

Full Length Research Paper

Barbers' activities in the main streets of Gulu, Northern Uganda: Implication for HIV transmission

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Little is known about barbers' hair-cutting practices and the precautions they undertake in Gulu Municipality. There are some concerns that hair-cutting sessions may be a contributing factor to HIV transmission in the region. This study was designed to assess the knowledge, attitudes and precautionary practices of barbers in the main streets of Gulu municipality. A cross-sectional study was conducted in barbershops of Gulu Municipality. Data were collected using a validated checklist to directly observe sixty hair-cutting procedures. Questionnaires were directly administered in fifteen barbershops randomly selected from twenty main street barbershops. Informed consent was obtained from each barber and ethical approval was obtained from the ethics review committee of Gulu Hospital. All barbers were males with an age range of 19-34 years and a mean of 25 (\pm 3.55) years. Most barbers 25 (83.3%) attained a post-primary school education and 28 (93.2%) learnt hair-cutting through apprenticeship and 2 (6.8%) from barber school. The instruments used were razor blades 46 (76.7%), manual clippers 26 (43.3%), smoothers 48 (80.0%), scissors 34(56.7%) and electric clippers 48 (80%). Clippers were sterilized in 4 (6.7%) and disinfected in 44 (73.3%), while no decontamination was carried out in 8 (13.8%) sessions. Air fresheners/after-shave were used in 31 (52%) of the disinfections, a disinfectant not recommended for HIV inactivation. Ultra-violet light sterilizers were used in 60% of the sterilization process. There was blade-to-skin contact in all sessions and accidental cuts occurred in four sessions and none was properly managed. The risk of transmitting HIV is high in these barbershops. Health education strategies including training, supportive supervision and peer education are needed to facilitate the adoption of effective precautionary measures against HIV infection among barbers.

Keywords: Barber activities, knowledge on HIV infection, health hazards, Gulu, Uganda.

INTRODUCTION

HIV/AIDS remains a major public health problem all over the world, but particularly in Uganda where it has caused incalculable human suffering, social and cultural disruption and huge economical losses (UNAIDS/WHO, 2010). Almost three decades after the first reported AIDS cases in Uganda (Serwadda et al., 1985). AIDS has continued to pose a significant public health and

development challenge. Uganda has a generalized HIV epidemic with a prevalence of 6.4% in adults and 0.7% in children (Uganda AIDS Commission (UAC), 2009). Approximately 1.1 million people in Uganda are HIV-infected and estimates indicate that over 100,000 new infections occur annually (Uganda AIDS Commission, 2009). In 2008, an estimated 110,694 new HIV infections occurred countrywide and approximately 61,306 people died from AIDS-related illnesses (Uganda AIDS Commission, 2009).

Prevention is the only viable method to control the spread of HIV as there is no definite cure for the infection

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(Oyedunni and Adesoro, 2009). In Uganda, much efforts have focused on prevention messages to curb the spread of HIV through heterosexual activities, blood transfusion, mother-to-child transmission and post-exposure prophylaxis for health workers and rape cases (WHO/UNICEF, 2009). However, not much effort has been focused on the prevention of HIV spread through contaminated sharp materials such as those in barbershops (Uganda AIDS Commission, 2009; WHO/UNICEF, 2009).

HIV transmission through sharing of non-sterile sharp instruments used for hair-cutting, circumcision, incision, tattooing, ear piercing, injections and acupuncture are being given less attention in the campaign against the spread of HIV (Oyedunni and Adesoro, 2009; USNIC, 2002). Specific HIV-risks of hair-cutting procedures relating to HIV transmission have been documented in Nigeria and other African and Asian countries (Khandiat et al., 1999; Zuwedi et al., 2002; Ibrahim et al., 2007). These authors reported incidences of accidental cuts on scalps and poor hygiene practices, including low disinfection rates of re-useable instruments.

Proper, effective and consistent disinfection of instruments for hair-cutting procedures are important in prevention of HIV spread in barbershops (Oyedunni and Adesoro, 2009). HIV infected persons, despite being asymptomatic, are infective at all stages of HIV/AIDS infection. Therefore, when dealing with all clients, barbers' instruments must always be disinfected and sterilized to minimize the risk of HIV transmission (Oyedunni and Adesoro, 2009). HIV on instruments barbers can be inactivated by using sterilizing agents such as flames, dry heat, cream and ultra-violet light (Salami et al., 2006; Katner et al., 1988). The concept of universal precaution considers that all blood and body fluids are potentially infectious and all invasive instruments are potentially contaminated if already used (Khandiat et al., 1999; Katner et al., 1988). The responsibility to keep such instruments free of infective agents lies on the barbers (Khandiat et al., 1999; Katner et al., 1988).

