

Knowledge, Attitudes and Prevention of Hepatitis B among Senior High School Students in Cape Coast Metropolis: A Study of University Practice Senior High School

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Abstract

The purpose of this study was to assess hepatitis B knowledge, attitudes and prevention among Senior High School Students in University Practice Senior High School. Three hundred (300) students were sampled for the study. Questionnaire was used to collect data for the study. The data was analysed using frequencies and percentages. The study found out that a greater number of students in University Practice Senior High School have fair knowledge about hepatitis B. Again, study revealed that greater number of the participants have fair knowledge on the risk factors and the symptoms associated with hepatitis B. Though a greater number of students in University Practice Senior High School have fair knowledge on the risk factors and symptoms of Hepatitis B, most of them have poor attitudes towards testing for hepatitis B and vaccination against hepatitis B. The findings of the study show that a greater number of the participants have fair knowledge on how Hepatitis B can be prevented. However, few of them have No idea on how Hepatitis B can be prevented. Based on the findings, appropriate conclusion and recommendations were made.

Key words: Hepatitis B, Knowledge, Attitudes, Prevention, Vaccination, Senior High School

1. INTRODUCTION

Hepatitis B virus is a major public health concern in the world and is one of the major global and regional health problem that have

devastated large populations almost all over the world. As posited by Yosef (2016), hepatitis B virus (HBV) gradually attacks the liver cells initially and eventually degenerates into chronic liver disease, cancer and finally death. According to the World Health Organization (2016), hepatitis B is a potentially life-threatening liver infection caused by the hepatitis B virus. It can cause chronic infection and puts people at high risk of death from cirrhosis and liver cancer. It is a viral infection that attacks liver and can cause both acute and chronic disease. The World Health Organization (WHO, 2016) estimated that 240 million people are chronically infected with hepatitis B. More than 686 000 people die every year due to complications of hepatitis B, including cirrhosis and liver cancer (WHO, 2016). Nettelman and Mortada (2016), also posited that it is estimated that 2 billion people worldwide have evidence of current or past hepatitis B infection, including more than 250 million chronic carriers and more than 600,000 deaths worldwide each year. The World Health Organization (2015) stated that in 2015, chronic hepatitis B affected about 343 million people worldwide. According to the Global Burden of Disease Study (2012), close to two billion people worldwide are infected with Hepatitis-B virus (HBV) and nearly 350 million persons are living with lifelong hepatitis. Besides, it kills more than 1.4 million people every year. HBV infection is a major public health problem with a high incidence of mortality and morbidity. The World Health Organization (WHO) also estimated the problem of hepatitis B virus infection to be roughly 2 billion with greater than 350 million people infected chronically globally (WHO, 2013). Hepatitis B is a leading cause of chronic hepatitis, cirrhosis, and hepatocellular carcinoma, accounting for over one million deaths annually.

In the United States, the Center for Disease Control (CDC) estimated that approximately 19,000 new cases of hepatitis B occurred in 2013. The World Health Organization (2017) reported that hepatitis B affects about 11 million people and alcoholic hepatitis affects about 5 million people. Hepatitis results in more than a million deaths a year, most of which occur indirectly from liver scarring or liver cancer. Hepatitis B (HBV) is endemic and a leading cause of morbidity and mortality in Asia. High rates of chronic infections are also found in the southern parts of eastern and central Europe. In the Middle East and the Indian subcontinent, an estimated 2-5% of the

general population is chronically infected. Less than 1% of the population of Western Europe and North America is chronically infected (World Health Organization, 2016). In Asia, Africa, Middle East and Amazon Basin the life time risk of HBV infection is over 60%. In highly endemic countries the mode of transmission usually is through vertical transmission at birth that is from a chronically infected mother to her new born and horizontal transmission resulting from unsanitary conditions in childhood (El-Nasser & El Baset, 2013). Hepatitis B prevalence is highest in sub-Saharan Africa and East Asia, where between 5-10% of the adult population is chronically infected. Hepatitis B is called acute when infection lasts for less than six months and chronic when infection continues longer. Most infections occur with limited or no symptoms, but often leads to vomiting, jaundice, malaise, fatigue anorexia (low appetite) and abdominal pain (Ugwuja & Ugwu, 2015). The mode of Hepatitis B virus transmission is through infected blood, by sexual means and mother to child (vertically) in the perinatal duration. Perinatal transmission is the principal mode of hepatitis B virus (HBV) transmission globally (Patton & Tran, 2014).

