively observed among males and females.

One of the determinants of the relatively high prevalence of street nail trimming at a univariate analysis level is their ease of access; 71.1%. Almost 69% of the respondents indicated that they had easy access to the services of street nail peddlers. The nice nature in which peddlers trim nails, its affordability and unwillingness for people to trim their own nails are determinants that largely accounts for the relative high prevalence of street nail trimming; 71.87%, 62.08% and

62.08% respectively. Again, Self-efficacy influenced the patronage, 55.2% of the participants indicated that they just could not trim their own nails and therefore engaged in the services of street nail trimming peddlers. From the study it was observed that factors that encouraged users to engage street nail trimming services such as being stress free, nice nature at which peddlers' trim nails, affordability of the service, feeling lazy to cut one's own nails, fear of cutting one's self in self-trimming and inability to cut one's own nail significantly influenced the rate or prevalence at which the respondents engaged in the services of street nail peddlers **($p<0.001$).**

These determinants are deemed to be perceived benefits that encourage users to engage in the services of street nail trimming peddlers. And with the high demand of the services, supply and prevalence of the services would consequently also be high.

Safety practices of street nail trimming among traders and nail trimming peddlers in Techiman Municipality.

Safety practices of street nail trimming among traders and nail trimming peddlers in Techiman Municipality

The potency of street nail trimming in the transmission of infectious diseases is obvious as about 82% of respondents in this study agreed. It is evident that HBV can be acquired through the use of unsterilized objects and this has been affirmed by Oliveira and Focaccia in a study in 2010. In Ghana, these peddlers are not regulated and they do not adequately sterilize their instruments. The solutions they use in disinfecting and sterilizing their tools may not be safe and potent. These nail trimming peddlers have little or no knowledge about sterilization of their tools. This phenomenon tends to increase the spread of infectious diseases especially in Africa. To ensure safety to both peddlers and users, there is the need to practice precautions and risk assessments.

With regard to this, street nail peddlers should assume that all clients are likely to be infectious and should therefore ensure and observe proper infectious control measures universally.

It is obvious in this study that most people who engaged the services of street nail trimmers were not much conscious and aware of their safety. Only about 41% of users requested tools to be disinfected before being used on them. Also, only about 39% refused to trim their nails with unsterilized or non-disinfected tools. Regarding the nail trimming peddlers, 75% indicated that they do not disinfect their tools and instruments. The non-conformity to safety practices in this study is witnessed in a cross-sectional survey conducted in the South-Western part of Ethiopia by Legesse et al, (2020). The checklist used for the observation in their study depicted that most of the traditional nail trimmers and the saloon operators do not sterilize their equipment.

5.1 Conclusion

This study has shown that though traders of the Techiman Municipality are aware of some possible health risk associated with street nails trimming and the associated poor safety practices, yet they engage in the practices of it due to the quest for **beautification** of their nails. Public health prevention strategies should be implemented and application of the health belief model in order to emphasize the need for healthy body over just concentration on nail beatification at the expense of healthy body.

5.2 Recommendations

- With the increasing demand and practice of street nail trimming and many people in Techiman and other urban areas of Ghana engaging in the nail trimming industry, there is need for the Social Behavior communication unit in the Health Promotion Division of the Ghana Health service to engage in awareness creation of epidemiology of possible

diseases that can be acquired through street nail trimming and the multiple uses of single sharps.

- The ministry of health and its related bodies should engage in Training on instrument sterilization and better workplace policies to promote a healthier workforce and populace dealing in street nail trimming and cosmetics.
- Ministry of health should engage with the appropriate bodies to **regulate** activities of street nail trimmers/peddlers.

5.2.1 Research Recommendation

Extensive case-control studies with regard to rates of blood borne infection among nail trimming users in Techiman and other parts of Ghana should be done to assess the incidence of blood borne and other disease related conditions associated with street nail trimming **among** this populace.

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APPENDICES

Appendix A: Interview Questionnaire

PARTICIPANT CONSENT

I am Janet Wepiah Batako, an MPH student at the Department of behavioral and social science University of Ghana carrying out a research to assess the Knowledge, Attitude and Practice of street nail trimming in the Techiman Municipality. Your response will assist in the establishment of facts relating to Street nail trimming practice. Your rights and choices are greatly respected; hence you can willingly participate or otherwise decline. You are assured of confidentiality and anonymity.