It is in view of this that the objective of this study was developed to assess the knowledge, attitude and precautionary practices of barbers in 15 out of 20 barbershops in the main streets of Gulu Municipality, Northern Uganda.

MATERIALS AND METHODS

Study setting

This study was conducted in Gulu municipality from April to June 2011. Gulu Municipality is a city in northern Uganda and it is 343 km north of the capital Kampala. This city is just recovering from a 20 year old civil war. It is strategically located and endowed with its transport

terminals and pivoted role in the vast and profitable distribution of goods in the region. It is the regional center for northern Uganda and draws largely rural population; many of whom were displaced into camps famously known as the internally displaced peoples camps (IDPS) for safety from the insurgency. According to the Revised Gulu District Development Plan (2009/2010), Gulu municipality has a population of 119,430 and has four sub-counties. It is estimated that over 10% of the adult population in the municipality is HIV positive and that there is evidence to show that the prevalence and incidence of HIV is rising in the municipality (GDPU, 2009).

Study design

This was a cross-sectional study in the barbershops of the main streets of the Gulu Municipality. The sample size was calculated and found to be sufficient to identify HIV transmission risk factors associated with hair-cutting practices with a power of 80% at 95% confidence interval if the prevalence factors influencing HIV transmission in hair-cutting in barbershops is between 10 and 90% in the study population.

Sampling procedures

The twenty barbershops in the main streets of the municipality which provided hair-cutting services to most middle class population in the town served as the sampling frame. Out of these, fifteen barbershops were randomly selected and these represented 75% of all barbershops in the main streets. Two barbers from each selected barbershops were consecutively selected, observed and interviewed for at least 2 hair-cutting sessions.

Data collection

Questionnaire and validated checklist were used to collect data on the socio-demographic characteristics, the knowledge, attitudes and precautionary practices of the barbers in the barbershops.

Two trained research assistants closely supervised by the core investigators, collected data by use of the questionnaire and direct observation of the barbers' hair-cutting sessions using pre-tested and validated checklists. Each of the selected barbers had to perform at least two hair-cutting sessions under the observation of investigators and the research assistants. Reusable hair-cutting instruments were observed while in use in one of the two sessions of hair-cutting by each barber. For the purpose of ensuring keen observation, only one session was observed if more than one hair-cutting session was

going on concurrently in the same barbershop and the first session was only accepted when it started in the presence of the researchers.

Two trained research assistants (1 male and 1 female) who interviewed the barbers were final year undergraduate medical students with knowledge of HIV/AIDS transmission. The average length of each interview was 20 min. The questionnaire interviews were conducted in English Language since most respondents could speak and understand English Language well enough.

Prior to this study, sensitization of the owners of the barbershops was conducted to inform them about the research and to seek their approval and consent to participate in the study. Informed consent to conduct the study was obtained from each barber and they were made to feel free to opt out of the study at any stage.

The shops were visited between 5:30pm and 7:30pm on weekdays and between 4:00pm and 7:00pm on Saturdays. These periods were the busy periods when hair-cutting sessions could be witnessed.

The pre-tested observation checklist used for data collection was designed and recorded one other behaviour that included incidences of "Shaolin" (hairstyle in which hair was cut up to the level of the skin) hairstyles and accidental cuts. The actions taken on the clients and instruments on those particular occasions were also recorded. With the exception of the verification of disinfectants used, other observations were conducted without interfering with the normal operations of hair-cutting sessions.

Dependent variables: Risk of transmission of HIV/AIDS during hair-cutting sessions was the outcome of interest. They include the instruments, the type of disinfectants, description of disinfection processes equipment, names and expiry dates of the decontaminant, immediate management of accidental cuts and follow-up. The other observation made was the sterilizers used by the barbershops, the presence of operating manuals, and functionality of sterilization machines. This was specifically whether the barbers in those shops had knowledge about the risk of HIV spread through the hair-cutting process to clients and the precautions they took to prevent the spread of HIV virus.

Independent variables: These were sex, age, tribe, religion, level of education, other occupation, marital status, number of children of the barbers.

