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EXPLORING MIDWIVES' PRACTICES TOWARDS PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HEPATITIS B IN THE LA NKWANTANANG MUNICIPAL ASSEMBLY

BY

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THIS THESIS/DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL IN NURSING DEGREE.

DECLARATION

I, Adiza Mumuni Atoko hereby declare that with the exception of published data that were used and duly acknowledged, this thesis is the results of my own investigation under the supervision of Dr. Florence Naab and Mr. Charles Ampong Adjei in the school of Nursing and Midwifery, University of Ghana-Legon. It must be stated clearly that this work has not be presented whether in full or part to any University for the award of another degree.

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ABSTRACT

Hepatitis B viral infection (HBV) infections remain one of the most disturbing liver infections in the world. Mother-to-child transmission remains one of the major routes of HBV transmission and therefore a key public health concern especially in Africa. Prevention of mother-to-child transmission (PMTCT) is very crucial in the elimination of HBV. Midwives are in the frontline as direct care providers of maternal and newborn care in Ghana. Therefore, their practices towards the prevention of mother-to-child transmission are very crucial in averting complications associated with HBV infection. However, there was paucity of literature on the practices of midwives towards PMTCT in Ghana despite the prevalence of HBV. This study explored midwives' practices towards prevention of mother-to-child transmission of Hepatitis B in the La Nkwantanang municipal assembly, Ghana. An exploratory descriptive qualitative design was employed for the study. Fourteen (14) midwives were purposively sampled from Madina polyclinic to participate in the study. Face -to-face interview was conducted using a semi-structured interview guide to collect data from participants. Thematic content analysis was used to analyse the data that was audio tape and transcribed verbatim. Six major themes emerged from the data. The findings established that midwives had some challenges towards PMTCT as well as some incorrect practices towards PMTCT. These findings suggest that there are several factors that influence midwives' practices towards PMTCT. Therefore, the need to train midwives on PMTCT of hepatitis B is crucial in Ghana. The findings of this study have implications for Nursing practice, education and Nursing research.

DEDICATION

This work is dedicated to my mother whose constant prayers and support has seen me through this course. I also dedicate this work to my late father may his soul rest well with Allah.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

HBV Hepatitis B virus

PMTCT Prevention of mother-to-child transmission

MTCT Mother-to-child transmission

TPB Theory of planned behaviour

TRA Theory of reason action

PBC Perceived behavioural control

WHO World Health Organization

CDC Centre for disease control

GHS Ghana Health Services

EPI Expanded Programme on immunization

HBIG Hepatitis B Immune globulin

HCC Hepatocellular carcinoma

ARM Artificial rupture of membrane

ANC Antenatal clinic

HCP Health care provider

HbsAg Hepatitis B surface antigen

HbeAg Hepatitis B e-antigen

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Hepatitis B viral (HBV) infection remains one of the most potentially life-threatening liver infections in the world. Evidence by the World Health Organization (WHO) established that individuals who are exposed to HBV risk the chance of developing complications such as liver cirrhosis and liver cancer (WHO, 2019b). The main menace of Hepatitis B is it's high infectivity rate and multiple modes of transmission (Trépo, Chan, & Lok, 2014). Global estimates show that people who are chronically infected with HBV are about 257 million (defined as hepatitis B surface antigen-positive (HbsAg) (WHO, 2017a, 2019b). Hepatitis B is the 7th leading cause of death worldwide (Naghavi et al., 2015) and about 40% of primary liver cancers are attributable to HBV (WHO, 2019b). According to the WHO 2015, death due to Viral Hepatitis was estimated to be 887,220 worldwide out of which 337,454 was due to hepatocellular carcinoma (HCC), 462,690 due to cirrhosis and 87076 attributed to acute Hepatitis. These are death associated with the complications of the HBV (WHO, 2016a, 2019b). World Health Organization report shows that Hepatitis B viral infection is highly prevalent in the Western Pacific and the African Regions (WHO, 2017a), where 6.2% and 6.1% respectively of the adult population are infected. Meanwhile the Eastern Mediterranean, South-East Asia, European and the American regions have a lower estimated rate of 3.3%, 2.0%, 1.6% and 0.7% of the general population being infected respectively (WHO, 2019b). According to the WHO global report on HBV, Sub-Saharan Africa has been listed as part of those regions with a high prevalence rate above 8% (Howell, Lemoine, & Thursz, 2014; Schweitzer, Horn, Mikolajczyk, Krause, & Ott, 2015; WHO, 2017a). A recent study by Spearman et al. (2017) documented 6.1% of HBV prevalence in Sub-Saharan Africa.

In Africa, mother-to-child and horizontal routes are the major factors in the transmission of HBV as well as the main cause of chronic HBV (Terrault et al., 2018; WHO, 2019b). A systematic review in Sub-Saharan Africa estimated that 1% (n = 367 250) of newborns are annually infected with HBV prenatally which is twice the number of paediatric HIV infections (n= 190000) (Keane, Funk, & Shimakawa, 2016). More importantly, the age at which an individual develops chronic Hepatitis B contributes to the rate at which they develop complications. Therefore, about 80-90% of infants who are infected at birth will develop chronic Hepatitis B infection (WHO, 2019b). Hepatitis B is not curable but can be prevented through vaccination; a potent and safe vaccine has been available since 1982 (WHO, 2019b). Vaccination has therefore, been recommended as the most effective way of preventing the disease from spreading from an infected person to other people as well as very useful in preventing vertical (mother -to- child) transmission (MTCT). Newborns have a 90% chance of being protected against HBV infection if these two recommended vaccines are given correctly within the 12hours after birth (CDC, 2019); Hepatitis B vaccine and Hepatitis B Immune Globulin (HBIG). Subsequently, these babies must receive the remaining doses of the Hepatitis B vaccine which is in line with the Expanded Programmed on Immunization (EPI) schedule to ensure complete protection. The vaccine has been added to the pentavalent vaccines given at 6weeks, 10weeks and 14weekks in many countries (WHO, 2017b). The vaccine is safe and effective in preventing MTCT of HBV with evidence showing in countries where between 8-15% of children used to become chronically infected with the hepatitis B virus, vaccination has reduced the rate of chronic infection to less than 1% among immunized children (WHO, 2019b).

Furthermore, countries like Taiwan had significantly reduced the HBV prevalence rate after the introduction of universal immunization in July 1984. A study conducted by Nastasio and Jonas (2018) with data collected from the national registration system of the Taiwan Ministry of Health and Welfare, the Primary Health Information System, and the Taiwan

Centres for Disease Control over a 32-year period from 1984 to 2016 proves that universal infant vaccination against HBV was able to significantly reduced the HbsAg- and HbeAg-seropositive rate in pregnant women from 13.4% to 1.0% . Further, 25 (69%) out of the 36 countries under the Western Pacific Region of the WHO had also been able to reduce the rate of Chronic Hepatitis infection in children under 5 to <1% from a prevalence rate of ≥8% (Woodring et al., 2019). In addition, Ork et al. (2019) conducted the first national survey that evaluated the sero-prevalence rate among children in Cambodia to assess the effect of the Hepatitis B vaccine introduction in 2005. The study revealed that Cambodia has been able to achieve the 2017 target of less than 1% HbsAg prevalence among under 5 years' children after the introduction of the Hepatitis B vaccine in 2005 into its immunization programme.

In preventing mother-to-child transmission (MTCT) of HBV administration of nucleoside analogue is helpful. In this regard a recent systematic review and meta-analysis of studies, revealed that administration of nucleoside analogues such as Tenofovir or Entecavir, Lamivudine, and adefovir during the second and third trimester of pregnancy to highly viraemic mothers (chronic HBV) have been found to be effective in the reduction of the viral load contributing to the prevention of MTCT (Brown et al., 2016; Hyun et al., 2017; Sellier et al., 2017). This also happens to be safe and cause no adverse effect for both mother and baby.

As part of the Sustainable development goals (SDG), the World Health Assembly developed a global strategy to eliminate HBV in 2016. These goals are in line with the Sustainable Development Goal 3.3 which is aimed at combating viral Hepatitis (Kieny et al., 2017; Nations, 2015). These strategies are intended to reduce new HBV infections by 90% and death caused by HBV by 65% by 2030 (Nations, 2015; WHO, 2016b, 2017a, 2019b). It is in this realization that individual countries need to develop and support the various strategies that are aimed at eliminating Hepatitis B infection. According to Spearman et al. (2017) some of the key strategies in achieving eradication goals in sub-Saharan Africa are the effective prevention

of new infections via universal implementation of the HBV birth-dose vaccine, full vaccination coverage, access to affordable diagnostics to identify HBV infected individuals, and to enable linkage to care and antiviral therapy. Subsequently universal screening of all pregnant women for HBV at the Antenatal clinic (ANC), providing timely birth dose vaccination and as well as administration Hepatitis B immunoglobulin (HBIG) to newborns of HbsAg-positive mothers is essential. Administration of the third dose of Hep B (HepB3) vaccination to HBV- exposed infants, and the provision of post-vaccination serologic testing to determine the infection status of exposed infants will be very useful (Woodring et al., 2019).

In order to eliminate HBV, the WHO recommends universal birth dose vaccination of all new-borns (WHO, 2017b) but only nine (9) out of the forty seven (47) countries in the WHO Africa region had introduced universal HBV birth-dose vaccination as of July 2017 of which Ghana is not one of these countries (Spearman et al., 2017). To achieve the WHO elimination strategies, the efforts of all stakeholders are required. Midwives are essential key players and their effort is needed right from the antenatal period to the postnatal period. It is vital to eliminate HBV therefore, practices such as universal screening of all pregnant women during antenatal care, health education on the causes, mode of transmission, complications, pre-test and post-test counselling on HBV, timely vaccination, providing linkage to care (CDC, 2019; WHO, 2019b). These are all in the line of duties of midwives that can avert most of the complications associated with HBV as well as help achieve the elimination target by 2030.

The attitude of Midwives toward the prevention of HBV is important; if health providers have positive attitudes towards PMTCT they will put in more effort to ensure pregnant women do not transmit the infection to their newborn. Adjei, Stutterheim, Naab, and Ruiter (2019b) in their study reported that health care providers (HCP) stigmatized individuals with HBV by being extra cautious, postponing their core responsibilities as HCP or shifting the task to someone else and breaching confidentiality. In addition, Elmukashfi et al. (2016) reported

that the majority of Health Care Workers do nothing after they suspect individuals of HBV infections. This negative attitude by HCP will have an effect on pregnant women seeking care and will interfere with the agenda of eliminating HBV by 2030. Moreover, studies conducted among health care professionals reveal that the majority of health care professionals had knowledge gap on HBV which is of concern since they are the first point of contact when individuals want to seek information on HBV. Also, the study recommended that adequate knowledge will inform practice on the care to give to individuals with HBV (Adjei, Asamoah, Atibila, Ti-enkawol, & Ansah-Nyarko, 2016; Mtengezo et al., 2016). It is quite worrying if health workers who are supposed to be knowledgeable, have a positive attitude and good practices and be concerned about preventing and eliminating HBV are not up to the task, as it will make the global expectation of eliminating viral Hepatitis difficult to achieve.

It is for this reason that this study explored midwives' practices towards PMTCT of HBV in the La Nkwantanang Municipal Assembly, using the theory of planned behaviour as an organizing framework.

1.2 Problem Statement

In Ghana, an estimated 12.3% of the adult population live with chronic Hepatitis B virus (HBV) (Ofori-Asenso & Agyeman, 2016) which exceeds the global prevalence rate of 3.61% (Schweitzer et al., 2015). It also exceeds the WHO threshold classification of endemicity ≥8 (WHO, 2019b). In addition, an estimated 1% of newborns in Africa are infected through MTCT each year which is twice the incidence of paediatric HIV (Keane et al., 2016). In eliminating HBV, vaccination is very essential and many nations in the WHO region have implemented universal birth dose vaccination. Ghana as part of other African countries was scheduling to implement birth dose vaccination by 2017 (Breakwell, Tevi-Benissan, Childs, Mihigo, & Tohme, 2017; Spearman et al., 2017) but according to Awuku and Yeboah-Afihene (2018), Ghana has not yet implemented the universal birth dose vaccination of HBV. Rather the

HBV vaccine is given together with the pentavalent in the routine expanded programme on immunization since 2002. This seems to suggest that a lot of babies born in Ghana miss the birth dose till 6 weeks and only when they start attending the Child welfare clinic before they receive their first dose of the HBV vaccine which is part of the pentavalent vaccines. Meanwhile, these babies could have already been exposed to the virus making them more susceptible to the infection, which could lead to future complications.

Prevention of MTCT is very crucial in eliminating HBV therefore WHO recommends universal screening of all pregnant women at the Antenatal clinic , followed by immunization of babies born to HBV positive mothers at birth within the 1st twelve hours after birth with both Hepatitis B immune globulin and Hepatitis B vaccine (CDC, 2019; WHO, 2017b). In Ghana, it seems little has been done in the area of prevention of viral Hepatitis B where midwives have little continuous professional development programme in the management of HBV (Adjei et al., 2016). As per standard practice, the WHO recommends pre-test and post-test counselling for every individual testing for HBV (WHO, 2017b). However, only health care providers adhere to this standard. Further, Little information is offered to pregnant women and their families on HBV, its mode of transmission or mode of prevention due to a knowledge deficit by these health care providers (Adjei et al., 2016; Bello & Musa, 2016). Afihene, Duduyemi, Hannah-Lisa, and Khatib (2017) reported disparities in the knowledge level amongst HCWs which have contributed to the wide gap between knowledge and practices that are aimed at the prevention of HBV. In addition, Adjei et al. (2016) study on the extent of knowledge of physicians and midwives on PMTCT of HBV revealed that, 87.3 % had no idea that vaccines are available and when administered with Hepatitis B Immunoglobulin to new-borns of mothers who are HBV positive can prevent transmission of HBV infection from mother to the new-born. Furthermore, 35.7 % of the participants had a knowledge gap on simple and effective ways for preventing MTCT of HBV as suggested by the World Health Organization. This is quite disturbing because

health workers should be the core source of Hepatitis B related information for their patients and relatives. Meanwhile, practices to prevent PMTCT such as a repeat testing of pregnant women in the third trimester of pregnancy to detect those who were negative in the first trimester but acquired the infection later in life as done in HIV seems to be missing. Furthermore, Standard precaution practices are life-saving measures that are relevant to the prevention of HBV since the number of people living with infectious diseases such as Hepatitis B keeps increasing.

In addition, infection prevention practices that are aimed at averting PMTCT by health providers is essential but studies by (Abubakar et al., 2015; Bello & Musa, 2016) reported a lack of compliance to infection control and preventive measures among health-care professionals. Similarly, Abubakar et al. (2015) observed that knowledge on standard precaution is low among nurses which reflect in their practices and behaviour. These sub-standard practices exhibited by these nurses may put patients, relatives, and even nurses at a significant risk of acquiring infections. Akande, Akere, and Adedoyin (2018b) reported that less than half of the health workers in their study were aware that mother-to-child transmission is a major mode of transmission of HBV. Paul, Marie, and Bechem (2017) studies also reported that health workers' knowledge on PMTCT/HBV is inadequate and their practices are also inappropriate. This is quite alarming that practices that are essential in reducing perinatal transmission are not adhered to. Therefore, these outcomes may suggest that the strategy recommended by the World Health Organisation to prevent MTCT of HBV is not well executed by these study participants. The implication is that a lot of babies born to mothers with hepatitis B are at a high risk of acquiring HBV infection if these lapses keep occurring. Although studies done have reported low knowledge and incorrect practices among health care providers, there has not been an extensive research done exploring Midwives practices towards the PMTCT of Hepatitis B in the Accra metropolis. Therefore, using the theory of planned behaviour (Ajzen, 1991) as an organizing

framework, this study explored the midwives practices towards the prevention of mother-to-child transmission of hepatitis B.

1.3 Purpose of the Study

The purpose of this study was to explore midwives' practices toward prevention of mother-to-child transmission of Hepatitis B in the La Nkwantanang Municipal Assembly

1.4 Specific Objectives

The specific objectives were generated from the constructs of the theory planned behaviour to;

1. Describe the beliefs and perceptions (subjective norms) of Midwives towards Hepatitis B infection.
2. Identify the attitudes of midwives towards the prevention of mother-to-child transmission of Hepatitis B
3. Explain the factors that influence midwives' practices towards the prevention of mother-to-child transmission of Hepatitis B (perceive behavioural control)
4. Determine the intentions of midwives' practices towards prevention of mother-to-child transmission of Hepatitis B.
5. Identify midwives' practices towards prevention of mother-to-child transmission of Hepatitis B

1.5 Research questions

1. What are the beliefs and perceptions (subjective norms) of midwives towards viral hepatitis B infection?
2. What are the attitudes of midwives towards the prevention of mother-to-child transmission of Hepatitis B?

3. What are the factors that influence midwives in preventing mother-to-child transmission of Hepatitis B?
4. What are the intentions of midwives towards prevention of mother-to-child transmission of Hepatitis B?
5. What are midwives' practices towards the prevention of mother-to-child transmission of Hepatitis B?

1.6 Significance of the study

Hepatitis B is one of the life-threatening infections that harm the lives of those who have acquired it; it is one of the leading causes of liver cancers and mortalities in the world. Practices by midwives will go a long way to ensure that individuals living with the infection do not transmit it to others and most importantly their babies. Despite the universal screening of pregnant women and the availability of vaccines to prevent the infection, HBV prevalence is still high with perinatal transmission as one of the most common ways of acquiring the disease. This study is important in identifying midwives' practices that will contribute to the prevention of perinatal infection. This will allow the researcher to find out what influences their decision to engage in activities that prevent PMTCT. Also, this study will note where gaps are in practice so that more research can be done in this area. Further, this study will inform policymakers to invest more in HBV issues so that we can achieve the sustainable development goal aimed at eliminating HBV by 2030. In addition, this study will inform hospital managers and administrators to know where additional training will be needed for their staff to improve upon their practice.

1.7 Definition of terms

Midwife: is a person who, having been regularly admitted to a midwifery educational programme, duly recognized in the country in which it is located, has successfully completed

the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery (ICM, 2005).

Prevention of mother-to-child transmission: Prevention of mother-to-child transmission (PMTCT, also known as prevention of vertical transmission), refers to interventions to prevent transmission of HBV from an HBV-positive mother to her infant during pregnancy, labour, delivery, or breastfeeding

Practice: The customary, habitual, or expected procedure or way of doing something.

Viral Hepatitis B: a potentially life-threatening liver infection caused by the hepatitis B virus (HBV)

Vaccination: Is the administration of a vaccine to help the immune system develop protection from a disease

Pregnancy: The period in which a foetus develops inside a woman's womb or uterus.

CHAPTER TWO

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This chapter presents the theoretical model that guided this study and the review of related empirical literature on midwives' practices towards prevention of mother-to-child transmission of hepatitis B.

2.1 Selection of a theoretical framework

Several models that address human behaviour were reviewed because individual choices are regularly fundamental to the selection of a clinical-related behaviour; more information about the reason behind basic practices is needed to improve behaviour change intervention focusing on health care professionals. These theories refer to theories where individual cognitions/thoughts are viewed as processes intervening between observable stimuli and responses in real-world situations. The Theory of Reasoned Action by Fishbein and Ajzen (1975b) was one of the models to be reviewed but it was not suitable for the study because it does not measure the external and internal forces that may influence the intention of an individual to perform or exhibit the desired behaviour .The theory of reasoned action was then modified to enable it to predict and explain such goal-directed behaviour. The modified theory, called Theory of Planned Behaviour differs from the theory of reasoned action, in that it takes into account perceived as well as actual control over the behaviour under consideration.

2.2 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) by Icek Ajzen hypothesized that attitudes often fail to reveal strong relationships with behaviour because of the large number of factors can potentially prevent the attitude from being converted into behaviour (Ajzen, 1991). The main components of TPB are; attitudes, subjective norms, perceived behavioural control, intentions, and actual behaviour (Ajzen, 1991; Hrubes, Ajzen, & Daigle, 2001).

A person's attitude can either be positive or negative towards a behaviour which is determined by his or her outstanding beliefs about the consequence of the behaviour multiplied by an evaluation of the desirability of the outcome for each belief.

