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Knowledge, Attitude and Practices about Prevention of Transmission Hepatitis B Virus among Nursing Students on ward placement at KIU-Teaching Hospital.

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ABSTRACT

In Uganda, it was recently shown that 52% of the adult population has serological evidence of previous hepatitis B exposure and 10% are chronic carriers with infection rates varying across the country from 10% in the south west and 25% in the north east. This study was planned to assess knowledge, attitude and practices of nursing students on ward placement at KIU-Teaching Hospital about prevention of hepatitis B virus. A descriptive cross-sectional study design quantitative in nature was used to recruit 73 respondents for the study. 78% of the respondents stated that the best precaution for prevention of transmission of hepatitis B virus was vaccination, 71% of the respondents agreed that reporting of occupational exposures was important for post exposure prophylaxis of hepatitis and 72% of the respondents agreed that universal precautions such as hand washing, gloving and gowning should be always be practiced in the ward. The researcher concluded that knowledge about prevention of transmission of hepatitis B was good as majority of the respondents stated that the best precaution for prevention of transmission of hepatitis B virus was vaccination. Attitudes about prevention of transmission of hepatitis B were also good as most of the respondents agreed that hepatitis B virus vaccination should be made compulsory for every nursing student on ward and most of the respondents agreed that reporting of occupational exposures was important for post exposure prophylaxis of hepatitis B virus infection. Practices towards prevention of transmission of hepatitis B virus were equally good as most of the respondents agreed that universal precautions such as hand washing, gloving and gowning should be always be practiced in the ward.

Keywords: Hepatitis B, Virus, infection, transmission, prophylaxis.

INTRODUCTION

Hepatitis B is a potentially fatal infection caused by the hepatitis B virus (HBV). About 2 billion people worldwide have been infected with the virus and about 350 million live with chronic infection. An estimated 600,000 persons die each year due to the acute or chronic consequences of hepatitis B [1].

Hepatitis B virus is a leading cause of chronic hepatitis, cirrhosis, and hepatocellular carcinoma, accounting for 1 million deaths annually. Its prevalence approaches 10% in hyper endemic areas such as Southeast Asia, China, and Africa [2]. More than 8% of the affected people are chronic carriers of hepatitis B virus which result from either neonatal transmission (vertical) or transmission from one child to another (horizontal) [3]. Among the health care personnel including nursing students, HBV is transmitted by the skin prick with an infected, contaminated needles and syringes or through accidental inoculation of minute quantities of blood during the surgical and dental procedures [4].

HBV infections and its sequelae are extremely common in sub Saharan Africa. The overall hepatitis B surface antigen (HbsAg) carrier rate in the general population is 5-20% which is amongst the highest in the world [5]. In the light of the lukewarm attitude shown towards the disease and due to acts of selective prevention of infectious diseases by the governments including HBV, the disease is said to be fast spreading with an estimated number of 4 million people as carriers [6].

The public health burden of hepatitis B infection in Uganda is unknown, although the country has long been considered to be among the highly endemic countries of Sub Saharan Africa with more than 8% of the population expected to harbour a chronic infection [7]. Results from a few Ugandan studies have supported this hypothesis. The prevalence of HBV surface antigen (HbsAg), a marker of chronic HBV infection, ranged from 6 to 15% among blood donors when HBV screening was introduced, and in selected populations in Uganda. In nursing students and health workers, the prevalence of HbsAg ranged from 8 to 11% [8].

A study conducted in 2005 to determine base line prevalence of hepatitis B infection and its risk factors in Uganda showed that the prevalence of biological markers; hepatitis B surface antigen (Hep b sAg) and hepatitis B core antigen (Hep bcAg) was significantly higher across northern Uganda, in rural areas, among the poor, least educated and in uncircumcised men. Other independent predictors of infection were age, ethnic group and number of sex partners [9].

In accordance with WHO recommended strategy for HBV control, HBV vaccine was introduced in Uganda in 2002 as part of Expanded Program on Immunisation (EPI) and is given at 6, 10 and 14 weeks of age [10].

The likely hood that the disease will become chronic depends on the age at which the person becomes infected. Children less than 6 years of age who become infected with hepatitis B virus are the more likely to develop chronic infections [11].

Most infected persons do not experience any symptoms during the acute infection phase however, some people have acute illness with symptoms that last several weeks including jaundice, dark urine, extreme fatigue, nausea, vomiting and abdominal pain [12].

Scientific knowledge regarding HBV transmission and its prevention is essential for nursing students so that they can take proper protection while their clinical posting as HBV is 50 times easier to transmit than HIV [13].

Various measures of preventive practices which should to be taken by the nurses include use of gloves, gowns, use of sterilized instrument, blood testing, taking vaccines and use of condoms [8].