Analysis

SPSS statistical software package version 12.0 was used to analyze data. First, univariate analysis was carried out to generate frequencies and proportions and secondly bivariate analysis to test for association between the independent and outcome variables. Chi-square statistic test was used to test for significance at 95% confidence

interval ($p < 0.05$)

Ethical considerations

The study was approved by the Research and Ethics Committee of Gulu Regional Referral Hospital. Permission to collect data was sought from the owners and the managers of the barbershops. Informed consent was obtained from each barber before interview and utilization of the observational checklists.

RESULTS

Socio-demographic characteristics of respondents

There were 30 barbers that carried out sixty hair-cutting sessions in our study. Table 1 shows the socio-demographic characteristics of the barbers, who were all males. Their mean age was (25 ± 3.55) years. There was preponderance (56.6%) of respondents that had attained post primary school education. Most respondents (93.3%) in the area learnt the art of hair-cutting through apprenticeship spanning through a period of 1.0 ± 0.8 months.

Most barbers were aware of HIV/AIDS transmission through contaminated sharp materials and they had a mean knowledge score of 8.3 ± 1.3 out of a maximum score of 10 (Table 2b). Thirteen barbers (43.3%) knew that HIV could be transmitted by sharing non-sterile sharp barber instruments (Table 2a).

For the prevention of HIV in barbershops, spirit was mentioned as used in 36 (60%), shampoo in 20 (33.3%), hot water in 4 (6.7%), after-shave/ Air freshener in 12 (20.0%) and Jik in 4 (6.7%) for disinfection in hair-cutting sessions. Six barbers (20.7%) did not know barbers were at risk of contracting HIV infection from their clients while 1 (3.4%) was not sure whether it was a possible mode of transmission (Table 2c).

Out of the 60 hair-cutting sessions we observed, razor blades were used in 46 (76.7%), manual clippers in 26 (43.3%), electric clippers used in 48 (80.0%), smoothers 48 (80.0%), and scissors 34 (56.7%) (Table 2c).

Table 3 shows the precaution taken by barbers when they experienced accidental cuts to clients or themselves. All the razor blades used were new and disposed off thereafter but not in a sharp container as recommended by the universal protection methods. This meant that the risk of getting cuts from used razor blades were high because of non separation of the sharp materials from the others.

Using the observation and validated checklists, the answers given in the questionnaires by the barbers were not matching the actual practices with many (75.9%) of them claiming to sterilize their instruments in their barbershops. Clippers were sterilized in 8 (13.3%) and

Table 1: Socio-demographic characteristics of the barbers.

Demographic data	Frequency (N=30)	Percentage
Age of the barbers (yrs)		
18-22	6.0	20.0
23-25	10.0	33.3
26-30	11.0	36.7
31 -35	3.0	10.0
Other occupations of the barbers		
Barbering only	20.0	66.7
Business	2.0	6.7
Peasant Farmer	3.0	10.0
Boda-boda rider	4.0	13.3
Others	1.0	3.3
The highest level of education		
Tertiary	8.0	26.7
Secondary	17.0	56.6
Primary	5.0	16.7
Religion of the barbers		
Catholic	22.0	73.3
Protestant	5.0	16.7
Moslem	3.0	10.0
The tribe of the barbers		
Acholi	24.0	80.0
Lango	2.0	6.7
Baganda	4.0	13.3
Marital status of barbers		
Single and not married	21.0	70.0
Married/cohabiting	6.0	20.0
Separated/divorced	1.0	3.3
Widowed and Remarried	1.0	3.3
Do not know	1.0	3.4
No. of Children of barbers		
No child	18.0	60.0
1-2 children	10.0	33.3
3-4 children	2.0	6.7

Table 2a: Knowledge of barbers to methods of HIV tra

Transmission methods	Frequency (N=30)	Percentage
Heterosexual intercourse	15.0	50.0
Cut and prick from contaminated materials	30.0	100.0
Mother to child	15.0	50.0
Homosexual intercourse	9.0	30.0
Blood transfusion	17.0	56.7
Sharing of contaminated barber materials	13.0	43.3
Prevention methods		
Washed hands and barber materials with Spirit	10.0	33.3
Washed hands with plenty of water	3.0	10.0
Misconceptions		
HIV is not spread through hair-cutting	19.0	63.3
Barbers materials does not have HIV	10.0	33.3

Table 2b: Knowledge score for the barbers on HIV transmission.

Knowledge score	Frequency (n=30)	Percentage
Scored Level of Knowledge (Maximum of 10 marks)		
Poor (1-3 marks)	2.0	6.7
Fair (4-5marks)	4.0	13.3
Good (6-7 marks)	4.0	13.3
Very Good (8-10marks)	20.0	66.7

Table 2c: Knowledge about possible spread of HIV/AIDS through barbers' materials.