Subjective norms refer to an individual's perceptions of the beliefs and behaviours of significant others. In a work situation, the source of these norms is likely to include both managers and those co-workers who are closely associated with the individual. Subjective norm (SN) is determined by multiplying an individual's normative belief that is, perceived expectations of important individuals or groups, and motivation to comply with these expectations (Fishbein & Ajzen, 1975b)

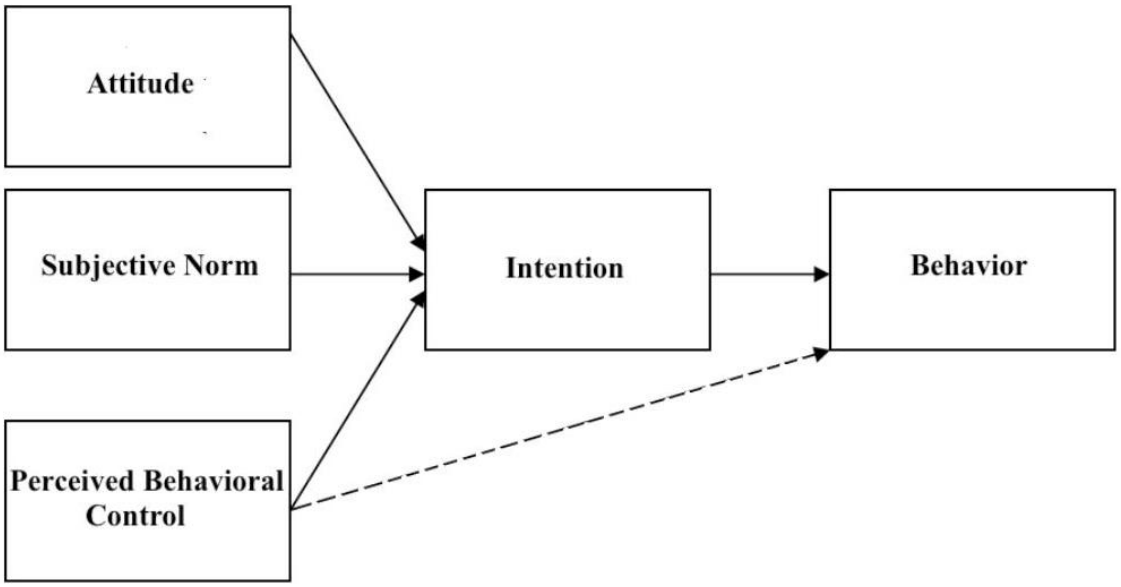
The final determinant of behaviour intention is perceived behavioural control (PBC), which refers to a person's perception of the ease or difficulty of performing the behaviour. Individuals frequently intend to perform certain behaviours, yet fail because of factors that fall outside their control. PBC is based on two components: control beliefs and perceived power. Control beliefs refer to those internal and external factors that may delay performance of a particular behaviour which can be measured by self-efficacy, an individual's evaluation of his or her ability to perform the behaviour. Perceived power the second component reflects factors that may ease or hinder the performance of the behaviour (Ajzen, 1991, 2011). According to the model, perceived behavioural control reinforces the relationship between intentions and behaviour. PBC has a direct effect on behaviour and if a person has high perceived behavioural control, then they have increased confidence that they are capable of performing the specific behaviour successfully. A direct path from perceived behavioural control to behaviour is expected to emerge when there is some agreement between perceptions of control and the person's actual control over the behaviour.

In addition, behavioural intentions are an immediate antecedent of behaviour and defined as the perception of an individual towards the performance of a particular behaviour (Fishbein & Ajzen, 1975a). Behavioural intentions indicate an individual's readiness to engage in a particular behaviour which is based on the individual's attitude, subjective norms and perceived behavioural control with each construct influencing and playing an important role

in relation to the behaviour and population of interest. This is because sometimes despite a person's readiness to act it does not always end up in the desire behaviour because various factors can impede the translation of the intention into conduct. The stronger the influencing factor the stronger the intention to engage in the desirable behaviour.

Finally, the behaviour is the observable response of the target population in a given situation which is influenced by one's intention and perceived behavioural control. The stronger the intentions and perceive behavioural control the stronger it is for the target population to engage in the desirable behaviour.

Figure 2. 1: **Theory of planned behaviour (Ajzen, 1991)**



2.3 Application of the theory of planned behaviour

As applied to this research, the constructs included in the TPB reflect individuals, groups, and hospital managers, policymakers' contributions towards the elimination of viral hepatitis B through PMTCT. Individuals (midwives) attitude toward HBV will determine whether they will engage in practices that prevents MTCT of HBV. Subjective norms which

include beliefs, and opinions of significant others and the norms developed by the organization, the ministry, the Ghana health service may influence the behaviour of the employees (midwives) who feel part of the organization; therefore, they must act as such. In addition, perceived behavioural control suggests there are times when despite the best intentions and willingness of midwives to prevent MTCT of HBV, the midwives may feel incapable of completing the work tasks according to the laid down rules, policy, and protocol. This is due to some external and internal factors such as (as lack of resources, lack of personnel, lack of time, knowledge deficit) that are beyond their direct control. Perceived behavioural control can also influence behaviour directly or indirectly through behavioural intentions. Therefore, if midwives have all the needed resources and are able to control the internal and external factors and have a stronger sense of intentions then they are most likely to engage in the prevention of MTCT transmission of HBV.

LITERATURE REVIEW

2.4 Literature search

A search for literature on PMTCT of HBV among midwives was conducted. The databases used to retrieve relevant literature were; Science Direct, EBSCOHOST, CINAHL,

PubMed, and Google Scholar, Sage was checked using the keywords: hepatitis B and pregnancy, hepatitis and perinatal transmission, hepatitis B and prevention of mother-to-child transmission, vertical transmission, hepatitis and health care workers, knowledge, attitude and practice of HCWs and HBV. After reviewing several articles, the ones relevant to the study were retrieved which ranged from 2015 to 2020 except for definition and model used. The literature review was organized according to the objectives of the study and constructs of the TPB.

2.5 Beliefs and perceptions (subjective norms) towards Hepatitis B infection

Subjective norms focus on individuals beliefs and perception especially those of peers, significant others such as superiors which influence the person ability to initiate a particular behaviour (Ajzen, 1991). Midwives' beliefs and perceptions may influence their willingness and intentions to involve in practices that are aimed at preventing mother-to-child transmission of HBV. “Belief” is the act of having faith or believing in something. Cultural beliefs are still regarded and their significance cannot be underestimated in many communities (Withers, Kharazmi, & Lim, 2018). Our cultural beliefs which have been passed down from one generation to the other may tend to have an effect on how we regard and perceive the causes of diseases. In view of this studies conducted in Ghana revealed that the cause of Hepatitis B has been linked to spiritual beliefs and perceptions such as witchcraft, curses, and as punishment from the gods of the land, spiritual (Adjei, Stutterheim, Naab, & Ruiter, 2019a). These beliefs held seems to influence how and where people living with Hepatitis B seek health care. In view of this several studies among health workers reported that health care workers had the belief that they were at high risk of acquiring HBV infection due to their profession, they also had the belief that HBV is more deadly than HIV (Hassan et al., 2016a). In addition, a study conducted in France by Moyroud, Hustache, Goirand, Hauzanneau, and Epaulard (2017) reported that the study participants had the notion that Hepatitis B is severe and potentially permanent disease. Further, study among patients and health care providers in

Ghana reported beliefs that HBV is highly contagious; it's severe and caused by a curse (Adjei et al., 2019b). HBV can be prevented by vaccination and complete vaccination status is achieved through a three-dose shot of the Hepatitis B vaccine (WHO, 2019b). However, in Saudi Arabia Alshammari, Aljofan, Subaie, and Hussain (2019) reported that about 31.2% of the study participant were not vaccinated, because they had the perception that the vaccines were not safe and they were also not sure of its effectiveness. Further, Moyroud et al. (2017) documented a negative perception about Hepatitis B vaccination. Meanwhile, positive perception about the efficacy and safety of vaccination was reported in Senegal and Ghana by (Djaogol et al., 2019; Obiri-Yeboah et al., 2019).

Subjective norms are determined by a person's beliefs regarding what others think about them performing a behaviour and the perceived pressure from them to perform that behaviour. Therefore, the influence of significant others such as colleagues, superiors may influence midwives' beliefs and perceptions about a particular behaviour. Midwives work under norms, rules and guidelines set by their superiors hence must conform to these regulations. Evidence suggest that a good leadership skill by nurse managers have a significant effect on the work engagement of their staff which will automatically reflect in their work performance (Manning, 2016). Abd-Elrhaman and Abd-Allah (2018) reported the positive effect of transformational leadership on the job performance of nurses. Hence, in the prevention of mother-to-child transmission of Hepatitis B the activities of midwives must first of all fall in line with standard practices and their practices need to be evaluated to ensure the right thing is done. The use of clinical practice guidelines is one of the key ways to apply evidence-based practice to clinical settings (Pronovost, 2013). Evidence-based practice (EBP) is now central to the practice and vocabulary of all nurses(Jansson & Forsberg, 2016; Veeramah, 2016) and considered the "gold standard" in the delivery of health care.

The WHO has laid down protocols and guideline that has been put in place and adopted by several countries to be implemented in order to eliminate viral Hepatitis B by 2030. Therefore, the onus lies in the hands of nurse leaders to support and provide the necessary resources to achieve this goal. A good leadership skill must go in hand with good supervision. The importance of clinical supervision by superiors cannot be overlooked when it comes to the performance of midwives in relation to their practices that prevents mother-to-child transmission of Hepatitis B. Clinical supervision contributes to increased professional competence, prevents burn outs, improves quality of health services provided (Nordbøe & Enmarker, 2017). Further, clinical supervision facilitate the development of nursing leadership, together with the opportunity to critique clinical and cultural practices within a safe environment (Blishen, 2016). Gera et al. (2019) studies reported several factors including supportive supervision of health staff as part of the primary reasons for improvement in service delivery. Despite these beliefs and perceptions as well as the influence of superiors on midwives, it is mandatory for them to engage in practices that prevent mother-to-child transmission of Hepatitis as recommended by the WHO which include screening, vaccination, health education (WHO, 2019b).

2.6 Attitudes towards the prevention of mother-to-child transmission of Hepatitis B

A person's attitude towards a behaviour is usually determined by his or her outstanding beliefs which influence their behavioural intentions towards an activity (Ajzen, 2011). The attitude of midwives is key to the elimination of HBV. Health workers' attitudes have been investigated by several studies. In view of this Rehman, Ali, Rooman, and Sardar (2018) study in Pakistan on Knowledge, Attitudes and Practices of Nurses, reported a positive attitude and better practices especially among nurses in the prevention of viral Hepatitis B. Other several studies conducted in Vietnam, Khartoum, Sudan, South Western Cameroon outcomes also stated that majority of the health workers had a positive attitude towards Hepatitis B. This they

demonstrated by their willingness to participate in screening, caring for patients and participating in vaccination (Ishimaru, Wada, Hoang, et al., 2017; Mursy & Mohamed, 2019; Ngekeng et al., 2018). In as much as some studies documented positive attitudes among Health workers towards Hepatitis B infection contrarily, other studies also reported negative attitudes among Health care workers.

In view of this, a study with patients and health care providers on chronic Hepatitis B stigma in Ghana, it was reported that individuals living with chronic hepatitis B face a lot of stigma from their socio-cultural contexts as well the hospital environment. In addition, the study revealed that health care workers manifested their attitude by stigmatising against these individuals by being extra cautious, postponing or avoiding their procedures, task-shifting and breaching the confidentiality of their clients (Adjei et al., 2019b). Most importantly these stigmas were influenced by the incorrect beliefs that Hepatitis B is highly contagious and very severe and the belief that Hepatitis B is caused by a curse. Scheun et al. (2019) qualitative study on stigma among healthcare workers towards hepatitis B infection in Bangalore, India reported some amount of stigma been displayed by HWCs. Other studies conducted in Vietnam and Southern Africa also stated that some HCWs rather fear HIV/AIDS transmission than HVB infection hence will display negative attitudes (Engelbrecht et al., 2020; Ishimaru, Wada, Huong, et al., 2017). In view of this HassanpourDehkordi, Mohammadi, and NikbakhatNasrabadi (2016) also alluded to the fact that attitudes such as stigma present major challenges not only for patients living with chronic Hepatitis but also for nurses and other healthcare practitioners. Meanwhile, Elmukashfi et al. (2016) publicised that the majority of the Health care providers in their study did nothing when they suspect an individual of having HBV. These negative attitudes toward HBV may have an effect on the elimination of HBV if some HCP continues to act unconcerned. A systematic review in Africa revealed that only a quarter of HCWs in Africa are fully vaccinated against Hepatitis B virus and then doctors were

more likely to be fully vaccinated than Nurses (Siraj, Fareed, & Mahajan, 2016). In Tanzania another study reported that Most of the HCP in the study did not know their HBV status and have never received any vaccine. Further, HCPs with 10 or more years of experience were more likely to be vaccinated than those with less than 10 years of experience (Debes, Kayandabila, & Pogemiller, 2016). Meanwhile, several studies have looked at HCP attitude towards HBV vaccination documented that HCP are at high risk of acquiring HBV than the general population due to the constant history of occupational exposure to risky conditions, unprotected mucocutaneous fluid contact on intact skin, sharp-needle injury and body fluid splash through body openings (Mueller et al., 2015; Muvunyi et al., 2018; Ogundele et al., 2017; WHO, 2019b). Although HCPs recognized they are at risk, interestingly the most common action these HCPs take after the exposure is washing the exposed area with soap, water, or antiseptic. In addition several studies have reported that HCP's attributed their inability to vaccinate to the high cost of the vaccine, non-availability of the vaccine and some are just not concerned about the issue (Abebaw, Aderaw, & Gebremichael, 2017; Akibu, Nurgi, Tadese, & Tsega, 2018; Akpor & Akingbehin, 2017; Choudary, Gupta, Saxena, & Uppadhaya, 2019; Khamis, Jacoub, Suleiman, & Fahal, 2016; Malewezi, Omer, Mwagomba, & Araru, 2016; Siraj et al., 2016). Brahmania, Palmart, and Shah (2015) reported that practice audit will improve health care workers attitude and behaviour towards individuals with chronic Hepatitis B.

The implication is that these health workers themselves who are at high risk of acquiring the infection can also be a source of infection to the patient they care for. Most importantly if they are not willing to vaccinate against HBV how can they advocate and educate their patients to vaccinate against this HBV?

2.7 Perceived behavioural factors towards prevention of mother-to-child transmission of Hepatitis B

Perceived behavioural factors (PBC) refer to a person's perception of the ease or difficulty of performing a particular behaviour. It implies that when attitudes and norms regarding the practices towards the prevention of mother-to-child transmission of hepatitis B are highly favourable, and the midwives perceive a high level of self-control over the behaviour (PMTCT), there would be stronger intention to perform it. People often intend to perform a certain behaviour, yet fail because of factors that fall within and outside their control. Obstacles may be in the form of personal competences, such as information, knowledge, ability, skill, and will-power, and external constraints such as organizational support, logistics and basic equipment (Ajzen, 1985, 1991). Midwives may have the best intention to want to PMTCT of Hepatitis B but they may not have the necessary knowledge, logistics, and information or even laid down policy and protocols to achieve this behaviour.

Knowledge on hepatitis B is very important in its prevention. Before an individual will be interested in getting involved in practices that prevent the transmission of HBV, he or she must be knowledgeable on the disease mode of transmission, treatment guidelines, counselling and testing, linkage to care and vaccination. Therefore, several studies have measured the health care provider's knowledge concerning viral hepatitis B transmission and prevention. Some studies reported a good knowledge level among health providers (Qin et al., 2018; Rehman et al., 2018; Van Ommen et al., 2019). Although these studies reported a good knowledge level among HCPs several other studies' findings were contradictory. Most studies reported a knowledge gap and incorrect practices as well as low vaccination uptake.

In China Chen et al. (2018) revealed low levels of HBV MTCT-related knowledge and preventive practices, although HCPs have the most frequent and relatively prolonged contact with pregnant women and their newborns. Also, the study revealed that more than 10%

of the HCPs did not know HbsAg-or HbeAg-positive mothers are at "high risk" of transmitting HBV to their children. Further, more than 30% didn't know that HBV DNA levels are the best predictor of vertical HBV transmission. The study also reported that HCWs especially nurses lacked systematic and comprehensive knowledge on HBV MTCT. Furthermore, nurses had low knowledge and are ineffective in transmitting knowledge into practice**.** In addition, a study on the extent of knowledge among physicians and midwives on MTCT in the eastern region of Ghana reported a good knowledge among the study participants, but acknowledges some knowledge gaps existed (Adjei et al., 2016). About 31% of the participants failed to recognised that there is the need to vaccinated new-borns of HbsAg/HbeAg positive mothers and (12.7 %) of the participants were aware of a vaccine which when administered with hepatitis B Immunoglobulin to newborns of mothers with HBV positive can prevent transmission of HBV infection from mother to newborn. Nonetheless only 18 (14.3 %) of the participants recognised that the hepatitis B surface antigen (HbsAg) is a serological marker for HBV infection. It is interesting to note that about 35.7% of these study participants considered caesarean section as a means to PMTCT rather than vaccination (Adjei et al., 2016).

While mother-to-child transmission is one of the major routes of acquiring HVB in Africa (WHO, 2019b), Akande et al. (2018b) reported that less than half of the health care providers studied were aware of this mode of transmission. This means that a larger percentage of these health care providers may not be screening antenatal women for the virus nor actively preventing mother -to-child transmission of hepatitis B per WHO standards. This study agrees with Paul et al. (2017) studies in Cameroon which also reported that health care providers' knowledge on PMTCT/HBV is inadequate and their practices are also inappropriate. Moreover, this HCP were not aware that there are available medications that are effective in reducing the viral load of pregnant women with a high viral load which subsequently prevents vertical transmission and long term complications (Agarwal et al., 2017; Terrault et al., 2016).

Meanwhile majority of the respondents, however, believed that silymarin and multivitamins are the main drugs for managing chronic hepatitis B. This is of concern because 73% of the respondents believed that an asymptomatic patient with hepatitis B infection needs no referral for further evaluation which is contrary to the WHO guidelines for counselling and testing of HBV (WHO, 2017b, 2019b). Although nurses and midwives may not be in the position to offer treatment to HBV positive mothers, a piece of good knowledge on the treatment option and guideline will promote linkage to care. Wait et al. (2016) also reported that Health professionals often do not know that effective treatments exist, and links between testing and treatment are poor, contributing to low treatment rates of HBV positive clients.

Subsequently in Uganda Lawrence et al. (2018) in a retrospective study reported that, majority of the Health care providers had little knowledge on the cause, signs and symptoms, transmission, risk factors, complications and management of hepatitis B. This is also similar to Ngekeng et al. (2018) findings in Cameroon. Health care provider's knowledge on HVB will promote adherence to screening and vaccination, provide adequate counselling and refer positive cases to appropriate care. Other several studies conducted in countries like Ghana and Nigeria have also reported suboptimal knowledge on HBV among health care workers (Afihene et al., 2017; Bello & Musa, 2016). Furthermore, Djaogol et al. (2019) study on prevention and care of hepatitis B in Senegal reported that several factors hinder health care providers from fully engaging in activities that will prevent MTCT of Hepatitis B. Although, the study acknowledged knowledge deficit in the key areas of HVB aimed at preventing MTCT, it reported several barriers that may explain the suboptimal intervention by these HCPs in the prevention of MTCT. Most of the HCPs had received no training on hepatitis B infection, no pre-test and post-test counselling as recommended by WHO testing guidelines was given to pregnant women during screening (WHO, 2017b) which was also reported by Adjei et al. (2016). Meanwhile continuing professional education is well-known to build the capacity of

health professionals in terms of knowledge and skills after completion of formal education(Smith, Brown, & Khanna, 2015).

Additionally, lack of availability of free HBV RDT, high cost of screening, antiviral treatment for HBV positive mothers, missed opportunities for vaccination for home birth babies were highlighted. Similarly, other studies also alluded to these existing barriers (Cheng et al., 2015; T. Djaogol et al., 2019; Wait et al., 2016). The HCWs in Chabrol et al. (2019a) study also lamented on the lack of diagnostics test kits for the screening of HBV in Cameroon. Likewise, the non-availability of screening tests and other virological tests on hepatitis B virus, the cost of screening of hepatitis B virus infection, the very costly anti-hepatitis B virus immunoglobulins, the scarcity of the anti-hepatitis B immunoglobulin, absence of national directives or programme to prevent hepatitis B infection like the one for HIV/AIDS, absence of logistics to optimise PMTCT/HBV programme was reported (Paul et al., 2017).

