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KNOWLEDGE, ATTITUDE AND PRACTICES OF NURSING MOTHERS TOWARDS HEPATITIS B AS A CHILDHOOD KILLER DISEASE: A SURVEY OF NURSING MOTHERS IN HO, GHANA

NUNANA ADDO

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DECLARATION

I hereby declare that this dissertation is the result of my own research conducted under the supervision of Dr Gilbert Tietaah at the Department of Communication Studies at the University of Ghana. All references to other people's works have been duly acknowledged.

……	……
Dr Gilbert Tietaah	Nunana Addo
(Supervisor)	(Student)
Date: ……..	Date: ……

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DEDICATION

This work is dedicated to God, who has been and still is the source of everything good in my life. I am grateful.

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Many people have contributed in diverse ways to the completion of this work and I wish to acknowledge them. My first acknowledgement goes to God Almighty who has been my source of strength and direction throughout my life. Thank You, Father.

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God richly bless you all.

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ABSTRACT

This study assessed the knowledge, attitude and practices of nursing mothers using two postnatal clinics in Ho, in the Volta region of Ghana. The study also looked at their sources of information on health issues. These two postnatal clinics were chosen because they were the most patronised postnatal care centres in the Ho municipality and therefore, allowed for the inclusion of respondents from a broad range of communities and a representative cross-section of demographic backgrounds.

The study employed the survey design by which a questionnaire was administered to 200 respondents to find out if the nursing mothers knew about the causes, modes of transmission, symptoms, effects and prevention of Hepatitis B. It also sought to find out if their knowledge of the disease had a direct impact on how they perceived the disease and subsequently, their practices towards the prevention of this disease in their children. The sources of information of these nursing mothers were also looked at in order to determine what their usual and preferred sources of information on the health of their children were. Data was collected using a questionnaire. The study, therefore, used the Health Belief Model.

The findings showed that the knowledge level of nursing mothers in the Ho municipality was low. Although most of them knew infection with Hepatitis B could cause death and that there was vaccination against it, their knowledge of the causes, modes of transmission and symptoms was low. Attitudes and practices of nursing mothers were also found to be poor, thus they did not make conscious efforts to prevent Hepatitis B infection of their children. The study also revealed that the usual and most preferred source of information on child

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health for the majority of them was health workers.

Nursing mothers had a low perception of the severity of Hepatitis B and their children's susceptibility to it. Although most of them knew that vaccination was required to prevent infection, they did not think it was very important.

More attention should be given to educating nursing mothers on the dangers and prevention of Hepatitis B as a childhood killer disease. Health workers should also be trained to give more adequate information on Hepatitis B as a childhood killer disease in order to encourage a more proactive attitude towards the disease among nursing mothers.

INTEGRI PROCEDAMUS

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

This study was designed to examine the knowledge, attitudes and practices of nursing mothers in relation to Hepatitis B prevention in and immunisation of children. The World Health Organisation (WHO, 1948) defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". In order to ensure that this definition of health is realised in an individual's life, accurate information about health-related issues is necessary. This information provides the individual with knowledge of the causes, modes of transmission, prevention and treatment of the disease.

Hepatitis B is an acute infection which attacks the liver and is caused by the Hepatitis B Virus (HBV). It is a major health problem globally and is ranked as the tenth leading cause of death in the world (Lavanchy, 2004). According to the World Health Organisation (2015), an estimated 240 million people are chronically infected with Hepatitis B. Within this broad statistic, an estimated 780 000 people die every year from complications of Hepatitis B (WHO, 2015). However, Hepatitis B is most prevalent in Sub-Saharan Africa and Asia (Raza et al, 2007). In highly endemic areas like Africa, Hepatitis B is more commonly spread from mother to child at birth (Lavanchy, 2004 & WHO, 2015). Most people with chronic Hepatitis B in Ghana were infected at birth or in their childhood (Theobald Hepatitis B Foundation, 2014). Moreover, a notable danger associated with Hepatitis B is that most infected people are unaware of their infection because the Hepatitis B Virus can persist for decades without observable symptoms.

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Hepatitis B can cause chronic liver disease and infection and put people at high risk of death from cirrhosis (scarring) of the liver and liver cancer (Theobald Hepatitis B Foundation, 2014; Sharma, Sharma & Khajuria, 2004; Siakwa et al, 2014; Othman, Saleh & Shabila, 2014; WHO, 2002).

According to WHO (2015), it is essential to vaccinate a child against Hepatitis B within the first 24 hours after birth. The first day and week are most critical for the survival of new-borns. In 2013, almost one million new-borns (36%) died on the day they were born, another one million (37%) died within the next six days of birth and some 0.8 million neonatal deaths (27%) occurred between day 7 and day 27 of life. WHO (2015) also stated that most neonatal deaths are preventable. Children who die in the first 28 days of life suffer from diseases and conditions that are often associated with quality of care around the time of childbirth and are readily preventable or treatable.

Three facts may be distilled from these statistics: the prevalence of Hepatitis B, the severity of the disease and the susceptibility of people to its infection.

1.2 Incidence of Hepatitis B and Role of Vaccination in Ghana

Chronic infection occurs in 80% to 90% of infants infected during the first year of life and in 30% to 50% of children infected before the age of six years. However, less than 5% of healthy persons who get infected as adults develop chronic infections (WHO, 2015).

Majority of the world's chronic Hepatitis B infection carriers, especially children, acquire this infection via the perinatal route (Jonas, 2009 and Lavanchy, 2004). According to a report by Theobald Hepatitis B Foundation (2014), the prevalence rate of Hepatitis B is 15.6% in

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children. The prevalence rate increased from 6.4% in 1994 to 10.5% in 2005 in pregnant women.

Ghana is one of the areas with a high prevalence (more than 8%) of Hepatitis B. This is in line with the definition of endemic areas by WHO (2015). The organisation describes a country or an area as highly endemic if it has more than 8% carrier rate of the disease.

According to the Hepatitis B Foundation of Ghana, there has been an increase in the number of deaths associated with the disease in the country. Although national data on specific types of viral hepatitis in Ghana is scanty, surveillance data on clinical viral hepatitis from the Disease Surveillance Department shows an increasing annual trend of reported viral hepatitis cases from all the ten regions of Ghana. At the end of 2012, 52 deaths were recorded out of a total of 26,470 Hepatitis B cases. This represented a 30% increase in Hepatitis B cases from the year 2011 where 21,522 cases were recorded. However, 86 deaths related to Hepatitis B infection were reported in 2011. Also in 2012, out of 842 blood specimen investigated at the National Public Health Reference Laboratory, 175 cases (20%) were confirmed Hepatitis B positive (Hepatitis B Foundation of Ghana, 2014).

As of 2008, 177 countries including Ghana, had incorporated Hepatitis B vaccine as an integral part of their national infant immunisation programmes, and an estimated 69% of the 2008 birth cohort received three doses of Hepatitis B vaccine (WHO, 2013). By the end of 2014, WHO revealed that 184 countries had introduced the Hepatitis B vaccine nationwide.

In line with this knowledge, some institutions and non-governmental bodies in Ghana have tried in diverse ways to educate the general public on the disease and also organised screening exercises for them. Some of these are Hepatitis B campaigns and screening exercises organised by the Okyeame Kwame Foundation, schools and churches over the years.

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1.3 Mode of Transmission

According to WHO (2013), the Hepatitis B virus can survive outside the body for at least seven days, during which time the virus can still cause infection if it enters the body of a person who has not been vaccinated. According to Grob (1995) and Esteban (1995), the Hepatitis B virus can be transmitted either horizontally or vertically.

Horizontal transmission occurs when one comes into contact with the bodily fluids of an infected person. These bodily fluids include blood, sweat, saliva and seminal fluids. Horizontal transmission mostly occurs during adolescence or childhood, through sexual exposure, needles and/or blood transfusion (Alter et al, 1990). This implies that any person with a bad history of sexually transmitted diseases (STDs), multiple sexual partners or intravenous drug usage stands a higher chance of being infected with HBV (CDC, 2002).

Margolis et al, 2000 argued that most of the infections occur among adolescents and young adults due to exposure to high risk activities they engage in at this stage of life. This, however, does not mean one cannot get infected later in life. Other factors like one's occupation, an example of which is being a health worker, and life choices, such as getting a tattoo increase one's chances of getting infected with the disease.

Vertical transmission (perinatal transmission), on the other hand, occurs when an infected mother transmits the virus directly to the baby during childbirth. Such transmissions are usually possible when the expectant mother suffers an acute infection of Hepatitis B during pregnancy. The mode of this vertical transmission is not clear-cut, but indications are that, infection might occur through a placenta cutting during childbirth. In high endemic areas like Sub-Saharan Africa and East Asia, the major mode of HBV transmission has been identified as vertical (Maynard et al, 1988 & WHO, 2015).

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1.4 Prevention and treatment

Hepatitis B is not curable but can be prevented through vaccination. A vaccine which is about 95% potent in immunising individuals against Hepatitis B has been available since 1982. Vaccination has, therefore, been recommended as the most effective way of preventing the disease from spreading from an infected person to other people. Over the years, numerous studies have identified universal immunisation of infants as a way of drastically cutting down the prevalence rate of the disease, especially in endemic areas (Sharma et al, 2004; Kue, 2011& Chan et al, 2012) This, they have argued, would protect people from getting infected through horizontal transmission of the disease as they grow and come into contact with other people. This discovery has led international organisations like the World Health Organisation to direct all its member countries to include HBV vaccination in their universal childhood immunisation programmes.

Vaccination can, however, only be achieved through a widespread awareness creation and an extensive education of the masses on the dangers and modes of prevention of the disease. Provision of health information to people has been stated as being an effective way of ensuring good health and reducing the spread of a disease among people.

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1.5 Statement of Problem

Two important factors can be distilled from the background and preceding discussion, which make this study relevant for research attention. First, Hepatitis B is more prevalent and more fatal than is publicly acknowledged. Secondly, Hepatitis B can be prevented through public education and vaccination. Underlying these two realities is the pivotal role of communication in creating public awareness, influencing individual perceptions and enabling desirable behaviour change practices.

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Over the years, vaccination has been used to prevent individuals from getting infected with the disease. Several campaigns and other educational programmes have been used to educate people on the causes, dangers and the availability of vaccines for the disease among adolescents and adults amongst others. Drawing from the findings of various studies which have revealed that immunisation of children at birth would enhance the reduction of the disease's prevalence, most countries have added the Hepatitis B vaccine to their national infant immunisation programmes. Immunisation is one of the most successful public health initiatives (UNICEF, 2013). As a result of the effectiveness of vaccination in preventing Hepatitis B, most states have included Hepatitis B vaccination in their universal immunisation programmes.

Immunisation is a proven tool for controlling and eliminating life threatening infectious diseases. It is one of the most cost effective health investments with proven strategies (Abdulkarim et al, 2011). According to WHO (2015), immunisation currently prevents an estimated two to three million deaths yearly. The report, however, stated that about 18.7 million infants worldwide were still missing out on basic vaccines. Ghana, in 1999, included Hepatitis B and Haemophilus influenzae type B (Hib), which causes severe pneumonia, meningitis and other serious diseases almost exclusively in children under the age of five, in its national infant immunisation programme. By March 2002, Ghana was one of the few African countries to have included the vaccine in its national immunisation programme (WHO, 2002). It made provision for the expense of this vaccination to be covered by the National Health Insurance Scheme (NHIS).