Knowledge about possible spread of HIV through barber materials		Yes	No	I do not know	I am not sure	Total
Non-sterile materials help in the spread of HIV/AIDS	Count	28.0	1.0	1.0		30.0
	%	93.3	3.3	3.3		100.0
There is a protocol in my barbershop	Count		30.0			30.0
	%		100.0			100.0
I have seen and used the protocol	Count		2.0	1.0		3.0
	%		66.7	33.3		100.0
I have a risk of contracting HIV from your clients	Count	20.0	4.0	4.0	2.0	30.0
	%	66.7	13.3	13.3	6.7	100.0
I have a risk of transmitting HIV to my clients	Count	22.0	4.0	2.0	1.0	29.0
	%	75.9	13.8	6.9	3.4	100.0
I sterilize materials before use on the next client	Count	27.0	3.0			30.0
	%	90.0	10.0			100.0
I have a sterilizer	Count	22.0	8.0			30.0
	%	73.3	26.7			100.0
I commonly get accidental cuts during haircutting	Count	15.0	14.0			29.0
	%	51.7	48.3			100.0

Table 3: Knowledge, attitude and practices of the barbers in Gulu Municipality main street towards the spread of HIV/AIDS.

Knowledge about possible spread of HIV through barber materials		Yes	No	I do not know	I am not sure	Total
Non-sterile materials help in the spread of HIV/AIDS	Count	28.0	1.0	1.0		30.0
	%	93.3	3.3	3.3		100.0
There is a protocol in my barbershop	Count		30.0			30.0
	%		100.0			100.0
I have seen and used the protocol	Count		2.0	1.0		3.0
	%		66.7	33.3		100.0
I have a risk of contracting HIV from your clients	Count	20.0	4.0	4.0	2.0	30.0
	%	66.7	13.3	13.3	6.7	100.0
I have a risk of transmitting HIV to my clients	Count	22.0	4.0	2.0	1.0	29.0
	%	75.9	13.8	6.9	3.4	100.0
I sterilize materials before use on the next client	Count	27.0	3.0			30.0
	%	90.0	10.0			100.0
I have a sterilizer	Count	22.0	8.0			30.0
	%	73.3	26.7			100.0
I commonly get accidental cuts during haircutting	Count	15.0	14.0			29.0
	%	51.7	48.3			100.0

Table 4a: Knowledge about HIV/AIDS among barbers in Gulu versus age cross-tabulation.

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-square	3.758	3	0.289
Likelihood Ratio			
N of Valid cases	30		

Chi-square tests shows $\chi^2 = 3.758$ with (df = 3) an insignificant association between age and knowledge on HIV/AIDS (p=0.289).

Table 4b: Knowledge about HIV/AIDS among barbers versus level of education.

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-square	0.759	2	0.684
Likelihood Ratio			
N of Valid cases	30		

Chi-square tests shows and an insignificant association $\chi^2 = 0.759$ with (df = 2) (p=0.684) between the level of education and knowledge of HIV/AIDS.

disinfected in 38 (63.3%) and no disinfection was carried out in 22 (36.7%) sessions. Out of the 38 sessions that involved disinfection, 18 (47.4%) used methylated spirit, 10 (26.3%) used shampoo, 2 (5.3%) used hot water, 6 (15.8%) used After-shave/Air fresheners, 2(5.3%) used Jik.

Ultra-violet light sterilizers were used in 60% of the sessions for sterilization. Only 40% of the UV light sterilizers were found to be operated according to specifications in the manufacturers' manual and the rest did not follow any guidelines. The type of UV light sterilizers used could only be identified in 9 barbershops since some of them did not have any labels.

The risk factors that could contribute to HIV transmission in the observed sessions included inappropriate disinfections, which involved the use of disinfectants that could not inactivate HIV in 36 (60.0%) and using same brush for cleaning instruments and brushing hair in 32 (53.4%) of cases. Other risk factors were blade-to-scalp contact (100%) and accidental cuts observed in 31 (51.7%) sessions conducted.

In addition, first-aid action taken on the victims and instruments involved in accidental cuts were mainly to control bleeding from the scalp and to boil or clean the instruments with spirit. Some 14 (46.7%) of spirits used were labeled with a 70% alcohol concentration whereas 10 (33.3%) of the alcohol used were labeled 40% alcohol concentration and 6 (20%) of the spirit used had no label. More still the expiry dates of these spirits were only indicated in 4 (26.7%) while the rest 22 (73.3%) had no label. Most 16 (53.3%) of the spirits were not in their original containers.