Statement of the problem

Globally, 2 billion people have been infected with HBV at some point in time in their life time and 360 to 400 million people which represents more than 5% of the world's population are chronic carriers with an estimated 600,000 deaths each year due to consequences of HBV [14].

Of all the WHO regions, Africa is of particular interest. It is estimated that out of the 360 million chronic global carriers of HBV, about 65 million of these chronic carriers live in Africa. In addition, of the estimated 1.3 million deaths recorded annually due to HBV related causes, about 250,000 are African [15].

In Uganda, it was recently shown that 52% of the adult population have serological evidence of previous hepatitis B exposure and 10% are chronic carriers with infection rates varying across the country from 10% in the south west and 25% in the north east.

Despite increasing prevalence of HBV, there is paucity of information on Knowledge, Attitude and Practice (KAP) concerning HBV among nursing students. Improved HBV related knowledge is imperative for developing an informed positive environment which can import, support and maintain good HBV control practices especially among nursing students in Kampala International University Teaching Hospital (KIU-TH).

Aim of study

To assess knowledge attitude and practices of nursing students on ward placement at KIU-TH about prevention of hepatitis B virus.

Study objectives.

1.To assess knowledge of student nurses on ward placement at KIU-TH about prevention of hepatitis B.

2.To find out attitudes of student nurses on ward placement at KIU-TH about prevention of hepatitis B

3.To identify practices of student nurses on ward placement at KIU-TH about transmission of hepatitis B.

Research questions.

1. What is knowledge of student nurses on ward placement at KIU-TH about prevention of hepatitis B?
2. What are the attitudes of student nurses on ward placement at KIU-TH about prevention of hepatitis B?
3. What are the practices of student nurses on ward placement at KIU-TH about transmission of hepatitis B?

Justification.

Hepatitis B is the most important infectious occupational hazard which the healthcare workers (HCWs) encounter. Healthcare personnel specially nursing staff and students represent a high-risk population for HBV infection. Therefore, the findings of this study will be beneficial to;

Nursing practice.

To become active participants and advocates of safety at work through safe medical waste disposal and injection practices.

Nursing education.

The study findings may be incorporated in the nursing curriculum to enhance teaching and learning of student nurses about prevention of hepatitis B virus infections and safe practices at work.

Nursing research.

The study findings may be used as a reference by other researchers with similar interest in assessing knowledge, attitude and practices of nursing students in ward placement about prevention of hepatitis B virus infections.

Nursing administration/management.

The study findings will help nurse managers to identify areas that need improvement in prevention of hepatitis B for the safety of nursing students in ward placement.

Kampala International University Teaching Hospital community.

The study findings may help the hospital community to identify their strength and weaknesses in prevention transmission of hepatitis B and therefore act accordingly for a healthy living.

METHODOLOGY

Study Design and rationale

The study was conducted through a descriptive cross-sectional study design quantitative in nature. The study design was selected because it aids in rapid data collection and allows a snap short interaction with a small group of respondents at one point in time thus allowing conclusions across a wide population to be drawn. The study design was used to assess knowledge attitude and practices of nursing students on ward placement at KIU-TH about prevention of hepatitis B virus

Study setting

The study was carried out at Kampala International University Teaching Hospital (KIU-TH), a private not for profit hospital located within Ishaka municipality in Bushenti district, Western Uganda. The hospital is approximately 365 Km south west of Kampala, Uganda's capital city. The hospital was established 2005 to aid training of nursing and medical students studying at Kampala International University. The hospital offers general as well as specialised medical services. It has a bed capacity of over 700 beds. The hospital specifically serves former greater Bushenyi and its neighbouring districts.

Study Population

The study population consisted of nursing students on ward placement at Kampala International University Teaching Hospital.

Sample size determination.

The sample size for the respondents at Kampala International University Teaching Hospital was calculated using [16] formula with precisions of +/- 5% at confidence level of 95%. It is given by the expression;

$$n = \frac{N}{1+N(e)^2}$$

Where N=Target population, N=100 (number of students on ward placement)
e=Fixed error, e=0.05

$$n = \frac{100}{1+150(0.05)^2}$$

n=73 respondents

Therefore 73 respondents were recruited for the study.

Sampling procedure

Convenient sampling method which a non probability sampling technique where participants are selected because of their convenient accessibility and proximity to the researcher was used for recruiting respondents for the study as it is fast and cost effective.

Selection criteria

Inclusion criteria

The study included all nursing students on ward placement above 18 years of age who were willing to consent for the study.

Exclusion criteria

Nursing students who were very sick or not on ward placement at the time of interview were excluded from the study.

