

# Informational and Practical Needs of Expectant Mothers with Chronic Hepatitis B in Ghana

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## Abstract

Hepatitis B virus infection is a global public health problem with disproportionately high endemicity in Africa and Ghana. The current national prevalence of hepatitis B among pregnant women in Ghana stands at 7.44%, highlighting the considerable threat of chronic hepatitis B on pregnant women and their general well-being. The study explored the informational and practical needs of pregnant women with chronic hepatitis B in Ghana. Fourteen pregnant women were selected purposefully using the exploratory descriptive qualitative design. Data were analyzed using thematic analysis. The findings showed that pregnant women with chronic hepatitis B lacked knowledge about the infection and were in great need of hepatitis B-related information. The study also revealed significant financial implications for treating the infection, necessitating policy reforms and stakeholder actions. To achieve effective coping, better health-seeking, and health-promoting behaviors for better health outcomes, it is crucial to provide targeted care that comprehensively covers the specific needs of pregnant women with chronic hepatitis B. It is also essential to consider including hepatitis B management in the National Health Insurance package to improve care quality.

## Keywords

chronic illnesses, midwifery practice, case management, business concepts, health promotion, patient satisfaction

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## Introduction

Chronic hepatitis B virus (CHBV) infection is a serious health problem due to its widespread and potential consequences (World Health Organization [WHO], 2017a, 2017b). According to WHO (2021), about 296 million people live with CHBV worldwide, with about 1.5 million new infections detected yearly. On average, 820,000 deaths associated with hepatitis B occur due to complications, such as cirrhosis and hepatocellular carcinoma (WHO, 2021). The estimated prevalence of CHBV in Africa is 60 million, making it one of the most endemic areas, resulting in about 200,000 deaths each year (WHO, 2021). It is also estimated that about 80% of liver diseases and related deaths in Africa are caused by CHBV (Lemoine et al., 2015). Despite the high endemicity of HBV in Africa, there is limited data on the prevalence among pregnant women (Bigna et al., 2019). The situation is not different for Ghana; the Ghana situation

review by the *International Alliance of Patients' Organizations* states that nearly 4 million Ghanaians are living with HBV (IAPO, 2017). The current national prevalence stands at 11% and 8.36% among the adult population, 14.30% in adolescents, and 7.44% among pregnant women (Abesig et al., 2020).

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CHBV describes a spectrum of the disease usually characterized by detectable hepatitis B surface antigen (HBsAg) in the blood or serum for longer than 6 months (NICE, 2013). The infection is mostly spread from mother-to-child transmissions (MTCTs) (Mühlemann et al., 2018; Tran, 2016; WHO, 2017b), with about 50 million new diagnoses being made every year (Patton & Tran, 2014). According to WHO, the development of CHBV is dependent on the age of the infection acquired: infections in infancy result in 95% of CHBV cases, with 40 to 60% of cases resulting from infections in early childhood. In contrast, persistent infections occur in less than 5% of adult infections (WHO, 2021).

In 2016, the first global health sector strategy for viral hepatitis B was implemented by WHO as a Sustainable Development Goal to reduce the incidence of chronic hepatitis infection from the current 6–10 million cases of chronic infection to 0.9 million infections by 2030, and to reduce the annual deaths from chronic hepatitis from 1.4 million to less than 0.5 million by 2030 using priority actions through 1) strengthening information systems, 2) high-impact interventions and services, 3) equal access, 4) financing for sustainability, and 5) developing innovations to drive rapid progress (WHO, 2016). These interventions have, however, faced challenges, especially in low- and middle-income countries, with studies showing 1% to 9% of babies who are being born to HBV-infected mothers in Sub-Saharan Africa still getting infected with the virus even after receiving the birth dose vaccination (Keane et al., 2016).

Pregnancy and childbirth are significant developmental stages in a woman's life, which in itself can be demanding; coupling it with the diagnosis of CHBV worsens the experiences by virtue of its significant burden from the point of transmission, management, and probable complications (Hamburg-Shields & Prasad, 2020; Rania, 2019; Valizadeh et al., 2016).

