Global Journal of Health Science; Vol. 17, No. 1; 2025
ISSN 1916-9736 E-ISSN 1916-9744
Published by Canadian Center of Science and Education

A Systematic Review Study on Lived Experiences of People Living with Hepatitis B (PLHB)

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Received: November 26, 2024 Accepted: December 30, 2024 Online Published: January 30, 2025

doi:10.5539/gjhs.v17n1p63 URL: https://doi.org/10.5539/gjhs.v17n1p63

Abstract

Background: Hepatitis B (HB) is a serious “silent infection” with an infection rate of around 325 million worldwide, with an expected death rate of 1.14 million in 2035. Chronic HB is a burden and a threat to People Living with Hepatitis B (PLHB), and it is predicted that the situation for PLHB will become even worse by 2030 if nothing is done to reduce its prevalence and eliminate it.

Objective: To determine the lived experiences of PLHB and their impact on their quality of life.

Methods: The Joanna Briggs Institute (JBI) Protocol was used as a guide to systematically search four electronic databases: MEDLINE, CINAHL, Science Direct, and Google Scholar, published in English from 2000 to 2022 with adult volunteers aged 18 years and above. The data screening and selection process was facilitated by the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) 2020 flow chart, and the methodological quality of the studies selected was evaluated using the JBI Critical Assessment Skill Program (JBI CASP). Data analysis and synthesis were done using the JBI qualitative meta-aggregation approach.

Results: Five themes emerged: informational needs, socio-cultural issues as barriers to treatment and care, health system challenges as barriers to healthcare and follow-up, coping strategies to overcome the challenges, and impacts of HB on the psychological, social, spiritual, and physical domains of life.

Conclusion: HB burden is a global burden affecting PLHB caused by several factors such as lack of knowledge, healthcare-seeking behaviors, barriers to healthcare, and healthcare system challenges and policy making. To address these challenges, policymakers and stakeholders are to commit funds for HB health education and the awareness creation, free screening for all, creation of HB clinics for early diagnosis and treatment, as well as subsidizing HB treatment and health insurance subscription at the district levels. More healthcare workers should be trained as professional counselors to address and improve the well-being needs of PLHB.

Keywords: Hepatitis B, lived experiences, quality of life, systematic review

1. Introduction

Hepatitis B (HB) is caused by the Hepatitis B Virus (HBV), a hepatotropic double-stranded DNA virus that can replicate at high levels and cause minimal disease or serious liver injury (Dusheiko, Agarwal, & Maini, 2023). Exposure to body fluids such as blood, semen, or vaginal discharge is the means through which one gets the infection, with sexual contact being the main mode of transmission while saliva is the lesser source of infection (Mahboobi et al., 2012). The clinical manifestation ranges from no symptoms to progressive hepatic fibrosis, advanced cirrhosis, and hepatocellular carcinoma (Dusheiko, Agarwal, & Maini, 2023). The European Association for the Study of the Liver (EASL) reported that chronic HB had a higher risk of hepatocellular carcinoma (HCC) (EASL, 2017). However, deaths from HBV are expected to reach 1.14 million by 2035 (Nayagam et al., 2016). However, HBV generally causes a self-limiting illness in adults, with viral control mediated primarily by the adaptive immune response. Treatment complements HBV vaccination, and safe sexual practices have been reported to reduce the risk of sexually transmitted HBV infection among the general public (Dusheiko, Agarwal, & Maini, 2023). People who are persistently infected with HBV and do not seek healthcare acvhrqw/o7rnd fail to undergo treatment face a lifelong risk of acquiring HCC, the world's third-leading cause of cancer (Fitzmaurice et al., 2017; Petruzziello, 2018).