Study variables

Dependent variable

Factors affecting prevention of transmission hepatitis B.

Independent variable

Knowledge about transmission of hepatitis B.

Attitudes towards prevention of transmission hepatitis B.

Practices about prevention of transmission of hepatitis B.

Research Instruments

A structured questionnaire was used as a tool for gathering information. The structured questionnaire was divided into four sections; The first section was used to collect data about socio-demographic profile, the second section was used to assess knowledge of nursing students about prevention of transmission of hepatitis B, the third section was used to assess attitudes towards prevention of hepatitis B and the fourth section was used to assess practices of nursing students about prevention of transmission of hepatitis B.

Data collection procedure

The researcher introduced herself to the prospective participants and read to the individual participants the consent form that details the title and purpose of the study as well as the rights of the participant. Whenever a participant agreed to be interviewed, he/she was asked to provide written consent by signing or fingerprinting. If they refused to participate the interview would not proceed.

After obtaining the written consent, the researcher entered the questionnaire serial number and date of interview and proceeded from the first up to the last question using a language understood by the participant. The researcher entered responses given by the participants by ticking the appropriate response and entering the same number in to the coding box. This was done to ensure data quality as the response number ticked was supposed to be the same as the one entered in the coding box. If the numbers were different it would not be a valid response. The researcher reviewed the questionnaires on a daily basis to ensure they were being completed correctly and any errors corrected to avoid being repeated. The process of data collection continued until every effort to contact every study participant in the sample was exhausted. All completed questionnaires were kept safe by the researcher until the time of analysis.

Data management

Completed questionnaires were checked for accuracy and completeness on a daily basis after data collection at the end of the day. This was followed by coding and entry of the data using Epi info 3.4.1 software for Windows and double entry into Statistical Package for Social Scientists (SPSS) version 20 software for analysis.

Data analysis and presentation

Data was analysed by descriptive statistics using SSPS version 20 software and presented in frequency tables, piecharts and bargraphs.

Quality control techniques.

For reliability and validity, questionnaire was pretested with a tenth of the sample size outside the study area. The questionnaire was then revised and content adjustments made accordingly. After data collection, questionnaires was checked daily, for completeness, clarity, consistency and uniformity by the researcher.

Ethical consideration

A letter of introduction was obtained from Kampala International University Western Campus School of Nursing sciences to permit the researcher to carry out the research.

Permission was obtained from the Executive Kampala International University Teaching Hospital.

All participating respondents were selected on the basis of informed consent.

The study was on voluntary basis and information was kept private and confidential. Participants' anonymity was kept. The study was conducted while upholding the professional cord of conduct in a manner that did not compromise the scientific inclinations of the research.

RESULTS

Bio demographic data.

Table 1: Shows bio demographic data of the respondents (n=73)

Bio demographic parameter		Frequency (n)	Percentage (%)
Age (Years)	18-28	69	94.5
	29-39	4	5.5
	40-49	-	-
	>50	-	-
	Total	**73**	**100**
Sex	Male	19	26
	Female	54	74
	Total	**73**	**100**
Tribe	Munyankole	41	56.2
	Muganda	23	31.5
	Others	9	12.3
	Total	**73**	**100**
Religion	Christian	63	86.3
	Moslem	10	13.7
	Others	-	-
	Total	**73**	**100**
Marital status	Married	3	4.1
	Single	70	95.9
	Divorced	-	-
	Widowed	-	-
	Total	**73**	**100**

Majority of the respondents (94.5%) were between 18-28 years of age while only 5.5% were of the age range 29-39 years. Most of the respondents (74%) were female while only 26% were male. More than half of the respondents (56.2%) were Banyankole while only 12.3% were other tribes. Majority of the respondents (86.3%) were Christian while only 13.7% were Moslem. Majority of the respondents (95.6%) were single while only 4.1% were married.

Knowledge about prevention of transmission of hepatitis B virus.

Table 2: Shows response on whether the respondent had ever heard about hepatitis B virus (n=73).

Response	Frequency (n)	Percentage (%)
Yes	73	100
No	-	-
Total	**73**	**100**

All the respondents (100%) had ever heard about hepatitis B virus.

Table 3: Shows response about how hepatitis B virus is transmitted (n=73).