In terms of management, the diagnosis of HBV marks the beginning of a series of events across a spectrum of patient experiences, from diagnosis to treatment and follow-up care (Kwong et al., 2018; Valizadeh et al., 2016). These transitions can be traumatic in some cases (Cipolletta et al., 2018) and eventually posing concerns about support and awareness that need particular attention (Adjei, Stutterheim, Naab, & Ruiter, 2019; Chabrol et al., 2019; Kwong et al., 2018; Lemoine et al., 2015; Noubiap et al., 2015; Ofori-Asenso & Agyeman, 2016). Providing useful information and support (usually financial) during this period is crucial for all expectant mothers (Freeland et al., 2021; Valery et al., 2015).

Even though there have been global recommendations for managing pregnant women with CHBV (Lampertico et al., 2017; NICE, 2013; Sarin et al., 2015; Terrault et al., 2018), there has been a paucity of evidence on available management protocols for managing pregnant women with CHBV in Ghana. There is no disease surveillance nor data collection pool for HBV among pregnant women in the District Health Information System to inform policy planning and

implementation. Most studies reviewed focused on treatment and management strategies for preventing MTCTs. Less attention has been paid to the other distressing experiences and unique challenges associated with the diagnosis of chronic HBV in pregnancy. Therefore, this study explored the experiences of parturient women with CHBV in Ghana using the supportive care framework by Fitch (2008).

## Review of Literature

Supportive care has been an integral part of healthcare delivery. It encompasses the totality and a multidimensional view of human needs to enhance patients' quality of life after the diagnosis of a serious or life-threatening disease. Hui (2014) defines supportive care as the provision of the necessary services for those living with a chronic problem to meet their informational, emotional, spiritual, social, or physical needs during their diagnostic, treatment, or follow-up phases. It encompasses issues of health promotion and prevention, survivorship, palliation, and bereavement (Hui et al., 2013). The *Supportive Care Framework for Cancer Care* by Fitch (1994), used as the guiding theory for this study, draws from the constructs of human needs, cognitive appraisal, coping, and adaptation as the foundation for conceptualizing how human beings experience and deal with serious health issues like hepatitis and establish how service providers should care for these clients after diagnosis.

Studies in Asia and Africa have highlighted that critical needs for pregnant women with CHBV are either minimal or not made available (Chabrol et al., 2019; Chirk et al., 2013). Others have identified the economic burden of HBV, resulting in significant distress (Adjei, Stutterheim, Naab, & Ruiter, 2019; Han et al., 2018; Valery et al., 2015). In Ghana, research has revealed gaps in HBV management among pregnant women and the general population as a whole. The lack of national data (Dortey et al., 2020; Nartey et al., 2022), high cost of treatment (Adjei, Stutterheim, Naab, & Ruiter, 2019; Cheng et al., 2015; Duah & Nartey, 2023), inadequate knowledge for both HCPs and patients (Adjei et al., 2016, 2018; Cheng et al., 2015; Dortey et al., 2020), stigma and discrimination (Adjei, Stutterheim, Naab, Ruiter, et al., 2019), religion and spirituality (Adjei et al., 2017), and lack of resources such as testing kits (Nartey et al., 2022) are individual, cultural, and health system barriers. There is also a lack of clear guidelines and protocols in HBV care, especially for managing pregnant women, leading to emotional distress and inability to cope due to inadequate pretest and posttest counseling (Chabrol et al., 2019; Han et al., 2018; Lanyo et al., 2022; Lingala & Ghany, 2016). HBV management and care among the pregnant population in Ghana is mostly skewed toward fetal outcomes, with little or no attention to the mother (Adjei et al., 2018; Antuamwine et al., 2022; Kwadzokpui et al., 2020; Stokkeland et al., 2017). To meet the 2030 WHO HBV elimination targets, there is a clear need for patient and community

education to increase knowledge and awareness, especially in Ghana (WHO, 2021). Therefore, the study sought to explore the perceived needs of pregnant women with CHBV, paying particular attention to their information and practical needs.

## Methods

### *Study Design and Setting*

An explorative qualitative study was conducted in three government facilities in the selected Metropolis of Ghana from October 2020 to September 2021. These facilities provide focused antenatal services to people within the catchment area. Given the little knowledge surrounding the phenomena and with individuals tending to attribute varying opinions about their encounters, the design enabled participants to articulate their distinct experiences.