The administration of HBV birth dose vaccination is very crucial in the prevention of HBV. Therefore countries like Nigeria, Namibia, Gambia Sao Tome Principe and Botswana have successfully implemented hepatitis B birth dose vaccination (Moturi et al., 2018). Administration of the birth dose of HBV vaccine is still inadequate in many countries as well point-of-care screening for HBV positivity in pregnancy, making identification of women at risk of maternal-to-child transmission of HBV difficult (Thio, Guo, Xie, Nelson, & Ehrhardt, 2015). In yet another study, unavailability of vaccines, limited vaccination hours, lack of institutional mechanisms to deliver vaccine at birth, and absence of proper documentation was found to be important factors hindering vaccination at birth (Gera et al., 2019; Taneja et al., 2015). Evidence showed that reinforcing health education, training, and supervision, providing subsidies for facility birth, strengthening the coordination among health care providers, and using out-of-cold-chain storage for vaccines will improve vaccination coverage (Gera et al., 2019; Wang, Smith, Peng, Xu, & Wang, 2016).

2.8 Intentions towards prevention of mother-to-child transmission of Hepatitis B

Intentions represent a person's motivation in the sense of her or his conscious plan or decision to exert effort to perform the behaviour. Behavioural intention represents the readiness of a person to perform a particular behaviour. Behavioural intentions are usually influenced by attitude, subjective norms and perceived behavioural control. Intentions represent a person's motivation (Norman & Conner, 2017). In examining the predictors of behavioural intention of hepatitis B among HCPs, it was reported that risk perception was the best predictor of preventive behavioural intentions (Morowatishaifabad, Zare Sakhvidi, Gholianavval, Masoudi Boroujeni, & Alavijeh, 2015). Cheng et al. (2015) study in Ghana reported that majority of the study participants were willing to enrol their patients in a clinical trial aimed to reduce HBV virus levels through the administration of Tenofovir in pregnant women and also provide hepatitis B (HBIG) to infants born to HBV positive mothers. Also, some participants were unwilling to perform the additional recommended test for the evaluation of HBV positive mothers because of the costs and time constraints involved. Furthermore, some of the participants were also willing to discuss the consequences of HBV infections with mothers such as the risks and benefits of HBV vaccination. But in (Chen et al., 2018), Only 26.6% of the participant were willing to provide additional infection control precautions to patients with HBV whiles nearly half of the participants stated that they would provide the HBV vaccine (48.1%) or HBIG (49.3%) to infants. Among Austrian HCWs Harrison et al. (2016) reported reasons why health care workers will engage in hepatitis B preventive behaviours which were for self-protection, desire to reduce HBV epidemics and to protect others as well as their patients from acquiring the infection. Because behavioural intentions can be influenced by attitude, subjective norms and perceived behavioural control, an individual can have the best intention to engage in PMTCT but the presence other factors can hinder the performance of PMTCT. Due to this Buntak, Kovačić, and Martinčević (2019) study on Impact of medical

logistics on the quality of life of healthcare users reported that the availability of medical logistics plays an important role in the delivery of effective health services. In addition, in Morocco it was reported that, the availability of adequate logistics contributes to the quality of health services as well patient's satisfaction (Frichi, Jawab, Boutahari, & Management, 2020). Therefore, it is paramount that the needed resources to ensure PMTCT must be available to enable midwives with the best intentions to engage in PMTCT.

2.9 Practices towards prevention of mother-to-child transmission of Hepatitis B (PMTCT)

According to the theory of planned behaviour, an individual will initiate a particular behaviour successfully if they have a positive attitude, subjective norms and have control over factors that will inhibit them from performing the desire behaviour. The practices of midwives towards prevention of mother-to-child transmission of HBV is essential considering the burden of HBV and the WHO target of eliminating this burden by 2030. The WHO has recommended some strategies that are aimed at the prevention of MTCT which are; universal screening of pregnant women, universal birth dose vaccination, treatment of HBV positive mothers, providing linkage to care among others (WHO, 2017b, 2019b). Because of this Kwong et al. (2018) studies on Peri-partum Care for Mothers Diagnosed with hepatitis B during pregnancy among health care providers (physician and midwives) found out that majority of the health providers universally screen all pregnant women 97%, 77% refer HBV positive cases to a specialist for further care.

Despite the fact that the study participant provided linkage to care, there was a lack of proper referral system which explained why HBV follow-up is suboptimal in this healthcare system. Additionally, Chao, Cheung, Chang, Pei, and So (2019) reported routine testing of pregnant women for hepatitis B surface antigen (HbsAg) with each pregnancy but only 60.9% routinely advised HbsAg-positive patients to seek specialist evaluation for antiviral treatment

and monitoring and fewer than half (48.6%) routinely provided them with HBV information. While they recognized the potential complications of chronic HBV (94.2%), only 21% were aware of the complications of chronic HBV carriers. Chen et al. (2018) results on the behavioural practices of the study participants, it was reported that less than half of them tested pregnant women for HbsAg (44.3%) and HbeAg (43.5%), and only 27.6% tested pregnant women for HBV DNA. Moreover, only a few participants discuss the consequence of HBV infection (39.0%) or the benefits and risks of HBV vaccination (38.6%) with patients. Interestingly for pregnant women who test positive for HBV additional test is recommended per WHO standard (WHO, 2017b) but a study on Hepatitis B mother-to-child transmission in the Eastern Region of Ghana reported that HbeAg and viral load testing are not routinely done on mothers who test positive for HbsAg during pregnancy (Hambridge, Nartey, Duah, & Plymoth, 2018). In addition, it has been reported that breastfeeding does not put of HBV exposed infant at risk of acquiring HBV. Hence breastfeeding is not a medium for HBV transmission but care must be taking to prevent cracked nipples, dry nipples or mastitis which can be a medium for MTCT (Ayoub & Cohen, 2016). The CDC reported that there is no need to delay breastfeeding in HBV exposed infant especially if they had taken the birth-dose vaccination. Therefore, MTCT of HBV through breastfeeding is almost negligible (CDC, 2019).

A post vaccination serological testing is recommended for babies born to HBV positive mothers after completion of the HBV vaccine series according to (Schillie et al., 2018; Woodring et al., 2019) . During labour, Hou et al. (2019) mentioned that performance of invasive procedures such as rupturing of membranes, vigorous suctioning, vacuum extraction can increase the risk of MTCT OF HBV but Cheung et al. (2019) reported that rupturing of membranes does not increase the risk of MTCT even in high viraemic mothers.

2.10 Summary of literature review

The beliefs and perceptions about hepatitis B is very important in its prevention and elimination. The beliefs and perceptions about HBV can influence how individuals seek care and treatment. Studies have reported that some people believe that HBV is associated with spiritual causes which makes the prevention of HBV challenging (Adjei et al., 2019a). Studies have documented that most HCWs believe HBV is very severe and even more deadly than HIV (Hassan et al., 2016b; Moyroud et al., 2017). These beliefs may influence midwives' ability to fully engage in activities that ensure PMTCT.

The attitude of midwives may influence their intentions to engage in the PMTCT of HBV. Several studies reported positive attitudes of HCWs towards HBV which was expressed in the willingness of health care workers to care for individuals who were living with HBV (Ishimaru, Wada, Hoang, et al., 2017; Mursy & Mohamed, 2019). In as much as some literature reported positive attitudes, some studies also reported some negative attitudes by HCWs. These studies reported some stigma and discriminatory behaviours exhibited by HCWs towards individual living with HBV (Adjei et al., 2019b). In addition, several studies have also reported a poor attitude towards vaccination uptake by HCWs despite the fact that HCWs are at higher risk of acquiring HBV. The most common reason for the poor uptake were time constrains, financial challenges, non-availability of vaccines (Akibu et al., 2018).

HCWs may face some challenges in their quest to PMTCT of HBV. These challenges can be within and outside their control. Several studies have documented low levels of hepatitis B knowledge among HCWs which may subsequently affect the quality of care they give (Akande, Akere, & Adedoyin, 2018a; Chen et al., 2018; Paul et al., 2017). In addition, there are other factors such as challenges with access to hepatitis B vaccines, financial challenges, availability of test kits for the screening of HBV, availability of standard practice guidelines

on hepatitis that influence HCWs ability to PMTCT of HBV (Djaogol et al., 2019; Gera et al., 2019; Wait et al., 2016).

The intentions of midwives to engage in PMTCT are exhibited in their preparedness towards it. Studies have revealed that despite the fact that HCWs may have strong intentions towards PMTCT there are other factors that may influence these intentions such as beliefs and perceptions, attitude and PBC. It was reported that HCWs may engage in hepatitis B preventive measure because they know they are at risk, to protect themselves, to reduce HBV transmission as well as prevent their patients from acquiring the infection (Harrison et al., 2016).

The behaviour of the HCWs is seen in their ability to engage in practices that prevent MTCT such as screening of pregnant women, administering hepatitis B birth dose vaccination to babies born to HBV positive mothers, offering linkage to care. Studies have reported screening practices among HCWs (Chao et al., 2019; Kwong et al., 2018). Although, HCWs screen pregnant women for HBV some studies reported poor referral practices among HCWs (Kwong et al., 2018). Chen et al. (2018) further reported that only few HCWs provided information on the risk of HBV to the newborn and benefits of HBV vaccination.

CHAPTER THREE

METHODOLOGY

This chapter outlines the methodology that was used for the study. It covers the research design, research setting, research population, sample size and technique, data collection tool used and procedure. In addition, the method of Data analysis, measures of ensuring methodological rigor and ethical considerations were also highlighted.

3.1 Research Design

The qualitative exploratory descriptive approach was used for the study. According to Fain (2017), a qualitative approach to research provides one with the opportunity to acquire a deeper understanding and rich descriptions of people's experiences of the phenomenon under study. According to Lincoln and Denzin (2000), qualitative research includes a realistic interpretive approach to the world. Qualitative researchers study things in their natural settings, attempt to make sense of them and interpret phenomena regarding the meanings people bring to them. This helps to provide insights into the problem, therefore, helping one to discover or expand in knowledge. The main goal of qualitative research is to acquire additional

understanding and help explore the depth, richness, and complications that characterize the phenomenon being studied.

This type of qualitative design permits the researcher to gain understanding into a phenomenon or experiences from the participants' perspectives and describes events as accurately as possible in a logical sequence depicting the meanings research participants' ascribe to those experiences and events (Neergaard, Olesen, Andersen, & Sondergaard, 2009). The explorative descriptive approach to research involves investigating the full nature of phenomena rather than simply observing and explaining the phenomena and this provides an insight into the comprehension of an issue or situation (Polit, Beck, & Hungler, 2004). An exploratory descriptive research design helped the researcher to have an objective and accurate description of the phenomenon under study (Polit et al., 2004). It provides a general overview of the concept and the way certain phenomenon occurs, thus helping to describe and providing answers to certain life experiences.

This qualitative design allowed the researcher the opportunity to present the findings of the study in a simple everyday language which is similar to the informant's language (Neergaard et al., 2009). Additionally, this approach was appropriate for this study as it allowed participants to describe vividly their personal experiences concerning their practices aimed at preventing mother-to-child transmission of Hepatitis B. This study also provided the researcher a better understanding on issues of HBV.

3.2 Research Setting

The study was conducted at Madina polyclinic in the La Nkwantanang Municipal in the Greater-Accra region. The La Nkwantanang-Madina is one of the sixteen (16) municipalities in the Greater Accra Region in Ghana. Geographically, it is a small municipality, which lies in the north-eastern part of the Greater Accra Region. La Nkwantanang-Madina is sandwiched between the Adenta Municipality on the east, Accra

Metropolitan Assembly (AMA) to the south and Akwapim South District Assembly to the north. There are twenty-three (23) communities in the municipality that are grouped under three sub-districts namely Madina, Danfa and Pantang which comprises of urban, peri-urban and rural areas. The Municipality has a total of Thirty-nine health facilities currently in existence in the municipality, two (2) of which are government polyclinics, namely Madina polyclinic-Kekele and Madina Polyclinic Rawlings Circle. There is a specialized Psychiatrist Hospital at Pantang.

Madina Polyclinic (Kekele) is the focus area for the study. This health facility provides a comprehensive curative and preventive healthcare service to the general public as well as training of students in public health care and general practice. It offers antenatal services to over 40% of the district population and also renders other services such as pre-pregnancy counselling, postnatal care, labour or delivery services, child welfare clinic, family planning, and home visits. Madina Polyclinic (Kekele) does not have a theatre; therefore, serious cases are referred to Pentecost Mission Hospital. Also, cases that cannot be handled by both hospitals are referred to the Korle-Bu Teaching Hospital and other tertiary health facilities. Both hospitals provide ambulance services. The study was conducted in this setting because the midwives in the setting engage practices that prevent mother-to-child transmission of HBV. More especially the midwives in the setting are the ones responsible for the administration of hepatitis B birth dose vaccination of babies born to mothers living with HBV unlike other settings that were reviewed.

3.3 Target Population

The research population is the groups with attributes of interest to the researcher (Polit & Beck, 2010). It is the population to which the results of the study would be generalized (Banerjee & Chaudhury, 2010). The research population from which the sample was taken was

midwives working at Madina polyclinic (Kekele) and in the performance of their duty care for pregnant women.

3.3.1 Inclusion Criteria

The inclusion criteria involved all registered midwives working at Madina polyclinic who gave their consent to participate in the study. These midwives were involved in the care of pregnant women from conception to 6weeks post-partum. In addition, these midwives had at least one-year working experience in the study facility (Madina polyclinic, Kekele).

3.3.2 Exclusion Criteria

These included midwives who were not involved in the direct care of pregnant women but provided other equally important services.

3.4 Sample Size and Sampling Technique

According to Polit and Beck (2008) sampling is a procedure involving the selection of a portion of the populace who meet the standards for inclusion in the study of a phenomenon to represent the total population so that inferences can be made about the population. In order to produce rich information from study participants, the researcher conducted in-depth interviews with the chosen participants. However, the final sample size was determined during data collection when saturation was reached. This is was where the research participants were not able to introduce any new perspectives on the topic under study and the data collected did not yield any further explanation on practices towards PMTCT (Baker & Edwards, 2012).

The sampling technique for this study was purposive sampling. Cohen, Manion, and Morrison (2005) postulated that purposive sampling is the most appropriate non-probability sampling technique for qualitative studies. Purposive sampling method was used to identify and select midwives to give a detailed account of their experiences regarding their practices towards the PMTCT of Hepatitis B.

3.5 Data collection tool

Data collection tools were designed to obtain data on a particular topic of interest. A semi-structured interview guide with open-ended questions based on the research questions, constructs of the conceptual framework and the reviewed literature was used as a tool for collecting data. The interview guide was in sections. Section one focused on the demographical data of participants whereas Section two centred on attitudes of midwives towards the prevention of MTCT OF HBV.

Section three elicited information on the various social influences (peer and superior) (subjective norm) factors that had both positive and negative influences on midwives in preventing MTCT of HBV. Section four identified the factors such as self-efficacy, knowledge, resources, barriers that either allowed or prevented midwives from fully engaging in PMTCT of HBV (perceived behavioural control). Whereas Section Five sought midwives' intention to engage in practices that prevented mother-to-child transmission of HBV and finally the last section elicited responses on their actual practice in term of preventing mother-to-child transmission of Hepatitis B.

The semi-structured interview guide consisted open-ended questions that granted the study participants the opportunity to give a detailed description of their experiences and allowed the researcher to probe further when study participants did not give answers which was in lined with the research questions (Turner III, 2010).

3.5.1 Pre-testing/ piloting of interview guide

Kvale (2007) explains that pre-testing the interview guide assists the researcher to know the strengths and weaknesses of the interview guide in terms of ambiguity of questions, leading or double barrel questioning and the duration of the interview sections so as to make the necessary corrections in order to elicit the appropriate responses before using the data

collection tool for the original study. The developed interview guide was pre-tested with two selected midwives at the Pentecost hospital in the La Nkwantanang municipal assembly.

The pre-testing of the interview guide was done after a letter seeking permission to interview midwives was sent from the School of Nursing and Midwifery, Legon to the hospital research administrator at the Pentecost Hospital. After permission was granted by the administrator of the Pentecost hospital, the researcher was introduced to the labour ward in-charges who then introduced the researcher to some midwives on duty. The researcher established rapport with these midwives and explains the motive behind the research and provided the necessary information about the research. Two midwives consented and a date and times was scheduled for the interview to be conducted. The data collected after the pre-test was not included in the main findings of the study.

3.6 Procedure for Data Collection

The researcher obtained a formal introductory letter from the School of Nursing and Midwifery Legon and the Ghana Health service ethics review board. This was sent to the regional office of the Ghana Health service for an approval letter that was sent to the la Nkwantanang municipal assembly for approval letter. This approval letter was then sent to administrator and Deputy director of Nursing Services of the Madina polyclinic for permission. This allowed the researcher to select research participants from the clinic for the interview. Midwives in this selected hospital (Madina polyclinic) were contacted by the researcher and briefed on the purpose of the study. An information sheet was given for further clarification on the research topic. Midwives who met the inclusion criteria and were willing to participate in the study were given the consent form to sign, signalling their willingness to participate in the study. A convenient day, time and venue was set with each participant for the interview that was conducted.

The researcher used a field diary to take note of all major happenings and non-verbal communication cues portrayed by study participants during the interviews. Important incidents that occurred with each interview session was documented in the field diary. The researcher ensured that the audio recorder was in good shape and functioning well and was fully charged for each interview session. Before the interview section commenced, the researcher established rapport with participants to allay their anxiety by talking generally about other issues. The researcher informed participants that the interview section was going to be recorded and consent to record the interview section was sought; this enhanced the capturing of accurate and reliable information.

Furthermore, participants were encouraged to ask questions to clear any doubts before the interview sections starts. Data was collected through a face-to-face interview during which participants were encouraged to relax, feel free and express their thoughts and feelings. The researcher used probing questions to help participants contribute meaningfully to the discussion. At the end of each interview session, the researcher played back the recorded interview to each participant to ensure that all important data was collected. The recorded interviews were then labelled and listened to several times to make meanings out of them and to aid in data transcription. The field diary was read several times to make sure they aligned with each interview's recordings. Data gathered was transcribed verbatim. Reflections and incidents that took place during the interviews were noted. Finally, all the activities of the day concerning the interview was summarized after which modifications and adjustments were made to improve upon subsequent interviews. Data saturation was reached in the data gathering process when no new information concerning the topic was obtained after the 14th participant. All information from participants such as the signed consent forms, demographic data and field notes made during the interview sections was kept in a locked safe. The audio recordings were stored on hard drives and kept in a secured safe.

3.7 Data management and analysis

Data was analysed using thematic content analysis. The thematic content analysis is a type of qualitative analysis approach to analysing and presenting themes or patterns that relate to the data and using interpretations in dealing with diverse subjects in the data (Boyatzis, 1998). The thematic content analysis, therefore, extends away from the counting of explicit words or phrases and focuses on identifying, describing both implicit and explicit ideas (Namey, Guest, Thairu, & Johnson, 2008). The thematic content analysis approach was more appropriate for this study because it provided flexibility in the use of both inductive and deductive approaches, provided opportunities to code and categorise data into themes (Miles, Huberman, Huberman, & Huberman, 1994).

This technique allowed the researcher to disintegrate the text into relatively small units, looking for trends and patterns of words, their frequency, and relationships to give a detailed description of the data (Vaismoradi, Turunen, & Bondas, 2013). In using the thematic content analysis in analysing data gathered from study participants, the researcher first familiarized herself with the data by listening to the audio recorded interviews several times to become conversant with its contents, understood it and made meaning of each interview. Then, data was transcribed, read and re-read to know the depth and breadth of what the data entails. Interesting ideas in the data were highlighted to assist in data analysis. Codes that capture meanings in each sentence were generated. The identified codes were then reviewed to find out how different codes support each theme guiding the data analysis. The identified the codes were compared with the original data to see whether the codes reflect or are congruent with the data. Identified codes were categorised and subsequently condensed to form themes. Codes that did not appear to fit into the themes and sub-themes were noted. During data analysis, themes and sub-themes were collated to see if they answered the research questions and the purpose of the study. Finally, a detailed report of the results of the study was written,

highlighting the study's findings and supporting them with verbatim quotations from study participants.