Response	Frequency (n)	Percentage (%)
Vertically and horizontally	54	74
Through smoking	-	-
Feco orally	19	26
Others	-	-
Total	**73**	**100**

Most of the respondents (74%) mentioned that hepatitis B virus is transmitted by vertical and horizontal means while only 26% mentioned feco orally.
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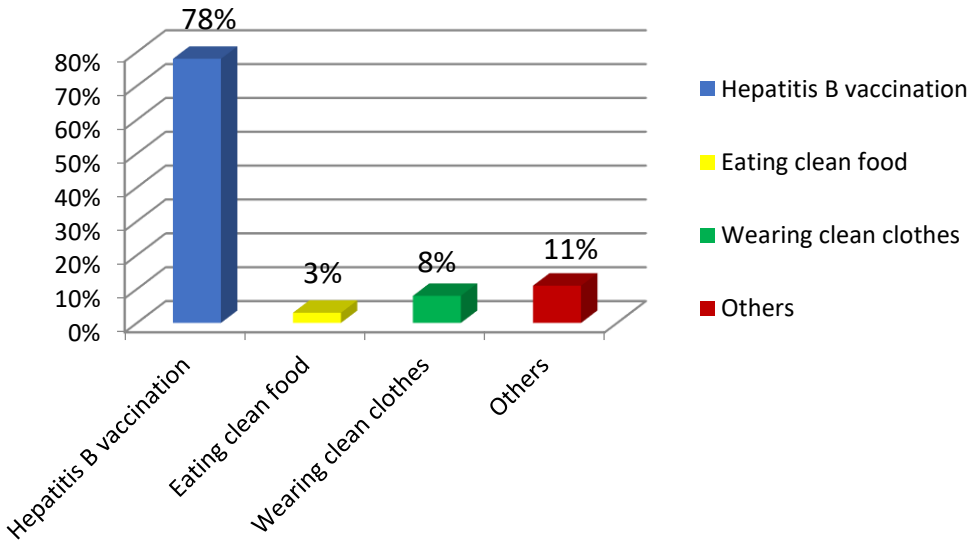

Figure 1: Shows response about the best precaution for prevention of transmission of hepatitis B virus (n=73).

Majority of the respondents (78%) stated that the best precaution for prevention of transmission of hepatitis B virus is vaccination while only3% mentioned eating clean food.

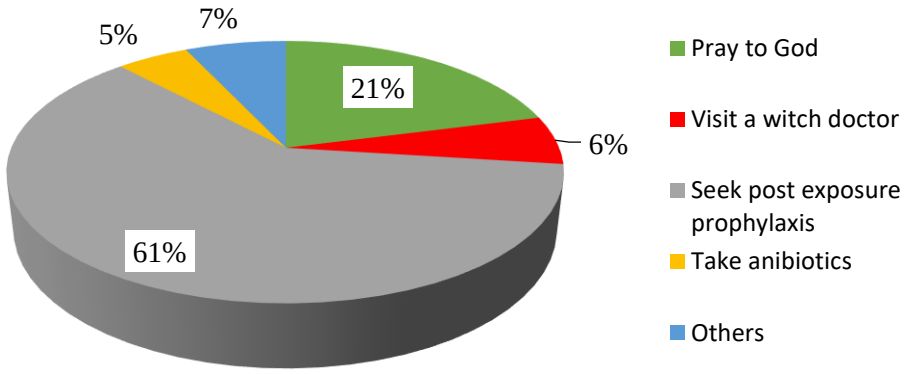

Figure 2: Shows response about the right thing to do when one suspects an exposure to hepatitis B infection (n=73).

Most of the respondents (61%) stated that the right thing to do after an exposure to hepatitis B virus infection is to go for post exposure prophylaxis while 5% stated they would take antibiotics.

Table 4: Shows response on how transmission of hepatitis B can be prevented in the ward (n=73).

Response	Frequency (n)	Percentage (%)
Following universal precautions	67	91.8
Following treatment schedules promptly	6	8.2
Having adequate light in the ward	-	-
Others	-	-
Total	**73**	**100**

Majority of the respondents (91.8%) stated that following universal precautions could help prevent transmission of hepatitis B in the ward while only 8.2% mentioned following treatment schedules promptly.

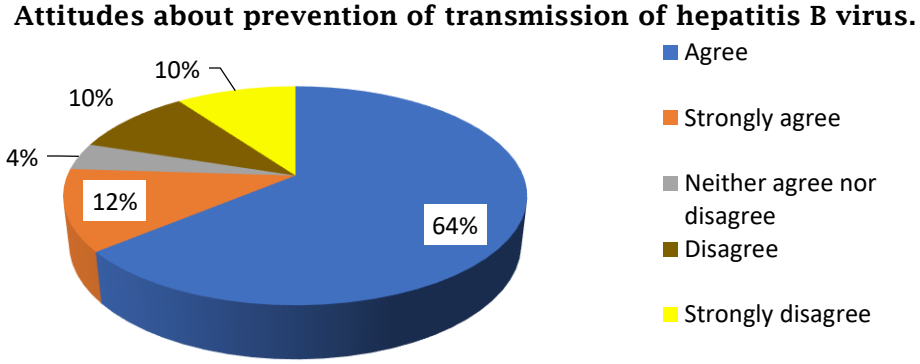

Figure 3: Shows response on whether hepatitis B virus vaccination should be made compulsory for every nursing student on ward (n=73)

Most of the respondents (64%) agreed that hepatitis B virus vaccination should be made compulsory for every nursing student on ward while only 10% neither agreed nor disagreed.