There are studies which have researched into the knowledge levels of adolescents, healthcare personnel and other adult groups on the disease (Chireh 2011; Sharma et al. 2004; Vu et al. 2009; Kue 2011; Kim et al. 2015; Chan et al, 2012; Sharma, et al, 2004; Othman et al, 2014; Abdulkarim et al, 2011). There are, however, no known studies on the knowledge levels,

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attitude, practices and sources of information of nursing mothers on Hepatitis B as a part of the universal infant immunisation programme. To ensure that the spread of and resultant deaths from Hepatitis B are reduced, it is essential to look at the knowledge levels, attitude and practices of nursing mothers, who are directly responsible for ensuring that their children are immunised as well as their major sources of health information. Such a study would help provide answers to questions on how to improve immunisation of children at birth and consequently aid the country curb the prevalence of the disease.

1.6 Objectives of the Study

The primary objective of this study was to explore nursing mothers' knowledge, attitude and practices in relation to Hepatitis B by examining their health belief and information seeking behaviours. The study was also designed to find out nursing mothers' major sources of child health information as well as their preferred sources of information.

1.7 Research Questions

The study sought to answer the following major questions with the data to be collected.

1) What is the level of knowledge of nursing mothers about Hepatitis B?
2) How do nursing mothers perceive the severity and susceptibility of their children to Hepatitis B?
3) What are the behaviours of nursing mothers towards remedies for their children against Hepatitis B?

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1.8 Significance of the Study

In order to reduce the prevalence of Hepatitis B in Ghana, it is important to increase the public's knowledge about the disease, the availability of a vaccine for immunising children and the benefits that come with it. A review of studies by researchers both in Ghana and abroad has shown that knowledge about Hepatitis B is insufficient or scanty (Chireh 2011; Sharma et al. 2004; Vu et al. 2009; Kue 2011; Kim et al. 2015; Chan et al, 2012; Othman et al, 2014; Abdulkarim, et al, 2011; Majolagbe e al, 2014). More importantly, there are no studies on the nursing mothers' knowledge of the disease's addition to the universal infant immunisation programme. It is, therefore, useful to assess nursing mothers' knowledge, sources of information on Hepatitis B as part of childhood killer diseases, their attitudes and practices towards its prevention. This study would not only provide data on mothers' knowledge but also their perception of the disease and steps they consciously take to prevent their children from getting infected. The study would also identify the sources of information they patronise the most and, therefore, enhance knowledge on how to effectively educate nursing mothers on Hepatitis B as a childhood killer disease and other health issues in future.

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 on and reduce the carrier rate of the disease in the country.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the theory on which the study is based and the findings of related studies. The review of other related studies would look at the purpose, methods used and findings of other articles. For the purpose of this study, the Health Belief Model would be used.

2.2 Theoretical Framework

2.2.1 The Health Belief Model

The Health Belief Model was first developed by Hochbaum, Rosenstock and Kegel in the 1950s in the United States to explain why medical screening programmes offered by the United States Public Health Service, particularly for tuberculosis, were not very successful (Hochbaum, 1958). The theory proposes four constructs on which health behaviour is based. These constructs are perceived susceptibility, perceived severity, perceived benefits and perceived barriers. Other additions were later made to the initial four constructs and these are self-efficacy, modifying variables and cues to action.

Perceived seriousness/ severity is the belief an individual has about the severity of a disease. This perception may either be as a result of medical information provided to the individual or based on what the person believes the difficulties and effects of ignoring the warning could pose to him or her.

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Perceived susceptibility refers to an individual's beliefs about personal risk. This has to do with whether or not he or she believes he or she could get infected with the disease in question.

The third construct, which is perceived benefits, has to do with the values or usefulness the individual perceives the new behaviour has in decreasing the risk of developing a disease. This implies that if an individual believes that the proposed behaviour would be beneficial to him or her, he or she would put in the necessary efforts to ensure that he or she enjoys these benefits.

Perceived barriers, the fourth main construct of the theory, refer to an individual's own evaluation of the obstacles in the way of adopting a new behaviour.

These constructs do not, however, always operate independently of each other. Whereas two of the constructs may jointly account for a particular health behaviour, other factors could also account for the adoption or rejection of a particular health behaviour. One of such factors is the availability of modifying variables like culture or past experiences. These variables inform an individual's decision to adopt or reject a behaviour change.

Another construct which was added later is cues to action. Cues to action refer to events, people or things that move people to change their behaviour. An example of this could be the illness of a family member or close friend.

Self-efficacy is the last construct of the Health Belief Model which was added in 1988 (Rosenstock, Strecher & Becker, 1988). Bandura (1977) defined self-efficacy as the belief in one's ability to do something. This implies that the individual is most likely to adopt a proposed healthy behaviour if he or she believes he or she can fulfil the requirements of the change.

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From the explanation of the constructs of the Health Belief Model, the study would be able to determine if nursing mothers are more likely to ensure that their children are immunised if they perceive that getting infected with the disease is serious and that their children are at risk of being infected. Also, the study would reveal if the perceived benefits of immunisation are likely to be responsible for their decision to adopt or reject the proposed solution to the health problem, thus Hepatitis B infection. Cues to action which could also account for the decision by nursing mothers to immunise their children would be found out in this study.

2.3 Related Studies

Hepatitis B, according to a report by World Health Organisation (WHO) in 2002, claims about one million lives each year. The prevalence and adverse effects of Hepatitis B have given cause to several studies on the knowledge, attitude, perception and sources of information of different groups of people on it (Chireh 2011; Sharma et al. 2004; Vu et al 2009; Kue 2011; Kim et al 2014; Chan, Lao, Suen & Leung, 2012; Sharma, Sharma & Khajuria, 2004; Othman, Saleh & Shabila, 2014; Abdulkarim, Ibrahim, Fawi, Adebayo & Johnson, 2011).

Maternal knowledge and attitude towards child vaccination practices have not received much attention. In general, however, the studies show that there exists a low level of knowledge about Hepatitis B, regardless of the educational or professional backgrounds of the population concerned (Chireh 2011; Sharma et al 2004; Vu et al 2009; Kue 2011; Kim et al 2015 & Othman et al 2014).

Studies conducted by different researchers both in and outside Ghana seem unanimous in their revelation of low levels of knowledge of different groups of people on Hepatitis B (Kue,

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2011; Chan, Lao, Suen & Leung, 2012; Sharma, Sharma & Khajuria, 2004; Chireh 2011; Kim, Lee, Kiang, Watanabe, Torres, Halon, Shi & Church, 2015; Othman, Saleh & Shabila, 2014; Vu, Gu, Watson, Dean, Peet, Dunne & Debattista, 2009; Abdulkarim, et al, 2011).

A study by Majolagbe et al (2014) was aimed at finding out the prevalence of Hepatitis B surface antigen in the serum of blood donors in Bauchi, Nigeria. It also sought to find out the knowledge of the donors as well as the risk factors associated with Hepatitis B within this group. Blood samples were collected from 100 blood donors who consented to be recruited for the purposes of the study. The study was done at a teaching hospital in Bauchi state in Nigeria, which had a blood bank which kept blood for emergency situations within the state. Data was collected through the use of interviews and the testing of the blood samples of donors using a Hepatitis B test strip. Two percent of the total sample was female while 98% was male.

Results from the study revealed that 18% of the donors tested positive to Hepatitis B and all these people were male, thus a prevalence rate of 18%. Majority of the male donors who tested positive were between the ages of 20 and 29 (19%). The study found that most of those who tested positive to the infection were traders and farmers. The researchers attributed this finding to the assumption that traders and menial workers were involved in socially high risk activities which exposed them to unhygienic conditions. They, therefore, assumed that their occupation could have put them at a higher risk. Donors who were related to Hepatitis B patients were also more reactive to the disease than other groups. Whereas a number of them (28%) confirmed that they had relatives who were Hepatitis B patients, others (66%) shared razor blades and other personal items with other people. 38% of them also admitted that they had more than one sexual partner.

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The study revealed that only 83% of the donors had ever heard about Hepatitis B. About one in three (33.7%) of them got to know about it through Information, Education and Communication (IEC) materials; 30.1% heard about it in hospitals, 28.9% in the communities in which they lived and 7.2% learnt about it during sensitization talks by the Ministry of Health. Majority of the donors who had heard of Hepatitis B knew at least one mode of transmission.

The study also found out that only 12% of the donors had ever been vaccinated against the disease. The educational background of the donors also played a role in their susceptibility to the disease. Donors with no formal education who tested positive to the disease were 30.7% whiles 3.4% of those with post-secondary education tested positive. The researchers cited and related this to an observation by Bello et al (2012) which stated that a correlation existed between Hepatitis B prevalence and level of education.

The researchers recommended that non-governmental organisations (NGOs) and health authorities should educate people more on the causes, modes of transmission, symptoms and prevention of Hepatitis B while providing vaccines for those who were particularly susceptible to the disease (thus traders and relatives of infected persons).

In another study by Brouard et al (2013), the researchers described the French population's knowledge, perceptions and associated screening and vaccination practices with regard to Hepatitis B. It compared its findings with those observed in the same population for HIV, an equally dangerous infection with similar transmission modes to Hepatitis B Virus.

The study added a module on Hepatitis B to an HIV KABP (Knowledge, Attitudes, Beliefs and Practices) survey which was carried out by telephone in 2010 among a random sample of 9,014 individuals aged between 18 and 69 and living in metropolitan France. This was done in order to get a fair representation of the general French population. Phone interviews

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included questions on whether one could get infected through unprotected sex with an infected person; sharing needles and through mosquito bites to test the interviewees' knowledge. Attitude was assessed using Likert scale responses on whether one feared s/he was at risk of getting infected. Practices were also assessed by looking at whether or not the interviewee had ever been screened or vaccinated against Hepatitis B.

Although France is known to be the country with the best hepatitis care delivery in Europe (Euro Hepatitis Index report, 2012), the study found that levels of knowledge within the country were low. Findings revealed that the general population was less aware that needle exchange during intravenous drug use (89.9%) and sexual intercourse (69.9%) were Hepatitis B Virus (HBV) transmission modes. Majority of them, however, knew that intravenous drug use (99.1%) and sexual intercourse (99.4%) were HIV modes of transmission. A little more than one in five interviewees (20.3%) expressed fear for both illnesses. The individual perceived risk of infection was, however, higher for HBV than for HIV. Whereas 60.8% believed they had a greater risk of getting infected with Hepatitis B, 40.3% of respondents believed they had an equal or greater risk of being infected with HIV. This finding was however, not reflected in their attitude towards HBV screening as, only 27.4% had ever been screened for the disease. More than half (61.4%) of the total number reported ever been screened for HIV. Using multivariate analysis, the researchers discovered that HBV screening was reported more often by individuals born in areas with high HBV endemicity (OR = 2.1 [95% CI: 1.5-2.9]) than by those born in low HBV endemicity areas and more often by those who reported they had used intravenous drugs during their lifetime (OR = 2.2 [95% CI: 1.2-4.2]) than those who did not report such behaviour.

Also, almost one in two respondents (47%) reported HBV vaccination. However, those who were more at risk of getting infected with the disease did not report vaccination more often than those who were less susceptible to the disease. The study, therefore, highlighted very

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contrasting levels of knowledge, perceptions and practices regarding HBV and HIV in the French population. Brouard et al (2013) recommended that there was a need to improve the general and high-risk populations' knowledge of HBV, especially concerning sexual intercourse as a mode of transmission, in order to improve screening and vaccination practices.