Hepatitis B virus can also be transferred by unprotected sexual intercourse (Atlam, Elsabagh & Shehab, 2016). The key Strategies of prevention include primary, secondary and tertiary preventions. Primary prevention of new infections includes health education and communication, vaccination of all new born as well as adults and the use of post exposure prophylaxis. Secondary prevention involves hygienic and sanitary practices and responsible sexual life. Tertiary prevention is the use of anti-viral therapies (Center for Disease Control and Prevention, 2010). Knowledge of the intricacies of viral infection and of the molecular biology of this fascinating virus has led to the successful development of a vaccine and treatment sometimes capable of eradicating chronic infection. According to Ephraim, Donko, Sakyi, Ampong & Agbodjakey (2015), in Ghana, while some experts believe that the national prevalence is 12.92% other experts put the figure around 10-15 % and this presupposes that Hepatitis B virus is of a dire public health importance and give credence to the fact that the prevalence might be much higher in the general population.

In Ghana, particularly in rural areas where the level of education is low and also the level of teenage pregnancy being high, it is expected that some of the sexually transmitted diseases like hepatitis B will be prevalent among the youth. Research indicates that antiviral treatments can repress HBV and hinder disease progression in advance countries, most of the people with the chronic HBV unfortunately live in under developed countries where health facilities are severely under resourced. Therefore, the incidence of lifelong hepatocellular carcinoma is predicted to rise over the next twenty years due to the high HBV burden throughout the world (Rahman & Mannan, 2010). Ephraim et al (2015) further stated that it is evident that knowledge regarding HBV transmission, prevention, symptoms, risks, and occurrence was low and that lack of knowledge on this virus is harmful and main reason for the spread of the disease in Ghana. A study by Jahangirnezhad, Hajiani, Makvandi & Jalali (2011) revealed that adolescents and young people in Ghana are still confronted with problems of high risk of sexual behaviours. As reported by Ofori & Agyemang (2016) mostly students are at risk, their knowledge about prevention and control is important. Ofori & Agyemang (2016) further opined that the highest HBV prevalence was found among those within the 16 to 39-year age group. In spite of hepatitis B related studies in developed countries, not much information is known on the disease in Ghana. As such no study on hepatitis B has been conducted among students of University Practice Senior High School in Cape Coast Metropolis. It is against this background that this study seeks to assess the knowledge, attitudes and prevention of hepatitis B among students of University Practice Senior High School.

In order to reduce the prevalence of hepatitis B in Ghana, it is important to increase the knowledge of the public about the disease, the availability of a vaccine for immunization and the benefits that come with it. This study will serve as useful literature for students and future researchers. The findings of this study will inform policy decisions and provide appropriate information needed to organize a more effective educational campaign against hepatitis B in Ghana. Findings from this study may guide policy makers, government, non-governmental agencies and public health educational programs and also assist in the development of public health interventions on hepatitis B. Additionally, the study will also help and provide data on

prevention of hepatitis B which can be used as a basis for subsequent academic research. Finally, the information gathered from this study will increase our understanding and knowledge on hepatitis B. It is hoped that the findings of this study would help public health officials and other concerned institutions to know what needs to be done to increase knowledge to reduce the carrier rate of the disease in the country. Lastly, findings from this study will be useful to the Ministry of Health, Ghana Health Service, Ghana Education Service, local and international health partners in the design of interventions aimed at preventing hepatitis B through increased awareness and improved screening.

The rest of the study was organised as follows: section two dealt with materials and methods. Section three focused on results and discussions. Finally, section four looked at conclusions and recommendations.