3.8 Rigour of the Research

The rigour of a study determines the criteria and standards used in evaluating the overall significance, relevance, impact, and utility of a completed research (Morse, Barrett, Mayan, Olson, & Spiers, 2002). The researcher employed Lincoln and Guba (1985) criteria for ensuring the rigour of the research. Lincoln and Guba came out with four criteria for determining the trustworthiness of qualitative research. They include; credibility, dependability, transferability, and confirmability.

Credibility- According to Shenton (2004) it is the researcher's ability to demonstrate that the research methodology measured what it purported to measure. The researcher ensured credibility by selecting the appropriate research methodology and design for the study. The qualitative exploratory descriptive design was used to explore, understand and describe the lived experiences of midwives' practices towards prevention of mother-to-child transmission of Hepatitis B. The researcher established early acquaintances with the study participants by making several visits to them and also reviewed appropriate documents to know much about the target group and their experiences regarding Hepatitis B. Purposive sampling technique was employed in selecting study participants who met the inclusion criteria, to represent the population thus be prepared to give adequate information that answers the research questions of the study (Morse et al., 2002). Informed consent was obtained from participants as they were briefed on the purpose of the study. Individuals who showed interest in participated in the study and freely shared their experiences with the researcher became study participants. Participants were also assured of the confidentiality of the information this helped them to freely open up to share their views on their practices that prevented mother-to-child transmission of Hepatitis B.

During the interview sections, open-ended questions and probing questions were used to elicit detailed information from the research participants. Furthermore, the researcher maintained frequent debriefing sessions with her project supervisors to interact with them regarding the research methodologies and the data gathering procedures to obtain their perception on the topic under study. This, in turn, helped the researcher to identify flaws in the work and the necessary corrections were made. In addition, the researcher also engaged in peer scrutiny of the work by presenting the research work to colleagues, academics and peers thus help in receiving feedback for needed corrections.

The researcher also employed member checks by first of all building a good rapport with the study participants in order to obtain an honest respond. Also, the researcher restated and summarised information gathered and questioned participants to affirm it accuracy. Further, the researcher allowed study participants to critically analysed and verified whether the transcribed data represented their ideas, feelings and experiences or what they intended to share with the researcher (Lincoln & Guba, 1985). Finally, the researcher also found out as to whether or not the research findings or the themes that emerged from the study agreed with the findings of previous studies (Shenton, 2004).

Dependability- this is the extent to which the research methodology when repeated with similar participants will yield similar findings (Lincoln & Guba, 1985). The dependability of the study was maintained by describing in detail the research methodology under which the research was carried out. The detailed description of the research methodology offered readers of the study the opportunity to assess how far the researcher followed the approved guidelines for conducting the research, as this would pave the way for future researchers to repeat the study. The researcher again explained the data gathering process into detail, elaborating on what took place on the field, the duration involved in the data collection. The researcher also ensured dependability by conducting a code-recode procedure on the data gathered during the

analysis phase of the study. After the initial coding, the researcher waited for a few weeks then return to recode the same data and compare both results.

Transferability- this referred to the extent to which the research findings can be applied to individuals and situations with similar characteristics as that of the study (Lincoln & Guba, 1985). To achieve this, the research setting which was Madina polyclinic in the La Nkwantanang municipal assembly was explained in detail for readers of this research to be able to apply these research findings to similar contexts. The researcher further provided sufficient thick descriptions of the topic under study to aid the reader's understanding and application of the research findings to similar circumstances or situations. The researcher also gave a detailed description of the research participants, stating categorically the inclusion and exclusion criteria of study participants.

Confirmability- this the extent to which the research findings reflected the views and experiences of the study participants and not that of the researcher (Lincoln & Guba, 1985). The researcher enhanced the confirmability of the study by using reflexivity. This refers to an assessment of the influence of the investigator's background, perceptions, and interests on the qualitative research process (Ruby, 1980). Thus, the researcher ensured that all her personal history, preconceived ideas and early acquaintances with the midwives did not influence the findings of the study. The researcher also involved an external auditor who followed through the progression of events in the study to try to understand how and why some decisions were made. An audit trail of raw data, field notes, and notes from member checks was used to provide the information needed for enhancing data analysis. The researcher also explained in detailed decision for choosing a specific research methodology and conceptual framework guiding the research. Finally, the researcher verified from study participants whether the transcribed data represent their ideas or what they intended to share with the researcher.

3.9 Ethical Considerations

Ethical consideration for research is concerned with obtaining informed consent and maintaining the confidentiality of individuals who participated in the study. Ethical approval was sought from the Ghana Health Service Ethics Committee. An introductory letter from the School of Nursing and Midwifery University of Ghana was sent to the regional office of the Ghana Health Service ethics committee, who then gave an approval letter to be sent to the director of the La Nkwantanang municipal assembly. Another letter was issued by the head of the municipal assembly to be sent to the administrators and medical director of the Madina polyclinic (Kekele) who then gave approval for the study participants to be recruited. The researcher booked an appointment with the chosen study participants. The researcher established rapport with the participants and explain the nature, purpose, procedure and importance of the research to them, to aid their understanding of the research. The researcher ensured that the participants were given an information sheet to read and decide whether they would participate in the study or not before data collection.

Informed consent was obtained from each participant with an assurance of anonymity and confidentiality. The right to withdraw from participating in the study at any point was allowed with no consequences. Participants were informed that, during data collection and analysis, pseudonyms were used instead of their personal identifiers. Moreover, the information gathered was solely for academic purposes. Only the researcher and her project supervisors had access to the information collected. The audio recordings and the transcribed data were stored on hard drives, password protected and kept safe . The field diary was also kept under lock and key. Lastly, participants were not coerced in any form hence benefits such as refreshment, educational materials, workshops that are associated with the research was communicated to participants.

CHAPTER FOUR

RESULTS/FINDINGS

This chapter presents the findings of the study. The findings are presented based on the objectives of the study.

4.1 Demographic characteristics of participants

A total of fourteen (14) midwives participated in the study. All fourteen participants were practicing midwives at the Madina polyclinic located within the La Nkwantanang Municipal Assembly. Predominantly in Ghana midwifery practice is mostly female dominated hence all the participants were females. Participants ages were between 29 and 50 years and they were all Christians. All the 14 participants had diploma certificates in Midwifery. Eleven (11) of the participants were Senior Staff Midwives (SSM) with work experience between three (3) to ten (10) years, two midwives were Senior Midwifery Officers (SMO) with 13 to 14 years working experience, only one midwife was a midwifery officer with 13 years working experience. All the participants were married except one midwife who was identified as single.

4.2 Organization of themes and sub-themes

The themes were organized based on the objectives of the study which were consistent with the constructs of the TBP. A total of six (6) main themes and twenty-one (21) sub-themes were identified from the data. Five (5) main themes were derived from the theory used and one additional theme emerged from the data.

Table 4. 1 presents the details of the themes and sub-themes

Themes and Sub-themes

Major themes (Theoretical)	Emerged	Sub-themes	codes
1. Subjective norm (beliefs and perceptions)		a) Perceptions about Hepatitis B before professional training b) Personal belief of midwives on Hepatitis B c) Influence of superiors	**SUBNORM**
2. Attitude towards prevention of mother-to-child transmission of Hepatitis B		a) Positive attitude b) Negative attitude c) Neutral attitude	**ATTIMID**
3. Factors influencing Midwives practices towards the prevention of mother-to-child transmission of Hepatitis (Perceived behavioral control)		a) Knowledge on Hepatitis B b) Financial challenges of client c) Challenges with logistics d) Hepatitis B vaccine issues e) Protocols on Hepatitis B f) In-service training on Hepatitis B	**FACTMID**
4. Intention to prevent mother-to-child transmission of Hepatitis B		a) Preparation by midwives toward PMTCT b) Source of motivation to engage in PMTCT	**INTMID**

5. Practices towards prevention of mother-to-child transmission of Hepatitis B (behaviour)		a) Hepatitis B screening practices b) Hepatitis B management practices during labour and after delivery c) Pre and post-test counselling practices d) Hepatitis B referral practices	**PRACMID**
	6. Experiences of Midwives in PMTCT	a) Fear of contracting Hepatitis B b) Feeling of empathy c) Feeling of sympathy	**EXPMID**

4.3 Subjective Norms (Beliefs and perceptions) of midwives towards Hepatitis B infections

Subjective norms encompass the beliefs and perceptions of midwives as well as the influence significant others have on them and their practices. These beliefs and perceptions of midwives and that of their significant others (influence of superiors) will determine their overall behaviour and participations in Hepatitis B related practices and activities. In describing subjective norms, the following categories were generated; Personal beliefs of midwives on Hepatitis B, perceptions about Hepatitis B and influence of superiors.

4.3.1 Perceptions about Hepatitis B before professional training

In describing their perceptions about Hepatitis B, participants shared various viewpoints on the causes of hepatitis B. The Majority of the participants had the perception

that Hepatitis B was just like any other form of disease hence did not attach any cultural or spiritual belief to the cause of Hepatitis B except for one participant who had a different view.

One participant mentioned that before becoming a midwife she had her own perception on the cause of Hepatitis B which she linked to spiritual cause. She said;

> *Before I got to study about it, I was thinking it was one of those spiritual diseases that people get. Especially when you see them with swollen legs and feet but when I came into the world of health and studied, I saw that it isn't a spiritual something but a condition that can also be prevented* ***(Gifty).***

On the other hand, Precious and a few others expressed otherwise;

> *I think is just like any sickness. I don't see it as spiritual my opinion says since it has been detected it cannot be spiritual. Any spiritual illness in our beliefs will not be detected in the hospital so I believe if you came and it is tested then you will get the opportunity to go through the management process* ***(Precious).***

Katako also mentioned;

> *I don't think is a spiritual disease. I have never attributed any form sickness to a spiritual cause before* ***(Katako).***

4.3.2 Personal beliefs of midwives on Hepatitis B

Personal Beliefs of midwives about Hepatitis B determined if they engaged in activities which are aimed at preventing mother-to-child transmission of Hepatitis B. In view of this, most of the participants shared the belief that Hepatitis B is very infectious.

Agnes, a senior staff midwife shared the belief that;

> *When taking care of a very ill infected Hepatitis B patient the body fluids alone that you will be in contact with can make you acquire the infection. I have an example of a friend like that, she said a friend of hers was very sick she took care of her and later the friend died and they told her she died of Hepatitis B, since then she has tested positive for Hepatitis B (****Agnes).***

Gifty, also a senior staff midwife, further reported that Hepatitis B is very infectious. She claimed that;

if I, have it in my saliva and I spit and mistakenly it touches you and you don't wash your hands well and you use it on any part of your body, you can also acquire it. So, I think it is contagious ***(Gifty).***

Ortin who is also a senior staff midwife shared that Hepatitis B is very infectious, she said;

Yeah, it is very contagious I learnt you can even get it through sweat when a person sweats and you touch the person you can even get it yeah ***(Ortin).***

Furthermore, Boosua expressed that Hepatitis B is very infectious and severe as lamented below;

I see it to be severe because if someone is Hepatitis B positive and I have a cut and the person's blood gets into my blood stream I don't think It will spare me. I will get it so I see it to be severe. Even when you share the same cup with someone who has it you will get it that is the only thing I can say ***(Boosua).***

However, one participant expressed that she does not believe Hepatitis B to be severe;

*I wouldn't say it is severe because it doesn't deteriorate the person's health very fast so I would not say that. Even though we know the long-term effect can be fatal (****Anastasia****).*

4.3.3 Influence of superiors

There are several norms instituted by organizations under which midwives work. These norms may emanate from immediate supervisors, the head of departments, the Ghana Health Service and may or may not influence the practices of the midwife when it comes to PMTCT of Hepatitis B.

In describing the influence of superiors on PMTCT, most participants expressed that generally their practices are influenced more by norms and protocols. However, their adherence to these norms and protocols are not influenced by superiors.

With regards to influence of superiors this is what Kira had this to say;

Generally, our work is based on protocols so nobody will compel you to do what you have to do ***(Kira).***

She also mentioned that;

Definitely you will be questioned about it because is it something you have to do, there is a protocol you have to follow. So, per the outcome of whatever you are doing and it is realized that you are not putting in much effort to combat whatever you have to you will be questioned about it ***(Kira).***

Nana Yaa further mentioned that midwives work under protocols that guide their practice when she was asked if she experiences any external pressure from her superiors when it comes Hepatitis B and its related issues;

Yes, we do because as a midwife one of our aims are to make sure we have a healthy mother and a healthy baby, we have protocols when it comes to Hepatitis B clients, like clients who are positive. We have protocols that we follow in other for them to come out safely themselves and their baby ***(Nana Yaa).***

Although, Kakra on the other hand thinks that she does not really get any influence from her superiors to do what she is supposed to do, she said;

No, I don't get any pressure from anybody, nobody will penalize me but as a health worker you know that, that is what you have to do so negligence is wrong meaning your conscience will not serve you right ***(Kakra).***

In addition, another participant also shared that there is no influence of superiors or supervision from them to monitor whatever she does. She has this to say;

No because It's just a workshop that we've ever attended that they talked about giving the vaccine after delivery but I don't think they have taken it to be a serious issue. For instance, there is no book for us to record in whenever we give the vaccine, so we don't record it. If it is something that they will penalize you for, there should be a book for it so documentation will be done that so so and so also came with Hep B and that after delivery this has been done. So, I will not be penalized. They don't follow up ***(Boosua).***

4.4 Attitude of midwives towards the PMTCT

The attitude of midwives may or may not determine their involvement in Hepatitis B management and prevention. Midwives attitude in this study was categorized as negative, positive attitude and neutral towards pregnant women with Hepatitis B which will determine how they treat them when discharging their duties.

4.4.1 Positive attitude towards PMTCT

The joy of every midwife is to have a healthy mother and baby at the end of each pregnancy. Therefore, the majority of the participants expressed PMTCT of Hepatitis B is a good practice. They think PMTCT is very beneficial to both mother and babies by preventing babies from getting unnecessarily sick, preventing under five mortalities and hence reducing hospital visits. In addition, participant expressed positive views in their willingness to care for pregnant women with Hepatitis B. This is what Agnes had to share;

> *No, we treat all client the same, anyway we all use preventive measures when giving care, such as hand washing, wearing of gloves and so on. Even if you are HIV positive, we will still have to do our work the only thing is that you take extra precaution that is all (**Agnes).***

Katako expressed how important she think PMTCT therefore her reasons to care for pregnant women with Hepatitis B;

> *PMTCT is very essential because we can't let the baby have it, once you can prevent it why not? Why will you infect your baby with Hepatitis B which can be chronic and can cause the death of the baby just like any other STI/HIV so is very essential **(Katako).***

Precious also share similar views;

> *it is every midwife's dream and every midwife's wish that when she sees a pregnant woman the woman will deliver safely and then baby will be free from any preventable diseases. And I want her to deliver safely and baby to be healthy so that we will have under-fives been healthy and then growing into a healthy adult **(Precious).***

Davi also mentioned she does not stigmatize against her client

> *Where I work normally, it is like we have been educated against stigmatization, it is just like the HIV, they say we should not stigmatize. All that you have to do is to protect yourself well and then give the necessary care that you are supposed to give. So that is what they do, I have not seen any staff maybe running away from Hepatitis B or refusing to take care of a Hepatitis B patients **(Davi).***

4.4.2 Negative attitude towards PMTCT

Although, participants had positive attitudes towards PMTCT, they equally shared some negative attitudes towards PMTCT. Most of these negative attitudes were expressed behaviours such as excessively cautiousness when caring for pregnant women with Hepatitis B. They manifested these negative behaviours by doubling their protective clothing's such as gloves, speaking harshly and prompting their colleagues about the status of client under their care.

> *Some of us are exaggerate when it comes to wearing protective clothing. Some can wear three gloves yes; I have seen one before. You know normally we don't usually wear the boot but that day the person put on the boot, apron and wore about five (5) gloves, I was like how and she was like oy3 hepatitis B positive (she is hepatitis B positive)* ***(Ortin).***

Kakra gave an account of how she behaved when she was newly posted to practice;

> *When you come out of school like that with all the knowledge and you come to the field and you see somebody with Hepatitis B, you will be like eeeeiii this woman I have to treat her just like HIV patient. So, if you do not take care, you will just stigmatize the person, so it was not easy for me on my first time. I had to wear double gloves* ***(laughed)*** *each time I am attending to the client, I have to be very cautious but now even though I am cautious, I am ok psychologically* ***(Kakra).***

Precious also alluded with Kakra views by sharing similar statement;

> *Hmmmm we are humans and no matter how protected you are you are very cautious of things like that, so yes, I have seen midwives who are cautious, putting on extra gloves, telling other colleagues to be careful because she is this and that. Sometimes we are a bit harsh on them to try to get them to get the vaccine for the baby's protection. So that is when I have seen midwives being harsh but not when they are attending to them and delivering them, we deliver all of them* ***(Precious).***

Agnes also added how some of their colleagues will be prompted to be careful with certain client because they are Hepatitis B positive;

> *Interestingly, there are some cases when you start handling them immediately you will be prompted to be careful, she is this, she is that it happens because sometimes we are scared* ***(Agnes).***

4.4.3 Neutral attitude towards PMTCT

Few of the participants had neutral attitude towards PMTCT. They acted normally towards pregnant women with hepatitis B but mentioned their colleagues paid more attention to HIV positive pregnant women than Hepatitis B.

> *Funny enough when people who are Hepatitis B comes in labour to deliver, comparing them to those with HIV they treat the ones with HIV with some form of special care, not special care for the clients but for themselves. They can wear double gloves, put on mask, and wear all the protective clothing available. Meanwhile when it come Hepatitis B, I have never seen anybody paying so much attention to protective clothing like that, the only thing they are concerned about is HIV that is what I have realized. When the person comes in labour the first thing, they check is the HIV not hepatitis B. So mostly we can take care of the woman till like 24hours before we realize that she is Hepatitis B positive because HIV is what everybody is looking at* ***(Katako).***

Another participant shared a similar sentiment;

> *Hepatitis B is a condition that people don't fear as much as HIV that is what I think, so we see it to be normal like any other condition but that one rather is more serious than the HIV that we see. So, we treat them as normal that is how we treat them compared to a client that has HIV and you will see them behaving funny, so this one they treat them ok* ***(Patri).***

4.5 Factors that influence midwives' PMTCT (Perceived behavioral factors)

Perceived behavioural factors refer to the issues that encourage or inhibit midwives' ability to fully engage in PMTCT of Hepatitis B. Several participants stated their views in various ways**.**

4.5.1 Knowledge on Hepatitis B

Participants expressed various levels of knowledge on Hepatitis B, which also included some misconceptions about the causes and mode of transmission of Hepatitis B.

Katako mention that;

> *Hepatitis B I think, in my own opinion is a viral infection which can be acquired through body fluids, yeah that is the simple thing I can say about Hepatitis B. Yes, you can get it through body fluids, you can get it through saliva, urine, what I am not too*

sure about is sweat but I have not had the time to check whether sweat can really cause Hepatitis B or not, am not very sure ***(Katako).***

Contrarily, Gifty had this to say about the causes of Hepatitis B;

Okay, I know hepatitis B is an infection and it also affect the kidney Yeah and it doesn't make it function well that is what I know. I know that when you take in too much of NSAIDS those Paracetamol you take them rough rough and you do not take in too much fluids to urinate so that the kidney will be free you can contract it, that is what I know. ***(Gifty).***

With regards to knowledge on Hepatitis B vaccine and whether it was safe and effective participants share their various views. Most of the participants believed the vaccine was safe and effective while few had contrary views.

Commenting on Hepatitis B vaccination, one participant said she does not believe that the vaccine offers 100% protection;

So far, we all think that if you are vaccinated you are protected that is the mentality we have now. But I don't think it is safe as such but all we can do is to take our infection prevention serious by screening all our clients, and promote the education of Hepatitis B and let our client know more about Hepatitis B and how to take care of themselves. Well, the vaccine will help us but what if you did not get it at the right time? Although the vaccine will help, I do not think is 100% safe. So, me I think if we are able to educate the client and we also take good care of ourselves I think it is better than the vaccine ***(Obidi).***

Other participants had different views about Hepatitis B vaccination

Yes, I think the vaccination is safe because it helps them to be immune against the infection and reduces the rate at which the disease spreads. I think it is effective because per statistics by the disease control people, they can say if the condition is not spreading or the cases, we are recording is going up or is going down. But most people who are immune against the disease per statistics they are not being exposed to the virus ***(Kira).***

Further, with regards to knowledge on treatment options available for Hepatitis B pregnant mothers, most participant had limited knowledge on the treatment options available for pregnant women with Hepatitis B. To add, majority of them had no idea pregnant women with Hepatitis B can be on treatment during pregnancy.