Research conducted by Long Life Africa, an NGO concerned with health issues, revealed that about 70% of senior high school students in Ghana had no knowledge about Hepatitis B and this seemed to be the situation among the general population. Adolescents and the youth have been categorised under the high risk group. This is because human development is particularly characterised by sexual activity and other behaviours that expose them to the bodily fluids of others.

This finding by Long Life Africa was confirmed in a study conducted by Chireh (2011) to assess the knowledge, attitudes and practices of adolescents living in the Upper West region of Ghana about Hepatitis B. The study compared the knowledge, attitudes and practices of adolescents living in an urban and a rural community in the region to check for differences and similarities. In the assessment of their knowledge on Hepatitis B virus, the researcher administered 408 questionnaires to in-school adolescents (JHS) in rural and urban districts of Wa West and Wa Municipal, respectively. The study was cross-sectional and was done over a three-month period, thus from June to August 2010. Chireh found that although respondents from both rural and urban communities had a fair idea of Hepatitis B, there were varying levels of knowledge between the two communities. Although female and rural adolescents demonstrated that they were more knowledgeable about the horizontal mode of transmission, the study discovered that they still needed more education on the causes, other modes of transmission and effects of the disease. Interestingly, their responses also showed a tendency of stigmatisation towards patients. Despite their knowledge of the dangers of the disease, less

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than 30% and 16% of rural and urban adolescents respectively had been tested for the disease. Only 17% of the rural adolescents and 12% of urban adolescents had been vaccinated against the Hepatitis B Virus.

Chireh's study could, however, have benefited from a mixed method approach instead of the quantitative design that it used. Although it revealed that the adolescents who lived in a rural community were more knowledgeable of HBV, a qualitative approach would have explained this finding and given context to the responses. Although the researcher stated that the headmasters of the selected schools clearly explained that neither the curriculum nor visits from public health officials to the school accounted for the students' knowledge on Hepatitis B, interviews with the students could have been more appropriate. Again the researcher speculated that the reason behind the higher level of knowledge among the female students could be attributed to their curiosity about caring for their children when they became mothers. This could also have been catered for using a mixed method approach.

In line with a suggestion made by Dobson et al (1995) that school-based vaccination programs should be instituted, Chireh (2011) proposed that school-based vaccination centres be established in all basic schools to reach out to all those adolescents who are not willing to get vaccinated. The study also suggested that public health campaigns should be instituted to help create awareness and educate the general public on Hepatitis B. It also proposed that health authorities carry out a program of compulsory vaccination of adolescents who were born before HBV vaccine introduction in Ghana and should be backed by a national comprehensive immunisation policy which should cover the screening of pregnant women, risk groups and the general public.

In a similar study, Kim et al (2015) sought to test the knowledge of various Asian American subgroups on the Hepatitis B Virus. Specifically, the study examined the knowledge of Asian

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American college students in Oregon and tried to figure out the differences which existed between the Asian subgroups. Kim et al also used a cross-sectional survey. They self-administered 258 questionnaires to the students to collect data on their knowledge of the modes of transmission and prevention of the disease. They found that the students lacked knowledge on the transmission and consequences of the disease. This indicated that poor knowledge of HBV among the Asian Americans was not limited to community settings as assumed by the researchers but extended to the education environment. The study also revealed that there were no significant differences between the subgroups.

Kim et al (2015) recommended that education on the disease should be improved, especially for the female students. Thus, the female students in the reproductive age group should be educated about mother-to-child transmission and its prevention by neonatal immunisation.

Similarly, cross-sectional studies have been conducted in Australia and USA to assess secondary school students' level of knowledge about STIs, including Hepatitis B. In these studies, the knowledge of students in rural and urban localities was assessed. Researchers found that rural students were more knowledgeable about issues of STIs as compared to their urban peers (Lucke, Dunne, Donald & Raphael, 1993; Svenson, Varnhagen, Godwin & Salmon, 1992).

Othman et al (2014) also assessed the knowledge of medical students in Erbil City, Iraq about Hepatitis B infection. In their assessment, the knowledge of 200 medical students on Hepatitis B was tested using self-administered questionnaires. In addition to basic demographic characteristics, the questionnaire included questions about routes and modes of transmission as well as prevention of Hepatitis B. The students were also asked about their vaccination status.

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The study, however, revealed that they had poor knowledge on vaccination as a form of prevention. Although older students, thus those in clinical years (3rd and 4th year), proved to be more knowledgeable of HBV than the junior students (1st and 2nd year), the knowledge levels were generally poor. Only 45% of the respondents were vaccinated and these were mostly senior students, who had had personal experiences with patients of the disease. The study recommended that public awareness be created and vaccination coverage be ensured among healthcare providers, especially among the younger medical students.

Studies by the World Health Organisation (WHO) in 2002 and Lavanchy (2004) have shown that Sub-Saharan Africa and Asia are the most HBV-endemic areas in the world, having more than 8% HBV carrier rate. A lot of studies conducted on Asians' knowledge, perceptions and practices by different scholars over the years have confirmed the findings of Lavanchy and WHO. In a study by Jennifer Kue (2011), the researcher assessed knowledge of Hepatitis B and liver cancer among the Hmong. The study also looked at the perceptions of risk and barriers to Hepatitis B screening and vaccination among South East Asians who had migrated to the United States. In Kue's study, in-depth interviews and key informant interviews were conducted. In all, 83 in-depth interviews and 17 key informant interviews were conducted. The key informants were people who held leadership positions in the Hmong community; were knowledgeable about the community and were interested in breast and cervical cancer. The semi-structured guide consisted of primarily open-ended questions that asked participants about their own beliefs, attitudes and experiences, covering similar topics as did the key informant interview guide. This included historical discrimination, medical mistrust, and health care system barriers, health literacy related to behaviour change communication screening, and how primary groups influence women's attitudes, decision-making, and behaviour around screening.

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Findings of this study revealed that chronic Hepatitis B disproportionately affected Asian Americans. It found that although Asians made up only 4.2% of the total United States' (U.S.) population, they accounted for more than half of those infected with Hepatitis B. The study, which sought to assess the knowledge, perceptions of risk and barriers to Hepatitis B screening and vaccination among the Asian population in Oregon, noted that although they emigrated from Southeast Asia where Hepatitis B was endemic and had a high prevalence, knowledge about the disease, as well as screening and vaccination rates, were low. The study discovered that although most participants had heard about the disease, they lacked comprehensive understanding of it.

Results indicated that most in-depth interview participants had heard of the Hepatitis B virus (96%) and slightly over half had been screened (53%) and vaccinated (51%). However, about 41% of them did not know that sexual intercourse was a mode of transmission and 40% did not know that sharing toothbrushes was a route of transmission of the disease. About 57% of the participants wrongly believed cough was a mode of transmission. Bivariate analyses showed that education, health insurance, preventive care, doctor's recommendation and English proficiency were significantly associated with having been screened for Hepatitis B. Only English proficiency was significantly associated with Hepatitis B vaccination.

Interestingly, Kue's (2011) study also found that there were some participants who did not know what Hepatitis B was, how it was caused, transmitted and how it could be prevented. The Hmong also did not know Hepatitis B was incurable if they became infected and that the infection could result in liver disease. The researcher also discovered that most of them relied heavily on herbalists in their community for information on health issues. These influential figures seemed to have little or no knowledge on HBV, judging from Hmong respondents' belief in the herbalists' claims that they could cure Hepatitis B through acupuncture. Their main source of information, who mostly lacked knowledge on the subject, could, therefore,

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be said to be responsible for the poor knowledge of the Hmong, who were perceived as individuals at high risk of HBV infection.

The study also found that there were low vaccination rates among the Hmong and through the interviews, discovered that this was due to low perceived susceptibility among them. There were other participants who believed that there was no need to know since their finding out would result in a quicker death for them. This indicated a lack of knowledge of the fact that the disease could be treated. The 52% who had been vaccinated mostly did so because they were obliged to do so by their employers or schools, or required to by their doctors.

The researcher recommended that appropriate interventions are culturally and linguistically designed to help effectively educate the Hmong. Another recommendation was for authorities to ensure compliance by parents to childhood immunisation of their children to curb the disease's spread. Considering the study's finding that herbalists were influential in the health practices of the Hmong, it suggested that they were considered in developing interventions. Most participants cited alcohol abuse as being a cause of liver disease and this was information they got from public health campaigns. The researcher, therefore, suggested that HBV screening and vaccination should be prioritised in public health campaigns.

In another study on Asian populations, Vu et al (2009) researched into the knowledge and practices of Chinese and Vietnamese living in Brisbane, Australia. They used self-administered questionnaires to gather data at the participants' community gatherings. The questionnaire also measured the participants' history of testing and vaccination. The study revealed an overall lack of knowledge among the two ethnic groups about modes of transmission, symptoms of the disease and the availability of possible treatment. It also showed a poor attitude by participants towards screening and vaccination. The researchers also discovered that monitoring of confirmed Hepatitis B patients' treatment was poor.

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The Chinese participants, however, showed a higher level of knowledge on the modes of Hepatitis B transmission than Vietnamese respondents. Generally, both groups did not know that sexual intercourse was a mode of transmission as only 50% of the sample, mostly Chinese women, identified sexual intercourse as a mode of transmission. Approximately one third of the sample was not aware that Hepatitis B infection could cause liver cancer.

It was also observed that although 80% of the Vietnamese adults and 60% of the Chinese participants admitted that they had been tested for Hepatitis B, only 60% of Vietnamese and 50% of Chinese participants stated that they had been vaccinated against the disease. Although some of the participants admitted that they had tested positive for Hepatitis B, about one in four Vietnamese and one in three Chinese Hepatitis B patients reported that they had not seen a doctor concerning Hepatitis B infection. The study also discovered that though majority of both Chinese and Vietnamese people preferred to receive information on Hepatitis B in their native language, this preference seemed to be much stronger among Vietnamese participants. Moreover, while a lot of Chinese people liked to search the internet for information on the disease, Vietnamese people preferred going to their doctors. The researchers stated that this finding was reflective of the findings of earlier researches which showed that the Vietnam communities living in Brisbane relied heavily on their family doctors for health information. Vu et al (2009), therefore, recommended that materials be printed in the native language of the Vietnamese to ensure that they understood the information clearly and consequently made prudent decisions. This was because the researchers found out that information provided to them by the doctors was scanty. They also recommended that people should be educated on the causes and dangers of Hepatitis B. The researchers further suggested that mass vaccination should be ensured especially for those who stood a higher risk of getting infected with Hepatitis B.

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According to Chan et al (2012), the commonest route of transmission of the Hepatitis B virus in endemic areas is vertical. This is to say that transmission from mother-to-child has been identified as the commonest way of infecting another person with the virus in areas where the disease is prevalent. Women, especially those in the reproductive age range, have, therefore, received a considerable amount of attention from researchers interested in Hepatitis B and/or health communication.

In Hong Kong, universal neonatal vaccination was introduced in 1988 to reduce the prevalence of the disease but about more than two decades after this initiative was put in place, the prevalence rate of the disease still remained at 10%. Chan et al attributed this situation to deficient knowledge of the disease and its prevention among the population. The researchers, therefore, decided to conduct a study to find out the knowledge levels of people living in high and low endemic areas as well as the role played by their sources of information on the knowledge they had about Hepatitis B.