2.0 MATERIALS AND METHODS

2.1 Research Design

Quantitative type of research was used in this study. The researcher employed the descriptive-survey method in the conduct of the study

2.2 Participants

The participants of the study were made up of all students of University Practice Senior High School. The total population was 1,450. A sample size of 300 was selected for the study. This was calculated based on Krejcie and Morgan (1970) recommendation on selection of population sample. The participants were selected using proportionate random sampling. This allowed equal representation of students across all levels. 54% of the participants were females and 46% were males. In addition, 36% were form one (1) students, 32% were form two (2) students while 32% were form three (3) students.

2.3 Instruments

The main instrument used for the study was Questionnaire. The questionnaires were designed and validated by the researcher. Questionnaire allows for collection of a lot of information from

respondents within a short time. The use of questionnaire was appropriate because the respondents were literate and large in size.

2.4 Data Gathering Procedure

The researcher sort for permission from the authorities of the school before the data was collected. Two weeks later, the researcher and four trained research assistants collected the data from the participants. Data collection took two weeks. All ethical considerations involving the research and the participants were ensured. This allowed the researcher to clarify the misunderstandings that arose during the data collection.

3.0 RESULTS AND DISCUSSIONS

Table 1 shows the knowledge of participants on hepatitis B.

Table 1: Response of participants whether they know of hepatitis B

Response	Frequency	Percentages (%)
Yes	255	85
No	45	15
Total	300	100

Table 1 indicates that (85%) of the participants have heard of hepatitis B with (15%) who responded they have not heard of hepatitis B before. This indicates that a greater number of the participants have heard of hepatitis B. The result of this study is similar to a study conducted by Badr, Mounir, Mahdy (1999) among Senior High school students in Alexandria, which revealed that participants had a fair level of knowledge about hepatitis B.

Table 2 Shows participant's knowledge on the risk factors associated with hepatitis B.

Table 2: Knowledge on the risk factors of hepatitis B

Risk factors of hepatitis B	Frequency	Percentages (%)
Sexual contact with infected persons	75	25
Mother to child during birth	90	30
Using infected needles and razors	45	15
Contact with infected blood and	25	8.3

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blood products		
Using intravenous drugs	5	1.7
Body fluid exposures	15	5
No idea	45	15
Total	300	100

The researcher asked the participants to identify the risk factors associated with hepatitis B. Results from table 3 shows that (30%) of the participants identified Mother to child during birth as the risk factor, (25%) identified Sexual contact with infected persons as the risk factor, (15%) identified Using infected needles and razors, (8.3%) identified Contact with infected blood and blood products while (5%) and (1.7%) identified Body fluid exposure and Using intravenous drugs respectively. However, (15%) of the participants indicated they have No idea on the risk factors of hepatitis B. The results indicate that greater number of the participants have adequate knowledge on the risk factors associated with hepatitis B. Again, the result of this study is similar to thw work of Badr, Mounir, Mahdy (1999) among Senior High school students in Alexandria, which revealed that participants had a fair level of knowledge about the risk factors of hepatitis B.

Table 3 Shows participant’s knowledge on the symptoms of hepatitis B.

Table 3: Knowledge on the symptoms of hepatitis B

Symptoms of hepatitis B	Frequency	Percentages (%)
General aches and pains	75	25
Enlarge liver and kidney problems	90	30
Yellowing of the skin and eyes	25	8.3
Tiredness	30	10
Abdominal pain and swelling	20	6.7
High temperature (fever) of 38C (100.4F) or above	15	5
No idea	45	15
Total	300	100

Participants were asked to identify the symptoms associated with hepatitis B. The result from table 3 shows that (30%) indicated Enlarge liver and kidney problems, (25%) indicated General aches and

pains as the symptoms of hepatitis B, (10%) indicated Tiredness, (8.3%) indicated Yellowing of the skin and eyes, (6.7%) indicated Abdominal pain and swelling while (5%) indicated High temperature (fever) of 38C (100.4F) or above as the symptoms of hepatitis B. However, (15%) indicated they have No idea on the symptoms of hepatitis B. This shows that a greater number of the participants have knowledge on the symptoms of hepatitis B. This result is similar to a study by Batholomew (2011) which revealed that adolescents in Upper West in Ghana knew about the symptoms of hepatitis B.

Table 4 Shows participant's attitudes towards testing for hepatitis B.