Precious mentioned that;

*No, I don't know of any treatment option**.** The management hmmm I don't know the actual medication they take for that I have not gone through that but I know if you test positive, we do a further test to know which type you have. I said earlier on you are not given any treatment during pregnancy, so I think pregnant women are not managed on any medication (**Precious).***

Gifty also agreed with precious statement by saying;

*Well in pregnancy we don't treat, we don't give them anything it is after pregnancy and when mother weans baby that if there is any medication we give to treat **(Gifty).***

Some participants mentioned that pregnant women with Hepatitis B are not put on any treatment during pregnancy but rather treated after they had delivered. However, Kathy said otherwise;

*Yes, in the past we were putting them hepantivir then some also use acyclovir, but currently I don't know the treatment that they give them but there are a lot of liver supports for them It is a tablet; you take it in daily for 30 days so when it is done you go for another. It helps their liver, it helps to fight the infection although it does not, for the one that I saw it suppressed the infection to the barest minimal. So those with good immune system are able to fight the virus and the acyclovir as well can also be given **(Kathy).***

Participant had diverse views with regards to whether Hepatitis B was curable or not. Most of the participant thought it was not curable while few of them had different views;

*No, it is not curable I know it is managed. You will be on drugs but is not curable. I learnt they can only be managed with some lifestyle changes. They are not supposed to take certain foods like fats and they have to be on vegetables and fruits just to keep the disease from progressing to the next stage or something **(Anastasia**).*

Boosua had a different view she had this to share;

*I think it can be curable because a sister's daughter had it. She tested positive then she started taking some drug but I have forgotten about the name. She was taking it every day for a year she then tested and she was negative, she waited for six months and she tested negative again and she went for the vaccination **(Boosua).***

When other participants were sure of their position on whether Hepatitis B was curable or not Patri was not quite sure she said;

Sure, it can be cured, actually for it to be prevented I think it is but cured completely I have never seen anyone. I don't know any medication that can cure it completely but I

have heard that there is medicine that when you take it at early stage it can be cured but when you get to a certain stage, I think nothing can be done ***(Patri).***

4.5.2 Financial challenges of the client

Several participants mentioned how most of their clients are not able to perform their financial obligations when it comes to purchasing Hepatitis B vaccine and immunoglobulin for their newborns. Some other participants further added that the cost of Hepatitis B screening is also a source of financial challenge to some clients;

Katako shared her experience;

> *Okay, the number one challenge will be economic challenge because the immunoglobulin is very expensive, I once had a mother who couldn't even get the money for the immunoglobulin which was around 500 Cedis so the baby was just given the vaccine and I don't know how that one can work* **(Katako).**

Boosua also shared how these financial difficulties sometimes affect the administration of both vaccine and immunoglobulin, leading to the administration of vaccine only in some situations;

> *Some of the women have financial challenges with buying the drugs. The vaccines to be given to babies are expensive it ranges between 600gh to 800gh. So most at times, some cannot afford so what we do is we send them to the public health unit. You know, we have the immunoglobulin and the vaccine. The vaccine at the public health unit is free so they just give them that one to those who cannot afford the immunoglobulin so the challenges we have is about money (****Boosua).***

However, Precious shared her experience on how she handles these issues of financial difficulties regarding Hepatitis B screening;

> *The routine Lab is a package so they pay and everything is done for them. All the pregnant women we see here before we start seeing we know you can do the labs or not because they come with labs. But in the case of those who cannot afford we take them to the social worker I even have one case with the social worker, so the social worker goes with them to the lab and it's done for them so if somebody cannot afford then the person will not come in here but if you get here and you can't pay physical cash for the lab you go through the social worker. So, in that case I don't see that as a challenge* ***(Precious).***

Agnes also agrees with precious to a certain extent. She said;

No, we do the screening at the lab. It is part of the investigations they do at the lab, there are about four which is done by the midwives and it is not free. But for the pregnant woman, all the labs have been put together and the price reduced to 60 Ghana cedis for every pregnant woman so the cost involve is not a challenge. But it may be for others, but because all is put together and not separated that is what will make it expensive to others but if it is separated then I don't see it as a challenge ***(Agnes).***

4.5.3 Challenges with logistics

Almost all the participants expressed they had challenges with the availability of test kits to screen pregnant women for Hepatitis B.

Katako, one of the participants, mention how she had no idea of how the Hepatitis B test kits looks like;

The testing at the first visit, when it comes to HIV its free and immediately you come for the first visit, we test you for free because we have the logistics with us, we have the test kits but as for the Hep B we don't even know how to check it number one, we don't even have the test kits number two and then the client pays for it number three. So, a client who cannot pay for it may not be screened until they can pay ***(Katako).***

Similarly, Ortin mentioned she had no idea there are test kits available for the screening of Hepatitis B. She said;

*Yes, they go to the lab, is part of the routine labs they do for ANC****.*** *I don't even know there are test kits available, like the HIV? No, I don't know about it, I thought it is only done at the laboratory* ***(Ortin).***

Katako further lamented on how the Hepatitis B test kits can go out of stock leaving pregnant women stranded although they had paid for the screening to be done at the laboratory.

Sometimes there is a shortage of the logistics at the facility I mean the Hepatitis B testing kits, because some time ago for some months we were not having the kits. People who came to do the test, Hepatitis B was not done for them so if unfortunately, you get a late attendant someone who comes in her 36 to 37th weeks and the test was not done she will deliver and she won't know her Hepatitis B status ***(Katako).***

Ortin attested to what Katako narrated by saying;

Yes, yes sometimes the lab people will say we don't have the equipment to check the Hepatitis B so they don't do it, so we have to ask them to go outside and do it ***(Ortin).***

Although Boosua did not have any challenges with logistics she mentioned that there are no test kits available at the labour ward if she wants to screen someone who comes in labour and is a non-attendant client.

She claimed;

> *As a midwife I have my logistics to work and prevent myself with the boots are there the gloves are there. But We don't have test kits because as we speak now if a client comes in and we need to screen for malaria we have the test kits, if we have to screen for HIV, we have the test kits but not for Hepatitis B* ***(Boosua).***

Kathy lamented on the challenges with test kits and their effects on her work as a midwife;

> *test kits are one big source of challenge, it is the first source of challenge because all the test kits are at the laboratory and in case the laboratory technicians are not there or someone just comes in the second stage of labour, as with HIV we will do the test we have the test kits at the ward but with Hepatitis B you cannot really run it because you don't have it and you cannot go to the lab to tell them to come and take the person's sample before they deliver* ***(Kathy).***

4.5.4 Hepatitis B vaccine issues

Majority of the participants had issue concerning the availability of Hepatitis B vaccine for their clients. Most participants further expressed frustrations with arrangement of vaccines for clients since the vaccines are not stocked by the facility.

This is what Katako had to share when it came to issues concerning vaccines;

> *We don't sell the vaccines at the facility is a private person who sells them, some people will come and they have the money but because of the storage they still have to wait till when they deliver then we call the person to bring it. Because we cannot also give the money to the person what if they do not show up? So, we wait when she delivers then we call but then I was thinking what if one day we call the person and we don't get him but I learnt we have it now at 37 but we don't have it at our facility so that one is also a problem. The vaccines are not readily available (****Katako).***

Nana Yaa expressed similar sentiment, stating the effects of unavailability of vaccines on breastfeeding;

> *Where I am working the vaccines are not readily available at the labour ward, we call those who sell it and most of the time they are not on night duties, sometimes on weekends they are not on duty with us and you have to call and call. Sometimes they*

would not even get them during the weekend and with this the baby would be crying disturbing the mother, sometimes some mothers give up and then they breast feed the babies ***(Nana Yaa).***

In addition, Kakra had this to add;

Sometimes aside money, there are delays in getting the vaccine for the client because we cannot reach the sellers and sometimes, we have to ask the relatives to go to Korle-Bu to get and we know that by 72 hours the baby has to be vaccinated so if after that period baby has not still taking the vaccine, it is a big challenge ***(Kakra).***

4.5.5 Protocols on PMTCT Hepatitis B

Pertaining to protocols on Hepatitis B, most of the participants stated that they had not seen clear written guidelines and protocols on the management of Hepatitis B.

Agnes shared her thoughts on the importance of protocols and guidelines on her practice if made available;

some we don't know and we need to see a protocol or how we go about it, and even before we give the vaccine, we need some protocol from ANC up to delivery as well as discharge there should be a protocol for us to go through before make every child receive the vaccine ***(Agnes).***

She further added;

These few ones that we know is just on screening and if the mother is positive, you vaccinate the child that is all that we know. If there are other things involve, we don't know if all babies can take the vaccine or a baby whose mother is G6PD reactive or a baby who is G6PD reactive can also take it. We don't know if there are any contraindications when it comes to the vaccine. Also, we don't know any treatment available for the mothers who are positive to unlike that of HIV so we need protocols and workshop to guide us ***(Agnes).***

Obidi shared her views on how important it is to have written protocols available to guide practice especially when you are alone;

*Protocols also help, when you are alone and you get a case, the protocols will guide you on what to do at a time but if there are no protocols, no training we end up leaving them to and I think it won't help (****Obidi).***

Nana Yaa shared her sentiment on Hepatitis B protocol and how useful it will be to her and students

> *We do not have protocols around if protocols on Hepatitis B are available, even if student midwives come around and the Senior Staff is not there because the protocols are there the student midwife can also go through the protocols to care for the patient so the protocols are very important* ***(Nana Yaa).***

Precious agreed with Nana Yaa by stating how helpful the protocols will be;

> *Yes, because if there is a written protocol at least everybody knows this is the protocol and we all follow it, it won't be different ideas I see this person and I do what I feel is right because there is no written protocol to guide us, so if there is one it will help* ***(Precious).***

Even though Kakra mentioned she has seen protocols on Hepatitis B, she could not really tell what it entailed.

> *Even with the protocols, I have seen it but I haven't really gone through it so I can't really tell you what it was* ***(Kakra).***

4.5.6 In-service training on Hepatitis B

Concerning in-service training, majority of the participants expressed how they had never attended any form of training on Hepatitis B

Ortin had this to say;

> *No no because I have not gone for any workshop on Hepatitis B before so I do not have enough knowledge on it, it is just what I have heard and read I do not have enough knowledge* ***(Ortin).***

Kakra affirmed what Ortin said;

> *I will say I have moderate knowledge when it comes to Hepatitis B because as I said I have not gone for any workshop ever since I started working* ***(Kakra).***

Some participants also described the significances of Hepatitis B training on their practice

Precious shared her thoughts;

*So, if there are workshops if not me other colleagues will benefit because I have read and I have a little information about it what about someone who will not read and will see a pregnant woman and just say you will need injection for your baby. So, if we are really informed it will help us (**Precious).***

Davi shared the same opinion as Precious. She mentioned that a workshop is of great importance to the midwives to be abreast with new trends on PMTCT of Hepatitis B

*We need a training, a workshop for Hepatitis B as a midwife because it is very important that we know what to actually do, the treatment aspect of it especially because we do not have any protocol guidelines or any written protocol that this is guiding what to do when handling Hepatitis B patient **(Davi).***

4.6 Intentions to PMTCT

A midwives' intention whether to engage or not to engage in activities that leads to the prevention of mother-to-child transmission of Hepatitis B can be easily influenced by factors such as beliefs and perceptions of the midwives, attitudes, as well as factors within and outside their control. Intention was described by participant in terms of the things they put in place before they engage in PMTCT and their source of motivation

4.6.1 Preparation towards PMTCT

Some participants described how they prepare towards PMTCT. Davi mentioned that;

*So, first of all when she comes, I will ask her whether she is aware about her status. Some can tell you that they are not even aware so I will educate her then ask whether during the antenatal time she was educated on the vaccine that the baby is supposed to receive just after birth and we are supposed to give it to the baby before she can even breast feed. So, I will do all these checks. During delivery too, I will try as much as possible to make sure that they are financially ready because they have to buy it themselves. As soon as she deposits money, we can buy so that just after she delivers, we give the vaccine in other to prevent Hepatitis B to the baby **(Davi).***

Nana Yaa although agreed with what Davi said, she talked about how she gets her personal protective equipment ready before she conducts the delivery;

When the client comes to the labour ward, you will first go through the card. So, when you look through the antenatal card because of the labs she has done you will know that she is Hepatitis B positive so you will find out what she knows about it and you will educate her. After delivery she will not breastfeed the baby, we have to vaccinate the baby. So, after I will make sure my delivery instruments are ready, my PPEs are ready because I have to protect myself also though I have been vaccinated but I still

*have to protect myself, so immediately I will call the officers who sell the vaccine that we have a client that is if my client is ready or can afford for the vaccine (**Nana Yaa).***

Kira shared how she makes arrangements for vaccines;

*So, for such a client I will do the arrangement for the vaccine so that after the baby is born it can be given. Then take precautionary measures so that the baby will not be so much exposed to the mother's body fluids **(Kira).***

Anastasia added that;

*I will make sure that the instrument I am going to use during the delivery are well sterilized, then after delivery will make sure to decontaminate the placenta, the bed and the items. Also, I will encourage the woman to get the vaccine available by making sure we start calling the source from where we will get the vaccine, so that immediately the woman delivers we give the vaccine to the baby so that she doesn't go get discharged without the baby receiving the vaccine (**Anastasia).***

4.6.2 Source of midwives' motivation to engage in PMTCT

Several participants mentioned reasons why they want to take part in practices that prevents mother-to-child transmission;

*I want that Hepatitis B to reduce, even in the family because if one person has it in the family, and then the person is not aware of their status, he or she can spread it and it will be another thing. So, we do it to make the Hepatitis B in the community to come low. Hmmm I think it is important we do this because the innocent child needs not to be infected so when baby is born baby needs to be vaccinated before baby breastfeeds so that baby will not contract the disease and become infected like the mother **(Gifty).***

Another participant also stated why she engaged in PMTCT. She expressed her desire to reduce the number of hospital visits for babies born to Hepatitis B positive mothers;

*So, it is just to help mother not to transmit the infection to the baby just that because we will be happy to see a healthy baby, if baby is infected it means baby will keep coming to the hospital to be managed and taking care of. But if we tell them, it is preventable then they are always happy **(Precious).***

To add, Boosua had shared that she does these things to fulfil her professional obligation;

*As a midwife is preventive measures, we are talking of so we try to prevent and we treat. As a midwife we do not want it to spread so if we do not take measure, it means it will continue to spread so we have to make sure to tackle it from antenatal, delivery and postnatal **(Boosua**).*

Finally, Katako mentioned why she is interested in PMTCT

I feel the baby's immunity is low so if the baby is having it, the chance of the baby having the severity of the disease is higher than the mother. So, in my personal opinion that is what motivates me to make sure the mother gets the vaccines. That is one aspect of it, but the main reason is that I do not even want a baby to get Hepatitis B from the mother personally ***(Katako).***

4.7 Practices of midwives towards PMTCT of Hepatitis B

The practices of midwives towards PMTCT of Hepatitis B are very important. This behaviour (practice) may sometimes be influenced by attitude, subjective norm, some internal and external factors as well the intentions of the midwives. This theme reports the performance of midwives on the PMTCT of Hepatitis B. The behaviour of midwives was described based on the following categories;

Hepatitis B screening practices, Hepatitis B management practices during labour and after delivery, pre-test and post-test counselling practices, Hepatitis B referral practices.

4.7.1 Hepatitis B screening practices

This sub-theme described midwives' screening practices for pregnant women during antenatal services. In view of this, majority of the participants said they screen all their clients when they come for antenatal clinic.

Like just starting from antenatal we do the screening then ask them go to the lab to do Hepatitis B test so we screen every pregnant woman ***(Boosua).***

Kira alluded with what Boosua said;

Until I have screened, I will not know, so I screen all these women, every pregnant woman is screened for Hepatitis B they are given the general labs and are told what the lab entails ***(Kira).***

Kathy agreed with what her colleagues mentioned but added that the test is mandatory for every pregnant mother once you come for antenatal clinic.

They all go through screening and we have mandatory screening that is done, if Hepatitis B is not picked, you are supposed to go and do it and bring it ***(Kathy).***

Although, Katako mentioned that they screen these pregnant women she added that they sometimes go through some challenges which sometimes affects their screening

> *Yes, we do, we screen every pregnant woman for Hepatitis B.I write it for them to go and do it at the lab we do not do it in our consulting rooms, we write all the labs together for them to go and do with the exception of HIV, but for some time when I used to be at the ANC the lab did not have the test kits* ***(Katako).***

4.7.2 Pre-test and post-test counselling on Hepatitis B

Participants shared diverse views on the practice of pre-test and post-test counselling for Hepatitis B. Some participants shared that they do engage in pre-test counselling whiles others said they do not, but rather focus on post-test counselling when the results are in.

Kakra mentioned that she does not engage in any form of pre-test counselling for her clients;

> *It is a routine test and it is not like something done one on one so there is no form of pre-test counselling but it is part of the health education that we give them so we propose a day that we will talk about lab investigation, then we hammer on each investigation that needs to be done and the reason of which the client is to do* ***(Kakra****).*

She further added that;

> *If the person is positive, we tell them they are positive in a proper manner and then we educate them on the need for the infant to take the vaccination just to prevent the baby from getting the infection. Also, we tell them they have to be coming for subsequent visits according to their schedule to come. In addition, their husbands also need to be tested so we tell them to find a nice way to tell their husbands or partners to also come and test. We get them informed that it can be treated, for that matter after the delivery they can go in for the treatment so that during their subsequent deliveries, we do not have to vaccinate the baby again and even knowing that this condition has a bigger complication on their life* ***(Kakra).***

For those who test negative this is what she said;

> *For those who are negative, most of the time we do not really pay attention to them unless the person asks you about the result, then you have to now talk to the woman about it* ***(Kakra).***

Nana Yaa however stated that they give some form of education prior to testing but not an actual pre-test counselling;

*We give them the education before they go for the test. As I said at the antenatal, we give them a talk on all the labs they will do before we ask them to go for it. It is not only about the Hepatitis B but all the other labs too for them to get more education on them**.** We also, we give the post-test counselling because we gave the pre-test counselling before the test. We educate them that now that they have found out that they are positive, we will educate them on their diet, their personal hygiene, the signs and symptoms that they have to look out for then we prepare them towards the vaccination of the baby too**.** And for those who test negative, we tell them though they have tested negative, it does not mean that there is no way they could get infected or contract the virus. We still emphasize on the education we give them; we can even tell them to also let their partners come and we test for them **(Nana Yaa).***

Kira on the other hand shared that she does not give any specific pre-test counselling to her client because Hepatitis B screening is not done in isolation but rather part of the routine antenatal test done at the antenatal clinic.

*Pre-test no, usually because the Hepatitis B is not separated alone in a way unlike the HIV how we do the HIV testing that one you will counsel her before you do it but Hepatitis B is added to the normal routine test so for the pre-counselling we do not do it on Hepatitis B before the woman go for the test **(Kira).***

She added that;

*The Hepatitis B screening is included into the routine test so it is when she comes back before you will be able to counsel her**.** We tell the client that this is the result and the result is saying that you are Hepatitis B positive but that is not the end of life so we have a vaccine so that you do not infect your baby, you take care of yourself, eat well to boost your immune system. But as a midwife, this is what we do in connection with the post-counselling. And for the negative we do not usually hammer on it, Ideally, we need to tell them although you are negative so you have to take care of yourself but we usually ignore that part because it is not positive **(Kira).***

Obidi mentioned;

*No, we do not do any pre-test counselling what we do is madam you will do some labs (laughed) unless the person comes and is positive that is when we provide counselling on Hepatitis B, we have been telling them that the routine labs that she did, Hepatitis B is reading positive and how it is acquired. Maybe you can get it through having contact with infected persons, having sexual intercourse and using sharps and others things. Also, it can be transmitted through birth, so the person will start thinking and can say my mother was having it or my dad. So, you encourage them that when they deliver there is a vaccine for the baby that will protect them from acquiring the infection (**Obidi).***

4.7.3 Hepatitis B management practice during labour and after delivery

This category described the actions of midwives during labour and after delivery.

Participants shared their various views on what they do for these women when they come in labour, how they manage their labour and what they do after the labour process has ended.