The study found, through a survey of non-selected cohort of pregnant Chinese women, that most of them (thus between 27% and 75%) knew that the disease was a lifelong condition. Also, 75% of them knew that the infection was associated with cirrhosis (scarring of the liver) and 60% knew that it was associated with liver cancer. However, they showed insufficient knowledge of the infection.

When it came to modes of transmission, only 40% of the women knew of vertical transmission (thus mother-to-child) of the Hepatitis B virus and only 40%-65% of the women knew that Hepatitis B could be transmitted through sexual intercourse. The researchers attributed this deficiency in knowledge to the insufficient education of the women on the disease. They also suggested that Hepatitis B be added to the list of sexually transmitted diseases in public health education and promotion materials. Also, only 24% of the

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respondents correctly stated that the virus could not be transmitted through the faecal or oral route.

More than half (76%) of the subjects studied also erroneously stated that eating a balanced diet and consuming vitamin C were ways of preventing infection with the disease. One of the factors that researchers found as being accountable for the deficient knowledge among pregnant women was immigration. They argued that most immigrants demonstrated low knowledge of Hepatitis B infection and prevention and this accounted for the high rate of horizontal transmission in the population.

The study also found that the mass media was the most preferred source of information on Hepatitis B among the pregnant women (with 63% choosing television and 38.8% choosing newspapers). The others comprised of radio (17.9%) and other sources, which less than 26% of the respondents chose. Interestingly, more than 80% of the women did not select medical or healthcare providers as useful sources of information on Hepatitis B. The study, using multivariate logistic analysis and adjusted odd ratios to assess the sources of information, discovered that some of the sources provided incorrect information on the disease. Whereas television programmes, internet, government antenatal clinics, newspapers and books were found to have provided minimal incorrect information, radio proved to be a major provider of misleading messages on the transmission of the disease (aOR= 2.24).

The researchers proposed that more accurate information should be provided through public education, especially to women in the reproductive age group, in order to curb the prevalence of the disease and also prevent stigmatisation which was common, especially in Mainland China.

A similar study by Sharma et al (2004) was conducted on the sources of information and knowledge, attitude and practices regarding HBV infection of married women in the

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reproductive age group in an Indian community. The researchers used interviews to collect data on the knowledge and sources of information of 300 married women in the reproductive age group in India. The interview guide which was used in the interview included questions on the routes of transmission of HBV, their vaccination status and the vaccination status of their children as well as their main sources of information. Participants were also given options to choose from with regards to attitudes and practices in preventing infection. Interviews were conducted in their local language.

Sharma et al found that knowledge of HBV among the participants was very low. Only 20% correctly identified the modes of transmission. A large number of them (50%) had misconceptions about the modes of transmission; thus they cited shaking hands and hugging amongst others as being some of the ways in which one could get infected.

Also, there were low HBV vaccination rates both among the women and their children. Whereas 80% and 75% of children below and above 5 years, respectively were vaccinated against the other childhood killer diseases, only 30% and 15% of children below and above 5 years respectively were vaccinated against Hepatitis B. The study, therefore, recommended that Hepatitis B vaccination should be added to the universal immunisation programme to ensure that the spread of the disease is gradually stopped. This is akin to the suggestion made by Kim et al (2004) that neonatal HBV immunisation should be made compulsory.

Some studies also looked at the effects of the disease on people, particularly the groups considered as being at high risk of getting infected. Others have also investigated the reasons for the low knowledge levels among the people they studied (Siakwa et al, 2014; Ocama et al, 2008 & Chan et al, 2012).

Siakwa et al (2014) researched on the effects of chronic Hepatitis B on pregnancy and birth outcomes in Ghana. Using a sample of 512 pregnant women who attended the antenatal clinic

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at the Cape Coast Teaching Hospital between January 2011 and December 2013, they observed the effects on the outcome of pregnancies of HBV-infected mothers. The study obtained 262 women who tested positive and 250 women who tested negative to Hepatitis B infection. Most of them (40%) were aged between 20 and 29 years. The Hepatitis B status of all pregnant women was determined through tests conducted on them while a researcher-administered semi-structured checklist was used to collect their demographic and medical data.

A number of studies focusing on infected pregnant mothers have stated that Hepatitis B increases risk for adverse pregnancy outcomes including maternal complications (Ka, Lai &Terence, 2005; Gambarin-Gelwan, 2007; Aghamohammadi & Nooritajer, 2011). Results from the study by Siakwa et al showed that pregnant mothers who tested positive to Hepatitis B risked suffering from Premature Rupture of Membranes (PROM). These mothers also increased the risk of vertical transmission of Hepatitis B. However, many researchers agree that the presence of Hepatitis B infection during pregnancy has more detrimental effects for the foetus and neonate than the mother (Fraser, Cooper & Nolte 2003; Wong, Chan, Yu & Ho, 1999). Siakwa et al found that the mother's infection could also result in asphyxia at birth, underweight babies and pre-term babies. The study, therefore, recommended that mothers who tested positive to Hepatitis B receive immunisation for HBV infection for babies.

In a 13-year hospital based study conducted in a rural district of Berekum in the Brong Ahafo region of Ghana to assess the role of indirect causes of maternal mortality, it was found that among the 229 maternal deaths recorded during the period of review, 15 were due to Hepatitis B infection (Diederike, Lucia, Kofi & Jos Van, 2003).

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A study conducted by Ocama et al (2008) revealed that there was high prevalence of HBV and HBV/HIV co-infection among patients with hepatocellular carcinoma (which is a type of liver cancer) in Uganda with high mortality. According to the researchers, hepatocellular carcinoma was the most common type of liver disease and was mostly due to viral hepatitis and cirrhosis (scarring of the liver). The study assessed 15 patients who were admitted to the gastrointestinal service of Mulago hospital in Kampala with a diagnosis of hepatocellular carcinoma from Hepatitis B Virus and HIV infection. Researchers found that patients infected with Hepatitis B were most likely to die faster than those who were not infected. HIV was also found to increase the prevalence of hepatocellular carcinoma, since it clearly accelerated Hepatitis B Virus-related liver disease. They recommended that reduction in incidence and mortality due to hepatocellular carcinoma in Uganda required urgent large scale Hepatitis B vaccination.

A study was conducted by Nisar, Mirza and Qadri (2010) to find out the knowledge, attitude and practices of mothers regarding the immunisation of one-year-old children in Pakistan. Using a semi-structured questionnaire, the researchers interviewed mothers who had one-year-old children at Mawatch Goth, Kemari town, Karachi in February 2007. The study revealed that the mothers had inadequate knowledge about Hepatitis B. Although the mothers were described as possessing a positive attitude toward immunisation, their attitude did not reflect in their practices.

The researchers found that about 70% of the women had started routine immunisation of their children but missed subsequent vaccination schedules. Some of the reasons they gave for missing their appointments included a lack of understanding of next appointment, non-availability of health staff, mild flu, mild illness of their children and household work. Health care staff was found to be the respondents' main source of information.

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There are other researchers who have looked at the reasons for the low levels of knowledge among the groups they studied (Chan, Lao, Suen & Leung, 2012; Comfort Foundation Ghana; Theobald Hepatitis B Foundation; Kue, 2011; Sharma, Sharma & Khajuria, 2004). According to these studies, most of the respondents pointed the mass media out as their main source of information. Sharma et al (2004) found in their study in India, that most married women in the reproductive age group (between 20 and 45 years) stated that television was their major source of information (35%) while only 5% stated the print media, thus magazines and newspapers as their major source of information. Interestingly, 25% of them stated that medical doctors were their main sources of information when it came to health issues. This could be interpreted as the existence of low knowledge levels of information about HBV on the part of the medical doctors as well since about 50% of the women had misconceptions about the transmission of the disease. While some believed it could be transmitted through hugging and the faeco-oral route, others thought usage of safe water could prevent one from getting infected with the disease. The cause of poor levels of knowledge among mothers, here, was therefore attributed to low levels of knowledge of those on whom they relied for information.

The study by Chan et al (2012) on the effect of sources of information on the knowledge levels of mothers, also found that mass media was the most preferred source of information on Hepatitis B among the pregnant women in Hong Kong (with 63% choosing television, 38.8% choosing newspapers and 17.9% choosing radio). The study used multivariate logistic analysis and adjusted odd ratios to assess the sources of information and found that radio proved to be a significant provider of incorrect information on the transmission of the disease (aOR= 2.24).

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The researchers, therefore, proposed that credible information should be provided through public education, especially to women in the reproductive age group, in order to curb the prevalence of the disease and also prevent stigmatisation among the people.

In a 2014 report by a non-governmental organisation, Comfort Foundation Ghana, misinformation by healthcare providers and a lack of knowledge about perinatal transmission were cited as causes of misconceptions in Ghana. According to the report, civil society organisations (CSOs) and other health professionals often gave varied information about the causes and transmission of viral hepatitis, thus causing fear and panic among patients and the public, hence resulting in stigmatisation. The NGO, therefore, suggested that messages and materials be culturally and linguistically tailored to encourage compliance and understanding on the part of the target audience (Comfort Foundation & Theobald Hepatitis B Foundation).

One of the few studies which looked at Hepatitis B vaccination of children, however, was a report by Allred et al (2008). In this report, they investigated new-born Hepatitis B vaccination coverage among American children in 2006. According to the report, the Advisory Committee on Immunisation practices (ACIP) recommended that children should be immunised on the first day of birth before discharge from the hospital. Following this suggestion, the National Immunisation Survey (NIS) collected data on Hepatitis B immunisation of children born between January 2003 and June 2005 through random digit-dialled-telephone interviews with mothers in 2006. The children who were included in this survey were born between January 2003 and June 2005. Then, the NIS conducted a mail survey of children's vaccination providers which the mothers identified. The Centre for Disease Control (CDC) then analysed this data by deducting the birthdate of the children from their vaccination dates in order to get the infant age of each child. They found that only 42.8% of the babies were vaccinated on the first day after birth. About 48.5% were vaccinated on the second day and 50.1% were vaccinated on the third day after birth. They,

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therefore, recommended that delivery hospitals should provide Hepatitis B vaccines for new-borns as a standard of care. This report, however, did not look at the knowledge the mothers had on the dangers Hepatitis B posed to their children.

From the literature which has been reviewed in this study, the publics whose knowledge was assessed included people of different socio-economic backgrounds, adolescents and people from different professional backgrounds. These were done in order to assess the knowledge levels of those perceived to be at high risk of getting infected with the virus.

Most of the studies cited in this literature review, employed a quantitative research approach in assessing the knowledge, attitude and practices of the audience as well as their sources of information on the disease. A few others also used the mixed method approach, thus administering questionnaires and using interviews as well. The literature reviewed here shows that a substantial number of studies have been conducted on the knowledge levels, sources of health information, effects and vaccination status of different individuals and groups in relation to Hepatitis B. There is, however, no study at the time of this research, which assesses nursing mothers' knowledge, attitudes and practices on Hepatitis B as a childhood killer disease. It is, therefore, essential to conduct a study on this group and aspect of the disease's spread.

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter covers the procedures which were used for the collection and analysis of collected data. The study sought to assess the knowledge levels, attitude and practices of nursing mothers in relation to immunisation of their children against Hepatitis B.