Table 5: Shows response on whether hepatitis B vaccine may be a source of hepatitis B infection (n=73).

Response	Frequency (n)	Percentage (%)
Agree	2	2.7
Strongly agree	-	-
Neither agree nor disagree	48	65.8
Disagree	10	13.7
Strongly disagree	13	17.8
Total	**73**	**100**

Most of the respondents (65.8%) neither agreed nor disagreed that hepatitis B vaccine may be a source of hepatitis B infection while only 2.7% agreed.

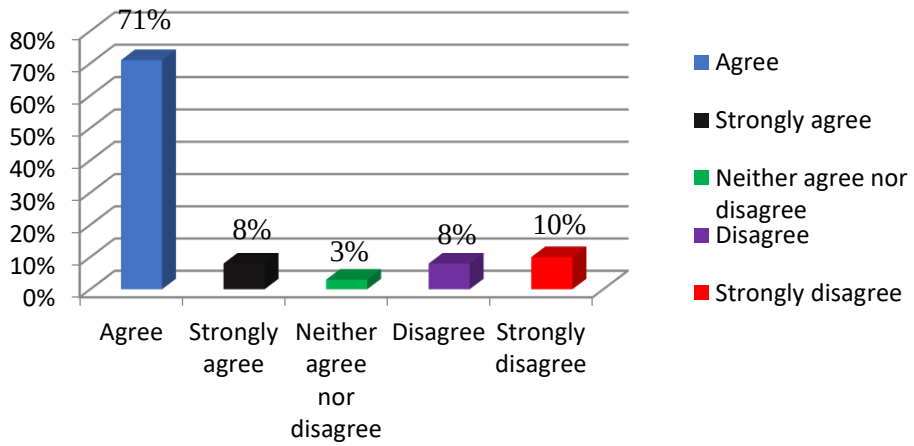

Figure 4: Shows response on whether reporting of occupational exposures is important for post exposure prophylaxis of hepatitis B (n=73).

Most of the respondents (71%) agreed that reporting of occupational exposures is important for post exposure prophylaxis of hepatitis B while only 3% neither agreed nor disagreed.

Table 6: Shows response about whether it is not always possible to follow universal precautions for prevention of hepatitis B transmission (n=73).

Response	Frequency (n)	Percentage (%)
Agree	46	63
Strongly agree	9	12.3
Neither agree nor disagree	-	-
Disagree	13	17.8
Strongly disagree	5	6.9
Total	**73**	**100**

Most of the respondents (63%) agreed that it was not always possible to follow universal precautions for prevention of hepatitis B transmission while only 6.9% strongly disagreed.

Practices about prevention of transmission of hepatitis B virus.

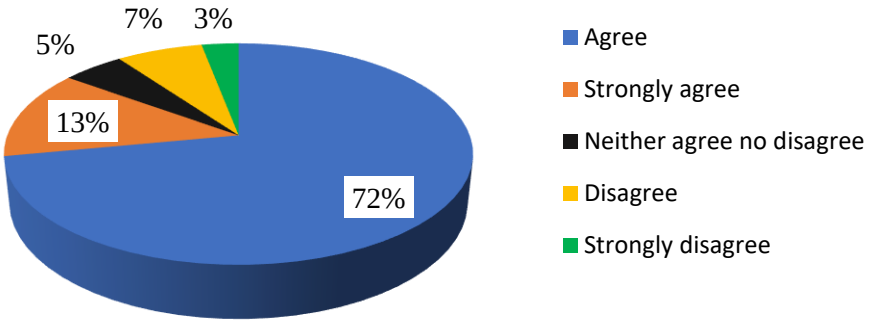

Figure 5: Shows response on whether universal precautions such as hand washing, gloving and gowning should be always be practiced in the ward (n=73).

Most of the respondents (72%) agreed that universal precautions such as hand washing, gloving and gowning should be always be practiced in the ward while only 3% strongly disagreed.

Table 7: Shows response on whether Routine screening for hepatitis B virus can be helpful for prevention of transmission of hepatitis B virus transmission (n=73).

Response	Frequency (n)	Percentage (%)
Agree	16	21.9
Strongly agree	47	64.4
Neither agree nor disagree	-	-
Disagree	3	4.1
Strongly disagree	7	9.6
Total	**73**	**100**

Most of the respondents (64.4%) strongly agreed that routine screening for hepatitis B virus can be helpful for prevention of transmission of hepatitis B virus transmission while only 4.1% disagreed.