> *If in labour and the mother is positive, we manage her like any other woman in labour with a partograph. we only make sure the baby takes the vaccine before breastfeeding at birth so that baby will not contract the infection from the mother. The Hepatitis B vaccine and the Hepatitis B immunoglobulin is given within the first 24 to 72 hours after birth and after delivery their things are well disposed so that no one comes into contact with it* ***(Gifty****).*

Similarly, Precious shared the same views as Gifty that they treat all women the same

> *We manage them as a normal person we do not discriminate because they are normal human beings like us and most of us are vaccinated so we go all out in taking care of them****.*** *As I said earlier on, we have to monitor their labour well so that immediately we detect any deviation we follow the protocol by hastening the delivery so that complication will be minimized. We do not give unnecessary episiotomy we just guard the perineum well. But when it is necessary to give episiotomy, we give it timely so that both mother and baby will be safe* ***(Precious).***

Although, most participants had similar views to share, there were some diverse views as to whether they artificially rupture the membranes of these women or not as a means to reduce the risk of mother-to-child transmission (MTCT).

Precious mentioned that;

> *During the delivery mothers with Hepatitis B, we do not artificially rupture their membranes we leave them intact till they can deliver normally or even if it breaks then baby is almost coming out so baby doesn't stay long to be at risk of getting infected (****Precious****).*

This was Obidi's take on how she manages women with Hepatitis B in labour;

> *Well first of all you will protect yourself by putting on your gloves and most at times allow the woman to go through labour and limit your VEs as much as possible, you don't do VEs unnecessarily and manage the woman on a partograph to detected any abnormality or delay that may occur. You also avoid routine and early rupture of membranes you allow everything to go successfully by it itself that is it****.*** *After delivery we normally decontaminate all the instrument and sterilized it as such. We also tell the mothers not to breastfeed till the babies take the vaccines* ***(Obidi).***

However, Katako had a different view;

> *For my personal point of view, the measures we take during delivery like wearing protective clothing, I take it for every client because you may never know and sometimes even the labs may be wrong so I take precautionary measure for everybody not necessarily for Hepatitis B clients or not. Yes, we rupture their membranes to but we don't do that for HIV clients. But for Hepatitis B we have not had any lecture that we should not artificially rupture their membranes in labour or not so we rupture their membrane like any other normal labour process* ***(Katako).***

Agnes shared a similar view, stating that they do rupture membranes artificially but they do it when the need arises;

> *No, we do not avoid doing artificial rupture of membranes (ARM) for them; if they need it, we will rupture it we don't say because she is Hep B positive, we will not rupture her membrane* ***(Agnes).***

Participants shared their practices on how they manage these women after delivery. Majority of the participants mentioned that these women go through the normal post-natal services like every other client

Katako mentioned;

> *They go through routine care, their vital signs are checked if it is normal, and if the baby is breastfeeding well and if the baby has taking the immunoglobulin, we write it and if it is only the vaccine to, we write in their folders and that is all and they continue with routine postnatal visits. But I don't know if there are some medications given to the babies after the vaccination neither do, I know any for the mother* ***(Katako).***

Agnes further mentioned that no special treatment is given to these women during the post-natal period;

> *We manage them together with other babies, after they have taking the vaccine that is Hep B immunoglobulin and vaccine intramuscularly on the shoulders. No, we don't do any other thing for them; they go through normal postnatal and continue their CWC* ***(Agnes).***

Kakra, who works at the post-natal unit further shared practices in terms of follow up care.

> *At the post-natal unit what we do is to examine the baby from head to toe to be sure that the baby is not having any abnormality and on their third visit we also examine the baby, normally such babies show signs of jaundice that is yellowish discoloration of their eyes and then their skin, so we see to their cord to be sure that the cord is not*

infected. Also, with such special cases after vaccination we have to let the woman understand that there is a repeated dose at six weeks that the baby needs to take and their information and contact details are given to the public health nurses to follow up in their homes. But we do not let them take any test to be sure that the baby is fine or the baby is not having any Hepatitis B but I think it is a good idea that maybe after taking the full course the baby has to be tested to be sure that the baby is not having Hepatitis B ***(Kakra).***

4.7.4 Hepatitis B referral practices

Participants cited their various views on whether they refer these women at any point during their care. Some participants stated they refer these women while others mentioned they do not.

Kira mentioned that although she refers these women to see a doctor after delivery, she does not receive any form of feedback from them;

*After she delivers, we refer her to see a prescriber at the OPD then she takes it from there. But my problem is that we don't get a feedback after they have been seen at the OPD so that is the problem so I don't know of any mother who is on treatment after she delivers (****Kira****).*

Davi mentioned she refers these women to the public health unit to seek further care;

we refer them to the public health unit. We make sure that they receive the vaccines. I could remember I had one client like that, she delivered so we refer her to the public health unit so later on we communicated so what she told me was that they have been given schedule to be coming to check on the baby and herself. She said the husband also checked but he was negative so as time goes on, they will give the baby some schedule to come like the beginning and then the six-month, one year that is what she told me, that is the monitory they have been doing for her ***(Davi).***

Boosua further stated that they do not refer the client to any other unit after they make sure the baby has received the vaccination after birth;

No no to help this your work I don't have to tell lies we don't refer any woman to anywhere. What we only do is that we document that this vaccine has been given we put the batch number there, date and the vaccine expiring date. We are only doing this after postnatal they go to the CWC for other immunizations so that when the look in the book they will know baby took Hep B vaccine so that they will continue ***(Boosua).***

Precious shared a similar view as Boosua she said;

I haven't sent anyone postnatal mother to go see a doctor based on that, I think you have brought it up so I think now we have to be doing things like that. Because mostly after seeing them through labour and postnatal that is it we don't follow up unless the mothers who still remember and knows the importance will come and remind you of what you said about treatment so such people you take them to see a doctor ***(Precious).***

4.8 Experiences of midwives

Experiences of midwives was an emerged theme. Participants shared various experiences on how they felt, and what they go through when caring for women with Hepatitis B. These experiences have been classified under three sub-themes which are; fear of contracting Hepatitis B, feeling of empathy and feeling of sympathy.

4.8.1 Fear of contracting Hepatitis B

Participants shared their different opinions about fears of contracting Hepatitis B infection. Some mentioned they had fears while others did not have such fears.

Kira shared her experience;

Honestly the first time I came into contact with a Hepatitis B case I was a little bit scared even though I was in gloves and I knew the precautionary measure I needed to put in place but psychologically I was still scared. Because sometimes there are holes in the gloves we wear and if sometimes if you are not careful you can get a needle prick when suturing such clients. In the initial stages I was scared but with time I got used to it ***(Kira).***

Precious described how she felt while nursing Hepatitis B positive women;

I was a bit scared because I have not read so much about it, I wasn't well informed about it all I knew was it was a disease that causes infection of the liver. I was scared for the baby I was always like if this baby gets infected what will have happened to this baby, will this baby stay long and what will happen to this baby so with that I was a bit unconformable but when I read more when I delve more into it I realized it is manageable and when the mother understands and is able to provide the vaccine and the immunoglobulin everything will be ok. So, me being informed I was relieved ***(Precious).***

While Kira and Precious had fears of being infected Anastasia shared a different opinion;

No, I wasn't scared, because I mentioned earlier on it is not a contagious infection so if you are testing you just protect yourself, know the means that you have to use so that you don't get it from an infected person so I wasn't scared ***(Anastasia).***

Katako shared same sentiment as Anastasia;

> *Hmm I didn't feel anything because I have been vaccinated against it so I felt a little bit protected against it. No, I wasn't scared because I have been vaccinated; I have never been scared of it* ***(Katako).***

4.8.2 Feeling of empathy

Participants shared how they felt towards persons living with Hepatitis B

Agnes said;

> *The first time I saw a result of someone who was infected with Hepatitis B, I felt so empathetic for the fellow because everybody wants to live a healthy life and you are pregnant with this infection you think you will infect your child* ***(Agnes).***

Ortin shared her views;

> *Sure, I am worried, because when a mother is a having Hepatitis B sister it is difficult (sad face) because the person is a mother, she has children and this disease is something that can be transmitted through fluids and other things. I may be eating and my child will want to eat and my hands or the spoon will be wet with my saliva which may contain the virus, I may try to feed my child with this same wet hands or spoon containing the virus and unfortunately, I feed and the child comes into contact with virus in the saliva and something happens hmmm sister is not easy I may die and my child to may die* ***(Ortin).***

Kathy lamented how she felt towards clients living with the disease;

> *mother dying leaving children is not something pleasant, mother having it is not easy, you can't cook for children you can't take good care of the family, you are always sick hmm sister is not easy (****Kathy).***

4.8.3 Feeling of sympathy

Participants shared various emotions such as worry, pity and sadness about their experiences with pregnant women with Hepatitis B.

Gifty shared how sorry she felt;

Hmm in fact I felt sorry because that person I came in contact with was a mother of three. So, I felt sorry I asked her if she had the children and her husband living with her and she said yes, so wrote labs for them to go and do because it will be very sad if all of them should contract this disease so I felt very sad. I had to encourage and reassure her; I had to also educate her on the things to do so that she won't spread the infection to the other family members who are closer to her ***(Gifty).***

Nana Yaa said she was worried about the situation;

Hmmm I was sad and very worried because we care for two lives and for this innocent baby to get the infection it is not fair. And sometimes we know some of these clients cannot afford the vaccination due to this if you do not take care, they will not even come to the clinic again, by the time you realized they are in labour ***(Nana Yaa)***.

4.9 Summary

The study findings revealed that all the participants were involved activities that prevents mother-to-child transmission of Hepatitis B such as health education, hepatitis B screening, and hepatitis B vaccination. The study revealed beliefs of participants about Hepatitis B. Participants shared various beliefs about hepatitis B contagiousness and severity. Participants also shared their perceptions about Hepatitis B and majority of them did not link the infection to any spiritual cause. The study also, discovered that influence of superiors had no effect on these participants to encourage them to engage in PMTCT but were more largely influence by institutional norms and protocols.

The attitude of midwives towards mothers who were living with Hepatitis B were both positive, negative and neutral. Midwives exhibited positive attitudes by caring for pregnant women with HBV. In addition, the study found out that some of the participants manifested some negative behaviours such as wearing of double protective clothing, being harsh and excessively cautious when dealing with women who are Hepatitis B positive. Some midwives were of the view that hepatitis B is just like any other infection hence treated every client the same but they admitted that their colleagues will behave differently if they were caring for HIV positive mothers.

Perceived behavioural control was very significant in the study since all the participants engaged in PMTCT of Hepatitis B. Participants shared various factors that influenced their involvement in PMTCT activities such as knowledge about Hepatitis B, issues with logistics, issues surrounding Hepatitis B vaccine, financial challenges on the part of the patient, issues with Hepatitis B protocols and issues with training on Hepatitis B. Most of the participants had a good level of knowledge on the causes and mode of transmission of Hepatitis B but had some difficulties with knowledge on treatment options available for women with Hepatitis B. In addition, majority of the participants lamented on how financial difficulties on the part of the pregnant women affected their ability to vaccinate babies born to Hepatitis B positive mothers. Furthermore, while most of the participants had knowledge on the importance and efficacy of Hepatitis B vaccine, a few of them had the perception that the vaccine does not provide a 100% protection. Some of them also shared some of the difficulties they encountered in securing Hepatitis B Vaccines for newborns who needed it. This they said was due to the fact that the vaccines are not readily available or stored in the facility. Also, majority of the participants expressed how their work is based on written protocols but further stated that they had challenges with the availability of Hepatitis B protocols to guide their practice. Almost the entire participant lamented on how they had never attended any form of training on Hepatitis B since they started working. A situation they expressed as worrisome.

Another important finding was the intentions of participants to engage in PMTCT. These participants had several intentions why they were involved in PMTCT of Hepatitis B which they shared as their preparation towards PMTCT and their source of motivation. Some of the participants mentioned that their source of motivation was to have a healthy baby and mother at the end of each care and to reduce the rate of Hepatitis B infections whiles others are just fulfilling their professional obligations.

Finally, findings on the practices of these participants on prevention of mother-to-child transmission were discovered. The findings suggested that most of the participant screened all pregnant women for Hepatitis B at the antenatal clinic which is the norm. The findings of the study revealed that although midwives screen pregnant women for Hepatitis B, not all of them provide these women with any form of pre-test counselling but rather focus more on the post-test counselling after the pregnant woman has tested positive. Further, the findings showed that participants had conflicting practices during the management of labour for women who are Hepatitis B positive. Whiles some of them engage in artificial rupture of membranes, others do not but wait for the woman to rupture membranes spontaneously. Findings also suggested that these women and their babies undergo the normal postnatal services available for every woman. One major finding was how some participants either refer these women for follow up services or leave these women and their babies to their fate.

The experience of these participants was found to be an important factor in the findings of the study. Most of the participants shared how their fears of contracting the Hepatitis B infection affected them. They also added how empathetic and sympathetic they feel towards these women living with Hepatitis B. For instance, some shared how they wish they could be of help to these women especially in getting them some form of assistance with the purchasing of the Hepatitis B vaccine which they mentioned was expensive. Some of them further suggested that it will be very helpful if the government can assist with free vaccines.

CHAPTER FIVE

DISCUSSIONS

Presented in this chapter, is a discussion of the findings of the study. The discussion is centred on the main themes and sub-themes as presented in chapter four.

5.1 Demographic characteristics of participants

A total of 14 midwives participated in the current study. The midwives who participated in this study were between the ages 29-50 years with thirteen of them being married. Karami, Farokhzadian, and Foroughameri (2017) Stated that there is a relationship between marital status of nurses and their professional competencies. Although, this relationship may be influenced by other factors such as personal, socio-economic status and cultural issues. They further added that married nurses tend to have higher professional competencies than unmarried nurses. However, in this study, participants did not mention any effect of their marital status on their practice. In addition, the midwives in this study had 3 to 14 years working experience just as reported in previous study that nurses with the work experience over 15 years had higher professional competency than others Karami et al. (2017). Although the study reported higher professional competency of more than 15 years, this current study did not reveal any substantial effects of participant's work experience on their professional competencies because of the qualitative nature of the study.

5.2 Subjective Norms (Beliefs and perceptions) of midwives towards Hepatitis B infections

The current study revealed the perceptions and beliefs of midwives regarding the care of pregnant women infected with Hepatitis B. The study established that the beliefs of midwives influenced the care they provided to pregnant women infected with Hepatitis B. The beliefs of the midwives in this study focused on their own personal beliefs about

Hepatitis B and their perceptions about Hepatitis B before their professional training as well as influence of superiors on their practices. Concerning the personal beliefs of midwives regarding Hepatitis B, majority of the participants in this study were of the view that Hepatitis B was contagious and severe as perceived by participants in previous studies by (Adjei et al., 2019b; Alshammari et al., 2019; Hassan et al., 2016b). Contributing to these beliefs is the perception that Hepatitis B can be transmitted through casual contact such as touching, sharing of utensil with people living with Hepatitis B (PLWHB) and through body fluids such as sweat. These seems to explain why some midwives are careful when caring for pregnant women with Hepatitis B.

Participants in this study shared their views concerning what their perception about Hepatitis B was before they started their professional training as midwives. Although some previous studies reported perceptions about Hepatitis B in Ghana, most profound perceptions in that study were the supernatural causes of Hepatitis B (Adjei et al., 2019a, 2019b). The majority of the participants in this current study had a contrary view and did not perceive Hepatitis B to be caused by any spiritual forces due to their exposure to information from the internet and other media outlet prior to their formal training. This is mainly because the study participants are not patients living with Hepatitis B hence have different orientation.

Furthermore, participants in this study had a belief that their superiors at work could have influence on their perceptions and job performance in relation to practices that prevent mother-to-child transmission of Hepatitis B. Midwives practices are guided by protocols and the norms laid down by their superiors and it is interesting to note that these are influential factors in their practices as similarly reported in the literature (Jansson & Forsberg, 2016; Veeramah, 2016). However, these midwives mentioned that superiors had little impact on their practice. In addition, this current study reveals that participants experienced little or no supervision when it comes to their practices that PMTCT of Hepatitis B. Meanwhile, existing

literature has emphasized the importance of clinical supervision by superiors on clinical practice in order to improve the quality of health services provided, prevent burnout, increase professional competence, and provide the opportunity to evaluate clinical and cultural practices (Blishen, 2016; Nordbøe & Enmarker, 2017). Also, a study by Gera et al. (2019) highlighted the importance of supportive supervision on service delivery. On the contrary, findings of this current study suggest that although midwives' practice are guided by laid down protocols, their practices towards PMTCT of Hepatitis B are not supervised.

5.3 Attitude of midwives towards PMTCT of Hepatitis B

The feelings and thoughts of midwives may predict their attitudes toward pregnant women living with Hepatitis B. This current study revealed actions that midwives exhibited towards pregnant women with Hepatitis B. Depending on how these actions were viewed; midwives' attitudes were seen as positive, negative or neutral. The findings of this current study suggested that midwives who understood the importance of PMTCT displayed positive attitudes towards pregnant women who were Hepatitis B positive. Majority of these midwives correspondingly exhibited positive attitudes which reflected in their willingness to take part in activities that ensured PMTCT such as screening, health education and vaccination. These positive attitudes were reported because these midwives felt protected by the preventive and precautionary measures such as the wearing of protective clothing when caring for pregnant women with Hepatitis B. Similarly Scheun et al. (2019) in India report on that although health care workers display some stigma towards people living with Hepatitis B, there was no form of resistance to care for people living with HBV. Likewise, Paul et al. (2017) in Yaoundé reported good attitude which was explained by the good knowledge the participants had on complications of HBV which drives them to prevent the infection. These findings are not different from findings reported among nurses and midwives in Vietnam, Khartoum, Sudan and South Western Cameroon (Ishimaru, Wada, Hoang, et al., 2017; Mursy & Mohamed,

2019; Ngekeng et al., 2018). These seems to suggest that a positive attitude such as willingness to care for pregnant women living with Hepatitis B by midwives may encourage pregnant women to feel safe, attend antenatal clinic and reduce mother-to-child transmission of hepatitis B.

Contrastingly, some participants demonstrated negative attitudes towards pregnant women with hepatitis B. These negative attitudes by these participants were manifested as excessive cautiousness and being harsh whiles giving care to pregnant women with Hepatitis B. The negative attitudes identified include wearing of double protective clothing such as gloves when attending to client they know are Hepatitis B positive. These findings were reported in Ghana previously where participant where excessively cautious and breached confidentiality when caring for people with hepatitis B (Adjei et al., 2019b). Likewise, Scheun et al. (2019) in India reported negative attitudes by health care workers towards hepatitis B infection which manifested as excessive cautiousness during procedures such as blood transfusion and sample taking. However, the midwives in this current study did not avoid or postpone their duties, engaged in task shifting or hesitated when rendering care to pregnant women with hepatitis B as reported previously (Adjei et al., 2019b; HassanpourDehkordi et al., 2016) study. Several Studies have reported that health care workers are more susceptible to HBV infection than the general population (Mueller et al., 2015; Muvunyi et al., 2018; Ogundele et al., 2017; WHO, 2019b). This could be the reason why midwives in this current study exhibited attitudes such as excessive cautiousness and exaggerated use of excessive protective clothing such as gloves due to fears of getting infected with Hepatitis B. These behaviours are consistent with the findings by Almutairi, Almutairi, Alsugair, Alseraikh, and Almutairi (2017) in Saudi Arabia .

These negative behaviours such as the over exaggerated use of protective clothing by midwives may be interpreted by pregnant women as discriminatory and can influence their

willingness to seek care and continue care at the antenatal clinic and eventually influence the impact of PMTCT. Finally, the study further revealed that some midwives breach confidentially of pregnant women with Hepatitis B by sharing their hepatitis B positive status with others who may or may not be directly involved in their care as previously reported in Ghana by (Adjei et al., 2019b). The principles of confidentiality are what reinforces the trust between patients and health care workers (Raut, 2017). Therefore, there is the need for midwives to hold the principles of confidentiality high so that patients will feel safe and encourage a lot more pregnant women with Hepatitis B to seek care which will eventually improve their quality of life.

Furthermore, few of the participants had neutral attitudes towards pregnant women with hepatitis B. They narrated that they saw Hepatitis B to be a normal infection hence this group of midwives did not treat pregnant women with Hepatitis B differently. Meanwhile it is possible that such midwives with neutral attitude were in a state of ambivalence. However, they stated that their colleagues pay more attention to HIV/AIDS than Hepatitis B and will behave differently because they fear HIV than HBV. This fear of acquiring HIV by health workers was also documented in Southern Africa and Vietnam (Engelbrecht et al., 2020; Ishimaru, Wada, Huong, et al., 2017). Furthermore, participants in Scheun et al. (2019) study reported that HIV has created more fears than HBV in India.