### *Sample*

The study used purposive sampling to identify pregnant women with CHBV who access antenatal care at three public health facilities within the selected Metropolis of Ghana. The technique allows the researcher to choose participants deliberately based on predetermined inclusion criteria. The sample size was not determined before data collection (Sim et al., 2018); however, this was subject to saturation during data collection. Saturation was reached when the research participants no longer offered any new insights on the problem under study. Fourteen parturient women with CHBV infection took part in the study.

### *Inclusion and Exclusion Criteria*

Pregnant women with CHBV were included in the study if they retested positive for HBV 6 months after their first test, were above the age of 18, were attending antenatal at any of the three selected public health facilities, and had consented to participate in the study. Pregnant women with less energy to go through the interview process were excluded.

### *Data Collection*

Based on the study's guiding framework, a semi-structured interview guide was created and reviewed by two experts. The guide was pretested on pregnant women with similar features. Pregnant women who satisfied the inclusion criteria for the research and indicated interest were given a consent form to sign. A semi-structured interview guide was used to conduct face-to-face in-depth interviews. With the participants' agreement, the interviews were audiotaped. Throughout the interview, privacy was maintained, and the National procedure for COVID-19 was strictly observed. The lead investigator utilized probing questions to help participants contribute positively to the discussion. Each interview lasted 45 min to an hour.

### *Data Analysis*

Data was manually analyzed by the lead investigator and reviewed by supervisors using thematic analysis following Braun and Clarke's (2006) procedure. Familiarization was achieved by listening to the audio-recorded interviews several times to become conversant with their contents, understand them, and make meaning of each interview. The interview was then transcribed verbatim, read, and re-read to know the depth and breadth of the data. Engaging ideas in the data were highlighted to assist in the analysis of the data. Codes that capture meanings in each sentence were generated and inputted into a spreadsheet. The identified codes were then analyzed to determine how different codes support each theme guiding the data analysis. After identifying the codes, they were compared with the original data to see whether they reflect or are congruent. Codes that did not appear to fit into the themes were noted. A detailed narrative of the study results was written to provide an in-depth understanding of the experiences of pregnant women with CHBV.

### *Rigor*

Using the techniques outlined by Polit and Beck (2010), credibility in this study was established by prolonged engagement with participants and doing member checks. This included asking participants in-depth follow-up questions about their responses during data collection. Dependability was guaranteed by conducting audits of the interview data and having experts (the research supervisors) examine it. Field notes were diligently maintained, together with a detailed account of the data collecting process and the resulting conclusions, as mandated by (Lincoln & Guba, 1985). Confirmability was also ensured through discussion of the findings in relation to a wide variety of literature sources. The researcher also guarded against her own biases through reflexivity (identifying one's own judgment and beliefs) and bracketing (setting aside preconceived ideas, personal experiences, and biases).

### *Ethical Considerations*

Ethical clearance was received from the GHS Ethics Review Board (GHS-ERC 031/09/20). All study participants signed written consent forms for involvement and audio recordings of the in-person interviews. Anonymity was maintained as participants were not obliged to provide any kind of personal information.

## Results

### *Sample Characteristics*

Fourteen (14) participants were interviewed for the study. The age range for all pregnant women with CHBV who

fell within the inclusion criteria was between 26 and 40. The years of diagnosis for CHBV ranged from 10 months to 7 years. They were all pregnant women with gestational ages of 36 to 41 weeks. Three primiparous and 11 multiparous women participated.

This study explored the experiences of pregnant women with CHBV concerning informational and practical needs. Two themes and five sub-themes emerged from the data, as outlined in Table 1.

**Informational needs.** The sub-themes detail the informational needs of participants. The study identified gaps in hepatitis B-related information, knowledge of hepatitis B by participants, and gaps in the provision of information and guidance by HCPs.