HBV infection causes serious liver complications globally (Nguyen, 2020). Among them is HBV-related cirrhosis, which resulted in an estimated 331,000 deaths in 2019 (Hsu, Huang, & Nguyen, 2023). HBV infection contributed to 55% to 70% of HCC cases (Nartey et al., 2022; Yen et al., 2021). Meanwhile, there is an increased rate of HCC globally, with the highest rate of disease and death occurring in the United States of America (Fitzmaurice et al., 2017; Leumi et al., 2020). As of 2019, only 68 out of 194 countries had achieved the 2030 target of elimination proposed by the World Health Organization (WHO) (Lavdaniti & Tsitsis, 2020). Moreover, people living with Hepatitis B (PLHB) frequently report worry and fear of passing the virus to their close contacts and family members, chiefly because of the perceived risk of infection and the incurable nature of Chronic Hepatitis B (CHB), which is likely to persist until a cure is found (Tu et al., 2020; Chabrol et al., 2019; Freeland et al., 2021). The burden of HB does not only affect people diagnosed with HB but also their spouses and healthcare workers (HCWs) who care for them**.** The actual, potential, and perceived harms associated with the diseases may affect friends, spouses, and family (Chabrol et al., 2019). Meanwhile, disclosure of HB status may lead to stigmatization, discrimination, isolation, and divorce (Chabrol et al., 2019; Lee, Kildea, & Stapleton, 2017; Tomar, Sharma, & Prasad, 2023; Adjei et al., 2020). However, several studies have reported that HBV remains seriously undiagnosed, untreated, and underfunded, and preventive measures to be taken to reduce the disease progression have become a challenge in both low- and high-income countries and regions globally (Nguyen, 2020; Hsu, Huang, & Nguyen, 2023; Schmit et al., 2021; Lavdaniti & Tsitsis, 2015; Adjei et al., 2021). Additionally, researchers have identified other burdens, including lack of data from some regions (Nartey et al., 2022), joblessness, absenteeism, reduced productivity at work due to increased infectivity, and mortality may follow if adequate counseling and support systems are not available (Schmit et al., 2021; Ofori-Asenso & Agyeman, 2016b; Barakat et al., 2005). In chronic diseases, family and marriage therapists are recommended to provide support (Escribano-Ferrer et al., 2016), but persons with HB, their spouses, and the HCWs who care for them have to face the challenges all by themselves. HCWs attending to such individuals also have challenges with the health system that affect the quality of services provided to individuals and their spouses (Adjei et al., 2019; Abaah, Ohene, & Adjei, 2023). Despite the increase in endemicity and HBV-related burdens, there is also a scanty study on the lived experiences of persons with HB and their spouses and their impact on the quality of life (Abaah et al., 2023; Aveyard, 2019). It is therefore important to explore the lived experiences of persons with HB and their spouses and how they describe their quality of life while coping with HB's uncertainty. The review will also consider the role of HCWs in relation to the quality of services and the impact of HBV on the healthcare system.

2. Methods

2.1 Search Strategy

This systematic review study was carried out using the Joanna Briggs Institute's (JBI) review approach (Aromataris & Munn, 2020). Science Direct, CINAHL, Google Scholar, and MEDLINE were used as databases to reach high-quality, peer-reviewed primary studies that are published and provide verifiable proof of the most popular healthcare studies (Center for Reviews and Dissemination [CDC], 2009; Oermann et al., 2021). Boolean operators used in the search strategy include AND and OR for keywords “Hepatitis,” “Hepatitis B,” “Lived experiences,” and “Quality of Life”. The combination of the search terms using the Boolean operators is indicated as follows: [“Lived experiences” OR “(“perceived susceptibility,” OR “perceived severity,” OR “perceived benefits,” OR “perceived barriers,” OR “cue to action”)] AND [People living with Hepatitis B OR “people diagnosed with hepatitis B” OR “hepatitis B patient” OR “HB seropositive patient” OR “HBsAg positive patient” OR “patient with viral hepatitis” OR “patient with viral hepatitis B] OR [“Spouses” OR “husband” OR “wife” OR “sexual partner” OR “life partner”] OR [“healthcare workers" OR “healthcare professionals” OR “healthcare providers” OR “nurses” OR “midwives” OR “doctors” OR “physicians” OR “physician assistants” OR “medical assistants” OR “general practitioners”] AND [“hepatitis B” OR “chronic hepatitis B” OR “viral hepatitis B” OR “hepatitis B viral infection” OR “hepatitis B infection”] AND [“Quality of life” OR “physical well-being” OR “psychological well-being” OR “spiritual well-being” OR “social well-being”].