Table 4: Attitudes towards testing for hepatitis B

Response	Frequency	Percentages (%)
Yes	105	35
No	195	65
Total	300	100

Participants were asked to indicate whether they have tested for hepatitis B. (65%) of the participants responded (NO) showing they have not tested for hepatitis B. However, (35%) of the participants stated (YES) indicating they have tested for hepatitis B. This finding clearly shows that a greater number of the participants have not tested for hepatitis B. This result is similar to the work of Salem, Shazaly, Salama (2015) which revealed that Senior High school students in Menoufia had poor attitude towards testing for Hepatitis B virus.

Table 5 Shows participant's attitudes to vaccination against hepatitis B.

Table 5: Attitudes towards vaccination against hepatitis B

Response	Frequency	Percentages (%)
Yes	102	34
No	198	66
Total	300	100

Participants were asked to indicate whether they have received vaccination against Hepatitis B. The result from table 5 shows that (66%) of the participants have not received vaccination against

hepatitis B. (34%) of the participants have received vaccination against hepatitis B. This results indicate that greater number of the participants have poor attitude towards vaccination against hepatitis B. Again, this result is similar to the work of Salem, Shazaly, Salama (2015) which revealed that Senior High school students in Menoufia had poor attitude towards vaccination against Hepatitis B virus.

Table 6 Shows participant's knowledge on prevention of Hepatitis B

Table 6: Knowledge on prevention of Hepatitis B

How to prevent Hepatitis B	Frequency	Percentages (%)
Vaccination	75	25
Public Health Education	70	23.3
Screening pregnant women for HBV	50	16.7
Avoid unprotected sex	40	13.3
Avoid contact with Blood and Blood Products	15	5
Avoid using infected needles/ razors	20	6.7
No idea	30	10
Total	300	100

Participants were asked to indicate whether Hepatitis B can be prevented. (90%) stated Hepatitis B can be prevented while (10%) stated it cannot be prevented. Again, participants were further asked to indicate how Hepatitis B can be prevented. Out the (90%) who indicated Hepatitis B can be prevented, (25%) state it can be prevented through Vaccination, (23.3%) stated it can be prevented through Public Health Education, (16.7%) stated Screening pregnant women for Hepatitis B, (13.3%) indicated Avoiding unprotected sex, (5%) stated Avoiding contact with blood and blood products while (6.7%) stated Avoid using infected needles and razors. This results indicate that a greater number of the participants had knowledge on how Hepatitis B can be prevented. However, (10%) of the participants stated they have No idea on how Hepatitis B can be prevented. This is similar to a study by conducted by Nettelmann and Mortada (2016) which revealed that vaccination, public health education screening pregnant women have reduced the number of new cases of hepatitis B by more than 75% in the United States.

4.0 CONCLUSION AND RECOMMENDATIONS FOR PRACTICE

Based on the findings, the following conclusions are drawn. The study concludes that a greater number of students in University Practice Senior High School have heard of hepatitis B. Again, study concludes that greater number of the participants have fair knowledge on the risk factors and the symptoms associated with hepatitis B. Though a greater number of students in University Practice Senior High School have fair knowledge on the risk factors and symptoms of Hepatitis B, most of them have poor attitude towards testing for hepatitis B and have also not received vaccination against hepatitis B. the study further concludes that a greater number of the participants have fair knowledge on how Hepatitis B can be prevented. However, few of them have No idea on how Hepatitis B can be prevented.

Based on the findings of the study, the following recommendations are made. Firstly, The Public Health Division of Ministry of Health/Ghana Health Service must increase educational campaign on hepatitis B in our Ghanaian schools especially in Senior High Schools. Educational campaign messages must be detailed and interactive as much as possible. Health care providers seeing clients should give hepatitis B screening education at health facilities. Ministry of Education, Ghana Education Service, Ghana Health Service in collaboration with NGOs should consider instituting hepatitis B awareness and screening on regular bases in Senior High Schools. The SRC and school authorities should try to organize hepatitis B screening during SRC week and speech and price-giving day celebrations. Lastly, Public health workers should give more health education on hepatitis B through the Radio, Television and community information centres in order to reach more people in our communities.

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