In cross-tabulating the knowledge about HIV prevention measures with their age, level of education, years of practice. The age of the barbers had a statistically

insignificant association with HIV knowledge ($\chi^2 = 3.758$; df = 3; p=0.289) (Table 4a) while the level of education had a statistically insignificant association with HIV knowledge ($\chi^2 = 0.759$; df = 2; p=0.684) (Table 4b). The experience (years of hair-cutting practices) had a statistically insignificant association with knowledge on HIV transmission ($\chi^2 = 11.914$; df = 7; p=0.103) (Table 4c). The respondents' level of education was cross-tabulated with risk of exposure to blood and found to have a positive but a statistically insignificant association ($\chi^2 = 5.62$, p=0.060) (Table 4d).

Knowledge about HIV/AIDS was nearly uniformly spread among the different age-groups and levels of education but a point to note was that; the more knowledge one had about HIV/AIDS, the lesser precautions they undertook to handle disinfection and sterilization of re-usable barber's materials. This observation could be attributed to poor attitudinal issues of barbers in the study area (Table 3).

Thirteen barbers (43.3%) had experienced exposure to clients' blood while 17 (56.7%) had not and the circumstances of exposure were as follows: 7 (53.8%) had a broken skin in the hands when the client was injured, 2 (15.4%) was cut by a razor blade used by a client, 2 (15.4%) was cut by clippers used on a client, 2 (12.5%) was cut with a sharp barber's instrument during hair-cutting and 1 (7.7%) was injured by a contaminated scissor used on a client (Table 3).

The actions taken by the barbers after injuries were inflicted were variable: 20 (62.5%) cleaned their hands immediately with disinfectant, 6 (18.75%) washed the spot with plenty of water, 2 (6.25%) squeezed the blood out, 2 (6.25%) asked the client about their HIV status and did nothing else, and 2 (6.25%) plastered the site and continued hair-cutting.

Table 4c. Knowledge about HIV among barbers versus their experience.

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-square	11.914	7	0.103
Likelihood Ratio			
N of Valid cases	30		

Chi-square tests (χ^2) = 11.914 with (df=7) shows an insignificant ($p=0.103$) association between knowledge of HIV and the experience of the barber.

Table 4d. Level of educational of barbers versus exposure to blood.

Variables	Being exposed to blood while working		
Education level	Yes	No	Total
Tertiary level	1	7	8
Secondary level	9	8	17
Primary level	3	2	5
Total	13	17	30
Pearson Chi-square (χ^2) = 5.62			
P-value = 0.023			

A statistically insignificant association (χ^2 =5.62, $p=0.060$) between level of educational and exposure to blood during hair-cutting.

DISCUSSION

The socio-demographic characteristics of barbers did not significantly influence the knowledge, attitude and practices of barbers of the main streets of Gulu Municipality. There were inappropriate hair-cutting practices in barbershops that could be due to lack of practical knowledge about disinfection and potency of disinfectants. Although the principle of universal protection methods considers that all blood and body fluids are potentially infectious and all invasive instruments were to be potentially contaminated, most barbers in the area did not know this concept. The possible reason for the poor HIV-prevention practices at these barbershops could be due to lack of strict control measures and monitoring by the relevant agencies in Gulu municipality. Barbers reported no single time when they were specifically trained in methods of HIV prevention. However, barbers are still important professionals in the community which are still owned, cared and financed by the community especially the rural and urban areas and majority of them do not have any perception of unhealthy working practices in hair-cutting (Wazir et al., 2008). Unlike in other countries where activities of barbers are regulated through a comprehensive training, licensing and monitoring programs (Mele et al., 1995), Gulu Local Government had not given any noticeable attention to barbers and their activities. This study showed that the frequency and quality of instrument disinfection practices of barbers in relation to HIV prevention was not satisfactory. Studies from other countries have proven that razor blade sharing

and shave from barbers has been identified as a key risk factor for HBV spread in Italy and for HCV and HIV among psychiatric patients in Japan, Egypt and Pakistan (Mele et al., 1995).