Please tick in the box or where necessary provide answers. Thank you for taking part in this study.

Participant consent: Yes [ ] No [ ], If No, end of interview

Date ..... Sign.....

Question number	Question	Coding categories	Skip to	Code

Modifiable factors	Q1	Age of respondents	15 – 20 .....1 21 – 30 .....2 31 – 40 .....3 41 – 50 .....4 51 – 60 5	☐
	Q2	Sex	Male.....1 Female..... 2	☐
	Q3	Educational level of respondents	No formal education.....1 Primary.....2 Middle School/ JHS.....3 Technical/Vocation/SHS.....4 Tertiary..... 5	☐
	Q4	Marital status	Single.....1 Married.....2 Divorced.....3 Widowed.....4	☐
	Q5	Religion	Christian.....1 Moslem.....2 Traditionalist.....3	☐

Section B: Knowledge factors

Q6	Do you know about street nail trimming?	Yes.....1 No.....0	☐
Q7	Nail trimming is likely to introduce germs into my body	Yes.....1 No.....0	☐
	I don't know	Yes.....1 No.....0	☐
Q8	HIV	Yes.....1 No.....0	☐
Q9	HBV	Yes.....1 No.....0	☐
Q10	HCV	Yes.....1 No.....0	☐
	I Don't know	Yes.....1 No.....0	☐
Q11	Are you aware of HIV?	Yes.....1 No.....0	☐
Q12	Friends and relatives	Yes.....1 No.....0	☐
Q13	Radio	Yes.....1 No.....0	☐
Q14	Television	Yes.....1 No.....0	☐

Q15	Health Worker	Yes.....1 No.....0	☐
Q16	Sexual contact	Yes.....1 No.....0	☐
Q17	Blood transfusion	Yes.....1 No.....0	☐
Q18	Nail cutting instruments	Yes.....1 No.....0	☐
	I don't know	Yes.....1 No.....0	☐
	Symptoms of HIV		
Q19	Fever	Yes.....1 No.....0	☐
Q20	Diarrhea	Yes.....1 No.....0	☐
	Weight loss	Yes.....1 No.....0	☐
	I Don't know	Yes.....1 No.....0	☐
Q22	Treatment available (Therapy)	Yes.....1 No.....0	☐
	Knowledge of respondents on HBV and HCV		

Q23	Ever heard of HBV and /or HCV	Yes.....1 No.....0	☐
Q24	Friends/relatives	Yes.....1 No.....0	☐
Q25	Radio	Yes.....1 No.....0	☐
Q26	Television	Yes.....1 No.....0	☐
Q27	Health workers	Yes.....1 No.....0	☐
Q28	Sexual contact	Yes.....1 No.....0	☐
Q29	Blood transfusion	Yes.....1 No.....0	☐
Q30	Sharing utensils	Yes.....1 No.....0	☐
Q31	Contaminated nail cutting instruments	Yes.....1 No.....0	☐
Q32	Contaminated barbering instruments	Yes.....1 No.....0	☐
	I don't know	Yes .....1 No.....0	☐

Q33	Right upper abdominal quadrant pain	Yes.....1 No.....0	☐
Q34	Fever	Yes.....1 No.....0	☐
Q35	Vomiting	Yes.....1 No.....0	☐
Q36	Nausea	Yes.....1 No.....0	☐
	I don't know	Yes.....1 No.....0	☐
Q37	HBV and HCV can affect liver function	Yes.....1 No.....0 I don't know.....2	☐
Q38	HBV and HCV can cause liver cancer	Yes.....1 No.....0 I don't know.....2	☐
Q39	Treatment available for HBV and HCV	Yes.....1 No.....0 I don't know.....2	☐
Q40	Vaccine available for HBV	Yes.....1 No.....0 I don't know.....2	☐
Q41	Would you like to be vaccinated	Yes.....1	☐

	against HBV	No.....0 I am indecisive.....2	

Section C: Attitude and Health beliefs

	Q42	There is a belief for the opportunity to patronise street nail trimming services.	Strongly Disagree.....1 Disagree.....2 Undecided.....3 Agree.....4 Strongly agree.....5	☐
Perceived Benefit	Q43	Benefits of street nail trimming outweigh the risks.	Strongly Disagree.....1 Disagree.....2 Undecided.....3 Agree.....4 Strongly agree.....5	☐
	Q44	Street nail trimming should be discouraged.	Strongly Disagree.....1 Disagree.....2 Undecided.....3 Agree.....4 Strongly agree.....5	☐
	Q45	Someone else can help in trimming your nails better than yourself	Strongly Disagree.....1 Disagree.....2 Undecided.....3	☐