### Knowledge on Hepatitis B

The majority of the participants lacked knowledge of HBV. Most participants had heard of hepatitis B from herbalists, traditional healers, and pastors on radio or television and often from other people like friends and colleagues who do not have accurate information about hepatitis B:

*“I usually do hear about it. Ooh, I usually hear about it from the radio and TV stations and those who sell herbal and alternative medicines.” (PWCH 5, 33 YEARS)*

*“A friend of mine who was working at Ghana Ports and Harbors Authority told me she was going to take an injection. She said they asked them to get an injection. She is the first person who mentioned the infection to me.” (PWCH 7,40 YEARS)*

Despite having been diagnosed with HBV during a prior pregnancy, participants still lack knowledge about the infection. From their perspective, HBV is comparable to HIV contracted via sexual promiscuity; the reason they have not regarded the illness with seriousness is that they are not promiscuous.

*“I don’t know much about it, but I hear that it is not a good disease. It’s just like HIV; if you get such infections, it means you are sleeping around, meaning you are a bad person. I*

**Table 1.** Organization of the Themes and Sub-themes.

Themes	Sub-themes
1. Informational needs	<ul style="list-style-type: none"> <li>• Knowledge of hepatitis B</li> <li>• Pre and posttest counseling</li> <li>• Self-care information</li> </ul>
2. Practical needs	<ul style="list-style-type: none"> <li>• Socioeconomic impact</li> <li>• Stakeholder intervention</li> </ul>

Source. Field Data (2021).

*know I am not like that, so I did not take it seriously the first time.” (PWCH 2, 30 YEARS)*

Some participants experienced anxiety due to the myths and misconceptions about the infection. They assumed that any abnormal feeling or symptom experienced was caused by the infection.

*“I could say it affected me a lot. They didn’t tell me anything. So, because of my mindset, it was like every day I was dying. I saw myself dying. I was growing very slim because of how I was thinking about it. It was psychological, not real. Later, I took my mind off.” (PWCH 10,35 YEARS)*

*“Initially, it nearly changed me. Every time I was worried, my BP was going up. Sometimes, when I am eating and am getting heartburn, I’ll start thinking, is it the disease that is causing the heartburn? But it got to a time when I became relaxed.” (PWCH 7,40 YEARS)*

### Pretest Counseling

During their usual prenatal screening, the majority of participants did not get any pretest counseling. They stated that no information was provided prior to the hepatitis B test. They were unaware of the exact laboratory test that had been requested of them until they were notified of their hepatitis B seropositivity.

*“I got pregnant, and I had to do some labs. When you come to the hospital, they give you some labs to take to the lab; it is the first thing you do. That was where they got to know that I had the infection.” (PWCH 1,29 YEARS)*

Another said:

*“We didn’t have any conversation. She [the healthcare provider] just wrote the labs for me to go and do; she said that would be used to take care of me.” (PWCH 5, 33 YEARS)*

### Posttest Counseling

Participants also expressed dissatisfaction with the information and details provided following diagnosis. The HCPs provided information targeted only at how to care for the baby, forcing some of them to rely on the internet as a source of knowledge:

*“The midwife did not tell me anything for the first time. In this current pregnancy, the midwife only told me about the baby’s injection, that’s all.” (PWCH 9,28 YEARS)*

*“They only told me that I would buy medicine my baby would receive after delivery before I breastfeed. That’s the only information given to me.” (PWCH 2, 30 YEARS)*

Inquiries about the way forward and how to take care of oneself yielded nothing. Participant's stated that they needed more counseling on the infection, prompting them to ask more questions, most of which were left unanswered or only partially answered:

*"I asked her [the midwife] what we would do about the situation, and she said for me, I already have it for me, so the baby is the one we need to protect. She said that I would have to buy medicine to inject the baby after delivery." (PWCH 5,33 YEARS)*

*"The midwife has not said anything to me. I've heard everything I know about the hepatitis B infection from my sisters, who also have the infection, as I mentioned earlier." (PWCH 3, 34 YEARS)*

Some participants said that if they were equipped with adequate knowledge, they wouldn't have been deceived and duped by pastors and herbalists in their hope of getting a cure:

*"What I would like to say is that when people come, and they have such a virus, please try to give enough education so that others would not be deceived like I was deceived by the pastor and those herbalists. When you educate us, it will at least let us know when someone is deceiving us, and we can also educate other people." (PWHB 10, 35 YEARS)*

Others stated that the information received from health care providers was conflicting and not satisfying. Some feedback from the healthcare providers was encouraging, while other feedback just emphasized their myths and misconceptions.