Although majority of barbers appeared to observe disinfection either with a disinfectant or sterilizer, more than half of the disinfections were inappropriately done. Some of the spirits used for the disinfection were labeled as 40% alcohol concentration. Several literatures indicate that any alcohol concentration less than 60% could not completely inactivate HIV (Ibrahim et al., 2007). More still, the ultraviolet light sterilizers claimed to be used for sterilization were mostly found not to be in good working condition and most times the machine was unplugged from power source. The absence of the sterilizers' operating manual also created much doubts about the possibility that the sterilizers were being operated as prescribed by the manufacturers. There is a major limitation of UV light sterilizers in that it is unable to inactivate viruses when the contaminated sites are not in direct contact with the UV light such as when the contaminant is hidden in the crevices of the clippers (Ibrahim et al., 2007; Ashraf et al., 2010). The use of inappropriate disinfectants such as shampoo, Air fresheners and "After-shave" which were not known to inactivate HIV was a clear indication of the breach of universal protection methods by these barbers.

Brushes were neither disinfected nor sterilized and were used for cleaning barbers' instruments and brushing client's hair. They were used several times in hair-cutting procedures on different clients, with the possibility of recontamination from the previous hair-cutting activities.

Similarly, in Pakistan it was observed that barbers perform hair cutting, nail trimming, pedicure, manicure and shampooing/dyeing of hair. In addition to circumcision and abscess drainage, especially in rural areas and urban slums were observed to create potential risks of spread of various infections (Janjua and Nizamy, 2004).

The authors have specifically identified the use of shampoo, "Air fresheners" and "after-shave" as disinfectant for barbers' instruments as a potential breach in the universal protection methods as they were not known to be disinfectants and do not inactivate HIV (Awodele et al., 2007). This implied that the seemingly high disinfection rates among barbers just amounted to a false sense of security to clients and general public. This finding was similar to some previous studies on barbers' practices in many other countries such as Nigeria and India (Salami et al., 2006; Awodele et al., 2007; Khandiat et al., 1999).

Skin damage is the precondition for scalp inoculation with HIV when penetration of the skin by Hair-cutting instruments occurs. This process usually exposes the circulatory system to several infections including HIV (Ashraf et al., 2010; Oyedunni and Adesoro, 2007). Skin damage occurs during hair-cutting either as accidental cuts or abrasion as a result of blade-to-skin contact or both. Blade-to-scalp contact often occurs during hair trimming, shaving and "shaolin" hairstyle-cutting when detachable plastic combs are not used (Oyedunni and Adesoro, 2007). Sometimes, barbers themselves are exposed accidentally to blood and body fluids of their customers, which is a health hazard (Ashraf et al., 2010). Another study of frequency of hepatitis B and C virus infection in barbers of Sivas region of Turkey concluded that both Hepatitis B and Hepatitis C viral infections might constitute occupational hazards for the barbers and the sources of infection could be, not only such personal risk factors as 'sharps' injuries and scissor cuts, but may also include other unknown factors (Candan et al., 2002).

Our study observed sessions involving hair trimming, shaving and "shaolin" hairstyle-cuts. All these procedures encouraged blade-to-skin contact and consequently, skin abrasion and cuts. Minor cuts during hair-cutting seem to have become a common accident as it has been extensively reported in previous studies (Khandiat et al., 1999; Zuwedie et al., 2002). It may be as a result of improper handling of instruments since most of the barbers were not formally trained in the practices of hair-cutting and they took very short time in training.

The "shaolin" hair-cuttings present one of the greatest risk factor for skin trauma and inevitably leading to skin abrasions and accidental cuts unless extreme care is undertaken (Candan et al., 2002). The most shocking revelation from this study was that knowledge about HIV spread among barbers was inversely proportional to the experience in hair-cutting practices. This result was however not exceptional in that similar results about little knowledge among barbers about the routes of spread of

HIV, hepatitis B and C were observed in Pakistan, although their attitudes and practices regarding the use of new blades and the disposal of sharps were very good (Ashraf et al., 2010). The poor attitudes of these barbers on disinfection of instruments for haircutting in Gulu municipality may merely be an issue of complacency to guidelines laid out by Uganda Ministry of Health on the re-use of sharp contaminated materials with blood or body fluids.

CONCLUSION

This study revealed that hair-cutting practices in Gulu Municipality main streets present a great risk for HIV transmission through the use of non-potent disinfectants and improper handling of sharp instruments leading to skin cuts that were inappropriately managed. The same invasive instruments were used on asymptomatic HIV-positive and uninfected individuals. In addition, there were blade-to-scalp contacts in all the sessions. Therefore, barbers could serve as a potential group for indirect transmission of HIV in the general population.

It is therefore recommended that barbers should be trained in universal protection methods, regularly monitored and supervised by the municipality and local government authorities on the correct hair-cutting procedures and instrument decontamination.

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