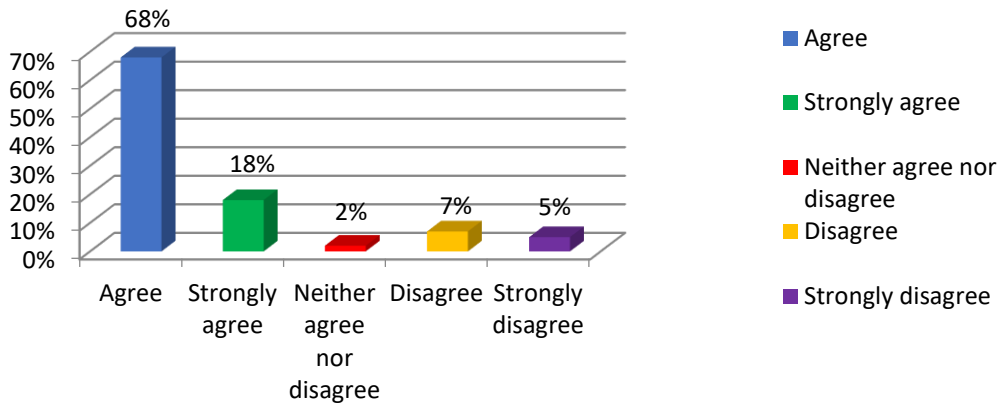

Figure 6: Shows response on whether universal hepatitis B vaccination should be practiced to prevent transmission of hepatitis B virus (n=73).

Most of the respondents (68%) agreed that universal hepatitis B vaccination should be practiced to prevent transmission of hepatitis B virus while only 2% neither agreed nor disagreed.

Table 8: Shows response on whether post exposure prophylaxis should always be provided whenever a risk of exposure to hepatitis B virus is anticipated (n=73).

Response	Frequency (n)	Percentage (%)
Agree	59	80.8
Strongly agree	-	-
Neither agree nor disagree	9	12.3
Disagree	-	-
Strongly disagree	5	6.9
Total	**73**	**100**

Majority of the respondents (80.8%) Agreed that post exposure prophylaxis should always be provided whenever a risk of exposure to hepatitis B virus is anticipated while only 6.9% strongly disagreed.

DISCUSSION

Biodemographic data.

Majority of the respondents (94.5%) were between 18-28 years of age while only 5.5% were of the age range 29-39 years. Young adults are always involved in experimental behaviours which bear risk of contracting hepatitis B virus infection for example intravenous drug injections, kissing and other risky sexual ventures though this is least expected among students undergoing health science training. It is also expected that as one grows up his/her behavior should change towards responsible healthy practices. This study findings are in concert with the findings of [9] who mentioned age as one of the independent predictors of infection with hepatitis B virus.

Most of the respondents (74%) were female while only 26% were male. Gender may have influence on health seeking behavior as in females always tend to have better attitudes towards health seeking behaviours for example very few females are intravenous drug abusers compared to males.

More than half of the respondents (56.2%) were Banyankole while only 12.3% were other tribes. Tribes have cultural practices that can pose a risk to transmission of hepatitis B virus for example the practice of tattooing and male circumcision where the same knife or instrument is used for different people can result in successful transmission of hepatitis B virus infection. This study findings are related to the findings of [4] who stated that among the health care personnel including nursing students, HBV is transmitted by the skin prick with an infected, contaminated needles and syringes or through accidental inoculation of minute quantities of blood during the surgical and dental procedures.

Majority of the respondents (86.3%) were Christian while only 13.7% were Moslem. Religious institutions can help in promoting prevention of hepatitis B virus infections by discouraging immoral practices that are associated with transmission of hepatitis B virus.

Majority of the respondents (95.6%) were single while only 4.1% were married. Though this study did not correlate between marital status and transmission of hepatitis B, it is worth noting unmarried individuals are commonly involved risky sexual ventures and other behaviours which culminate in the transmission of hepatitis virus infection.

Knowledge about prevention of transmission of hepatitis B virus.

All the respondents (100%) had ever heard about hepatitis B virus. Most of the respondents (74%) mentioned that hepatitis B virus is transmitted by vertical and horizontal means while only 26% mentioned feco orally. Since the respondents were nursing students, they could have probably heard about hepatitis B virus infection from lectures in class or probably read about it from books so there is no doubt that they were quite informed about hepatitis B virus infection. This study findings agree with the findings of [17] who conducted a study in India and found out that all the respondents had heard about hepatitis B and that most of the respondents had knowledge that hepatitis B could be transmitted by unsafe sex (88%), infected blood transfusion (98%), needle sharing (98.7%), and using same razor or by piercing/tattooing by same object (86%).