2.2 Selection Criteria

Researchers have suggested formulating relevant and precise research questions for qualitative evidence synthesis utilizing the PICo mnemonics (P- population/participants, I- phenomena of interest, Co-context) (Page, Higgins,

& Sterne, 2019). Table 1 shows the details of PICo.

Table 1. The PICo framework

Population [P]	Patients, spouses, healthcare workers
The phenomenon of interest [I]	Lived experiences and how it impacts the quality of life
The Context [Co]	Global

Primary qualitative and qualitative mixed methodologies studies conducted globally were considered in this review to select the relevant articles among patients, spouses, and HCWs in the hospital, educational institution, and home settings. The studies published from 2000 to 2022 and in English were examined and included peer-reviewed journals and studies with full text related to lived experiences with HB and quality of life. Suitable support was included.

Systematic review studies and studies that were not complete and unavailable were excluded from the study. Studies including other forms of hepatitis were also excluded from the review.

2.3 Selection Process

To guarantee the eligibility of the articles and to reduce the number of articles while minimizing the risk of bias, a selection process was used (Page et al., 2021; Snyder, 2019 Oermann et al., 2021). Careful reading of all titles and abstracts with a keen interest in identifying relevant articles marked the beginning of the selection process. This was followed by reading the full-text studies to check for relevant and pertinent information related to the study. The articles were also checked for duplication, which was removed, and those that met the inclusion and exclusion criteria were downloaded (Snyder, 2019; Higgins et al., 2022). Those studies that matched the eligibility requirements were thoroughly examined, including their reference lists, as this allows scanning of the titles, reading abstracts and full texts, and finally checking the bibliography of remaining studies. Those studies that do not satisfy the requirements were eliminated (Higgins et al., 2019; Polanin et al., 2019; Joanna Briggs Institute, 2018).

A total of 20,784 articles were found during the initial search using MEDLINE, CINAHL, Science Direct, and Google Scholar. During the first search, the inclusion criteria were considered, and the second phase of the screening considered duplicate article titles (n = 3), elimination by automation tool (n = 20,726), and other reasons (26) were eliminated. The third screening phase proceeded with the title and abstract (n = 58), followed by the full-text reading of the article (n = 48) (Aromataris & Munn, 2020). The eligible articles after full-text reading were (n = 25) cross-examined for inclusion and exclusion criteria, and those that met the criteria for inclusion were chosen as the readable articles (n = 23) for evaluation. A Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) Flow Diagram was adopted and used as a preferred reporting item for the systematic review as indicated by Figure 1 (Polanin et al., 2019; Page et al., 2021).