3.2 Research Design

The method employed in this study was a survey. This is a method which makes it easy and convenient to collect a large amount of data within a relatively short period of time. Most of the questionnaires were self-administered, since a number of nursing mothers were literate whiles a few of them were interviewer-administered because some mothers were not literate. The questions were, therefore, translated as clearly as possible in the Ewe language, which is the native language of the researcher, to the nursing mothers and their responses were documented on the questionnaires. The questionnaire used short sentences and simple language to enhance the respondent's understanding.

The questionnaire was divided into four parts. The first part posed questions which were structured to test the knowledge of respondents on Hepatitis B as a disease- cause, symptoms, effects, transmission and prevention. The second part consisted of questions which assessed their attitude towards Hepatitis B infection. The third part of the questionnaire had questions which investigated their health information-seeking habits. The last part of the questionnaire asked questions which tested their practices in relation to child health and immunisation generally; but in particular in order to protect their children from Hepatitis B infection. Questions on their attitudes and practices were Likert scale type questions. Questions on their

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usual and preferred sources of information provided pre-coded response options to choose from. Finally, items related to their level of education and place of residence were required in the questionnaire.

Most of the questions were close-ended questions whereas a few were open-ended. Close-ended questions were used because the responses are specific, straight to the point and allow for easy analysis, considering the large number of respondents. Open-ended questions, on the other hand, allow respondents to express themselves and give more detailed explanation for their choices. The combination of close-ended and open-ended questions, therefore, ensured the quick collection of rich data which helped to draw useful and accurate conclusions.

3.3 Target Group

Nursing mothers were the target of this study. These nursing mothers were specifically chosen from two postnatal centres in the Ho Municipality in the Volta region. These postnatal centres were the postnatal care section of the Royal Hospital in Ho and the Municipal Health Directorate's postnatal centre in Ho. They were selected because they were the two most patronised postnatal care centres in the municipality. The selection of these two centres, therefore, ensured that the target sample of 200 nursing mothers was met within the space of one month.

3.4 Sampling Process

A sample of 200 nursing mothers was selected for the study. Purposive sampling was used for both conceptual and pragmatic reasons. First, only nursing mothers who had heard about Hepatitis B before were allowed to participate in the study. Consequently, a screener question was used to purposively filter respondents according to that threshold. Secondly, for reasons of patient confidentiality, it was unlikely and undesirable to seek a comprehensive register or sampling frame of nursing mothers with which to conduct a probability sampling.

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In order to be able to conduct the survey, the researcher negotiated access by submitting introduction letters from the Department of Communication Studies (University of Ghana) to the administration of the Royal Hospital and the Ho Municipal Health directorate. After permission was granted by the authorities of the two postnatal centres, the researcher proceeded to pre-test the instrument on a smaller number of respondents at the Child welfare clinic. This was done to ensure that the questions were not ambiguous but clear and understandable to the nursing mothers. The researcher assured nursing mothers of strict confidentiality and made it clear that their names were not required in answering the questionnaires. They were also assured that answering the questions would not bring them any physical or material loss or harm. The researcher also informed the nursing mothers that the study was purely for academic purposes. The midwives and community health nurses at the postnatal centres assisted the researcher in explaining to the nursing mothers that the exercise was completely voluntary and that they were free to decline to answer the questionnaire at any point if they did not want to do so.

Data was collected on the days assigned for postnatal sessions at both centres. At the Royal Hospital, Mondays, Tuesdays and Thursdays were the days on which nursing mothers were expected to bring their children for postnatal care. At the Child Welfare clinic (Town Council hall), Thursdays were the major days on which nursing mothers were attended to. However, nursing mothers could come around on other days as well if they had an emergency or if the day for vaccinating their children against a disease fell on any other day apart from Thursday. The researcher, therefore, collected data at the Royal Hospital mainly on Mondays and Tuesdays. Thursdays were dedicated to data collection at the Child Welfare centre (Town Council hall). In all, the researcher paid twelve visits to the two postnatal centres.

The administration of each questionnaire took about ten minutes on the average since the researcher had to read some of the questions out to a respondent. Some of the nursing

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mothers, however, filled the questionnaires out themselves. On the average, 15 questionnaires were administered daily. The questionnaire was, therefore, administered to any nursing mother who was available at the postnatal centre and who had heard of Hepatitis B. There were some nursing mothers who had heard of Hepatitis B but declined answering the questionnaires. There were others who started answering the questionnaire but could not complete it because they had to leave immediately after they had been attended to. The researcher, therefore, administered 206 questionnaires in all but had 200 questionnaires which were successfully administered. All the respondents were in Ho at the time of this study. The data was collected within five weeks.

3.5 Data Analysis

After the collection of data, the Statistical Package for the Social Sciences (SPSS) software programme was used for data entry and analysis. This was used for the ticked responses. These were entered as numerical data to ensure easy analysis of the data. The responses for the open-ended questions were also categorised under themes and subsequently coded into numerical data in order to make SPSS analysis of the data easy. Statistical tools such as cross-tabulations and frequency tables were used to present and explain the findings of the study.

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CHAPTER FOUR

FINDINGS OF THE STUDY

4.1 Introduction

This chapter presents the results of the study. The study sought to find out the knowledge of nursing mothers in the Ho district on Hepatitis B as a childhood killer disease. It also aimed at assessing their attitudes and practices towards the protection of their children against the disease. The mothers' sources of information on child health was also investigated in order to better understand their knowledge levels and also find out their health information seeking behaviours. The study sampled 200 nursing mothers who said they had heard of Hepatitis B.

4.2 Demographic Information and educational levels of Respondents

A total of 200 questionnaires were successfully administered to 200 nursing mothers. Majority of the respondents (50.5%) were less than 30 years old. A considerably large number of them were also aged between 31 and 40 years (47.5%) whereas only a few were above 40 years old (2.0%).

Almost all the nursing mothers who took part in this study had received some level of formal education. More than 4 out of 10 (45%) of the mothers had had tertiary education, 29% had attended Senior High School and 19.5% had attended Junior High School. Those that were classified as others had either ended their formal education at the elementary (primary) level or had not had any formal education at all. This indicated that most of the mothers had, at least, had some form of formal education which enabled them to speak, write and understand basic sentences in English.

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4.3 Knowledge of nursing mothers on Hepatitis B

The first part of the questionnaire was designed to gauge the knowledge of nursing mothers of Hepatitis B. The questionnaire was only administered to respondents who said they had ever heard about Hepatitis B. In order to find out the levels of awareness and knowledge of Hepatitis B among the respondents, they were asked a battery of questions about the causes and consequences, transmission and treatment, of the disease. The tables that follow reflect their knowledge levels.

Table 1: Causes of HB

Response	Frequency (*f*)	Percent (%)
Don't know	116	58
Virus	52	26
Infection	15	7.5
Sweat	12	6
Bacteria	3	1.5
Others (blood transmission, insect)	2	1
Total	200	100

As many as 116 nursing mothers, representing 58% of the total number of respondents, did not know what caused Hepatitis B infection or disease. A little over a quarter of them (26%) stated that the disease was caused by a virus. Fifteen nursing mothers indicated that infection was the cause of the disease and up to 6% said sweat caused Hepatitis B. Three nursing mothers said bacteria caused Hepatitis B infection whereas 1% of them stated other causes like blood transfusion and insect as being the cause of the disease.

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Table 2: Mode of transmission

Response	Frequency (*f*)	Percent (%)
Contact with body fluids	98	49.0
Tattooing	13	6.5
Through curse or spiritual means	1	.5
Childbirth	18	9.0
Eating contaminated food	3	1.5
Don't know	47	23.5
Others	20	10.0
Total	200	100.0

Table 2 displays the knowledge of respondents on the modes of transmission of Hepatitis B. Close to half (49%) of the respondents stated that coming into contact with the bodily fluids of an infected person was a mode of transmitting Hepatitis B to an individual. Thirteen of the nursing mothers indicated tattooing and eighteen of them indicated childbirth (mother-to-child) as modes of Hepatitis B transmission. About one out of five nursing mothers (23.5%) did not know the modes of transmission; 1.5% said eating contaminated food was a mode of transmission and 0.5% said one could be infected through curses and spiritual means. One out of five (10%) of the nursing mothers stated other modes of transmission like kissing and sharing personal items like sponge and toothbrushes as modes of Hepatitis B transmission.

Whereas the majority (52.5%) of the respondents did not know the part of the body Hepatitis B affected, more than one in four (26.5%) correctly stated the liver as being the part of the body which the disease affects. One out of twenty (5.0%) of the mothers said Hepatitis B affects the heart; 9.0% said it affects the head and 7.0% stated other parts like the kidney,

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immune system and the chest as the body parts which Hepatitis B affects. This means that only a quarter of the nursing mothers knew the part of the body that Hepatitis B affects.

Table 3: Symptoms of Hepatitis B

Symptom	Frequency (*f*)	Percent (%)
Fever/ Temperature	57	28.5
Vomiting	16	8.0
Diarrhea	7	3.5
Don't know/ not sure	98	49.0
Others	22	11.0
Total	200	100.0

From Table 3, nearly half of the nursing mothers (49.0%) did not know the symptoms of Hepatitis B. More than a quarter of them (28.5%) correctly stated that fever/temperature was a symptom of the disease; 8.0% correctly indicated vomiting as a symptom and 3.5% said diarrhea was a symptom of Hepatitis B infection. About one out of ten nursing mothers (11.0%) rightly stated headache, jaundice, weakness, nausea and weight loss as symptoms of the disease and are classified as others. This indicated that although more than half of the respondents did not know the symptoms of the disease, nearly half of them knew the symptoms of Hepatitis B.

The study further revealed that majority of the respondents (70.5%) knew that Hepatitis B affected both adults and children. Whereas 16% stated that Hepatitis B affected only adults, 4.5% said that it affected only children. Less than one in ten (9.0%), however, indicated that they did not know which group of people the disease affected.

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Majority of the nursing mothers (89%) correctly answered that Hepatitis B could cause death. Quite a significant number (9.5%) of them, however, did not know if the disease could lead to death or not whereas three mothers (1.5%), said the disease could not cause the death of an infected person. This indicated that almost nine out of ten nursing mothers knew that Hepatitis B could result in death.

Majority of the respondents (78.0%) demonstrated adequate knowledge about the prevention of the disease whereas one out of five (21.5%) did not know if Hepatitis B could be prevented. Only one nursing mother said Hepatitis B could not be prevented.

Table 4: How Hepatitis B can be prevented

Response	Frequency (*f*)	Percent (%)
Vaccination	117	58.5
Eating healthy food	4	2.0
Don't know/ not sure	25	12.5
Others	21	10.5
No response	33	16.5
Total	200	100.0

The majority (117 out of 200) of sampled nursing mothers stated vaccination as a way of preventing Hepatitis B. One in eight (25) respondents did not know how Hepatitis B could be prevented and 4 respondents said eating healthy food was a way of preventing infection with the disease. Just over one in ten (10.5%) of them, however, stated other ways of preventing the disease which included avoiding contact with infected people and usage of their personal items, keeping a clean environment and taking drugs prescribed by doctors. 16.5% of the

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respondents said they did not know if Hepatitis B could be prevented and so did not answer how it could be prevented. Although more than half of the respondents knew the right way of preventing the disease (58.5%), about four out of ten of them did not know how the disease could be prevented.