Fear of getting infected may influence midwives to put up discriminatory attitude towards pregnant women with Hepatitis B which may affect the quality of care given. It is therefore very paramount that midwives are equipped with the needed education and resources to champion the agenda of PMTCT and eventually HBV elimination by 2030.

5.4 Factors influencing Midwives practices towards PMTCT of Hepatitis (perceived behavioural control)

The participants in this study reported several factors that either facilitate or impede their practices towards PMTCT of Hepatitis B. These include knowledge on hepatitis B, financial challenges of client, and challenges with logistics, Hepatitis B vaccine issues, and protocols on Hepatitis B and In-service training on Hepatitis B

As part of their knowledge on practices towards PMTCT these midwives had varied knowledge regarding hepatitis B infection including what causes Hepatitis B, the mode of transmission of hepatitis B, treatment options available and hepatitis B vaccination. Majority of the midwives in this study believed Hepatitis B is caused by a virus and transmitted via body fluids but some had misconceptions about the mode of transmission of Hepatitis B. Some of them believed that sweat was a medium for transmission which was contrary to what Schillie et al. (2018) documented that sweat is not a medium for hepatitis B transmission. In addition, majority of the midwives in this study were not aware pregnant women with Hepatitis B can be treated with nucleoside analogues based on their viral load during pregnancy. Meanwhile, there are available treatment options for hepatitis B positive pregnant women as reported by Terrault et al. (2018) and WHO (2017b). Furthermore, Agarwal et al. (2017) in their clinical practice guidelines on the management of hepatitis B virus infection treatment of high viraemic mothers with nucleoside analogues such as entecavir, tenofovir alafenamide is recommended. Similarly, inadequate knowledge on treatment options of pregnant women with Hepatitis B was reported among HCWs in rural Fatick, Senegal (Djaogol et al., 2019) . In Asia, HCWs often do not know there are available treatment for HBV, hence the link between testing and treatment and the linkage to care is poor (Wait et al., 2016). Although midwives in Ghana may not be in the position to prescribe drugs for HBV positive mothers who need treatment,

knowledge on the available treatment options will allow midwives to act as advocate for pregnant women who need linkage to care.

However, majority of the midwives in the study had knowledge on availability of Hepatitis B vaccination and had confidence in the safety and efficacy of hepatitis B vaccine for the prevention of mother to child transmission of Hepatitis B. Nonetheless, generally participants had some inconsistencies in their knowledge level with regards to mode of transmission, treatment options on Hepatitis B as reported by several studies in Ghana, Nigeria and South China (Adjei et al., 2016; Afihene et al., 2017; Bello & Musa, 2016; Chen et al., 2018). This seems to be disturbing because midwives who are the first point of contact and source of information for these pregnant women may not be knowledgeable enough to assist with the right information and education. Furthermore, pregnant women with Hepatitis B may miss the opportunity of getting treated if midwives have inadequate knowledge especially on treatment options available hence cannot advocate for these women if eligible for treatment. This is very essential in reducing their viral load, MTCT and prevents complication associated with HBV.

In addition, participants in this study were of the notion that financial challenge served as a major obstacle towards PMTCT of Hepatitis B. According to these midwives, most mothers cannot afford the cost for the hepatitis B birth dose vaccination prescribed for babies born by mothers with hepatitis B. Furthermore, some pregnant women may not be able to afford the screening fee since screening of HBV has been added to routine antenatal screening which has been subsidize by the NHIS yet pregnant women pay a little token for the routine screening. The midwives believe that this can be some of the reasons that may prevent mothers with Hepatitis B from seeking health care and vaccinate their newborns. This finding agrees with studies in Senegal and Ghana which revealed high cost of hepatitis B screening and vaccination (Cheng et al., 2015; Djaogol et al., 2019). Paul et al. (2017) in Cameroon similarly

reported high-cost of hepatitis B screening and hepatitis B immunoglobulin. The high cost of Hepatitis B vaccination may hinder the success of PMTCT. This is because birth dose vaccination for HBV has not been implemented in Ghana yet as done in Nigeria, Namibia, Gambia, Botswana and Sao Tome and Principe (Moturi et al., 2018). Also, the hepatitis B birth dose vaccination for babies born by mothers with Hepatitis B is not covered by NHIS in Ghana, hence the huge financial burden on pregnant women. These financial challenges may cause a lot of babies born by mothers with hepatitis B to be discharged from the hospital unvaccinated.

The study further ascertained there are challenges with availability of some logistics such as hepatitis B test kits for screening could also hinder the PMTCT of hepatitis B. According to the midwives they have not seen HBV test kits before, they usually refer these pregnant women to go to the laboratory where screening is done per their request. Further, they stated that sometimes there are shortages of these test kits at the laboratory and the non-availability of these test kits at the labour wards especially for the screening of non-attendants who may come in labour. These challenges may prevent some mothers from being tested thereby increasing the risk of babies born by mothers with hepatitis B virus from contracting the infection. These challenges were also documented by studies in South Western Uganda (Mugisha et al., 2019) and rural Fatick in Senegal (Djaogol et al., 2019) where there were problems with diagnostic resources. Other studies in Yaoundé, Cameroon reported on the lack of the simple, reliable diagnostic tests, non- availability of diagnostic test and other virological test on HBV (Chabrol et al., 2019b; Paul et al., 2017). Shortage of these test kits may prevent pregnant women from being tested early in order to put timely measures in place towards PMTCT of hepatitis B.

The participants of this current study further reported difficulties in getting access to Hepatitis B vaccine and immunoglobulin for their clients. This is because the vaccines are not stored in the facilities where they work hence not readily available. The vaccine and

immunoglobin are acquired through middle men who sell the vaccine to these clients upon request by the midwife. However, these middle men may not be reached or may not be able to deliver the vaccines on time when the need arises. A study by Thio et al. (2015) identified difficulties with obtaining and delivering the monovalent HBV vaccine and immunoglobins in low- and middle-income countries suggesting that access to Hepatitis B immunoglobulins is problematic in these sub-regions. In addition, unavailability of vaccines, limited vaccination hours, lack of institutional mechanisms to deliver vaccine at birth, vaccine out of stock, high cost of vaccines and poor documentation were found to be important factors hindering vaccination at birth in India (Gera et al., 2019; Taneja et al., 2015). The difficulties in obtaining Hepatitis B vaccine and immunoglobulin may affect the timely administration of the vaccine to newborns of HBV positive mothers which hinders the goal of PMTCT.

Implementation of PMTCT of Hepatitis B was also found by participants of this study to be influenced by protocols on Hepatitis B. Majority of the participants recounted that there are no written protocols in their facilities regarding the PMTCT of Hepatitis B. This, according to the participants affects their practices of PMTCT. Therefore a study done in five countries in Africa reported the absence of standard clinical guideline for the management of hepatitis B and lack of written guidelines to standardize Hep B birth dose implementation at health facilities (Moturi et al., 2018) . Meanwhile , available hepatitis B testing and treatment guideline by the World Health Organization (WHO, 2017b) indicate that individual countries can adopt and implement to suit their unique situation. It is therefore very important that policy agents of the Ministry of Health/ Ghana Health Service develop guidelines on PMTCT and make them available to guide midwives' practice to improve the PMTCT of hepatitis B.

Furthermore, the current study revealed that midwives did not receive any in-service training on mother-to-child transmission of hepatitis B. Participants in this study attributed the inadequate knowledge to the lack of continuous professional development on PMTCT.

According to the participants the little knowledge they have is what they read on the internet. These findings are in line with findings of a study conducted in five African countries Nigeria, Gambia, Botswana, Sao Tome Principe and Namibia, suggesting lack of training opportunities for HWCs on hepatitis B as a problem (Moturi et al., 2018). This lack of adequate training of HCP is believed to be associated with frequent misconceptions about transmission and diagnosis of hepatitis B (Chabrol et al., 2019a). The implication is that these midwives may not be updated with current trends in the prevention, care and management of pregnant women with Hepatitis B.

5.5 Intention to PMTCT

The current study revealed the intentions of midwives towards PMTCT. These midwives were ready to engage in PMTCT as they expressed in their plans to make sure they secure the necessary resources to ensure PMTCT. These midwives pointed out that they had intentions to reduce the number of hospital visits for babies whose mothers are Hepatitis B positive, prevent the babies from being infected and prevent complications associated with HBV despite the challenges they face.

Although, midwives may be having the best intentions to engage in PMTCT certain factors such as availability of adequate resources may influence these intentions. The midwives mentioned how they intend to prepare for the care of HBV positive mothers. They do this by gathering logistics and resources including hepatitis B birth dose vaccine. This is consistent with a study in Ghana and China where vaccines are made available for babies born to HBV positive mothers (L. Chen, Yue, Lamb, Zhang, & Zhu, 2020; Cheng et al., 2015) . It is also similar to Buntak et al. (2019) who indicated that availability of medical logistics play a significant role in the effective delivery of healthcare services. In addition, a study by Frichi et al. (2020) identified that adequate availability of hospital logistics contribute significantly to quality of health service and patient satisfaction. This seems to reveal that the availability of

necessary logistics influences the intentions of midwives towards PMTCT. Contrary, several studies have reported challenges with the availability of resources such as test kits, vaccines, standard guidelines hindering PMTCT of hepatitis B (Chabrol et al., 2019a; Djaogol et al., 2019; Gera et al., 2019). Furthermore , a study in Iran by Mirzaei-Alavijeh, Jalilian, and Jalilian (2019) reported that complete vaccination status of nurses influenced their engagement in Hepatitis B preventive behaviours such as PMTCT. This could mean that midwives who have completed their hepatitis B vaccination series may have the best intentions to engage in PMTCT.

Aside the preparation towards PMTCT, the current study also ascertains that there are certain factors that motivate midwives to engage in PMTCT. Majority of the midwives expressed that they are ready and willing to prevent PMTCT because they are interested in reducing the transmission of hepatitis B to newborns, reducing the hospital visits of mother and child as well as preventing complications associated with HBV. This can be attributed to the fact that midwives were aware of the importance of PMTCT of Hepatitis B as stated by WHO (WHO, 2019b). This concurs to a study by Harrison et al. (2016) that the most important reasons for HCWs to engage in preventive practices of HBV such as vaccination was for self-protection, prevention of epidemics, protection of others and patients. Therefore, it is very important for midwives to have strong intentions and sense of motivation towards PMTCT. These may encourage midwives who are part of the core personnel who render most of the HBV preventive practices to engage in PMTCT.

5.6 Practices towards PMTCT of Hepatitis B

The midwives in this study shared their practices for PMTCT of hepatitis B. The responses of participants centred on requesting screening for hepatitis B by midwives, offering

counselling before and after the screening, management of pregnant women with Hepatitis B during labour and after delivery and Hepatitis B referral practices. With regards to midwives' hepatitis B screening practices, the midwives acknowledged that they screen every pregnant woman who attends the antenatal clinic for hepatitis B to know their status and for early detection of hepatitis B positive mothers in order to protect their babies from contracting it. This finding is in consonance with studies in China which revealed that all pregnant women attending antenatal care are screened for Hepatitis B infection (Chao et al., 2019; Kwong et al., 2018).

Majority of the midwives in this current study mentioned that pregnant women are given some information prior to testing for Hepatitis B. Nevertheless, the study found that pre-test counselling for hepatitis B was not as effective as post-test counselling. Especially for women who test negative, little or no information is given after testing. Concerning the post-test counselling, the study ascertained that these midwives counselling centred around how to care for their babies including their diet and personal hygiene, the need for their babies to be vaccinated to protect them from contracting hepatitis B, and the need for husbands and other significant others to be tested. These activities carried out by these midwives are in line with WHO guidelines for testing Hepatitis B and C (WHO, 2017b). Although it seems the midwives in this current study provide some form of information as post-test counselling, findings of Chen et al. (2018) in China ascertained that health workers do not discuss the benefits and risks of HBV vaccination to their patients. Djaogol et al. (2019) in Senegal reported the lack of training on post-test counselling among health workers. This may explain why midwives in this current study seem to give little information or are not able to provide adequate counselling prior to and after testing for HBV.

Moreover, the current study revealed that for midwives to ensure PMTCT of hepatitis B, hepatitis B positive mothers are monitored closely during labour according to standard care.

Most of these midwives expressed that they avoid unnecessary episiotomy, limit vaginal examinations, avoid artificial rupturing of membranes and avoid any other invasive procedures that will increase perinatal transmission. Nonetheless, some of them also stated they carry out these procedures when necessary. According to the midwives, they also protect themselves well against hepatitis B by using infection prevention practices such as wearing of gloves, mask, goggles and using of sterile equipment when conducting deliveries. The midwives added that babies born by hepatitis B positive mothers are given hepatitis B vaccine and immunoglobin to protect them from being infected before they initiate breastfeeding. A study by Hou et al. (2019) on the interruption of MTCT of hepatitis B revealed that during labour invasive procedures such as rupturing of membranes, vacuum extraction, instrumental deliveries, vigorous suctioning further increases the risk of MTCT of HBV. However, Cheung et al. (2019) revealed that even in women with high viral load, rupturing of membranes during labour will not contribute to vertical transmission of HBV if babies receive standardize HBV vaccination at birth. In addition, the WHO and CDC recommend birth dose vaccination of babies born to HBV positive mothers (CDC, 2019; WHO, 2017b). Also in Sudan the use of sterile instruments and wearing of gloves are important when preventing Hepatitis B infection (Mursy & Mohamed, 2019).

In the clinical practice guideline for hepatitis B and pregnancy, it was reported that breastfeeding will not pose any additional risk of HBV transmission to the HBV exposed babies even without neonatal vaccination (Castillo, Murphy, & van Schalkwyk, 2017). However, the CDC stated that although breastfeeding is safe and allowed in HBV exposed infant, they advised that breastfeeding should be initiated after they have received post exposure prophylaxis. (CDC, 2019). Therefore, mothers who wished to breastfeed must be allowed to. These conflicting standpoints may affect midwives' practices on whether to allow mothers to breastfeed their HBV exposed babies prior to the administration of HB Vaccine and

immunoglobulin. Further research is needed to be done to clarify these variations of thought on breastfeeding practices.

However, regarding the referral practices, equal proportion of participants in this study recounted that they do refer hepatitis B positive mothers to see a doctor or to the public health unit after delivery whilst the other half of the participants mentioned that they do not. Also, majority of the midwives did not provide any additional assessment for the new born at the postnatal clinic aside the normal postnatal care such as examination of the newborn, cord care, education on the need for Child Welfare Clinic. Studies in China and Senegal discovered that majority of their participants refer mothers who are HBV positive to see specialists for further management (Kwong et al., 2018)(Djaogol et al., 2019). It is very essential that post vaccination serological test is done for babies born to HBV positive mothers after the completion of HBV vaccination series or at least a month after the last hepatitis B dose as documented by experts (Schillie et al., 2018; Woodring et al., 2019). Therefore, it is very important for midwives to refer positive pregnant women to specialist so that they can be evaluated for possible treatment. If not, the implication is that a lot more pregnant women who are eligible for treatment may not be treated leading to an increased viral load and risk HBV transmission to the foetus. It is very essential that HBV exposed infants are evaluated to determine their HBV status after HBV vaccination.

5.7 Experience of midwives in PMTCT

The participants shared varied experiences they had during the care of pregnant women with Hepatitis B throughout their professional practices. The experiences ranged from fear of contracting HBV, feeling of empathy and sympathy. This current study revealed that some midwives had the fear of acquiring HBV anytime they had to care for pregnant women with HBV while others did not exhibit such fears. Some of the midwives were empathetic about the situation due the risk of mother-to-child transmission and horizontal transmission. In addition,

midwives in this study also shared feelings of sympathy towards mothers with HBV especially because most of the HBV positive mothers cannot afford the hepatitis B vaccine and immunoglobulin due to their cost. A situation they describe as worrying especially when there is nothing, they can do about the situation than to allow the woman breastfeed and go through normal postnatal services like any other woman. Studies have documented that health care workers are more at risk of acquiring HBV than the general population (Muvunyi et al., 2018; WHO, 2019a). In addition, in India Scheun et al. (2019) reported that some of the nurses in their study were scared when attending to individual living with HBV. This may explain why midwives in this study exhibited fear when caring for HBV positive mothers. In Malawi, a study reported that HCWs showed positive attitude such as being empathetic towards people living with HIV, HBV and HCV but indicated that HCWs are more empathetic towards people with HIV (Mtengezo et al., 2016). In addition, in Africa mother-to-child transmission is a major mode of transmission for HBV (Terrault et al., 2018; WHO, 2019b). This may be the reason why some midwives are concerned about mothers who are Hepatitis B positive as well the risk of the newborn acquiring HBV. Finally, due to high cost of hepatitis B vaccine and immunoglobulin a lot of mothers may not be able to vaccinate their newborns against HBV at birth as similarly reported by previous studies (Djaogol et al., 2019; Paul et al., 2017). These midwives in the present study stated that they are unable to do anything about the situation because the vaccines are not free and not covered by NHIS in Ghana but must be purchased by the pregnant woman. This situation leaves some midwives in a state of worry and pity. It is therefore very necessary that government looks at other means to subsidize the cost involve in the birth dose of Hepatitis B vaccination for exposed infants.

In summary, the discussion covered beliefs and perceptions about HBV, attitudes of midwives towards PMTCT, factors influencing midwives' practices towards PMTCT, intentions towards PMTCT, practices towards PMTCT and experiences of midwives towards

PMTCT. All the themes except experiences of midwives were consistent with the constructs of the theory of planned behaviour which was used to organised the study.

CHAPTER SIX

SUMMARY OF THE STUDY, IMPLICATIONS OF THE FINDINGS, LIMITATIONS, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of the study, implications of the findings, limitations of the study, conclusion and recommendations based on the findings are outlined.

6.1 Summary of the Study

Mother-to-child transmission is a major route of HBV transmission and therefore prevention of mother-to-child transmission of HBV is the most effective way of reducing HBV transmission to newborns. The study explored the practices of midwives towards PMTCT of HBV in the La Nkwantanang municipal assembly using the theory of planned behavior as an organising framework. The objectives of the study were formulated based on the constructs of this theory. An exploratory qualitative design with purposive sampling technique was used to engage fourteen midwives who met the inclusion criteria. The study was conducted at the Madina polyclinic (Kekele) in the La Nkwantanang Municipal Assembly. Data collection commenced after ethical approval was obtained from the Ghana Health Service Ethics Review Committee. The interview guide was pre-tested at the Pentecost Hospital in the La Nkwantanang Municipal Assembly to refine the questions. Midwives who agreed to be part of the study were informed about the study and were allowed to sign a consent form before they were interviewed. The interviews conducted were audio-taped and transcribed verbatim. Thematic content analysis was used to analyse the data collected. Six major themes were generated. Five of them were consistent with the theory of planned behavior and one of them was an emerging theme.

The study revealed that midwives had certain beliefs and perceptions about hepatitis B. They had the perception that HBV was like any other infection and did not associate any spirituality to the cause of HBV infection. They also had the belief that hepatitis B is very severe and contagious whiles acknowledging that influence of superiors had little impact on their practice as midwives. The study discovered that midwives displayed positive, negative and neutral attitudes during the care of pregnant women with Hepatitis B. In addition, the study

recognised that midwives face a lot of challenges when it comes to PMTCT especially on knowledge of HBV, training on hepatitis B, protocols and logistics. The study discovered that midwives had strong intentions towards PMTCT. Furthermore, in discussing the practices of midwives on PMTCT, the midwives in this study screened all pregnant women for HBV, vaccinate their babies if they can afford the HBV vaccine and immunoglobulin at birth but it was discovered that there were poor referral practices among these midwives. Finally, it was revealed that midwives had fears of acquiring HBV when discharging their duties to HBV positive mothers, they equally shared some emotional characteristics of empathy and sympathy towards these women during the analysis of the data.

6.2 Implications

The findings of the study had implications for nursing practice, education and research

6.2.1 Implication for Nursing education

Study findings indicated that participants' knowledge on hepatitis B were from professional training in school which they claim were a bit inadequate. Due to these inconsistencies in the knowledge level of participants on PMTCT and Hepatitis B in general, it very important to tackle these deficiencies. Therefore, it will be beneficial to introduce a course on infectious disease which will cover all the infectious disease including viral hepatitis in nursing and midwifery education. Emphasis should be placed on the role and responsibilities of the midwife in the prevention of mother-to-child transmission.