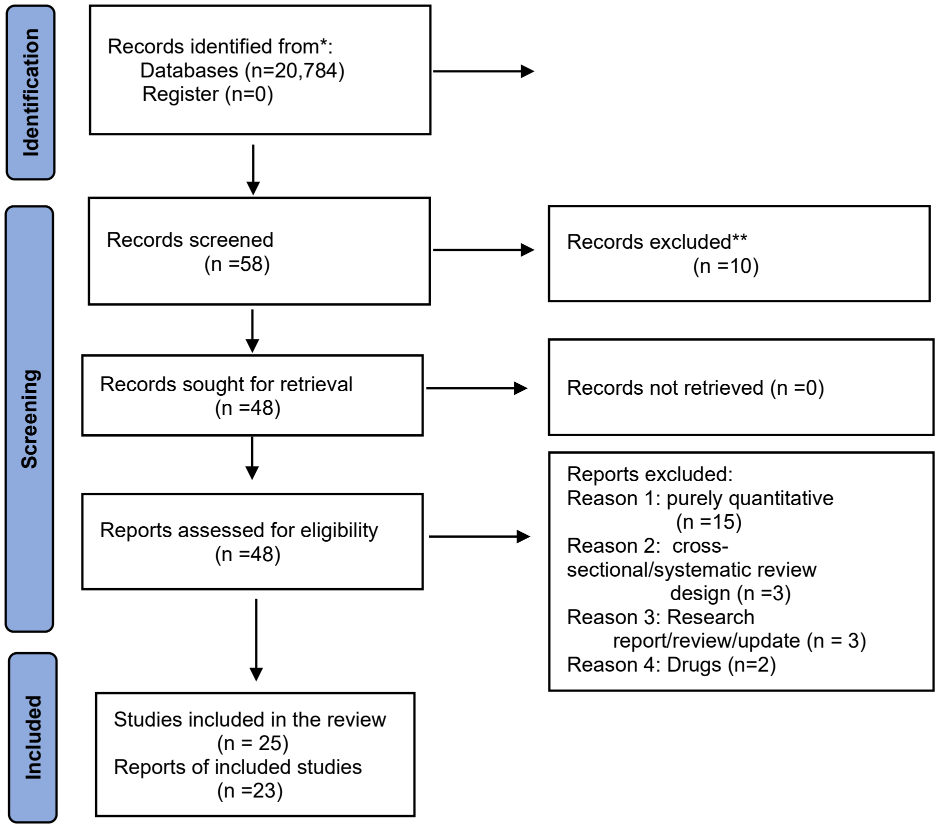

Figure 1. Article search and selection process

A data extraction sheet was developed to extract relevant information needed for further analysis and to create themes for this study (Table 2 supplementary file).

2.4 Quality Assessment

According to the JBI review committee, the purpose of critiquing an article is to assess the methodological quality of that study and to determine the extent to which it has addressed the possibility of bias in terms of design, conduct, and analysis (JBI, 2020) as well as increase the standardization of care and policy (Ma, Wang, Yang, Huang, Weng, & Zeng, 2020; Khorsan & Crawford, 2014). Several quality assessment methods have been developed to assess the authenticity of individual articles (Higgins, Thomas, Chandler, et al., 2019; Ma et al., 2020; Zeng, Zhang, Kwong, et al., 2015).

The JBI Critical Appraisal Checklist for Qualitative Studies was used as a tool to assess the quality of the articles obtained from the database searches that met the inclusion criteria for the review because most of the articles identified for appraisal are qualitative studies, except three articles that were mixed methods (Adekanle et al., 2020; Oka et al., 2017; Valizadeh et al., 2018). The JBI Critical Appraisal Tool includes 10 questions with an elaborated explanation of expectations for the reviewer to follow, making the whole process easy and helping to select quality articles for the review (Lockwood et al., 2016). This is because the reviewer is looking for a primary study that looks into the lived experiences and quality of life of PLHB to inform healthcare practices and policies (Mondragón-Sánchez et al., 2022).

2.5 Data Analysis

The JBI qualitative research meta-aggregative approach was used to synthesize the study findings (Lockwood et al., 2016). The meta-aggregation focuses on the primary authors' analytical interpretation of the study data instead of the empirical data (Munn et al., 2021). According to Munn et al. (2021), this process is usually presented in a standardized visual representation in order of findings (verbatim interpretation of the results) or data (themes, metaphors, or rich descriptions of findings) without seeking the reviewer's interpretation or reconceptualization of those findings (Aromataris & Munn, 2020).

A total of 276 findings were subjected to a level of credibility. Of those, 215 were considered unequivocal, with 35 of them being assigned as credible. Because the main findings are verified against the meaning, not all the individual quotes under main themes are verified unless the quote is aligned to a subtheme. Hence the variation in the number as compared to the extraction. These findings were aggregated into similar categories, which reduced the number to 34 findings. Further categorization and meta-synthesis were done, and 5 themes were identified that could be used to influence nursing practice, policy, and research.

3. Results

The review included 23 studies conducted globally in both developing and developed countries between 2000 and 2022. As Table 3 reveals, most of the studies (87%) were qualitative studies, while the remaining 3 (13%) were mixed methods conducted in China (Na & Na, 2013), the Netherlands (van der Veen et al., 2009), and Australia (Le Gautier et al., 2021). Out of the 23 studies, 7 (30%) of the studies were conducted in sub-Saharan Africa: 5 in Ghana (Adjei et al., 2020; Adjei et al., 2017; Adjei et al., 2019; Abraham et al., 2021), 1 in Nigeria (Adekanle et al., 2020), and 1 in Senegal (Boye et al., 2020). Out of the remaining 16 (70%) studies, 5 were conducted in Asian communities; 2 in China (Na & Na, 2013; Wallace et al., 2017). 2 in Iran (Valizadeh et al., 2018; Ezbarami et al., 2017), and 1 in Japan (Oka et al., 2017). Four were carried out in the United States of America (Freeland et al., 2021; Hyun et al., 2021; Alber et al., 2020; Hwang et al., 2012), and another 4 studies were conducted in the Pacific Islands: Australia (Le Gautier et al., 2021; Wallace et al., 2017; Mude et al., 2019; Davies et al., 2014). One of the studies was conducted globally among 32 countries (Freeland et al., 2021), including the United Kingdom, New York (Blanas et al., 2015), and Europe, Netherlands (van der Veen et al., 2009).