*"I keep asking, especially when I see someone who is a health worker. Some of them give me positive answers; some give me negative answers. The negative ones were killing me. I was still curious, and I just wanted to know more." (PWCH 10,35 YEARS)*

### Self-Care Information and Guidance

Several participants required extensive counseling and guidance in living with and dealing with the infection. Sadly, this did not happen. Participants reported that after the initial hepatitis B testing, information about additional tests like HBV profile, HBV viral load, liver function test, and an abdominal ultrasound to assess the patient's treatment needs were not requested:

*"Nothing was done for me; she [the midwife] did not do anything. She just wrote in my book that my baby needs an injection after delivery. That was all." (PWCH 1,29 YEARS)*

*"No, for me, she didn't say anything about me. I asked her what I'd do, but she kept saying that protecting the baby is what we should think about, but for me, she didn't say anything." (PWCH 5,33 YEARS)*

Participants identified a need for treatment information. Most participants said the treatment plan was just for the baby (PMTCT). Post-diagnosis, participants indicated they needed information on how to care for themselves and their babies. Their responses revealed that the most common advice was to get the birth dose vaccination to protect the baby from the virus. Participants wanted to know how to cure or manage their infection. There was no specific instruction for them (the mothers):

*"They didn't do anything; they didn't give me any medication. As I said, they mentioned that because of the pregnancy, I couldn't take any medication apart from the routine antenatal drug. I wanted to hear more; I wanted them to do something for me too, not only about the baby but about me too, what I can do to get a cure or tell me what they can do for me to get a cure that I will be cured through the vaccine and medication." (PWCH 11,32 YEARS)*

*"The assistance is to know how I can take care of myself; they should teach me how I can take care of myself and, if I give birth too, how I can take care of my baby. I wanted to know how to live with this disease." (PWHB 11,32 YEARS)*

**Practical needs.** This theme identifies the direct assistance needed to reduce the burden of infection on pregnant women with CHBV. This theme identifies the socioeconomic impact of the infection and the need for stakeholder intervention to lessen the burden of the diagnosis.

### Socioeconomic Impact

We found that treating the infection has a lot of financial demands. Because participants' financial abilities vary, it becomes a serious concern because not everyone has access to or can afford treatment. The majority of participants said they couldn't afford it. Getting financial help from others, especially their husbands, was difficult:

*"The last time I got it [hepatitis B] was four years ago. This time around, I don't know. But, hmmm, that's my problem, my primary headache (shows signs of crying). It is a difficult matter for me. Requesting financial help is really a frustrating and challenging experience for me." (PWCH 1,29 YEARS)*

*"For the drug, I can't buy it, so I've even decided to come and ask her if there's anything else that can be done about it because, honestly, I cannot buy the drug; if I say I can, I*

am lying. For him, even in this hospital (ANC) that I am coming to, if I ask him for money to go to the hospital, he is not ready to give money." (PWCH 5,33 YEARS)

A few participants who have their partners supporting them stated that they could afford to buy the vaccine for their babies:

"I was told that the vaccine is very costly, but my husband and I will be able to afford it; we will do anything to make our baby safe. I am saving myself, knowing he will also support me." (PWCH 11,32 YEARS)

The participants who opted for alternative treatment by visiting pastors/herbalists categorically stated that they had spent a lot of money seeking a cure from pastors and herbalists because they believed that these could cure them of the infection:

"So, I have been going to see a herbalist; she has been coming on Adom TV... Whatever drug you are given depends on your financial capability. I took the medicine for almost a year, but I got to a point where I got fed up because the money I spent was close to 100 million Ghana cedis. It was not the small money I was paying, so I stopped going there." (PWCH 7,40 YEARS)

"In the initial stage, I spent a whole of the money. I've used a lot of money to buy all those medicines and herbs and also see the pastor. I was buying some of the drugs, 500, 800 every month." (PWCH 10,35 YEARS)

The pandemic was also identified as one of the issues aggravating the financial burden. Participants stated they could not afford to buy vaccines due to the financial strain caused by the pandemic. Some participants discussed the financial implications of treatment in the COVID-19 era.