Concerning the treatment of Hepatitis B, 63% of the nursing mothers said Hepatitis B could be treated completely if an individual was diagnosed of the disease whiles 7.5% said it could not be treated completely. A significant number of them, thus 29.0%, did not know if Hepatitis B could be treated completely or not.

The study further revealed that majority of the nursing mothers (66%) knew of the existence of vaccination for children against Hepatitis B while 4.0% of them did not know there was vaccination for children against Hepatitis B. At least three out of five nursing mothers (29.5%) stated that they did not know if children could be vaccinated against Hepatitis B or not.

4.4 Attitude towards Hepatitis B

The second objective of the study sought to find out the attitudes of nursing mothers towards Hepatitis B. To achieve this, mostly Likert-type questions were posed to respondents. Specifically, they were asked to show the extent to which they identified with a set of statements about Hepatitis B by indicating on a scale of 1 to 5 that they strongly agreed (SA), agreed (A), disagreed (D) or strongly disagreed (SD). Otherwise, they could also express uncertainty or indifference by indicating neutral (N).

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Table 5: Attitude of nursing mothers towards Hepatitis B

	Attitudes Questions (N = 200)	SD		D		N		A		SA	
		f	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*
1	HB is a major health problem	5	2.5	4	2.0	9	4.5	56	28	126	63
2	My child is at risk of getting infected with HB	16	8	18	9	15	7.5	66	33	85	42.5
3	Vaccinating my child is an assured way preventing him/ her from getting HB	6	3	5	2.5	20	10	49	24.5	120	60
4	I should get my child tested for HB	5	2.5	7	3.5	14	7	75	37.5	99	49.5
5	Infection of HB can lead to death of my child	7	3.5	4	2	7	3.5	58	29	124	62
6	HB is not important if my child is healthy	87	43.5	48	24	21	10.5	19	9.5	25	12.5

*****Attitudes towards HB (N= 200, M = 3.95, SD = .60)

Table 5 reflects the attitude of nursing mothers towards Hepatitis B prevention for their children. Six out of ten nursing mothers strongly agreed that Hepatitis B was a major health problem whereas 56 of them simply agreed that it was a major health problem. Five respondents strongly disagreed that Hepatitis B was a major health problem whiles 4 of them disagreed that the disease was a major health problem. Nine nursing mothers were, however, neutral as to whether or not the disease was a major health problem.

In answer to whether sampled nursing mothers thought their children were at risk of getting infected with Hepatitis B, 16 mothers strongly disagreed; 18 mothers disagreed and 15 were not sure if their children were at risk. About a third of the mothers (33%) agreed that their children were at risk of getting infected while 42.5% of them strongly agreed that their children risked getting infected with the disease.

More than half (60%) of the respondents strongly believed that vaccination was a sure way of preventing Hepatitis B infection in their children whiles 3% of them strongly disagreed that

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vaccination prevented infection with Hepatitis B. A little less than half (49%) of the mothers agreed that Hepatitis B could be prevented through vaccination whereas 2.5% disagreed that vaccination would prevent infection. One out of ten respondents, however, did not know if vaccinating their children was an assured way of preventing infection.

Almost half (49.5%) of the respondents thought it was necessary to get their children tested for Hepatitis B. a little more than a third (37.5%) of the total number agreed that they should get their children tested whiles 7% was not sure if they should get their children tested for Hepatitis B. Seven of the respondents disagreed that it was necessary to get their children tested and five of them thought it was totally unnecessary for their children to get tested for the disease.

Seven nursing mothers (3.5%) strongly disagreed that Hepatitis B could lead to death and 2% disagreed that it could lead to death.

More than six out of ten (62%) nursing mothers strongly believed that infection with Hepatitis B could lead to the death of a child while 29% agreed that the disease could cause a child's death. There were, however, 3.5% of the respondents who were not sure if the disease could cause the death of a child.

About four out of ten (43.5%) of the respondents said that it was very important to vaccinate their children even if their children were in good health. About one out of five (24.5%) also agreed that their children should be vaccinated even if they were healthy. A little over one out of ten (10.5%) did not know if it was necessary to vaccinate children who were not sick. One out of eight (12.5%) believed that it was absolutely unnecessary to vaccinate a healthy child and 9.5% thought children should not be vaccinated if the child was healthy.

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4.5 Practices of nursing mothers towards Hepatitis B

The third research objective aimed at finding out the behaviours of nursing mothers towards Hepatitis B. To this end, a number of behaviour (intent) statements were posed and respondents were asked to indicate the extent to which these statements reflected or described them as 'very well', 'somewhat' or not at all.

Table 6: Responses to practices towards Hepatitis B

	Practices Questions (N= 200)	Describes me very well		Describes me somewhat		Doesn't describe me at all	
		f	*%*	*f*	*%*	*f*	*%*
1	I like to seek information on HB prevention for my child	81	40.5	38	19	81	40.5
2	I rely on health workers/other people around to tell me about HB	159	79.5	29	14.5	12	6
3	I don't even know if my child has been vaccinated against HB	60	30	56	28	84	42
4	My child was given the first dose of the HB vaccine within the first 24 hours after birth	30	15	55	27.5	115	57.5

*Practices towards HB (N = 200, M = 1.95, SD = .35)

Table 6 presents the practices of nursing mothers towards the prevention of Hepatitis B in their children. The table shows that 40.5% of the respondents sought information on Hepatitis B on their own whiles another 40.5% had never sought information on the disease. Almost one out of five (19%) of them also stated that they had, at one time or the other, tried to look for information on Hepatitis B.

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About eight out of ten mothers (79.5%) rely heavily on health workers and other people around them for information on Hepatitis B while 12 nursing mothers (6%) do not rely on health workers or other people around them for information on the disease. Twenty-nine respondents (14.5%) stated that they sometimes, relied on health workers and people around them for information on Hepatitis B.

One out of six (15%) of the nursing mothers stated that their children were vaccinated within the first 24 hours after birth whiles 57.5% stated otherwise. More than a quarter (27.5%) of them were not very sure if their children had been vaccinated within the first 24 hours after birth or not.

4.6 Sources of information on child health

To understand their media-use habits and its possible association with their Hepatitis B knowledge levels, respondents were asked about their sources of information, their preferences among alternative sources and the reasons for their choices.

Table 7: Source of information on child's health

Source	Frequency (*f*)	Percent (%)
Radio	46	17.2
Television	39	14.6
Newspaper	5	1.9
Health worker (midwife/doctor)	136	50.7
Neighbour	7	2.6
Health Card	11	4.1
Religious/Opinion leaders	2	0.7
Others	22	8.2
Total	268	100.0

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More than half of the respondents (50.7%) cited health workers, namely midwives, doctors and community health nurses, as their major source of information on issues related to their children's health. Radio was the second major source of information among the sampled nursing mothers in the Ho municipality, with 46 respondents selecting it as a source of information on child health. Thirty-nine (14.6%) of the respondents stated that they learnt about their child's health on television. Whereas 4.1% said the health card was their source of information on child health, 2.6% said their neighbours provided them with information on their child's health. Five respondents (1.9%) stated newspapers and 0.7% stated religious or opinion leaders as their sources of information on the health of their children. Twenty-two nursing mothers (8.2%) cited other sources of information like emails, the internet, relatives and books as places from which they educated themselves on the health of their children.

Table 8: Source of information on when to vaccinate your child

Source	Frequency (*f*)	Percent (%)
Radio	17	6.8
Television	17	6.8
Health worker (midwife/doctor)	152	60.8
Neighbour/Relative	2	0.8
Health Card	57	22.8
Religious/Opinion Leaders	2	0.8
Others	3	1.2
Total	250	100.0

More than six out of ten (60.8%) of the respondents said health workers informed them on when to vaccinate their children and 22.8% relied on the information provided in their health

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cards to know when they had to vaccinate their children. Less than one in ten (6.8%) nursing mothers chose radio and television as their sources of information whiles 0.8% also relied on religious/opinion leaders and neighbours or relatives to get their information on when to get their children vaccinated.

Table 9: Source of information on diseases child is vaccinated against

Source	Frequency (*f*)	Percent (%)
Radio	14	5.9
Television	16	6.7
Health worker (midwife/doctor)	172	72.0
Health Card	33	13.8
Others	4	1.7
Total	239	100.0

Whereas 72.0% nursing mothers relied on health workers to educate them on the diseases against which their children were being vaccinated, 13.8% derived this information from their health cards. Sixteen (6.7%) and fourteen nursing mothers (5.9%) got information on diseases their children were vaccinated against from television and radio, respectively. Four (1.7%) of the respondents got such information from other sources like the internet and books.

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Table 10: Source of information on Hepatitis B as childhood killer disease

Source	Frequency (*f*)	Percent (%)
Radio	47	19.4
Television	50	20.7
Newspaper	5	2.1
Health worker (midwife/doctor)	110	45.5
Neighbour/Relative	1	0.4
Health Card	6	2.5
Religious/Opinion Leaders	3	1.2
Others	20	8.3
Total	242	100.0

Table 10 shows sources through which nursing mothers learnt that Hepatitis B could cause the death of children. About one out of five (19.4%) stated radio; 50 (20.7%) mentioned television and 5 (2.1%) mentioned newspapers as their main sources of information. A little more than half of the nursing mothers (110) mentioned health workers as being their main source of information on Hepatitis B as a childhood killer disease while 6 nursing mothers (2.5%) referred to their health cards as their source. Three respondents (1.2%) said they relied on religious/opinion leaders and one person (0.4%) derived such information from a neighbour/relative. Twenty nursing mothers (8.3%) learnt it was a childhood killer disease from Hepatitis B campaigns and screening by volunteers at their workplaces, courses taken in school, social media and the internet.

The study also found out the preferred sources of information of sampled nursing mothers in the Ho municipality. Whereas 70.5% of the respondents preferred receiving information on Hepatitis B through health workers, 13.5% and 9.5% preferred television and radio,

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respectively. Only one percent wanted this information channeled through their religious/opinion leaders and their health cards. Nine mothers stated emails, text messages and fliers as their preferred sources of information and these were put under others.

The study also found out that 35.5% of the respondents selected their preferred sources of information in order to get better explanation of issues while 31.0% preferred their selected sources because of the credibility of the source of the information that came from that source. One out four (25.0%) preferred their chosen source because it was convenient for them and 7.0% selected their preferred sources on the basis of familiarity with the source of information. Three of respondents, however, selected their preferred sources of information for other reasons like the use of visual demonstrations or illustrations.

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Table 11: Cross-tabulation of preferred source of information on HB and reason for selecting preferred source

			Reason for selecting preferred source					
Preferred source of information on HB			**Better explanation**	**Familiarity**	**Credibility of source**	**Convenient means of communication**	**Others**	**Total**
	Radio	Count	4	0	1	14	0	19
		% within preferred source	21.1%	0.0%	5.3%	73.7%	0.0%	100.0%
	Television	Count	6	1	1	18	1	27
		% within preferred source	22.2%	3.7%	3.7%	66.7%	3.7%	100.0%
	Health worker	Count	58	11	59	12	1	141
		% within preferred source	41.1%	7.8%	41.8%	8.5%	0.7%	100.0%
	Health Card	Count	0	0	0	2	0	2
		% within preferred source	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
	Religious leaders	Count	0	0	1	1	0	2
		% within preferred source	0.0%	0.0%	50.0%	50.0%	0.0%	100.0%
	Others	Count	3	2	0	3	1	9
		% within preferred source	33.3%	22.2%	0.0%	33.3%	11.1%	100.0%
Total		Count	71	14	62	50	3	200
		% within preferred source	35.5%	7.0%	31.0%	25.0%	1.5%	100.0%

Table 11 presents the preferred sources of information of the respondents and their reasons for selecting these sources. In all, 19 nursing mothers said they preferred radio as a source of information on Hepatitis B as a childhood killer disease. Out of this number, 4 respondents

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said their reason for selecting this source was based on its ability to explain information better. Only one nursing mother chose it because information given there was credible. Fourteen nursing mothers selected the medium because of its convenient nature. However, no respondent selected radio as a preferred source of information based on familiarity.