6.2.2 Implication for Nursing practice

The study findings revealed some knowledge deficit and some incorrect practices among the midwives. It is therefore very important that midwives are periodically trained on hepatitis B, importance of PMTCT, management of pregnant women living with HBV during the antenatal period, labour and post-natal periods. Training must also emphasize on referral

and linkage to care practices. The need to follow up on HBV exposed infants to ascertain if the post exposure prophylaxis worked or not. In addition, training must also centre around guidelines for proper pre-test and post-test counselling for pregnant women on hepatitis B. This will ensure that midwives give the best information to pregnant women and their families. Furthermore, nurse managers must ensure that the right practices are implemented, logistics must be available at all times and most importantly hepatitis B related activities must be properly documented. This will serve as a baseline data for tallying the number of pregnant women with HBV and finding out the number HBV exposed babies who were eventually given the hepatitis B immunoglobulin at birth. The skills and education obtained from the training will empower midwives to be knowledgeable enough to be able to explain the disease to these pregnant women who may want to seek care from traditionalists and spiritualists. Training will allow midwives to act as advocates for pregnant women.

6.2.3 Implications for Nursing research

The findings of the study revealed that midwives had diverse views when it comes to whether to engage in invasive procedure during the management of pregnant women with HBV in labour. Hence, research should focus on the impact of invasive procedures such artificial rupturing of membrane, vacuum extractions, and vigorous suctioning of HBV exposed infant on mother-to-child transmission of HBV. Also, research should look into whether breastfeeding should be allowed before or after birth dose vaccination of Hepatitis B. Additionally, research can be done to ascertain if pregnant women in Ghana can vaccinate against HBV if tested negative during screening. Further, studies on the post vaccination serological screening of HBV exposed infants who have completed their hepatitis B vaccination serries need to be looked at. This will enable the assessment of the status of HBV exposed infants after completion of their hepatitis B vaccination series in Ghana.

6.3 Limitations

Despite the vital findings reported in this current study on the practices of midwives on PMTCT, the study was not without limitations. Fourteen (14) midwives were recruited for the study; thus, generalisation of the findings should not be done. However, the findings of this study can be transferred to participants' similar backgrounds since the demographic characteristics and setting has been well described. In addition, the study was only limited to midwives and did not include other categories of health care providers which made the findings of the study one sided

6.4 Conclusion

This study explored the practices of midwives towards prevention of mother-to-child transmission of Hepatitis B in the La Nkwantanang municipal assembly using the theory of planned behaviour as an organizing framework. It was ascertained that these midwives faced some challenges that affected their ability to fully engage in PMTCT. Also, there were some incorrect practices by these midwives which ultimately affected the goal of PMTCT. It is therefore very essential that midwives are given the necessary training to enable them discharge their duties appropriately as standard of practice demands. This will put Ghana in the right direction to eliminate viral hepatitis B by 2030 as anticipated by WHO for endemic countries.

6.5 Recommendations

Based on the findings of the study, the following recommendations are made to the Ministry of Health, Ghana, the Ghana Health Services and the

6.5.1 To the Ministry of Health, Ghana

The Ministry of Health should;

1. Intensify education on hepatitis B by collaborating with other agencies in Ghana to create awareness of the existence of endemic
2. Implement of birth dose vaccination of Hepatitis into the national immunization program
3. Subsidize hepatitis B vaccination by collaborating with other health agencies such as pharmaceutical companies
4. Develop a recording tool that allows the capture of timely and total number of hepatitis B birth dose vaccination given
5. Provide funding and support for hepatitis B related research
6. Formulate national policy guideline and protocol on the management of viral hepatitis B especially on management of pregnant women with hepatitis B
7. Designate units to be responsible for carrying out hepatitis B activities

6.5.2 Ghana Health Services (GHS)

The Ghana Health Service should;

1. Provide professional development programme for midwives especially on PMTCT and pre-test and post-test counselling on HBV
2. Empower midwives to screen for HBV as part of focus antenatal care just like HIV
3. Modify maternity register to include columns for documenting birth dose vaccination of hepatitis B
4. Develop hepatitis B birth dose vaccination data
5. Ensure monthly report on hepatitis B preventive practices is collated by midwives and sent to the district. This will allow monitoring of the prevalence of HBV in the district and in Ghana

6. Encourage facilities to analysed their immunization data and utilize the findings for future planning
7. Ensure availability and dissemination of HBV protocols across all hospitals

6.5.3 Madina polyclinic (Kekele)

The management of Madina polyclinic (Kekele) should;

1. Train all cadre of health care workers on viral hepatitis B
2. Enrol all staffs in professional development programme that is aimed at PMTCT of HBV
3. Inculcate hepatitis B education in the health education programs at the antenatal clinic
4. Ensure all health care workers are vaccinated against HBV so not to be a source of infection to patients
5. Ensure availability of HBV vaccine in the facility at all times by liaising with appropriate centres
6. Ensure the public health unit of the clinic engage communities to create awareness of the existence of hepatitis B
7. Develop a formal outreach program in collaboration with the public health unit to vaccinate babies born outside the health facilities
8. Ensure constant availability of resources such as test kits

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APPENDICES

Appendix A: Ethical clearance

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
GPS Address: GA-050-3303
Tel: +233-302-681109
Fax + 233-302-685424
Mob + 233- 050-3539896
Email: ethics.research@ghsmail.org

MyRef. GHS/RDD/ERC/Admin/App/ 19/631
Your Ref. No.

22nd November, 2019

Adiza Atoko Mumuni
School of Nursing and Midwifery
College of Health Sciences
University of Ghana
Legon

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC048/11/19**
Project Title	Exploring Midwives' Practices towards Prevention of Mother-to-Child Transmission of Hepatitis B in the La Nkwantanag Municipal Assembly
Approval Date	22nd November, 2019
Expiry Date	21st November, 2020
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report **after completion** of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
Dr. Cynthia Bannerman
(GHS-ERC Chairperson)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

Appendix B: Introductory letter

UNIVERSITY OF GHANA
DEPARTMENT OF MATERNAL AND CHILD HEALTH
SCHOOL OF NURSING

Ref. No.: ID: 10582028 February 5, 2020

Regional Health Director
Greater Accra Regional Health Directorate
Accra

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you **Adiza Atoko Mumuni**, an MPhil second year student of the School of Nursing and Midwifery, University of Ghana.

The Ethical Review Committee of Ghana Health Service has approved the thesis topic: **"Exploring Midwives' Practices towards the Prevention of Mother-to-Child Transmission of Hepatitis B in the La Nkwantanang Municipal Assembly".**

We shall be most grateful for any assistance to enable her collect data at Madina Polyclinic (Kekele).

Counting on your usual co-operation

Thank you.

Yours faithfully,

Dr. Florence Naab
Head, Dept. of Maternal and Child Health

COLLEGE OF HEALTH SCIENCES
• P. O. Box LG 43, Legon, Accra, Ghana. • Telephone: +233 (0) 302 513 250 / 0289 531 213
• Email: mch.son@chs.ug.edu.gh • Website: www.nursing.ug.edu.gh

Appendix C: Introductory letter

In case of reply the number and date of this letter should be quoted.

My Ref. No. ***GHS/GARHD/007/19***

Your Ref. No.

GHANA HEALTH SERVICE
Your Health - Our Concern

GHANA HEALTH SERVICE
REGIONAL HEALTH DIRECTORATE
GREATER ACCRA
P. O. BOX 184
ACCRA

Tel: +233-0302-234225/226203/
0208140751
E-mail:c_brako@yahoo.com

6th February, 2020

THE MUNICIPAL DIRECTOR OF HEALTH SERVICE
LA NKWANTANANG MADINA MUNICIPAL HEALTH DIRECTORATE
MADINA

LA NKWANTANANG MADINA MUN. HEALTH DIRECTORATE
RECEIVED
11 FEB 2020

RE: LETTER OF INTRODUCTION
ADIZA ATOKO MUMUNI

This is to introduce to you **Adiza Atoko Mumuni** an MPhil Second Year Student of the Department of Maternal and Child Health, School of Nursing, University of Ghana, Legon who has approval from the Regional Health Directorate to undertake a research on the topic: ***"Exploring Midwives' Practices towards the Prevention of Mother-to-Child Transmission of Hepatitis B in the La Nkwantanang Municipal Assembly"*** in your Facility as per the attached documentation.

You are kindly entreated to provide the needed assistance.

Thank you.

DR. (MRS.) CHARITY SARPONG
REGIONAL DIRECTOR OF HEALTH SERVICE
GREATER ACCRA

Attn Admin
To be forwarded to all BMCs for their information and necessary assistance.
14/02/2020

Appendix D: Introductory letter

In case of reply the number and the date of this letter should be quoted

My Ref LNMMHD/ADM 10 13 02

Your Ref

GHANA HEALTH SERVICE

Your Health - Our Concern

La-Nkwantanang Madina Municipal Health
Directorate
Box, MD 839
Madina
Email: lanmaghs@gmail.com

TEL: 0244-232525, 0302-542737
Date: 17/02/..... 2020

THE MEDICAL OFFICER I/C
MADINA POLYCLINIC, KEKELE
MADINA

LETTER OF INTRODUCTION

NAME: MS ADIZA ATUKU MUMUNI

I wish to introduce to you the above-named officer, who has been granted permission to undertake his/her research in your facility.

Kindly accord him/her the necessary assistance.

Thank you.

PRISCILLA ANIMA SIAW (MS)
MUNICIPAL HEALTH DIRECTOR
LA-NKWANTANANG MADINA MUNICIPAL HEALTH DIRECTORATE
MADINA

Ghana Health Service CORE VALUES: People Centeredness, Professionalism, Team Work, Innovation, Discipline and Integrity

Appendix E: Introductory letter

UNIVERSITY OF GHANA
DEPARTMENT OF MENTAL HEALTH
SCHOOL OF NURSING

10582028 November 11, 2019

Ref. No.:.....

The Chairperson
Ethics Review Committee
Ghana Health Service
Accra.

Dear Sir/Madam,

LETTER OF INTRODUCTION

I write to introduce to you **Adiza Mumuni Atoko**, an MPhil second year student of the School of Nursing and Midwifery.

The Scientific Review Committee of the School has approved the thesis topic: **"Exploring Midwives' Practices Towards Prevention of Mother-to-Child Transmission of Hepatitis B in the La Nkwantanang Municipal Assembly."**

I hope that the Ethical Review Committee will consider the proposal to enable her collect data.

Counting on your usual co-operation

Thank you.

Yours faithfully,

Dr. Florence Naab
Supervisor

COLLEGE OF HEALTH SCIENCES
• P. O. Box LG 43, Legon, Accra, Ghana. • **Telephone:** +233 (0) 302 513 250 / 0289 531 213
• **Email:** mentalhealth.son@chs.ug.edu.gh • **Website:** www.nursing.ug.edu.gh

Appendix F: Introductory letter

UNIVERSITY OF GHANA
DEPARTMENT OF MATERNAL AND CHILD HEALTH
SCHOOL OF NURSING

Ref. No.: 10582028 November 11, 2019

The Chairperson
Ethical Review Committee
Ghana Health Service
Accra.

Dear Sir/Madam,

LETTER OF INTRODUCTION

I write to introduce to you **Adiza Mumuni Atoko**, an MPhil second year student of the School of Nursing and Midwifery.

The Scientific Review Committee of the School has approved the thesis topic: **"Exploring Midwives' Practices Towards Prevention of Mother-to-Child Transmission of Hepatitis B in the La Nkwantanang Municipal Assembly."**

I hope that the Ethical Review Committee will consider the proposal to enable her collect data.

Counting on your usual co-operation

Thank you.

Yours faithfully,

Mr. Charles Ampong Adjei
Supervisor

COLLEGE OF HEALTH SCIENCES
• P. O. Box LG 43, Legon, Accra, Ghana. • **Telephone:** +233 (0) 302 513 250 / 0289 531 213
• **Email:** mch.son@chs.ug.edu.gh • **Website:** www.nursing.ug.edu.gh

UNIVERSITY OF GHANA

Appendix G: Interview guide

MPhil Research Proposal: Midwives practices towards prevention of mother-to-child transmission of Hepatitis B in the La Nkwantanang Municipal Assembly

INTERVIEW GUIDE

The purpose of this interview is to explore midwives' practices towards the prevention of mother-to-child transmission of Hepatitis B. This interview is being conducted to understand your experiences towards practices that prevent of mother-to-child transmission (PMTCT) of Hepatitis B. Please be assured that all information obtained in this interview is purely for academic purposes only and will be treated in strict confidence.

Participant Code _____ Date and time of Interview _____

Interview Number _____ (1st or 2nd Round) _____

Duration _____

Section A

Demographic data

Please can you tell me about yourself?

Probes: Name, age, educational level, category of health care provider, years of experience, position/ranks, Department

Section B

- **Beliefs and perceptions about hepatitis B**

1. What are your thought and opinion about Hepatitis B?

   Probe (e.g., perceived contagiousness, perceived severity, as a consequence of norm violating behaviour such as promiscuity etc.)

2. What are your worries as a midwife about the Hepatitis?

   Probe (susceptibility to risk)

3. Now let's talk about your thought about Hepatitis B vaccination?

   Probe (Is safe, effective, and curable)

4. Can you tell me about your activities to prevent mother-to-child transmission of Hepatitis B?

   - What compels you to engage in these activities?

   Probe (external pressure from colleagues, superiors)

5. How often do you engage in practices that prevents mother-to-child transmission of Hepatitis B?

Section C

- **Attitude towards prevention of mother- to- child transmission of HBV**

1. Can you share with me how you felt the very first time you came into contact with a patient with hepatitis B?

   Probe (e.g., scared of getting infected etc.)

2. How do your colleagues treat patients they know are hepatitis B positive during delivery?

   Probe (reluctant to assist labour, avoidance, excessive cautiousness, exaggerated gloving, task shifting)

3. Do you know your HBV status? If yes,
4. Have you been vaccinated? If yes
5. How many doses of HBV vaccine have you taken?
6. If no why?

   Probe (cost, no times, no reason, vaccine not available)

7. When was the last time you had in-service training on Hepatitis B?

Section D

- **Factors influencing Midwives practice towards prevention of mother-to-child transmission of Hepatitis B**.

1. Please can you tell me what you know about hepatitis B? (Causes, mode of transmission, at risk individuals, types, mode of prevention, treatment options, complications, Serological marker of HBV
2. Have you please come across a protocol that outlines the processes involved in PMTCT of hepatitis B in your health facility? If yes, what does it entails?
3. Why is it very essential for midwives to prevent mother-to-child transmission of hepatitis B? **probe**
4. Can you share with me your view on caesarean section as an option for PMTCT of hepatitis? **Probe**

5. What can you say about the treatment options available for a Hepatitis B positive pregnant woman?

   Probe (administration of nucleoside analogues such as tenofovir, lamivudine etc. when to administer it,)

6. As a midwife, are there some challenges you face in managing hepatitis B positive mothers and their newborns.

   Probe (Logistics such as test kits, Vaccine, No HBV workshop/training No clear protocol, Limited vaccination hour, cost of screening etc.)

7. Do you see yourself as well equipped in terms of knowledge and skills to ensure PMTCT of hepatitis B? Please give me some examples

Section E

- **Intention to prevent mother-to-child transmission of HBV**

    1. In a case where you come into contact with a patient who is hepatitis B positive and due for labour, what arrangement would you make as part of your intentions to prevent mother to child transmission? Kindly describe with examples.

Section F

- **Practices towards prevention of mother-to-child transmission of HBV**

    1. As a midwife, how do you identify pregnant women with Hepatitis B?

2. How are these women prepared for the test?

   Probe (pre-test counselling and post-test counselling, what do you discuss with the client)

3. After identifying a patient who is hepatitis B positive, what are some of the services you provide for them at ANC, labour, and after delivery

   Probe (testing, counselling, education, avoidance of invasive procedures (ARM), birth dose vaccination, additional testing, follow up care etc.)

4. How do you manage a baby born to a Hepatitis B mother?

   Probe (time of administration and the rationale for the time schedule) etc.?

5. What are some of the vaccines?

6. How are these women and their babies managed after discharge?

   Probe (follow up care)?

Appendix H: Consent Form

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

Application for Ethics Approval

For Research with Human Participants

Information Sheet

General Information about Research

Title of Study: Exploring midwives' practices towards prevention of mother-to-child transmission of Hepatitis B in the la Nkwantanang Municipal Assembly

I am a second-year MPhil Nursing student at the School of Nursing and Midwifery, University of Ghana, undertaking a study as mentioned above. This study is purported to explore midwives' practices toward prevention of mother-to-child transmission of Hepatitis B (PMTCT) and is solely for academic purposes. You have been selected to voluntarily partake in the study. I would like you to provide me with information on your knowledge and practices that are aimed at preventing mother-to-child transmission of Hepatitis B. If you agree to participate in this study, you will be required to answer some questions on Hepatitis B and its prevention. This will not interfere with your duties at the maternity unit as you will be contacted after working hours, at a date and time convenient for you. In addition, you will be required to sign two copies of this form (I will keep one and the other will be kept by you) as a proof that you voluntary agreed to be part of this study. Thereafter, you will be engaged in a face-to-face interview in the English language which will be audiotape, this interview is expected to last between 45 and 90minutes. You reserve all the right to terminate your participation in the study without any consequences whatsoever. More importantly, the information obtained from this study will be kept secured under lock and key by my supervisor and will be destroyed after five years.

Possible Risks and Discomforts

You will not be exposed to any risks or discomfort. Yet, you have to offer your time for the interview to be conducted. You have the right to refuse to answer any question you feel is too sensitive to you. There will be intermittent breaks as you deem appropriate for refreshments.

Possible Benefits

There is no direct monetary benefit for joining the study; however, the findings of the study will be used to improve midwives' knowledge, awareness, and practices toward hepatitis B infection in general. Also, Ghana as a country falls under the World Health Organization classification of endemicity with our prevalence rate of 12.3%. Therefore, outcome from this study will be used to inform policymakers, institutional head to invest more in Hepatitis B and its related issues especially because we if Ghana wants to be part of those countries aiming to eliminate viral hepatitis by the year 2030. This is the target of the World Health Organization which is also in line with sustainable development goals 3.3. You may also seize this opportunity to add your voice in suggesting ways by which clinicians can be more involved in diagnosing and management of hepatitis B patients especial in pregnancy be improved.

Confidentiality

In the course of the interview, no personal identifiers whatsoever will be required from you to render the information anonymous. You also refrain from mentioning names or locations that can reveal the identity of a third party. The information you will provide will only be accessible to the researcher, supervisors, School of Graduate Studies of University of Ghana, Ghana health service ethics review board and a publisher who will accept to publish the results of the study, even so, only the categorized data will be made available to any third

party without a name or personal identifiers. The audio recordings will be stored on a password-protected computer accessible only to the aforementioned parties.

Compensation

There will be no monetary compensation for the information you provide, however, at the end of the interview, you will be given a note pad and a pen as a sign of appreciation for availing your time to participate.

Voluntary Participation and Right to Leave the Research

Your decision to partake in this study is strictly voluntary. You reserve every right to withdraw from the study at any time without any consequences. If you decide to withdraw from the study, all the data you have provided will be destroyed and nothing will be held against you.

Contacts for Additional Information

All questions and concerns about the study can be addressed to the following persons:

Name: Adiza Mumuni Atoko

Contact: +233 205890904 / adizamumuni@gmail.com

aamumuni002@st.ug.edu.gh

Name: Dr. Florence Naab

Contact: +233 0204522332 / Email: florencenaab@yahoo.com

Name: Mr. Charles Ampong Adjei

Contact: 0244712071 / Email: charlesichd2013@gmail.com

For information on your right as a participant, please contact:

Hannah Frimpong

Administrator

Ethics Review Committee

Ghana Health Service

0507041233

CONSENT FORM

STUDY TITLE: **EXPLORING MIDWIVES' PRACTICES TOWARDS PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HEPATITIS B**

PARTICIPANTS' STATEMENT

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and satisfactorily explained to me in the English language. I fully understand the contents and any potential implications as well as my right to change my mind (i.e., withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Name or Initials of Participant……. ID Code ……...

Participants' Signature ……...OR Thumb Print……

Date…….

INVESTIGATOR STATEMENT AND SIGNATURE

I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant have been addressed.

Researcher's name…….

Signature …….

Date…….