"At first, it won't be a problem because my husband is a teacher, and I am also a fashion designer, but because of the virus, I mean the pandemic, we have to suspend so many things that will be causing a lot of challenges when we are ready." (PWCH 12,32 YEARS)

### Stakeholder Intervention

This subtheme reflects participants' diverse wishes and ideas, which can aid in the comprehensive management of HBV, as they do for HIV/AIDS. Participants offered proposals for how the government, NGOs, or the health system may aid in health promotion and care interventions.

PWCH 3 suggests that the government cover part of their treatment cost.

"If possible, the government can help those of us with hepatitis B infection. We will be happy because the treatment of HIV is free if they can do the same for us because it is too expensive... I have two children; they are in the house now because of COVID-19. Under normal circumstances, I will pay school fees, uniforms, and everything. As for me, I can't afford that amount. So, if possible, the government should come to our aid and take part in our treatment cost; we will be happy." (PWCH 3,34 YEARS)

Other participants proposed that hepatitis B treatment be included in the Health Insurance Policy coverage in order to reduce the cost burden:

"Looking at things right now, the vaccine we are talking about is very expensive; not everybody can afford it, so if the health insurance covers it right after delivery, every baby will be injected. I think it will help because not everybody will get that 8 million. It means that if you cannot get the money for the vaccine, the baby will be getting the infection throughout his/her lifetime. So, the drug should be made available for free." (PWCH 5,33 YEARS)

Other participants called on the government, health ministry, and NGOs to actively educate the public on hepatitis B. They believe hepatitis B is as dangerous as HIV and that hepatitis B testing should be done in schools, churches, and mosques. This will help reduce the long-term effects of hepatitis B.

"There has not been enough public education. I believe the health sector is supposed to educate us more. I mean, it is as serious as HIV, right? So, everybody, I mean, has to get tested so that you know what to do and what not to do. The health sector should organize for NGOs to go to schools, churches, and our mosque to preach more about Hep B and then make the test available even if it is expensive because it is an NGO; the prices will be a little so that they can afford it. I think with that, it's going to help a lot; I think it is really going to help a lot." (PWCH 4,27 YEARS)

### Discussion

Communication and the transmission of information are critical components in assessing and managing patients, especially pregnant women with CHBV infection. How healthcare providers and patients communicate might be viewed as supportive. The study has revealed various informational needs of participants ranging from information about the disease, procedures (pre and post and further testing), available treatment options, services (multidisciplinary care and linkage to care), and provision of professional guidance on developing appropriate and healthy coping skills. The predominant need of pregnant women diagnosed

with CHBV is to be given detailed information and support, usually financial and psychological (Chabrol et al., 2019; Chirk et al., 2013). How healthcare providers and patients communicate might be viewed as supportive, leading to the development of appropriate and healthy coping skills.

The study revealed that participants knew very little or nothing about HBV. Many studies have shown that people with HBV don't know much about their condition. This highlights the big knowledge gap among pregnant women with CHBV (Bennett et al., 2021; Franklin et al., 2018; Hajarizadeh et al., 2015; Jarrett, 2016; Mtengezo et al., 2016; Mugisha et al., 2019; Tamayo et al., 2016; Ul Haq et al., 2013), as well as the lack of public awareness on HBV that is needed to help influence widespread testing and screening, vaccinations, and early treatment, especially with the high knowledge deficit among the general population, and even the HCPs on HBV (Adjei et al., 2016; Bennett et al., 2021; Dorte et al., 2020; Franklin et al., 2018; Giles-Vernick et al., 2016; Hajarizadeh et al., 2015; Jarrett, 2016; Mtengezo et al., 2016; Mugisha et al., 2019; Subic & Zoulim, 2018; Tamayo et al., 2016; Ul Haq et al., 2013). This underscores the need to strengthen the healthcare system in terms of health education and awareness creation, keeping in mind the primary goal of eliminating HBV by 2030 (WHO, 2017a).