Television was another medium which 27 nursing mothers stated as their preferred source of information. Whereas only one nursing mother selected this source based on its credibility, 6 chose it because it explained health-related issues better. Eighteen nursing mothers also preferred this source because it was the most convenient means of receiving information. One nursing mother selected this medium based on familiarity and another one chose television because of other reasons.

More than seven out of ten nursing mothers (141) preferred to receive information through their health workers. From the table, 58 of them chose this source of information based on better explanation while 59 of them chose this source based on their belief that the health workers were credible sources of information on child health. Twelve nursing mothers, however, preferred health workers to other sources of health information because of the convenient nature of receiving information from them. Eleven respondents explained that they preferred education on Hepatitis B as a childhood killer disease by health workers because of the familiarity that existed between them. One nursing mother had other reasons for choosing health workers as her preferred source of information.

Only two nursing mothers preferred the health card as a source of information because it was the most convenient means of communicating health information. Two (2) other nursing mothers also selected religious leaders as their preferred source of information because they could trust the credibility of information coming from them and also because it was more convenient to receive information from them.

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There were nine respondents who preferred other sources of information like the internet, emails, education by volunteers and text messages to any other source of information. Whereas three of them preferred these sources because of their better explanation of information, two preferred them because they were more familiar with those sources. Three respondents out of the nine also preferred these other sources because they were more convenient and one other respondent gave other reasons for her choice.

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CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the findings of the research presented in Chapter four are discussed. These findings are analysed to answer the research questions posed and also to draw logical conclusions based on the objectives set for the study. Flowing from the conclusions, a number of recommendations are made for scholarly attention and for policy and practice on child and maternal healthcare.

5.2 Knowledge of Hepatitis B among nursing mothers in the Ho Municipality

The first objective of the study was to assess the knowledge of nursing mothers in the municipality on Hepatitis B. The instrument tested their knowledge of the causes of the disease, its mode of transmission, the part of the body affected by the disease, its effect on an infected person and its prevention.

A large number of nursing mothers showed poor knowledge of what caused Hepatitis B infection or disease. Although 26% (52 mothers) correctly answered that Hepatitis B infection or disease was caused by a virus, a significant number of them (58%) admitted they did not know what caused it. Other respondents gave a varied range of inaccurate answers like bacteria, infection, and insect, sweat and blood transmission as causes of the disease. This lack of knowledge about a disease that is 50 to 100 times more infectious than several better known conditions such as HIV or AIDS (www.m.webmd.com) is, however, not peculiar to Ghana. Low levels of knowledge of causes of Hepatitis B among women in the reproductive age group was similarly observed in a study conducted by Sharma et al (2004)

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on pregnant women in India, where mothers mentioned drinking polluted water as a cause of the disease.

Most of the mothers, however, showed better knowledge of the modes of transmission. They mentioned coming into contact with the bodily fluids of infected persons as the major mode of transmission. Specifically, 49% of them knew that one could get infected with Hepatitis B if s/he came into contact with the bodily fluids of an infected person whereas 9% identified mother-to-child transmission as a mode of transmission. Some nursing mothers actually expressed the erroneous view that the disease could be transmitted to an individual through a curse or spiritual means. This finding is similar to that of the study conducted by Sharma et al (2004) in India, where 50% of 300 pregnant women showed poor knowledge of modes of transmission of Hepatitis B infection. In this study, most of the women mentioned shaking hands and hugging as channels through which the disease could be transmitted. Only 20% of them mentioned correct modes of transmission like sweat and blood contact.

The finding of this study also reflects the results of a survey by Kue (2011) on Asian American college students which revealed that students did not know about the modes of transmission and consequences of the disease. In Kue's 2011 study, although 96% of the Hmong people had heard of Hepatitis B, they did not know that sexual intercourse was a mode of transmission.

Nursing mothers generally had poor knowledge of the part of the body affected by Hepatitis B. It was observed that only about a quarter (26.5%) of the selected sample knew that Hepatitis B affected the liver. This is akin to the finding by Vu et al (2009) in their study of the Chinese and Vietnamese living in Australia. The study revealed that approximately one third of the total sample was not aware that Hepatitis B infection could cause liver cancer.

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Only a few of them knew that symptoms of Hepatitis B included yellowing of the eyes/ jaundice, dark urine, fever and headache.

According to WHO (2015), chronic infection occurs in 80% to 90% of infants during the first year of life and in 30% to 50% of children before the age of six. Majority of the nursing mothers in this study knew that Hepatitis B affected both adults and children and understood that chronic infection of the disease could lead to death.

Othman et al (2014) conducted a survey of 200 medical students in Erbil, Iraq. This was aimed at investigating their knowledge on transmission and prevention of Hepatitis B. The study revealed that they had poor knowledge of vaccination as a form of prevention. This finding by Othman et al (2014) was reflected in this study as only half of the sampled nursing mothers knew that vaccination was the only way of preventing the disease. Although 66% of the mothers admitted that they knew of the existence of a vaccine for children against Hepatitis B, they did not know it was the only way of preventing infection.

In Kue's 2011 study, majority of the respondents did not know that Hepatitis B was incurable and could result in liver diseases. Similar to the findings of Kue's study, more than half of the respondents (63.5%) wrongly thought Hepatitis B could be treated completely.

Nursing mothers in Ho were generally found to have poor knowledge of the disease and therefore, had a low perception of susceptibility to it. However, mothers between the ages of 31 and 40 years possessed a higher level of knowledge of Hepatitis B as a childhood killer disease than those below 30 years and above 40 years. This could be attributed, from the data, to the high level of education of this age group than the others. The data showed that most of the nursing mothers within this age group had had tertiary education as compared to those in the other age groups. This is similarly observed in a study conducted by Nirsa et al. (2010)

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which indicated that most of the mothers who were interviewed were illiterate and hence, showed low levels of knowledge of the disease.

This finding is akin to the observation made by Majolagbe et al (2014) in their study of the knowledge, prevalence and risk factors associated with Hepatitis B among blood donors in Nigeria. The study discovered that the educational background of the donors played a key role in their susceptibility to the disease. Out of 100 selected donors, 30.7% of them who had had no formal education tested positive to the disease whiles a lower percentage of 3.4% of those with post-secondary education tested positive. Majolagbe et al (2014) also related this to an observation by Bello et al (2012) which stated that a correlation existed between Hepatitis B prevalence and level of education.

From the results of this survey, the level of knowledge of nursing mothers in the district on causes, effects and prevention of Hepatitis B was found to be very low.

5.4 Attitude of nursing mothers towards Hepatitis B

The perceived severity of Hepatitis B among sampled nursing mothers was low. Although they knew that it was a major health problem which could result in death, their concern was not reflected in their attitude towards preventing the disease in their children. Although they agreed that it was important for them to vaccinate their children, the conviction that the Hepatitis B vaccination was paramount in the lives of their children was not evident. Thus, only four out of ten respondents strongly believed that their children were at high risk of getting infected with the disease if they were not vaccinated. The remaining six out of ten either admitted it was considerably important or expressed indifference towards the vaccination of their children during infancy.

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The low level of perceived severity of the disease among the nursing mothers culminated in a low level of perceived susceptibility among them. This observation could be attributed to the low levels of knowledge the mothers had of the disease. Similarly, Kue (2011) found that although 96% of the sample studied had heard of Hepatitis B, vaccination rates were low because they had a low perception of susceptibility of the disease.

The study also revealed that a little over half of the mothers perceived that vaccinating their children would be highly beneficial to them. About 60% of the respondents strongly agreed that vaccination was an assured way of preventing infection in their children. However, a significant percentage, thus 40% of them either simply adhered to the directions of their health service providers in getting their children vaccinated or thought it was not an assured way of preventing Hepatitis B infection in their children. In their opinion, a child should not be vaccinated against Hepatitis B if s/he showed no signs of sickness. This shows that, although they probably knew about vaccination, they did not perceive it as a benefit worth sacrificing for.

The Health Belief Model states that individuals are more likely to take instructions on healthy behaviour if they believe they are susceptible to infection with a particular disease. On the other hand, if they do not know that they are at risk of getting infected, they are less likely to take steps to prevent infection. The study observed a poor attitude towards the prevention of Hepatitis B among nursing mothers.

5.5 Practices of nursing mothers towards Hepatitis B prevention

Findings of this study revealed that close to 80% of the nursing mothers relied heavily on health workers, thus community health nurses and midwives, for information on Hepatitis B.

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Apart from being educated by health workers, less than half of the sampled nursing mothers took the initiative to seek information on the disease. The study also revealed that whereas 40.5% of the respondents had taken the initiative to further educate themselves on Hepatitis B and its prevention, an equal percentage of them had never attempted searching for information on the disease while the rest were not certain if they had.

According to the Health Belief model, on which this study is based, people are more likely to take steps to protect themselves from getting infected with a disease when they have adequate knowledge of it. The model posits that if an individual perceives that a disease is dangerous and that getting infected can have severe repercussions on him or her, s/he would take the necessary steps to avoid getting infected with it. In spite of the fact that all the mothers had ever heard of the disease and knew the dangers associated with it, only four out of ten were inclined to search for information on it. This practice could be a result of their low perception of susceptibility and severity to the disease. Data gathered about their attitude showed that they did not believe that their children were at high risk of getting infected with Hepatitis B. Consequently, they did not feel an urgent need to vaccinate their children, especially if the children were healthy. This attitude could, most likely, account for their lack of motivation to seek more information on Hepatitis B.

The study further revealed that less than half of the respondents were confident that their children had been vaccinated against Hepatitis B. More than half of the sample affirmed that they did not know if their children had been vaccinated against the disease or not. This is similar to a finding by Chireh (2011), who carried out a cross-sectional survey on high school students in two communities in the Upper West region of Ghana. Chireh's 2011 study revealed that despite their knowledge of the dangers of the disease, less than 30% and 16% of rural and urban adolescents respectively had been tested for the disease. Only 17% of the

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rural adolescents and 12% of urban adolescents had been vaccinated against the Hepatitis B Virus.

According to WHO (2015), the first shot of the Hepatitis B vaccine should be administered to babies within the first 24 hours after birth. The study found that only 15% of the total sample were sure that their children had been vaccinated within the first 24 hours after birth. Although a section of the mothers confirmed that the children had been given the Hepatitis B vaccine, they were sure the first shot of the vaccine had not been administered within the first 24 hours after the birth of their children.

The level of practices towards prevention of the disease was evidently low among the sample studied in this work.