Majority of the respondents (78%) stated that the best precaution for prevention of transmission of hepatitis B virus is vaccination while only 3% mentioned eating clean food. Though still a few respondents could not tell precisely the best precaution for prevention of hepatitis B virus infection, it is clear that majority of had better knowledge on prevention of hepatitis B virus infection this attributed to increased advocacy by many health organizations to have all individuals involved in the care of patients vaccinated against hepatitis B virus infection. This study findings are in line with the findings [13] who stated that knowledge about the existence of a vaccine to prevent HBV has been found to be high amongst HCWs from around the globe for example, this was known by 100% of Saudi Arabian nurses, 98% of Moroccan nurses and midwives and 85.1% of Pakistani nursing students and 95.4% of nursing students in India and 77.2% of Nigerian nurses.

Most of the respondents (61%) stated that the right thing to do after an exposure to hepatitis B virus infection is to go for post exposure prophylaxis while 5% stated they would take antibiotics. Though individuals may be aware of post exposure prophylaxis, they may become reluctant to report occupational injuries, an important aspect of post exposure management for HBV. This could be due to fear of the unknown and possible stigmtisation among the colleagues. This study findings agree with the findings of DeVries and Cossart, [15] who urged that several studies reviewed from around the globe have found knowledge about Post Exposure Prophylaxis (PEP) for hepatitis B virus to vary, with most nursing students knowing about PEP and most nursing students not knowing about PEP in different settings. The study findings are also in line with the findings of [18] who cited that most nursing students in Ethiopia didn't know about PEP as only 41.1% knew that they have to wash their

skin immediately and 51.5% knew that they have to flush their eyes immediately with clean water or saline, when there is contact with blood or body fluids. The study findings are further in tandem with the findings of [19] who found out that 76.3% of Kenyan nursing students did not have any knowledge of PEP for HBV.

Majority of the respondents (91.8%) stated that following universal precautions could help prevent transmission of hepatitis B in the ward while only 8.2% mentioned following treatment schedules promptly. Universal precautions such as gloving and gowning help to protect health care personnel from contact with contaminated specimens like blood which is a potential source of infection. This study findings agree with the findings of [20] who stated that several studies reviewed from around the globe have found knowledge about Universal Precautions (UPs) to vary, with most nursing students knowing about UPs and most nursing students not knowing about UPs in different settings for example, most (97%) of Iranian nursing students knew about UPs compared to 61% of nursing student from Kenya.

Attitudes about prevention of transmission of hepatitis B virus.

Most of the respondents (64%) agreed that hepatitis B virus vaccination should be made compulsory for every nursing student on ward while only 10% neither agreed nor disagreed. Nursing students are more at risk of hepatitis B virus infection since they are still curious to learn many procedures in the ward and may forego universal precautions such as gloving and gowning. This study findings are concert with the findings of [2] who found out in an Indian study that majority of the participants (89.3%) believed that HBV vaccination should be compulsory and 25.13% of the participants stated that they were scared of vaccination, while almost 2.28% of participants did not trust HBV vaccination.

Most of the respondents (65.8%) neither agreed nor disagreed that hepatitis B vaccine may be a source of hepatitis B infection while only 2.7% agreed. Hepatitis B vaccine is meant to offer protection against hepatitis B virus thus is proven to safe for use in humans with no life threatening reaction associated with it however people may develop negative attitudes towards it if they saw unusual reactions among vaccinated persons although it may not even be vaccine related side effects. This study findings concur with the findings of [21] who found out that attitudes were positive towards the HBV vaccine in 54% of Georgian nursing students who said they would recommend the vaccine to other HCWs. The study findings also agree with the findings of [22] who found out that 100% of nursing students from Morocco preferred being vaccinated before joining nursing school. The study findings further agree with the findings of [23] who found out in a study in Nigeria that54% of unvaccinated nursing students in gave reasons for not taking up the vaccine suggesting that they were complacent and thus may not have appreciated the importance of the vaccine.

Most of the respondents (71%) agreed that reporting of occupational exposures is important for post exposure prophylaxis of hepatitis B while only 3% neither agreed nor disagreed. Though this study showed some positive attitudes towards reporting of occupational exposures for Hepatitis B PEP, it is important to note that negative attitudes do exist mainly related to lack of reporting of occupational injuries, an important aspect of post exposure management for HBV. This study findings are line with the findings of Ganju and Goel, [24] who found out that exposures were not reported by 42% of the 51% Kenyan trainee nurses who sustained work related injuries and 64% of the 91% of Ugandan trainee nurses who sustained work related injuries because of a lack of time This indicated negative attitudes towards reporting to access PEP as time may not be weighed to be very important compared to the possibility of an infection with HBV.