Table 3. General characteristics of studies

Type of studies	**Number**	**%**
Qualitative	20	87
Qualitative Mixed method	3	13
Regions of studies conducted		
Global (23 countries)	1	4.3
United States of America	4	17.4
Asia	5	22.0
Pacific Islands	4	17.4
Europe	1	4.3
United Kingdom	1	4.3
Sub-Saharan Africa	7	30.4
Total	23	100

All 23 studies explored the views of individuals diagnosed with HB, their families, community members, and Healthcare workers (HCWs). The studies were observed to be related to the topic of this review. Five themes emerged after summary and categorization to include the knowledge gap as an informational need, perception and attitude towards HB and its treatment, challenges associated with HB healthcare and the healthcare system, strategies adopted to overcome the challenges, and how HB impacted their quality of life (Table 4).

Table 4: Summary of themes and sub-themes identified

No.	Themes	Subthemes
1.	Attitude and perception of HB (Informational needs)	Lack of appropriate and adequate information on the description of HB as a disease (Adjei et al., 2019; Oka et al., 2017; Na & Na, 2013; van der Veen et al., 2009; Abraham et al., 2021; Boye et al., 2020; Ezbarami et al., 2017; Hyun et al., 2021; Hwang et al., 2012; Wallace et al., 2013). • Education on HB (Alber et al., 2020; Blanas et al., 2015). • Knowledge and awareness of HB (Alber et al., 2020; Wallace et al., 2013; Davies et al., 2014). • Not regarded as STD (van der Veen et al., 2009). • Unawareness of HB (Abraham et al., 2021; Hyun et al., 2021; Davies et al., 2014). • Lay explanation of the disease (Davies et al., 2014). • Community knowledge (Wallace et al., 2017). Sources of HB knowledge (Abraham et al., 2021; Boye et al., 2020; Hwang et al., 2012). Mode of transmission (van der Veen et al., 2009; Abraham et al., 2021; Wallace et al., 2013). Cultural beliefs of the causes (Boye et al., 2020; Hwang et al., 2012; Wallace et al., 2013). Prevention (Na & Na, 2013; van der Veen et al., 2009; Ezbarami et al., 2017; Alber et al., 2020; Hwang et al., 2012; Blanas et al., 2015). Complications (Abraham et al., 2021; Boye et al., 2020.
2.	Attitude and perception towards HB and its treatment	Societal values/beliefs regarding HB and treatment (Adjei et al., 2019; van der Veen et al., 2009; Blanas et al., 2015). • Alternative treatments search (Valizadeh et al., 2018). • Health belief (Blanas et al., 2015). • Intercultural misunderstanding of HB (van der Veen et al., 2009; Hyun et al., 2021). Perceived benefit and individual beliefs (Adjei et al., 2020; Boye et al., 2020; Ezbarami et al., 2017). Abandoning the prescribed treatment (Ezbarami et al., 2017). Screening (Adjei et al., 2020; Adekanle et al., 2020; van der Veen et al., 2009). Prior knowledge of risky behavior (van der Veen et al., 2009). Lack of diagnostic facilities (Adjei et al., 2019; Ezbarami et al., 2017). Distrust in the medical system (van der Veen et al., 2009).
3.	Challenges associated with HB healthcare and Health system barriers	Personal challenges • Inability to buy life insurance (Oka et al., 2017). • Life failure (Oka et al., 2017). • Financial (Oka et al., 2017; Hyun et al., 2021). HCPs challenges • Misinformation from HCP (Ezbarami et al., 2017; Mude et al., 2019; Davies et al., 2014). • Lack of knowledge on HB (Oka et al., 2017).