			Agree.....4 Strongly agree.....5	
	Q46	There are ways of trimming nails better than these street nail trimming peddlers.	Strongly Disagree.....1 Disagree.....2 Undecided.....3 Agree.....4 Strongly agree.....5	☐
Perceived Susceptibility	Q47	One can be infected through contaminated nail trimming instruments.	Strongly Disagree.....1 Disagree.....2 Undecided.....3 Agree.....4 Strongly agree.....5	☐
	Q48	Nail trimming peddlers should sterilize their equipment.	Strongly Disagree.....1 Disagree.....2 Undecided.....3 Agree.....4 Strongly agree.....5	☐
	Q49	Individuals who trim their nails should be screened for any of the diseases related to street nail trimming.	Strongly Disagree.....1 Disagree.....2 Undecided.....3 Agree.....4 Strongly agree.....5	☐

Section D: Practices of street nail trimming

	Q50	Do you trim your nails from street nail trimmers?	Yes.....1 No.....0 Sometimes 2	
Perceived Self efficacy	Q51	Do you ask if the instruments have been disinfected?	Yes.....1 No.....0 Sometimes 2	
	Q52	Do you ask nail trimmers to disinfect instruments?	Yes.....1 No.....0 Sometimes 2	
Likely health behaviour	Q53	Do you Refuse to trim with non-disinfected instruments?	Yes.....1 No.....0 Sometimes 2	
	Q54	Do you give personal instruments peddlers for your nails' trimming?	Yes.....1 No.....0 Sometimes 2	
	Q55	Do street nail trimmers wash hands before trimming nails?	Yes.....1 No.....0 Sometimes 2	
Perceived severity	Q56	Do street nail trimmers (peddlers) change the foam used in cleaning the nails after use on one person?	Yes.....1 No.....0 Sometimes 2	
	Q57	Do street nail trimmers clean hands, and	Yes.....1	

		feet after trimming?	No.....0 Sometimes 2	
	Q58	In attempt to scrub out your nail cuticles out, have you ever experienced a cut?	Yes.....1 No.....0	☐
	Q59	I have easy access to them	Yes.....1 No.....0	☐
	Q60	Stress free	Yes.....1 No.....0	☐
	Q61	Peddlers do it nicely for me	Yes.....1 No.....0	☐
	Q62	Peddlers' charges are cheap	Yes.....1 No.....0	☐
	Q63	I feel lazy in trimming my own nails	Yes.....1 No.....0	☐
	Q64	I just can't do it well for my self	Yes.....1 No.....0	☐
	Q65	I will cut my self	Yes.....1 No.....0	☐
	Q67	I just don't have time to trim my own nails	Yes.....1 No.....0	

	Q1	Are the instruments use for street nail trimming being disinfected?	Yes.....1 No.....0	☐

	Q2	Do traders ask nail trimmers to disinfect instruments before use?	Yes.....1 No.....0 Sometimes.....2	
	Q3	Do traders refuse to trim with non-disinfected instruments?	Yes.....1 No.....0	
	Q4	Do traders give personal instruments to peddlers for their r nails' trimming?	Yes.....1 No.....0	
	Q5	Do street nail trimmers wash hands before trimming nails?	Yes.....1 No.....0	
	Q6	Do street nail trimming peddlers change the foam used in cleaning the nails after use before using on another person	Yes.....1 No.....0	
	Q7	Do street nail trimmers brush off debris from hands and feet of clients after trimming?	Yes.....1 No.....0	
	Q8	In an attempt of cleaning your nail cuticles out have you ever experienced a cut	Yes.....1 No.....0	

THANK YOU

Appendix B: Interview Guide

In- depth interview guide with Street nail trimmers (peddlers of nail trimming) interview to access experiences of practice of street nail trimming and safety practices.