Most of the respondents (63%) agreed that it was not always possible to follow universal precautions for prevention of

hepatitis B transmission while only 6.9% strongly disagreed. It is important to note that nursing students like other Health Care Workers (HCWs) have some negative attitudes towards Universal Precautions (UPs). This study findings agree with the findings of [25] who found out that about 20% of Uganda trainee nurses felt that UPs interfered with patient care and that 14% personally judged that UPs were not warranted in certain situations despite the requirements saying UPs were needed.

Practices about prevention of transmission of hepatitis B virus.

Most of the respondents (72%) agreed that universal precautions such as hand washing, gloving and gowning should be always be practiced in the ward while only 3% strongly disagreed. Universal precautions help to ensure safety at work therefore risks of acquiring infections including hepatitis virus infection can be minimized if such safety precautions are adhered to. This study findings concur with the findings of [26] who found out in a study conducted in Denmark that out of 300 respondents, only 27% did not use any gloves while handling surgical instruments while majority of the study participants (92.7%) used sterilized instruments.

Most of the respondents (64.4%) strongly agreed that routine screening for hepatitis B can be helpful for prevention of transmission of hepatitis B transmission while only 4.1% disagreed. Screening of individuals for hepatitis B virus infections helps to identify those who are already infected for appropriate intervention measures to be taken and also for identification of those who are eligible for hepatitis B vaccine. This study findings concur with the findings of [27] who conducted a study in Nigeria regarding preventive measures for hepatitis B and found out that 80.8% of them mentioned screening before blood transfusion as preventive measure.

Most of the respondents (68%) agreed that universal hepatitis B vaccination should be practiced to prevent transmission of hepatitis B virus while only 2% neither agreed nor disagreed [28,29,30,31,32]. Occupational exposure of nursing trainees occurs through mainly NSIs and uptake of PEP by HCWs is less than adequate therefore vaccination would be a safe alternative for this group of people. This study findings agree with the findings of [28] who Conducted a study in Dhaka and found out that only 59% of the respondents were found fully vaccinated and that this was comparable to a study done among HCW in Islamabad, Pakistan where vaccination status was 57.6%.

Majority of the respondents (80.8%) Agreed that post exposure prophylaxis should always be provided whenever a risk of exposure to hepatitis B virus is anticipated while only 6.9% strongly disagreed. PEP is an immediate measure for prevention of hepatitis B infection following an exposure but quiet commonly health worker are reluctant to go for PEP following an exposure [33,34,35]. This study findings are in line with the findings of [29] who found in a study in Nigeria that 53.7% of nurses had NSIs and yet none of them received PEP.

CONCLUSION

i) Knowledge about prevention of transmission of hepatitis B was good as majority of the respondents stated that the best precaution for prevention of transmission of hepatitis B virus was vaccination.

ii) Attitudes about prevention of transmission of hepatitis B were also good as most of the respondents agreed that hepatitis B virus vaccination should be made compulsory for every nursing student on ward and most of the respondents agreed that reporting of occupational exposures was important for post exposure prophylaxis of hepatitis B virus infection.

iii) Practices towards prevention of transmission of hepatitis B virus were equally good as most of the respondents agreed that universal precautions such as hand washing, gloving and gowning should be always be practiced in the ward and most of the respondents strongly agreed that routine screening for hepatitis B virus can be helpful for prevention of transmission of hepatitis B transmission.

RECOMMENDATIONS

i) Conducting continuous medical education and seminars about prevention of transmission of hepatitis B virus infection will help polish up knowledge of nurse trainees about prevention of transmission of hepatitis B virus.

ii) Cooperation between the training institutions and Ministry to Health to ensure that every student receives hepatitis B vaccine at a subsidized cost will help improve attitudes towards prevention of hepatitis B virus transmission through vaccination.

iii) Ensuring availability of protective gears in the wards especially for nurse trainees will promote better practices towards prevention of transmission of hepatitis B virus infection.

iii) More research about knowledge attitude and practices about prevention of transmission of hepatitis B virus should be conducted among nurse trainees from other institutions in the country so as to come up with more comprehensive findings and conclude appropriately.

Implications to the nursing practice

Transmission of hepatitis B virus infection is quite common among HCWs especially nurses through per cutaneous inoculations in needle stick injuries and HCWs most often ignore universal precautions such gloving, gowning and worse still recap needles. Therefore, the findings of this study will be used by nurses improve on their practices in the wards to minimize risk of acquiring hepatitis B virus infection especially by adhering to universal precautions.

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