The lack of pretest and posttest counseling, as observed in previous studies, leads to participants being left with many unanswered questions and uncertainty about further actions typically induces considerable strain (Adjei et al., 2017, 2020; Hamborsky et al., 2015), psychological and emotional distress (Chabrol et al., 2019; Han et al., 2018; Lingala & Ghany, 2016), and an inability to effectively cope with the diagnosis (Adjei et al., 2017, 2020; Hamborsky et al., 2015). Extensive counseling has been recommended as an effective response to managing pregnant women with CHBV (Jarrett, 2016; Mugisha et al., 2019; Rania, 2019); others have also advocated for improving health literacy as a public health measure to raise awareness, prevent disease, promote health, and improve the quality of health (Castro-Sánchez et al., 2016; Dahl et al., 2014; Nawabi et al., 2021; Sørensen et al., 2012).

Another major concern highlighted by the study's findings is economic burden contributing to emotional and psychological stress (Abraham et al., 2021; Cheng et al., 2019; Franco et al., 2012; Hu & Chen, 2009; Myran et al., 2018). The majority of participants in this study are low-income pregnant women who cannot afford treatment. Studies have shown tremendous economic challenges when making out-of-pocket expenditures for further testing and possible treatment since the National Health Insurance Scheme (NHIS) does not cover treatment for CHBV. Though no study has attempted to estimate the cost of managing CHBV and its related diseases in Ghana, many studies have shown that patients with CHBV cannot afford care, resulting in participants opting for alternative medicine

(Adjei, Stutterheim, Naab, & Ruiter, 2019; Ofori-Asenso & Agyeman, 2016). According to Nykänen et al. (2018), around one-third of average Ghanaians live on USD 3.1 (GHS11.9) or less per day, while one-eighth live on USD 1.9 (GHS7.3) or less each day. The high cost of treatment is a barrier to CHBV treatment (Adjei, Stutterheim, Naab, & Ruiter, 2019; Chabrol et al., 2019; Lemoine et al., 2015; Ofori-Asenso & Agyeman, 2016). Other studies cited the pandemic as a direct economic problem (Di Fusco et al., 2021; Ghaffari Darab et al., 2021; Jin et al., 2021). This has resulted in gaps in treatment, adherence to treatment, quality of care, and quality of life (Cheng et al., 2019; Valery et al., 2015). According to Valery et al. (2015), the inability to afford treatment is a direct economic burden causing financial stress. Even though Ghana's NHIS was introduced in 2003 to improve health services by removing financial barriers (particularly out-of-pocket payments), HBV screening, vaccination, and treatment are still not covered under the scheme, making CHBV expensive to treat (Adjei, Stutterheim, Naab, & Ruiter, 2019; Ofori-Asenso & Agyeman, 2016).

## Implications for Research and Practice

The profound understanding of the experiences of pregnant women with CHBV provided by this study highlights the need for midwives and other healthcare providers to design interventions or protocols tailored to the specific needs of pregnant women with CHBV to help improve and lessen the burden of infection. Additional research on CHBV among pregnant women in Ghana is needed to influence policy decisions. It is important to also further investigate the quality of care, satisfaction rates, and cost estimations for treatment options for pregnant women with CHBV to highlight the holistic impact of CHBV on pregnant women in Ghana.

Midwives and all other healthcare professionals caring for pregnant women must periodically update their knowledge in HBV management to effectively counsel, educate, and adequately give guidance and appropriate care to pregnant women with CHBV. Adding to that, adequate reporting and coverage of HBV data will help produce evidence for policymakers to take action and execute effective interventions—including HBV treatment in the NHIS.

## Conclusion

The study results revealed that pregnant women with CHBV had a significant lack of information in addition to other issues that require pragmatic attention as well as a great system support. We recommend that these unique and unmet needs be taken into account throughout their management to influence the provision of tailored care toward the accomplishment of optimal health of pregnant women. This

supportive care approach will help pregnant women to better cope with CHBV.

## Strengths and Limitations

This study is one of the initial studies exploring the needs of pregnant women with CHBV in Ghana. However, the small sample size limits the generalizability of the findings to other settings.

## Authors' Contribution

The main author (Midwife/student) was responsible for the conceptual design, collection, and analysis of data, as well as writing the study report and manuscript. The co-authors (Supervisors) supported the data analysis and review of the first draft of the manuscript. All authors worked on revising and developing the final draft and approved it for submission.

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Participants have consented to anonymized transcripts.

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