5.6 Sources of information

This survey revealed that more than half of the respondents (50.7%) rely extensively on health workers for information on issues related to their children's health. Their next source major was the mass media. Others which a few of the respondents relied on occasionally included books, the internet and relatives as well as religious/opinion leaders among others. This is similar to the finding that television was the main source of information on health issues for 35% of married pregnant women (between 20 and 45 years) in India according to the study by Sharma et al (2004). Similarly, in their study of the deficiency of pregnant women's knowledge about HBV in Hong Kong, Chan et al (2012) found that 63% of the pregnant women relied on television for information. This study, however, differs on the major source of child health information for the women. Whereas majority of the nursing

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mothers (50.7%) surveyed in Ghana depended on health workers for information on health, only 25% of Indian women depended on their health workers for health information.

From the study, it was discovered that most nursing mothers relied heavily on health workers, most especially nurses and midwives, for information on when to vaccinate their children and the diseases against which the children were being vaccinated.

Interestingly, the study revealed that although majority of the nursing mothers relied on the health workers for health information, only a few of them learnt that it was a childhood killer disease from the latter. A larger number learnt that it was a childhood killer disease on television and radio programs. Other stated sources included Hepatitis B campaigns and screening exercises held by volunteers and organisations as well as talks given by opinion/religious leaders. This showed that the health workers were probably not providing adequate information to the nursing mothers.

Given the low levels of knowledge and low levels of perceived susceptibility among the sampled nursing mothers, it appears that the health workers have either provided the former with wrong and/or inadequate information of Hepatitis B as a childhood disease. Considering that most of them selected the mass media and other less preferred mediums as their source of information on Hepatitis B as a childhood killer disease, it indicates that other mediums create more awareness than the preferred medium of information of the respondents.

In spite of this finding, 70.5% of the nursing mothers chose health workers as their preferred source of information on Hepatitis B as a childhood killer disease. They explained that this would enable them have a face-to-face interaction with the nurses and midwives. Other reasons the respondents gave included convenience and familiarity. These, they believed, would ensure that they received the necessary information and create a more comfortable atmosphere for them to ask questions.

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Mass media was the second most preferred source of information chosen by respondents. Most of them gave convenience as the reason for choosing this source as their most preferred means of receiving information while others said it gave a better explanation on health issues. Other reasons they gave for preferring television as a source was the availability of visual demonstrations or illustrations which would enhance their understanding. Some nursing mothers also claimed the media would be the most appropriate source because information given through them was reliable.

From the findings of this study, it was observed that the most used and most preferred source of information was health workers. However, from the levels of knowledge and actions taken by the respondents, it is clear that they are not given adequate information. Considering that an almost equal number of respondents who showed low knowledge of the disease selected the same preferred source of health information, thus health workers, the conclusion that health workers largely account for the low level of knowledge and the lackadaisical attitude of respondents toward the prevention of the disease could be drawn. This assertion is in line with a 2014 report by a non-governmental organisation, Comfort Foundation Ghana which cited misinformation by healthcare providers as the cause of misconceptions and a lack of knowledge about perinatal transmission in Ghana. According to the report, civil society organisations (CSOs) and other health professionals give varied information about the causes and transmission of viral hepatitis, causing fear and panic among patients and the public and sometimes resulting in stigmatisation.

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5.7 Conclusion

This study assessed the level of knowledge, attitude and practices of nursing mothers concerning Hepatitis B in the Ho Municipality. It also looked at their preferred sources of information.

The results of this study have revealed a deep need for proper education of nursing mothers on Hepatitis B. Findings from this work have shown that majority of the sampled nursing mothers in the Ho Municipality had poor knowledge of the causes, modes of transmission, effects and prevention of Hepatitis B.

The study also found that though the nursing mothers knew that chronic infection with the disease could lead to death, their perception of their children's susceptibility to it was very low. A poor attitude was, therefore, observed among majority of the sampled mothers.

The study deduced from the data gathered that due to the low perception of susceptibility to and severity of the disease among the respondents, their practices towards prevention of Hepatitis B was poor. A key area which was ignored was the compulsory vaccination of child within the first 24 hours after birth.

Respondents' knowledge of Hepatitis B as a childhood killer disease as well as the existence of its vaccine for children was also not encouraging. Findings of the research indicated that nursing mothers in the Ho municipality had close to no knowledge about Hepatitis B as a childhood killer disease and its prevention. Majority of the respondents did not know that the disease could be transmitted from mother to child.

The study also revealed that nursing mothers with higher formal education knew more about Hepatitis B as a childhood killer disease than those who were less educated. This problem could be addressed by employing more practical methods and visual aids to enable less

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educated mothers to get the intended message from discussions at the postnatal centres and hospitals.

From the information provided by this study, the main sources of child health information for the nursing mothers were health workers and the mass media.

5.8 Recommendations

Based on the findings of this study, nursing mothers need to be educated more on the dangers of Hepatitis B and its prevention for their children and themselves. Emphasis should be placed on the vertical mode of transmission as it is currently the highest mode of transmission in endemic areas, of which Ghana is part.

Health workers should also be given more information and updates on the disease to enable them give out correct and detailed information to the mothers they come into contact with. The mass media should also be trained on the dangers and prevention of the disease by the appropriate authorities and encouraged to seek out accurate information before communicating it to the public. These institutions have been singled out because they were the most preferred sources selected by respondents in this study.

Further research should be conducted to find out what prevented the nursing mothers from getting their children vaccinated, especially within the first 24 hours after birth. This study looked largely at three main constructs out of the four proposed by the Health Belief Model. These are the perceived severity, susceptibility and benefits of nursing mothers. The study should, therefore, focus on the perceived barriers to vaccination among nursing mothers.

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The media should also take up active public education on Hepatitis B as a childhood killer disease since the study reveals that a good percentage of nursing mothers rely on it for important information.

5.9 Limitations of the study

A limitation of this study was time. Data for this study was collected within the space of one month; therefore, only 200 nursing mothers were sampled. A larger sample could have been taken if the period for conducting the study had been longer.

Another limitation was the sample size used for this study. Due to the small sample size selected, the findings of this study cannot be generalised.

These limitations, notwithstanding, the findings of this study are truly representative of the knowledge, attitude and practices of nursing mothers in the Ho municipality.

INTEGRI PROCEDAMUS

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KAP QUESTIONNAIRE FOR HEPATITIS B SURVEY

I am a graduate student of the Department of Communication Studies of the University of Ghana. I am carrying out a study to find out what nursing mothers know and feel about Hepatitis B and child welfare. This research is purely for academic purposes. You were selected to take part in this survey because I value your views and want to ensure that the outcome would include the opinions of people like you. The responses that you willingly give will not lead to any personal physical or material loss or harm to you. I assure you of strict confidentiality, which is why provision of your name is not even required.

SECTION A: First, I want to ask you questions about Hepatitis B

1. What causes Hepatitis B? ……...
2. How is Hepatitis B transmitted?
    1) Through contact with the bodily fluids of an infected person [ ]
    2) Tattooing [ ]
    3) Through curses or spiritual means [ ]
    4) Childbirth (from mother to child) [ ]
    5) Eating contaminated food or drinking polluted water [ ]
    6) Don't know/not sure [ ]
    7) Other (specify) ……..
3. What part of the body does Hepatitis B affect?
    1) Liver [ ]
    2) Heart [ ]
    3) Head [ ]
    4) Don't know/not sure [ ]
    5) Other (please specify) ……...
4. What are some of the symptoms of Hepatitis B?
    1) Fever/ temperature [ ]
    2) Vomiting [ ]
    3) Diarrhoea [ ]
    4) Don't know/ not sure [ ]
    5) Other (please specify) ……...
5. Which of the following groups does Hepatitis B affect?
    1) Adults [ ]
    2) Children [ ]
    3) Both adults and children [ ]
    4) Don't know/ not sure [ ]
6. Hepatitis B can cause death.
    1) Yes [ ]
    2) No [ ]
    3) Don't know [ ]
7. Hepatitis B can be prevented.
    1) Yes [ ]
    2) No [ ]
    3) Don't know [ ]

If your answer to question (7) was YES, answer question (8). If not, skip to question (9).

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8. How can Hepatitis B be prevented?
    1) Vaccination [ ]
    2) Eating healthy food [ ]
    3) Drinking clean water [ ]
    4) Don't know/ not sure [ ]
    5) Other (please specify) …….
9. Hepatitis B can be treated completely.
    1) Yes [ ]
    2) No [ ]
    3) Don't know [ ]
10. Is there vaccination for your child against Hepatitis B?
    1) Yes [ ]
    2) No [ ]
    3) Don't know [ ]

SECTION B: Next, I want to ask you a couple of questions about what you think/ feel about Hepatitis B

	Attitude	**Strongly Disagree**	**Disagree**	**Neutral/ not sure**	**Agree**	**Strongly Agree**
12	I think Hepatitis B is a major health problem.					
13	I think my child is at risk of getting infected with Hepatitis B.					
14	Vaccinating my child is an assured way of preventing him/her from getting infected with Hepatitis B.					
15	Hepatitis B vaccination is not important if my child is healthy.					
16	I should get my child tested for Hepatitis B.					
17	Infection with Hepatitis B can lead to the death of my child.					

SECTION C: I now want to ask you a few questions about how you normally get information on child immunisation and health generally.

18. How do you normally get information on your child's health in general?
    1) Radio
    2) Television
    3) Newspapers
    4) Health worker (midwife/doctor)
    5) Neighbour

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6) Health card
7) Religious/opinion leader
8) Others (please specify) ……

19. How do you get to know about when to vaccinate your child?
    1) Radio
    2) Television
    3) Newspapers
    4) Health worker (midwife/doctor)
    5) Neighbour/Relative
    6) Health card
    7) Religious/opinion leader
    8) Others (please specify) ……
20. How do you get to know about which specific diseases your child is being vaccinated against at any one time?
    1) Radio
    2) Television
    3) Newspapers
    4) Health worker (midwife/doctor)
    5) Neighbour/Relative
    6) Health card
    7) Religious/Opinion leader
    8) Others (please specify) ……
21. Where do you normally get information on Hepatitis B as a childhood killer disease?
    1) Radio
    2) Television
    3) Newspapers
    4) Health worker (midwife/doctor)
    5) Neighbour
    6) Health card
    7) Religious leader
    8) Others (please specify) ……
22. What is your preferred source of information on Hepatitis B as part of the childhood killer diseases?
    1) Radio
    2) Television
    3) Newspapers
    4) Health worker (midwife/doctor)
    5) Neighbour/ Relative
    6) Health card
    7) Religious/opinion leader
    8) Others (please specify) ……
23. Why do you prefer the source selected in question (15) to the others?

……
……

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SECTION D: Now, these questions are intended to find out what you do/have done to prevent your child from getting infected with Hepatitis B

	Describes me very well	Describes me somewhat	Doesn't describe me at all
24. I like to seek information on Hepatitis B prevention for my child.			
25. I rely on health workers/ other people around me to tell me about Hepatitis B prevention for my child.			
26. I don't even know if my child has been vaccinated against Hepatitis B.			
27. My child was given the first dose of the Hepatitis B vaccine within the first 24 hours after birth.			

SECTION E: Finally, a few questions about yourself:

Age

1) Less than 30 [ ]
2) 31-40 [ ]
3) Above 40 [ ]

Educational level

1) JHS [ ]
2) SHS [ ]
3) Tertiary [ ]
4) No education [ ]
5) Other ……

Town of residence: ……..