Name of Interviewer_____

Date_____

Name of Interviewee_____

Designation_____

"Good morning. I am Janet Wepiah Batako

This interview is being conducted to get your experiences about Street nail trimming practices. I am especially interested in any the feedback you get from your customers on concerning the nail trimming procedure go perform on their toes or fingers and again the precautions you observe during the nail trimming process.

"If it is okay with you, I will be tape recording our conversation. The purpose of this is so that I can get all the details but at the same time be able to carry on an attentive conversation with you. I assure you that all your comments will remain confidential. I will be compiling a report which will contain all staff comments without any reference to individuals. If you agree to this interview and the tape recording, please sign this consent form."

"I'd like to start by having you briefly describe your nail trimming procedure.

"I'm now going to ask you some questions that I would like you to answer to the best of your ability. If you do not know the answer, please say so."

1. "Are you aware of any problems with the street nail trimming practices?"
2. If so, probe - "What have the problems been?"
3. What do clients say about your nail trimming practices?
4. What do they request from your services? Please describe for me how"
5. "What types of concerns have you had or heard regarding the sharps you use to trim your customers' nails?
6. Why are these problems occurring?"
7. Do you have any suggestions on how to minimize these problems?"
8. What are about the safety concern your clients raise?
9. "Is there any other information about the nail trimming practice you can talk about?
10. Do clients give you their own trimming sharps for you to trim for them?
11. Has there be an instant where a customer had some blood coming out during nail trimming?
12. What do you do when a customer gets a cut?
13. What detergents do you use to clean your customers feet before you start trimming?
14. How do you disinfect your instruments before attending to your next customer?
15. What disinfectant do you use?
16. What do your customers say about how you treat your instruments before using it on them?
17. Do you have a license for your nail trimming work?
18. Please tell me something about your nationality (where is your home country)?

Appendix C: Focus group discussion guide

A focus group discussion guide for traders' persons who patronize street nail trimming services to share their experiences with the practice.

Introductions (2 Minutes) before we start, I'd like to have everyone introduce themselves and tell us what you trade in and how long you've worked in this Techiman here.

Interactive Exercise (10 minutes) think about the different ways in which have your nails trimmed. Note in your mind issues that crop up when you think of them.

How would you describe street nail trimming practices in Techiman here, or the experiences you receive from peddlers of street nail trimmers them?

What's useful? What kind of thoughts grabs your attention when you take up these services?

Knowledge on Perceived health risk

1. Do you think procedures are healthy enough?
2. Are there some health risks in patronizing street nail trimming?
3. Please what are some of the disease s that can be contracted through patronage of street nail trimming?
4. What are some of the ways these diseases can be contracted?

Attitude and Health Belief

1. What do you like about street nail trimming?
2. Do you think you can be infected through contaminated nail trimming instruments?
3. Do you feel that benefits of street nail trimming outweigh the risks?

4. Should street nail trimming be discouraged?
5. Why should street nail trimming be discouraged?

Reasons for Patronage of street nail trimming services

1. Why do you patronize street nail trimming services?

Safety Practices of street nail trimming

1. How many of you patronize street nail trimming practices?
2. Do you use other nail trimming services?
3. What do you do to ensure safe instruments are by peddlers in trimming your nails?
4. What are the hand washing practices before and after your nails are trimmed?
5. Any recommendations to help improve on safety practices of street nail trimming

Closing: Thank you for taking the time to participate today. Your feedback will be collected and included in a report (all feedback is reported anonymously). Your insights help regulate the practices of nail trimming for healthiness. Again, thanks for your time!

Appendix D: Ethical Clearance Letter

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
GPS Address: GA-050-3303
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Email: ethics.research@ghsmail.org

My Ref: GHS/RDD/ERC/Admin/App/19/646
Your Ref: No

21st November, 2019

Janet Wepiah Batako
P. O. Box 5
Kintampo South District

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC053/11/19**
Project Title	Knowledge, Attitude, and Practice of Street Nail Trimming in Techiman Municipality of the Bono East Region
Approval Date	21st November, 2019
Expiry Date	20th November, 2020
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months.
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report **after completion** of the study
- Informing ERC if study **cannot** be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol.

SIGNED.....
Dr. Cynthia Bannerman
(GHS-ERC Chairperson)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra