CENTRAL UNIVERSITY

SCHOOL OF MEDICINE AND HEALTH SCIENCE DEPARTMENT OF NURSING

HEPATITIS B VIRUS INFECTION, A STUDY AMONG PREGNANT WOMEN AT PRAMPRAM POLYCLINIC

 \mathbf{BY}

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NURSING DEGREE

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DECLARATION

We hereby declare that this submission is our own work towards the BSc. and that, to the best of our knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the university, except where due acknowledgement has been made in the text.

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DEDICATION

To our Families, Friends and Lecturers

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Our profound gratitude goes to the Almighty God for His care and protection throughout our studies at Central University. We also thank Him for seeing us through this project work. Our appreciation goes to our supervisor, Mrs. Brenda Osei Assibey for her direction and supervision that saw us through this project. God bless her.

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TABLE OF CONTENTS

Declaration	ii
Dedication.	iii
Acknowledgement	iv
Table of contents	v
List of Figures.	vii
List of Tables.	viii
Abstract	ix
CHAPTER ONE: BACKGROUND AND LITERARTURE REVIEW	
1.0 Introduction.	1
1.1 Background of the study	1
1.2 Problem statement	2
1.3 Purpose of Study	3
1.4 Research Objectives.	4
1.5 Research Questions.	5
1.6 Significance of the study	5
1.7 Operational Definition of Terms.	5
1.8 Literature Review.	6
1.8.1 Knowledge of pregnant women on Hepatitis B virus infection (HB)	6
1.8.2 Attitude of pregnant women on Hepatitis B virus infection	12

CHAPTER TWO: RESEARCH METHOD

2.0 Introduction to chapter	16
2.1 Research design.	16
2.2 Research setting.	16
2.3 Target Population.	17
2.4 Sampling method and sample size.	18
2.5 Data collection Tool.	18
2.6 Data Collection Procedure	18
2.7 Validity and Reliability	19
2.8 Ethical consideration.	19
2.9 Limitations of the study	20
3.0 Statistical Analysis	20
CHAPTER THREE: STUDY FINDINGS AND DISCUSSIO	NS
3.1 Introduction.	21
3.2 Findings	21
3.3 Discussions	32
3.4 Conclusion.	35
3.6 Recommendations	35
References	36
Appendix	38

LIST OF FIGURES

Figure 1: Occupation of Respondent.	22
Figure 2: Marital status of Respondent.	23
Figure 3: Will you like to eat, sleep or shake hands with a person infected with hepatitis B?	27
Figure 4: Testing for hepatitis B infection	28
Figure 5: Efficient treatment of hepatitis B virus infection	29
Figure 6: Isolation of patient with hepatitis B virus infection from infecting others	30

LIST OF TABLES

Table 1: Age of Respondent.	21
Table 2: Level of Education of Respondent.	22
Table 3: Knowledge level of pregnant women on Hepatitis B virus infection	24
Table 4: Causes of hepatitis B virus infection.	31
Table 5: Hepatitis B can kill faster than HIV when left untreated	31

ABSTRACT

According to the World Health Organization (2012), hepatitis B is the world's most common liver infection, which is caused by a DNA-virus, the hepatitis B virus (HBV). The virus is highly contagious, 50 -100 times more infectious than human immunodeficiency virus (HIV). The purpose of the study was to ascertain the knowledge and attitude of Hepatitis B infection among pregnant women at Prampram Polyclinic. The study sought to achieve two specific objectives: to ascertain knowledge on hepatitis B virus infection and to find examine the attitude of pregnant women towards hepatitis B virus infection. Quantitative descriptive research design was adopted for the study. The researcher employed a simple random technique to administer questionnaires to 100 respondents for the study. Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 24 supported and Microsoft excel. The results indicated that, the pregnant women who participated in the study had good knowledge of what Hepatitis B is, its predisposing factors and preventive practices. The pregnant women also had positive attitude towards the infection and also show willingness to know more about it.

CHAPTER ONE

BACKGROUND AND LITERATURE REVIEW

1.0 Introduction to the Chapter

This chapter covers the background of the study, problem statement, purpose of the study, research objectives, research questions, significance of the study, operational definition of terms and literature review.

1.1 Background of the Study

Hepatitis is an inflammatory condition of the liver which among other things is mostly caused by infection with one of the hepatitis viruses (A, B, C, D or E). According to the World Health Organization (2012), hepatitis B is the world's most common liver infection, which is caused by a DNA-virus, the hepatitis B virus (HBV). The virus is highly contagious, 50 -100 times more infectious than human immunodeficiency virus (HIV). It is transmitted between people through blood, semen, vaginal fluids and mucous membranes. There are more than 2 billion people Worldwide, having evidence of recent or past HBV infection (WHO, 2012).

Center for Disease Control and Prevention (2016) stated that viral hepatitis- a group of infectious disease known as Hepatitis A, B, C, D and E affects almost 400 million people worldwide, causing acute and chronic liver disease and killing more than 1.4 million people every year. Hepatitis B virus (HBV) infection is one of the major diseases of mankind, estimated to cause about 686,000 deaths per year mostly from liver cancer and liver cirrhosis and globally about 240 million people are chronically infected with hepatitis B (Afrin, 2017).

Abdulai (2017) noted that, the most common ways of transmission of hepatitis virus are by unprotected sex, unsafe blood transfusions, and unsafe use of needles, from mother to child at

birth, close household contact and between children in early childhood. In addition, tattooing, ear piercing, acupuncture, dialysis, and even using unsterilized syringes can be source of infection. Prevention against any disease is proportional to knowledge, attitude and practice (KAP) of the population and reflection of the importance that is paid to health related issue by the society. Abdulai (2017) assessed the knowledge, attitude and perception (KAP) concerning hepatitis B (HBV) among young adults of Sagnarigu district in Ghana. The findings showed relatively high level of knowledge on hepatitis B viral infection among young adults of Sagnarigu district, but poor attitude towards the infection.

Pregnant women are vulnerable to a number of infections among which is the hepatitis infections. The awareness of the pregnant women on the infection is therefore crucial in preventing themselves and unborn child from it. However, the awareness of the women is not documented. This means that, there are no reference documents for stakeholders to implement their programmes in combating the Hepatitis virus. This is a cause for concern. The researchers therefore have decided to study into the knowledge and attitudes of Hepatitis infection among pregnant women at Prampram Polyclinic.

1.2 Problem Statement

Despite being a major threat to health worldwide, the hepatitis B virus, which kills secretly, has not yet attracted the attention of health institutions, policy makers, the general public and those responsible for taking decisions in Ghana. Although HBV infection is classified as a "primary disease", there is a continuous increase in the detection of new cases worldwide (Abdulai, 2017). It has a long history right after World War II. Hepatitis was increased in Accra because of the development of slum areas with poor sanitation. Despite the long history of the disease in Ghana,

there were no bold and pragmatic measures to remove it, except for the formation of the Ghana Hepatitis B Foundation (GHBF), which began in September, 2007 (Abdulai, 2017).

The disease is said to have spread rapidly with an estimated four million due to lukewarm attitude towards the disease and the actions of selective prevention of infectious diseases by health professionals, including HBV. Number of people as carriers (GHS, 2009). The 2009 Ghanaian Health Service report published worrying figures showing the prevalence rate increased from 8: 1 in 2005 to 6: 1 in 2009 (GHS, 2009). This means that one in every sixth person is infected.

The researchers during their clinicals observed that, a significant number of the pregnant women who reported for antenatal tested positive for hepatitis B infection. Knowing the risk that this poses to the unborn child as well as the pregnant woman alarmed us to undertake a study into the knowledge and attitude of the women towards Hepatitis B infection.

Pregnant women are most vulnerable and this makes it important to document awareness on the subject. The researchers have decided to establish the knowledge and attitude of pregnant women on Hepatitis virus infection in Ghana. This is to help reduce the spread of the infection in the country. This therefore has called for a study into the knowledge and attitude of Hepatitis B infection among pregnant women at Prampram Polyclinic.

1.3 Purpose of the study

The purpose of the study is to ascertain the knowledge and attitude of Hepatitis B infection among pregnant women at Prampram Polyclinic.

1.4 Research Objectives

The specific objectives of the study are:

- 1. To ascertain knowledge of pregnant women on hepatitis B virus infection.
- 2. To examine the attitude of pregnant women towards hepatitis B virus infection.

1.5 Research Questions

- 1. What is the knowledge level of pregnant women on hepatitis B virus infection?
- 2. What is the attitude of pregnant women towards hepatitis B virus infection?

1.6 Significance of the Study

It is envisaged that findings from this study will inform the government about the knowledge and attitude of pregnant women towards Hepatitis infection in Ghana. This will ensure that policies are made towards reducing hepatitis infections in the country.

Media and other professionals who are involved in planning Hepatitis campaigns will determine the extent to which such campaigns influence the knowledge and attitude towards Hepatitis virus infection among pregnant women and hence intensify their educational programmes.

The Ghana Health Service and Non-Governmental Organizations (NGO's) will equally find the outcome of this study very relevant. The study shall enable them to know the extent to which their educational programmes have been able to influence the knowledge and attitude of pregnant women towards Hepatitis virus infection.

Academically, the study will contribute to knowledge on the topic.

The finding from this study will provide nurses information's needed for education of pregnant women on Hepatitis virus infections. This will help curb the spread of Hepatitis virus infections.

1.7 Operational Definition of Terms

Below terms have been defined as follows for the purpose of this study:

Hepatitis: It is an inflammatory condition of the liver which among other things is mostly caused by infection with one of the hepatitis viruses (A, B, C, D or E).

Hepatitis B: It is a disease caused by a blood borne virus known as hepatitis B virus (HBV).

Pregnant woman: A woman above 18 years carrying pregnancy.

Knowledge: The fact or condition of knowing something with familiarity gain through experience.

Attitude: A settled way of thinking or feeling about something.

LITERATURE REVIEW

1.8.0 Introduction

This is a review of relevant literature from text books, journals, articles and other publications that are relevant to the study.

1.8.1 Knowledge of pregnant women on Hepatitis B virus infection (HB).

Afrin (2017) researched on the topic "Survey on Hepatitis B knowledge and awareness among the university students of Bangladesh". A questionnaire based survey was carried out among 500 university students in Dhaka city of Bangladesh. Where 55% were females. It was found that 89% of respondents have heard about HB. Of those who were aware of hepatitis B infection, 30% mentioned blood transfusion as route of transmission of Hepatitis B, 20% and 17% marked mother to fetus and sharing infected needle & syringe respectively while 15% said that the disease can be transmitted through unprotected sex. About 77% students were aware of the affected organ. With regards to vaccination, 47% of the sample and the rest of them did not complete the full dose vaccination or did not take vaccine due to the lack of free time, lack of belief and also informed that they have never thought about vaccination and its necessity. Also, most of the respondents (70%) had no knowledge about correct WHO schedule for HB vaccination.

Adeyemi, Afolabi, Adeomi (2014) studied Hepatitis B Virus (HBV) infection in pregnancy: knowledge and practice of care providers in Nigeria. A cross sectional descriptive study of obstetric care providers in southwestern Nigeria. Mean and standard deviation was used to summarize continuous variables while frequency and percentage was used for categorical variables. Categorical variables were compared with chi-square test and Fisher's exact tests as appropriate; while continuous variables were compared using the t-test. The level of statistical significance was set at $P \leq 0.05$. Scoring of the outcome variables for knowledge was done, and

the score categorized into good and poor knowledge, depending on if the respondent scored above or below the mean score. Three hundred and eighty-one (67.4%) of the care givers routinely screen pregnant women for the serum marker (HBSAg) of HBV infection. Two hundred and seventy-four (48.5%) of the respondents had good knowledge score of the management of HBV infection in pregnancy. Routine screening for HBV infection was significantly associated with age (p = 0.002), years of practice (p < 0.001), specialty (p = 0.001) and professional cadre (p < 0.001), while knowledge was significantly associated with age (p = 0.012), years of practice (p = 0.003), specialty (p = 0.047) and types of practice (p = 0.014). Care providers have poor knowledge of the management of the positive mothers.

Han, Yin, Zhang, Thio, Nelson, Bai and Hou1 (2017) assessed Knowledge and attitudes towards hepatitis B and its transmission from mother to child among pregnant women in Guangdong Province, China. A cross-sectional survey, was employed among pregnant women in Guangdong Province China. The total response rate was 94.5% (737/780). Of the 11 knowledge questions, the mean score was 6.73 ± 3.04 (mean ± SD), 53.3% of the respondents did not know that HBV can be transmitted through unprotected sexual intercourse and nearly 20% did not know that HBV can be transmitted from mother to infant. Results revealed that 83% and 85% being willing to be screened for HBV and let their baby receive HBV vaccine and HBIg, respectively. However, only 16.5% of respondents agreed that they would be willing to take drugs that are known not to harm the fetus to prevent MTCT of HBV. In multivariable analysis, higher education level was associated with better knowledge and attitude scores. Knowledge about HBV among pregnant women was poor.

Saini, Saini and Sugandha (2010) sought to determine the current knowledge and awareness of undergraduate Dental Students of Rural Dental College regarding the Hepatitis B infection. A cross-sectional observational study was conducted among the students of Rural Dental College, Maharashtra, India. Predesigned questionnaire which assessed knowledge and awareness about Hepatitis B infection and transmission was the tool for data collection. A total of 150 students participated. The male female ratio was 1:2; mean age of respondents was 20.66 ± 1.01 years. On an average, 59.23 and 40.67% had correct and incorrect knowledge about Hepatitis B infection, respectively. A total of 81.55% exhibited adequate level of awareness while 18.45% exhibited incorrect level of awareness about transmission of Hep B infection. Results indicated that students had adequate awareness and perception about of Hepatitis B infection.

Choisy, Keomalaphet, Xaydalasouk, Quet, Latthaphasavang and Buisson (2016) aimed to assess the effects and changes in prevalence of HBV infection among pregnant women attending the Mahosot Prenatal Clinic (Vientiane Capital). Methods. A retrospective study was performed in the Mahosot Hospital Laboratory to collect and analyze all the results of HBsAg testing in pregnant women from 2008 to 2014. The results indicated that, of a total of 13,238 tested women of mean age of 26 years, 720 women (5.44% [95 CI: 5.1–5.8%]) were found HBsAg positive, the annual prevalence ranging from 4.6% to 6.2%. A slight but steady and significant decrease in prevalence over the 7 years of the study could be documented. The study concluded that, although below the 8% hyperendemic threshold, the HBsAg prevalence observed in pregnant women in Vientiane reflects a high risk of HBV perinatal transmission which can cause death of the pregnant woman and the unborn child.

Another study by Abdulai, Baiden, Adjei, Owusu-Agyei (2016) assessed knowledge, awareness and effects of HBV among pregnant women in the Kintampo Municipality of Ghana. A cross-

sectional survey was conducted among pregnant women attending antenatal clinic in two facilities between September 2010 and November 2010. Forty-one percent of the 504 women were aware of hepatitis B viral infection, 33.5% of the women were able to correctly mention the transmission routes of Hepatitis B. The radio was the most (42%) mentioned source of information on HBV and the least source of information were places of worship (2.7%). After adjusting for other factors, level of education; SSS/SHS and above OR=4.2, P<00.1, 95% CI (2.5, 7.0) and occupation (Civil servant/ Student); OR= 3.8, P00.1, 95% CI (1.7, 8.5) were the important predictors of Hepatitis B awareness. Among the effects of hepatitis identified is the effect on the unborn child which include low birth weight and death.

Dahlstrom and Viberg (2013) studied "Knowledge about hepatitis B virus infection and attitudes towards hepatitis B virus vaccination among Vietnamese university students in Ho Chi Minh City". A cross-sectional study with quantitative method using a questionnaire. The study was carried out at the University of Medicine and Pharmacy in Ho Chi Minh City. First year students from the nursing and medical technician programme were selected and 233 students completed the questionnaire and were included in the study. The majority of the university students (95.3%) had heard about hepatitis B virus (HBV). More than half (55.4%) knew correctly that HBV cannot be transmitted by sharing food with an infected person, and 58.4% knew that HBV can cause liver cancer. Only 47.6% knew that HBV can be sexually transmitted and 39.5% knew that HBV can be transmitted from mother to child at birth. More male than female students answered correctly that HBV can be transmitted by sharing a toothbrush with an infected person (p= 0.026). Almost all students (93.1%) thought that they would receive HBV vaccination. The study concluded that, the students showed insight into the subject, but the result also showed some gaps of knowledge among the university students considered as serious.

Jha, Devaliya, Bergson and Desai (2016) studied "Hepatitis B knowledge among women of childbearing age in three slums in Mumbai: a cross-sectional survey". Female health workers approached all households in three designated slum neighborhoods: one each in the eastern suburbs (ES), western suburbs (WS) and Island City (IC). Female residents aged 18-45 were invited to participate in the study, and those who agreed to participate responded to a questionnaire that was administered in the form of an oral interview. The five sections of the questionnaire addressed demography, hepatitis B knowledge, personal risk related to hepatitis B, pregnancy and childbearing history, and the participant's most recent pregnancy. A descriptive statistical analysis was performed. Health workers submitted 6571 interview forms that were suitable for analysis (ES, 28 %; WS, 34 %; IC, 38 %). Large proportions of study participants were married (89 %), were not employed (94 %) and had completed less than 12 years of school (87 %). Only 240 (3.6 %) women answered yes when asked if they knew about hepatitis B. Among those women, there were high levels of accurate knowledge regarding some modes of hepatitis B transmission but low levels of accurate knowledge regarding other modes. Twenty-two percent of 739 women who had given birth within the previous 36 months reported that they had been tested for HBV during pregnancy. While 70 % of these women reported that their children had received three doses of hepatitis B vaccine, reported vaccination levels varied greatly across the three study areas. The study concluded that, there was low awareness of HBV among women of childbearing.

Siakwa, Kpikpitse, Ankobil, Mupepi, John, Doe, Nancy, Dare, Hanse-Owoo (2013) conducted a study among 512 pregnant women attending antenatal clinic in the Cape Coast Teaching Hospital, Ghana, between January, 2011 and December, 2013 to determine the effects of hepatitis B during pregnancy on birth outcomes in Ghana. The HBsAg status of all pregnant women was determined by the latex agglutination test while a researcher administered semi-structured checklist was used

to collect demographic/ obstetric/ medical data of respondents. Logistic regression analysis showed that pregnant women who had chronic hepatitis B were more likely to develop PROM (p = 0.008) and foul smelling liquor (p=0.024) at delivery. Moreover, neonatal consequences for chronic hepatitis B were; preterm babies (p=0.002), underweight (p<0.001), Apgar score lower than 7 (p<0.001), asphyxia at birth (p=0.006) and still birth (p=0.04). The study concluded that babies born to mothers with positive HBsAg status have a higher risk for vertical transmission as well as adverse neonatal consequences.

Gboeze, Ezeonu, Onoh, Ukaegbe and Nwali (2015) researched on "knowledge and awareness and attitude of hepatitis b virus infection among pregnant women in Abakaliki Nigeria". A cross-sectional study of 400 pregnant women accessing antenatal care at the Federal Teaching Hospital, Abakaliki. A pretested questionnaire was administered to women who fulfilled the inclusion criteria and gave consent. Analysis of results was done using the IBM SPSS Statistics, version 20, 2011. Statistical level of significance was set at P – value < 0.05. The result showed that 258 (62.5%) of the respondents have heard of HBV infection. Two hundred and eighty six (71.5%) were aware of its occurrence in pregnancy while only 99 (24.8%) knew that hepatitis is a viral infection affecting the liver, 27 (6.8%) thought it is an eye disease while 210 (52.5%) do not know. Mother-to-child transmission and transfusion of unscreened blood were recognized by 283 (72.94%) and 41 (10.3%) of respondents, respectively. Level of Education and parity were associated with the awareness of hepatitis (p-value. 001).

Tanoey (2013) researched on Hepatitis B and C Screening Practices among At Risk Population Groups in 6 European Countries: A Survey of Experts in Hungary, Germany, Italy, Spain, The Netherlands, and The United Kingdom". Questionnaires on hepatitis B and C screening recommendations to specified at-risk groups were developed and translated into five other main

languages. Questions were tailored to different fields of expertise as follows: general viral hepatitis care, general practitioners, sexual health services providers, antenatal care providers, and asylum seekers' care providers. The questionnaires were made available on an online platform (LIME survey). Potential respondents were selected based on their involvement in viral hepatitis care. Direct personalized links were disseminated per email, and answers were descriptively analyzed with SPSS 19. The survey yielded 286 completed questionnaires. The response rates from the surveyed six countries varied considerably (UK: 19.0%, Germany: 14.8%, Netherlands: 53.8%, Hungary: 27.7%, Italy: 35.7% and Spain: 32.5%). Total responses in each field of expertise also varied extensively, with the most coming from antenatal care providers (81 respondents) and the least from asylum seekers' care providers (18 respondents) across the six countries. The results showed varying practices in recommending hepatitis B and C screening to all at-risk groups, except in hepatitis B screening among pregnant women. This variety demonstrates a lack of consensus among experts in screening recommendation standards within their knowledge or services, albeit recommendations in available policies or guidelines. Regional differences in standard practices were also suggested in antenatal care for hepatitis C and in asylum seekers' care in most study countries.

1.8.2 Attitude of pregnant women on Hepatitis B virus infection.

Abdulai (2017) assessed the knowledge, attitude and perception concerning hepatitis B (HBV) among young adults of Sagnarigu District in Ghana. The tool for the study was structured questionnaire. A total of 400 young adults (15-40 years) responded to the survey. Data were computerized using Excel and analyzed using SPSS (version 21). The study show that regarding the respondent's attitude and perception towards patients infected with HBV and the infection, the findings showed average attitude and perception as most (49.5%) of the respondents scored an

average mark of 3 indicating average attitude and perception. The study also revealed significant association between respondents occupation and willingness to test for the HBV infection (OR=1.23; 95% CI: 1.7-17.6; $p \le 0.000$). Also, females were one time more likely to go for HBV infection screening as compared to the male counterparts (OR =1.36; 95% CI: 0.1–1.6; p = 0.236). The study concluded that there was relatively poor attitude towards hepatitis B viral infection among young adults of Sagnarigu District.

Hang Pham, Nguyen, Dong Luu, Truong and Tran (2018) examined the knowledge, attitudes and practices of pregnant women and mothers in Vietnam concerning HBV prevention and immunization. A cross-sectional study was conducted in Quang Ninh and Hoa Binh provinces in 2017. A pre-designed questionnaire was administered to women when they received care at primary and tertiary maternal health clinics. Correct responses were summarized as knowledge scores. Data was analyzed using a multivariable regression model across participant demographics. Among the 404 women surveyed, 57.6% were pregnant and 42.4% were postpartum. Despite 73.5% of participants reporting having received information about HBV during their pregnancy, gaps in knowledge and misconceptions are evident. Overall, only 10.6% provided correct answers to all questions regarding HBV transmission routes and prevention measures. Around half of the participants incorrectly believed that HBV is transmitted through sneezing, contaminated water or sharing foods with chronic HBV patients. Although 96.4% of participants believed that HBV vaccination is necessary for infants, only 69.1% were willing to have their own child vaccinated within 24 hours. More than a third of participants expressed concern about having casual contacts or sharing foods with chronic HBV patients. The attitude of the pregnant women was found to be suboptimal.

Iman, Anwar and Hussein (2019) assessed the knowledge and attitude towards HBV and its transmission from mother to child among sample of pregnant women attending the primary health care centers in Baghdad, Iraq. A cross sectional study was carried for the period from 1st of September to 15th of November 2018 at ten primary health centers at Baghdad. A convenient sampling technique was conducted to choose the primary health centers; pregnant women 15-19 years old were included, pregnant women who refuse to participate or those who attended the health center as a second visit and were more excluded. A questionnaire was self-administered through face-to-face interviews and a total of 215 pregnant women responded to the survey. Data were computerized using the statistical package for social sciences (SPSS) version 23 across participate demographics. Out of the 215 pregnant women who were invited to participate, 200 agreed and answered the questionnaire, the proportion who agreed to participate was high (93%). The study participant's ages ranges from 15-49 years. The mean \pm SD is (27.94 \pm 6.76). The most common age were (25-29) years old and (20-24) years old, 55 (27.5%) and 53 (26.5%) respectively. More than half of the women were housewives 144 (72%) while 56 (26.8%) of the respondent attained higher educational level. The majority of the women were pregnant at the 2nd trimester was 109 (54.5%) and few of them were pregnant with their first baby 29 (14.5%). Of the respondent, a total of 173 (86.5%), 180 (90.0%) were willing to be screened for the HBV during antenatal care and also having their baby receive HBV vaccine respectively. 46 (23.0%) of them were willing to get pregnant if they got HBV infection, moreover if they were diagnosed with HBV only 43 (21.5%) of them agreed to let their doctors and their husbands know and ask them whether they can go ahead to receive HB vaccine while 193 (96.5%) of the pregnant women agreed to have their baby HBV tested during the baby's first year. 123 (61.5%) of the respondent agreed that the person with HBV should always be isolated to prevent HB infection to others.

Han z, Yin Y, Zhang Y, Thio CL, Nelson KE (2017) assessed the knowledge and attitude towards hepatitis B and its transmission from mother to child among pregnant women in Guangdong province china. A cross-sectional survey, was employed among pregnant women in Guangdong province china. The total responses rate was 94.5% (737/780) and 68.5% of the participants answered the four questions better regarding the willingness to be screened for HBV and to agree the components of the current WHO recommendation to prevent mother to child transmission of HBV. Of the respondents, 83.3% and 89.8% were willing to be screened for HBV during antenatal care and have their baby receive HBV vaccine respectively, moreover if they were diagnose with HBV, 85.0% of them would let their baby receive HBIg and agree to HBV testing during the baby's first year. However only 49.0% of the pregnant women were willing to allow blood drawn from their child in the context of clinical trials. When asked about taking drugs in pregnancy to prevent mother to child transmission of HBV, only 16.5% of respondents agreed that they willing to take drugs that are not harmful to the fetus. In multivariable analysis, higher education level was associated with better attitude and knowledge scores. Attitude about HBV among pregnant women was poor.

CHAPTER TWO

RESEARCH METHOD

2.0 Introduction to the Chapter

The research method outlines the manner in which the study was executed. It covers the study design, research setting, and target population, sampling method and sample size. The data collection tool, data collection procedure, validity and reliability of the study, pretest, ethical considerations and limitation of the study are also presented.

2.1 Research Design

Quantitative descriptive research design was adopted for this study. Descriptive research is a type of quantitative research that helps discover new meanings, determine what exists, determine the frequency of events, and categorize the information. The descriptive approach was used to ascertain the knowledge and attitude of hepatitis virus infection among pregnant women.

2.2 Research Setting

Prampram Polyclinic is located in the Ningo-Prampram District of the Greater Accra Region of Ghana. It is dominated with natives of Ningo-Prampram who speak Ga-Adamgbe as their local dialect. It is a 30 minutes' drive away from the Tema Metropolitan District located 25Km east of Accra. The clinic is the major health facility in the district which is responsible for managing general health conditions and refers serious conditions to the Tema General Hospital for treatment. The facility has an Out-Patient Department (OPD), Laboratory, Pharmacy, Administration Block, In-Service Training Unit and a Record Keeping unit. There is also a Public Health Department which consists of the Antenatal and Maternity Units. The antenatal unit provides antennal sessions

for pregnant women who live within and around the Prampram community. The Polyclinic has health personals ranging from community health nurses, medical doctor and laboratory technicians, pharmacist who are responsible for providing care for the patients who patronize the clinic. Data for the study was collected from the antenatal unit of the Prampram Polyclinic. Ningo-Prampram has a population of 70,923. The district is located about 15 km to the east of Tema and about 40 km from Accra, the capital of Ghana. The district is bounded by Shai-Osudoku district, Gulf of Guinea, Ada East district, Kpone-Katamanso district in the north, south, east and west respectively. Ningo-Prampram District covers a total land area of about 622.2 square kilometers. The district also serves as a dormitory for workers in many industries in Tema and Accra metropolis (Population and Housing Census, 2010).

2.3 Target Population

The target population of this study included all pregnant women who attend antenatal clinic at the Prampram Polyclinic.

Inclusion Criteria

Pregnant women who are fit in terms of their health condition.

Pregnant women who are regular attendants.

Exclusion Criteria

Pregnant women who are below 18 years.

2.4 Sampling method and Sample size

The researcher would employ a simple random technique to administer questionnaires to 100 respondents for the study. A minimum sample size would be obtained using the sample size calculation formula:

$$n = Z^2 (p*q)/e^2$$

n = sample size.

Z=percentile for 95% significance level of normal distribution (1.96)

P=awareness of hepatitis virus infection (50% = 0.50)

$$Q = 1-p$$

Giving:

$$n = 1.96^2 (0.50 * 1-0.50) / 0.10^2 = 96$$
 pregnant women

The sample size would be adjusted to 100 pregnant women to cater for non-response.

2.5 Data Collection Tool

The measurement tool for the study was researcher-administered questionnaires. The questionnaires contained closed and open ended questions. The questionnaires was made to capture variables in order to answer the research questions.

2.6 Data Collection Procedure

Letter of introduction from the Department of Nursing of Central University will be sent to the Prampram Polyclinic to allow for the researchers obtain information from the respondents. Informed consent was sought from participants for the study and no person will be forced to

participate in the study. The data collection will be done within one week. Each respondent will be assisted to understand the questions and fill in as expected.

2.7 Validity and Reliability

Validity is the indication of how sound your research is.

For the sake of validity, the questionnaire was proofread by the supervisor. To ensure that questions covered objectives of the study. All corrections were done before being administered.

A research instrument is reliable when it can measure a variable accurately and constantly and obtain the same results under the same conditions of a period of time (Creswell & Clark, 2011). The questionnaire was pretested by the researcher among 10 pregnant women within the Tema community who meet the inclusion criteria to determine the reliability of the instrument. After the pretesting study, the questionnaire was revised to meet the needs of the population by taking expert guidance. Conducting a pilot study will help yield the validity of the questionnaire and provide reliable information concerning the knowledge and attitude towards hepatitis virus in pregnancy.

2.8 Ethical Consideration

A letter of introduction from the Department of Nursing of Central University will be sent to Prampram Polyclinic to obtain information. Informed consents will be sought from participants for the study and no person will be forced to participate in the study. The participants will have the right to withdraw from the study anytime without any punishment. Informed consents will be provided to the subjects with information concerning the purpose of the study, implications of participation, potential risks, and benefits involved. Names of the participants will not be needed

in order to ensure anonymity. The information given by the respondents will not be used for any other purpose other than educational research. All participants will be treated fairly and equally.

2.9 Limitation of the study

The researchers foresee the following to be the limitation of the study:

Inadequate time available for the conduct of the study since the project is expected to be completed in a stipulated time by the department.

Busy schedules of some of the pregnant women.

Unwillingness of some of the pregnant women to participate in the study.

Limited financial resources available for the study since the research has huge budget to meet.

2.10 Statistical Analysis

Data would be analyzed using the Statistical Package for Social Sciences (SPSS) version 24 supported and Microsoft excel. The various variables under study would be coded for recognition in SPSS. The output of the SPSS would be presented using frequency distribution, tables and charts (pie and bar), hence the use of descriptive data analysis.

CHAPTER THREE

STUDY FINDINGS AND DISCUSSIONS

3.1 Introduction

The findings has been organized according to the objectives of the study. This chapter covers the presentation of the study findings and discussions. Conclusions and recommendations are also presented in this chapter of the study Discussion of the findings are also presented afterwards

3.2 Findings

3.2.1 Background Information

Table 1: Age of Respondents

Response	Frequency	Percent
18 - 25 years	31	31.0
26 – 39 years	62	62.0
Above 39 years	7	7.0
Total	100	100.0

Source: Field Survey (2019)

Table 1 above indicates that, 62% of the respondents were between the ages of 26 to 39 years. Thirty-one percent were between the ages of 18 to 25 years whiles 7% were above 39 years of age.

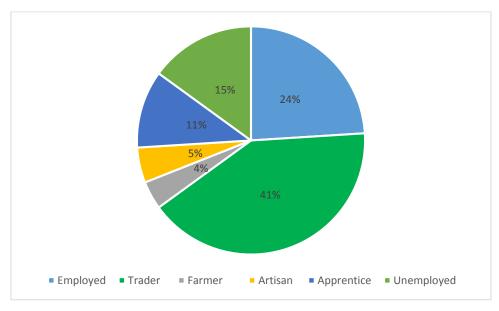
Table 2: Level of Education of Respondents

Response	Frequency	Percent
Basic	9	9.0
SHS	33	33.0
Tertiary	52	52.0
No Education	6	6.0
Total	100	100.0

Source: Field Survey (2019)

From table 2 above, more than half (52%) of the respondents have tertiary education as their highest education level. Thirty three percent had their education up to the SHS. Nine percent had basic education whiles 6% had no education.

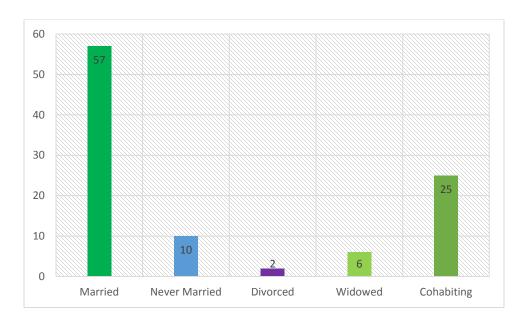
Figure 1: Occupation of Respondents.



Source: Field Survey (2019)

Analysis from figure 1 above shows that, 41% of the respondents were traders whiles 24% were employed. Eleven percent were apprentices whiles 5% were artisan. Only 4% were famers.

Figure 2: Marital status of Respondent.



Source: Field Survey (2019)

Figure 2 above shows that, majority (57%) of the respondents were married whiles 25% were cohabiting. Ten percent were never married whiles 6% were widowed. Only 2% had divorced.

3.2.2 Knowledge level of pregnant women on Hepatitis B virus infection.

In trying to find out the knowledge level of the pregnant women concerning the Hepatitis B infection, series of questions were asked. The responses obtained is as tabulated below.

Table 3: Knowledge of pregnant women on Hepatitis B virus infection.

Statement	True	False	Don't
			Know
Hepatitis infection can be obtained through the air	12(12%)	81(81%)	7(7%)
Hepatitis infection can be gotten through blood, semen, vaginal	62(62%)	10(10%)	28(28%)
fluids and mucous membranes.			
Hepatitis infection can be transmitted from mother to child during	70(70%)	10(10%)	20(20%)
child birth.			
Hepatitis can be caused by infection with one of the hepatitis viruses	66(66%)	11(11%)	23(23%)
(A, B, C, D or E).			
Signs of hepatitis infection can be	85(85%)	10(10%)	5(5%)
a) fever,			
b) body weakness	83(83%)	4(4%)	16(16%)
c) jaundice	69(69%)	8(8%)	23(23%)
Hepatitis infection can cause liver cancer	54(54%)	13(13%)	33(33%)
Hepatitis B infection is more deadly than HIV	71(71%)	22(22%)	(7%)
Avoiding unprotected sex is a way of preventing hepatitis infection.	92(92%)	8(8%)	0(0%)
Routine screening for Hepatitis infection can help prevent it.	77(77%)	16(16%)	7(7%)

Avoiding infected needles and syringes can help prevent hepatitis	92(92%)	2(2%)	6(6%)
infection.			
Avoiding tattooing, ear piercing and acupuncture is a way of	90(90%)	3(3%)	7(7%)
preventing hepatitis infection.			
Creation of awareness of hepatitis infection through the mass media	97(97%)	0(0%)	3(3%)
can help prevent it.			

Source: Field Survey (2019)

Table 3 reveals that, a great majority of the respondents (81%) were of the view that, hepatitis infection cannot be obtained through the air. Meanwhile, 12% of the respondents affirmed this. Seven percent did not know the response to the assertion.

Further responses indicate that, majority of the pregnant women (62%) responded in affirmative that, hepatitis infection can be gotten through blood, semen, vaginal fluids and mucous membranes. Ten percent thought otherwise whiles 28% did not know the appropriate response. In the views of 70% of the pregnant women, hepatitis infection can be transmitted from mother to child during child birth. Ten percent did not think so whiles 20% did not know the response to the statement.

Further analysis from table 3 indicate that, 66% of the respondents believe that, hepatitis can be caused by infection with one of the hepatitis viruses (A, B, C, D or E). Eleven percent thought otherwise whiles 23% did not know the response to give.

Eighty-five percent of the respondents believe the signs of hepatitis infection is fever. Ten percent do not know fever is a sign of hepatitis infection whiles 5% could not express any opinions. Eighty-three percent of the respondents think body weakness is a sign of hepatitis infection whiles 4% did not think so. Sixteen percent of the respondents did not express any opinion. With regards to

jaundice as a sign of hepatitis infection, 69% of the respondents affirmed it. Twenty-three percent did not express any idea whiles 8% responded otherwise.

Fifty-four percent of the respondents believed hepatitis infection can cause liver cancer. Thirteen percent thought otherwise whiles thirty-three present did not know the response.

Seventy-one percent of the respondents affirmed that hepatitis B infection is more deadly than HIV. Twenty-two percent responded otherwise whiles 7% did not know the response to give.

Ninety-two percent of the respondents affirmed that, avoiding unprotected sex is a way of preventing hepatitis infection. Eight percent responded otherwise.

Seventy-seven of the respondents believe that routine screening for Hepatitis infection can help prevent it. Sixteen percent did not believe so whiles 7% did not know the response.

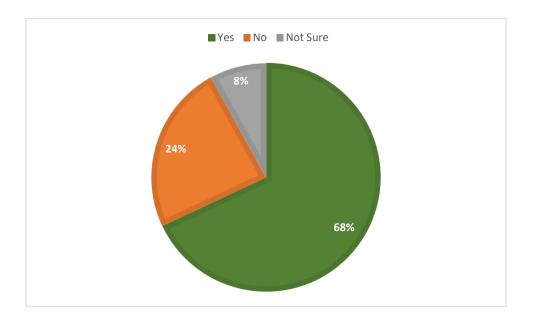
In the views of 92% of the pregnant women, avoiding infected needles and syringes can help prevent hepatitis infection. Two percent did not think so whiles 6% did not know the response.

Avoiding tattooing, ear piercing and acupuncture is a way of preventing hepatitis infection according to responses from 90% of the respondents. Three percent responded otherwise whiles 7% did not take any position.

Creation of awareness of hepatitis infection through the mass media can help prevent it according to responses from a great majority (97%) of the pregnant women. Three percent did not provide any response to the statement.

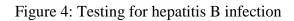
3.2.3 Attitude of pregnant women towards Hepatitis B virus infection

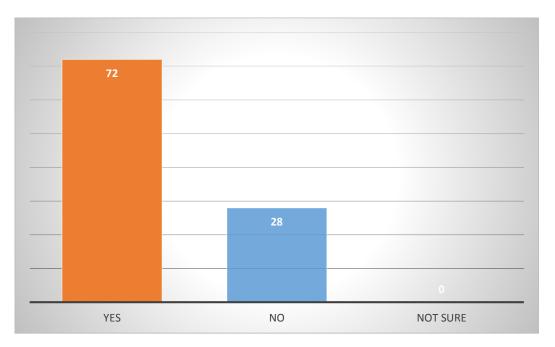
Figure 3: When respondents were asked if they would like to eat, sleep or shake hands with a person infected with hepatitis B.



Source: Field Survey (2019)

From Figure 3 above majority of the respondents (68%) responded in affirmative that, they will eat, sleep or shake hands with a person infected with hepatitis B. Twenty-four percent of them responded otherwise whiles 8% were not sure about the response to give.





From figure 4 above shows the responses of participates when asked whether they would be willing to be tested for hepatitis B infection, seventy-two percent responded yes whiles 28% responded no.

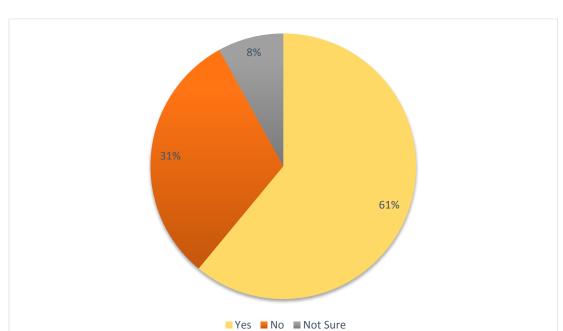


Figure 5: Efficient treatment of hepatitis B virus infection.

From figure 5 above, 61% of the respondents think there is efficient treatment for hepatitis B virus infection. Thirty-one percent do not think so. Eight percent were not sure about the response to the statement.

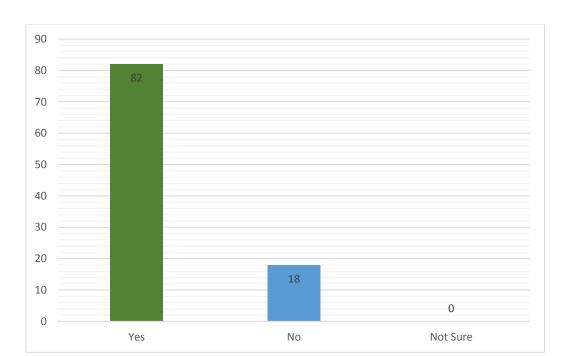


Figure 6: Isolation of patient with hepatitis B virus infection from infecting others

Analysis from figure 6 above shows the responses of participates when asked whether hepatitis B virus infected person be isolated from other people to prevent them from infecting them. Findings indicated that 82% of the respondents said yes whiles eighteen percent of the respondents said no.

Table 4: Causes of hepatitis B infection.

Response	Frequency	Percent
Yes	35	35.0
No	62	62.0
Not sure	3	3.0
Total	100	100.0

From the findings presented in table 4 above, shows that 62% of the respondents do not believe Hepatitis B infection is spiritual whiles 35% of them think so. Three percent of the respondents were not sure about the response to the statement.

Table 5: Hepatitis B infection can kill faster than HIV infection when untreated.

Response	Frequency	Percent
Yes	72	72.0
No	28	28.0
Not sure	0	0.0
Total	100	100.0

Source: Field Survey (2019)

Table 5 above revealed the responses of participates when asked whether they thought hepatitis B infection could kill faster than HIV infection when untreated. Seventy-two percent of responded in affirmative. Twenty-eight percent responded otherwise.

3.3 Discussion

3.3.1 Background Information

Findings from the study indicates that, 62% of the respondents were between the ages of 26 to 39 years. This was not surprising because this is the reproductive age of women. Further, more than half (52%) of the respondents had tertiary education as their highest education level. However, traders (41%) dominated the pregnant women. This reveals that, though most of the pregnant women were educated, they were not engage in formal work and this may be due to the unavailability of jobs in the government and formal sectors. They engaged in their own trading activities. This is contrary to the findings of Afzali, Heravi, Moravveji, and Poorrahnama (2015) in which most of the respondents were uneducated. Majority (57%) of the respondents of this study were married because Ghana is a religious nation and most people get married before getting pregnant.

3.3.2 Knowledge level of pregnant women on Hepatitis B virus infection.

Findings from the study further indicates that, a great majority of the respondents (81%) were of the view that, hepatitis infection cannot be obtained through the air. Majority of the pregnant women (62%) responded in affirmative that, hepatitis infection can be gotten through blood, semen, vaginal fluids and mucous membranes. In the views of 70% of the pregnant women, hepatitis infection can be transmitted from mother to child during child birth. Sixty-six percent of the respondents believe that, hepatitis can be caused by infection with one of the hepatitis viruses (A, B, C, D or E) and seemed to be more knowledge about HBV transmission routes. These observations agree with the findings of Dahlstrom and Viberg (2013) when they observed that, majority of their respondents (95.3%) had heard about hepatitis B virus (HBV). More than half (55.4%) knew correctly that HBV cannot be transmitted by sharing food with an infected person,

and 58.4% knew that HBV can cause liver cancer whereas only 47.6% knew that HBV can be sexually transmitted and 39.5% knew that HBV can be transmitted from mother to child at birth.

Findings further indicate that, eighty-five percent of the respondents believe the signs of hepatitis infection is fever. Eighty-three percent of the respondents think body weakness is a sign of hepatitis infection whiles 4% did not think so. With regards to jaundice as a sign of hepatitis infection, 69% of the respondents affirmed it. Fifty-four percent of the respondents believed hepatitis infection can cause liver cancer. Seventy-one percent of the respondents affirmed that hepatitis B infection is more deadly than HIV. Ninety-two percent of the respondents affirmed that, avoiding unprotected sex is a way of preventing hepatitis infection. This is in disagreement with the findings of Han, Yin, Zhang, Thio, Nelson, Bai and Hou1 (2017) in which 53.3% of the respondents did not know that HBV can be transmitted through unprotected sexual intercourse and nearly 20% did not know that HBV can be transmitted from mother to infant. This is because the respondents are highly educated, therefore have a good knowledge and aware that HBV is transmitted through unprotected sex.

Seventy-seven percent of the respondents believe that routine screening for Hepatitis infection can help prevent it. In the views of 92% of the pregnant women, avoiding infected needles and syringes can help prevent hepatitis infection. Avoiding tattooing, ear piercing and acupuncture is a way of preventing hepatitis infection according to responses from 90% of the respondents. Creation of awareness of hepatitis infection through the mass media can help prevent it according to responses from a great majority (97%) of the pregnant women. Overall, the knowledge level of the pregnant women concerning Hepatitis B infection was good. This also disagree with the observation of Han, Yin, Zhang, Thio, Nelson, Bai and Hou1 (2017); Jha, Devaliya, Bergson and Desai (2016) when it was established that, the overall knowledge about HBV among pregnant women was poor.

However, the finding about knowledge level agrees with the results of Saini, Saini and Sugandha (2010).

3.3.3 Attitude of pregnant women towards Hepatitis B virus infection

Findings from the study show that, majority of the respondents (68%) responded in affirmative that, they will eat, sleep or shake hands with a person infected with hepatitis B. Most of the respondents (72%) expressed their willingness to get tested for the Hepatitis B infection. This finding is in support of the findings of Han, Yin, Zhang, Thio, Nelson, Bai and Hou1 (2017) when 85% of their respondents expressed willingness to be screened for HBV and let their baby receive HBV vaccine and HBIg, respectively. This is because the respondents have a good attitude about the hepatitis B infection and are willing to be tested for early diagnoses to prevent it transmission to their unborn child. Meanwhile, 61% of the respondents think there is efficient treatment for hepatitis B virus infection. Eighty-two percent of the respondents think hepatitis B virus infected person should be isolated from other people to prevent them from infecting others. Sixty-two percent of the respondents do not believe Hepatitis B infection is spiritual. Findings also show that, 72% of respondents think Hepatitis B infection can kill faster than HIV infection when untreated. Overall, the findings of this study has established good attitude towards the infection because when the hepatitis B infection is left untreated and progressed into chronic stage it may leads to death. The finding is in disagreement with Abdulai (2017); Valizadeh, Zamanzadeh, Negarandeh, Zamani, Hamidia, Zabihi (2016) and Adeyemi, Afolabi, Adeomi (2014) who observed poor attitude and practices towards hepatitis B infection.

3.4 Conclusion

The pregnant women who participated in the study have good knowledge of what Hepatitis B is, its predisposing factors and preventive practices. The pregnant women also have positive attitude towards the infection and also show willingness to know more about it. It is therefore crucial that the Government and all stakeholders join hands in reinforcing pregnant women about the infections and also help them build positive attitude towards it.

3.5 Recommendations

The recommendations below has been made based on the study findings:

- 1. Pregnant women's knowledge should be strengthen about hepatitis B infection through antenatal clinics to increase their knowledge level and prevent transmission.
- 2. Pregnant women should be screened routinely to help in early diagnoses to prevent mother to child transmission of hepatitis B infection.
- 3. The media, Non-Governmental Organizations and Churches, opinion leaders should organize educational programmes on Hepatitis B infection to help the pregnant women broaden their knowledge base in order to prevent the spread of the infection.
- 4. Authority of health facilities should create more awareness campaign and policies at the various antenatal clinics to help pregnant women know the various transmission routes of hepatitis B infection.
- 5. Health institution should broaden the knowledge on behavioral practices of pregnant women which can lead to the contraction of the infection in order to prevent it during their antenatal service.

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APPENDIX A

QUESTIONNAIRE

CENTRAL UNIVERSITY

DEPARTMENT OF NURSING

HEPATITIS VIRUS INFECTION, A STUDY AMONG PREGNANT WOMEN AT PRAMPRAM POLYCLINIC

This questionnaire is purely for academic purposes for the award of a degree of Nursing in the named university. Information given would be kept confidential.

Questionnaire: Please tick the most appropriate response.

Section A: Background Information

1. Age?
(a) 18-25yrs []
(b) 26-39yrs []
(c) above 39yrs []
2. Level of education?
(a) Basic Education []
(b) SHS []
(c) Tertiary []
(d) No education []

3. Occupation?
(a) Employed []
(b) Trader []
(c) Farmer []
(d) Artisan []
(e) Apprentice []
(f) Unemployed []
4. Marital status?
(a) Married []
(b) Never married []
(c) Divorced []
(d) Widowed []
(e) Cohabiting []

Section B: Knowledge level of pregnant women on Hepatitis B virus infection.

Please tick the appropriate response from the statements in the table.

Statement	True	False	Don't Know
5. Hepatitis infection can be obtained through the air			
6. Hepatitis infection can be gotten through blood, semen, vaginal fluids			
and mucous membranes.			
7. Hepatitis infection can be transmitted from mother to child during child			
birth.			
8. Hepatitis can be caused by infection with one of the hepatitis viruses			
(A, B, C, D or E).			
9. Signs of hepatitis infection can be			
a) fever,			
b) body weakness			
c) Jaundice.			
10. Hepatitis infection can cause liver cancer			
11. Hepatitis B infection is more deadly than HIV			
12. Avoiding unprotected sex is a way of preventing hepatitis infection.			
13. Routine screening for Hepatitis infection can help prevent it.			
14. Avoiding infected needles and syringes can help prevent hepatitis			
infection.			
15. Avoiding tattooing, ear piercing and acupuncture is a way of			
preventing hepatitis infection.			
16. Creation of awareness of hepatitis infection through the mass media			
can help prevent it.			

Section C: Attitude of pregnant women towards Hepatitis B virus infection

Please tick the appropriate response from the statements in the table.

Statement	Yes	No	Not Sure
17. Will you like to eat, sleep or shake hands with a person infected			
with hepatitis B?			
18. Would you be willing to be tested for hepatitis B infection?			
19. Do you think there is efficient treatment of hepatitis B virus			
infection?			
20. Should hepatitis B virus infected person be isolated from other			
people to prevent them from infecting them?			
21. Do you consider Hepatitis B infection spiritual?			
22. Do you think Hepatitis B infection can kill faster than HIV			
infection when untreated?			

Thank you