		• Prejudices of health-care personnel (Ezbarami et al., 2017). • Challenges with translation of key words (Davies et al., 2014). • Lack of understanding and communication (Davies et al., 2014). • Procedure postponement or avoidance and task shifting (Adjei et al., 2019). • Language barrier (Hyun et al., 2021). Health system challenges • Lack of HB medication (Mude et al., 2019). • Distrust in the medical system (van der Veen et al., 2009). • Asymptomatic and chronic nature of the disease (Hyun et al., 2021). • Stigma in health care setting (Adjei et al., 2019). • Knowing that hepatitis B is a chronic condition (Mude et al., 2019). • Limited patients' choices of treatment (Na & Na, 2013). • Structural challenges (Hyun et al., 2021). Consulting and follow up challenges • Short consultation time with doctors (Mude et al., 2019). • Stigma in health care setting (Adjei et al., 2019). • Referral protocol/Lack of clinical follow up (Wallace et al., 2013). • Difficult rescheduling and missed appointment (Mude et al., 2019). • Long waiting time (Mude et al., 2019). • Being referred to a specialty with no feedback (Mude et al., 2019; Wallace et al., 2013). • Unawareness of prevention and follow ups (Hyun et al., 2021). • Breeches of confidentiality (Adjei et al., 2019). • Facilitators of regular clinical monitoring (Mude et al., 2019). Policy and managerial challenges • Structural challenges (Hyun et al., 2021). • Distrust of the healthcare services (Oka et al., 2017). • Lack of regulation of pharmaceutical market (Na & Na, 2013). • Resourcing and sourcing (Wallace et al., 2013). • Lack of life insurance and health financing (Oka et al., 2017; Hyun et al., 2021). • General practitioner support and prescribing right (Wallace et al., 2013). • Lack of law enforcement (Na & Na, 2013).
4.	Coping strategies to overcome challenges	Positive coping • Personal strategies (Adjei et al., 2017; Adekanle et al., 2020; Mude et al., 2019). • Individual resilience/change in lifestyle (Mude et al., 2019).

		• Knowing other people with hepatitis B (Mude et al., 2019). • Searching internet for treatment (Valizadeh et al., 2018; Freeland et al., 2021). • Protecting oneself or others (Valizadeh et al., 2018). • Seeking reproductive advice from Practitioners and consultants (van der Veen et al., 2009; Mude et al., 2019). • Education on HB (Wallace et al., 2013). • Encouragement and support from close relations (Oka et al., 2017). • Religious belief, faith and spirituality (Valizadeh et al., 2018; Mude et al., 2019). • Appreciating life (Ezbarami et al., 2017). • Sharing brings a feeling of empowerment and encouragement (Freeland et al., 2021). • Counselling/support from family and friends (Oka et al., 2017; Mude et al., 2019). • Disclosure to trusted family members (Adjei et al., 2020). Negative coping • Avoidance of disclosure (Na & Na, 2013). • Concealment of HB status (Adjei et al., 2017; Valizadeh et al., 2018; Na & Na, 2013; Alber et al., 2020). • Denial of the disease & disclosure (Adjei et al., 2017; Valizadeh et al., 2018; Na & Na, 2013; Alber et al., 2020). • Minimization (Valizadeh et al., 2018).
5.	HB impacts the psychological, social, spiritual, and physical domains of life (QoL).	Physical impacts • Absence of symptoms (Hyun et al., 2021). • Symptoms of fatigue, nausea, pain in the abdominal region and other flu-like symptoms, sleeplessness, panic, and even loss of appetite (Freeland et al., 2021; Abraham et al., 2021). Psychological impact • Psychological instability (Abraham et al., 2021). • Emotional disturbances; distress, depression (Na & Na, 2013). • Stigma, discrimination (Oka et al., 2017; Na & Na, 2013; Wallace et al., 2017). • Concerns about disclosure (Na & Na, 2013). Cognitive experiences • Fear, anxiety, anger, hopelessness (Na & Na, 2013). • Fear and anxiety (Ezbarami et al., 2017; Freeland et al., 2021). • Sadness, worry, fear, shock, shame, and disbelief (Adjei et al., 2017). • Self-blame (Adjei et al., 2017; Ezbarami et al., 2017). • Shock (Adekanle et al., 2020). • Fear of victimization and depression (Freeland et al., 2021; Ezbarami et al., 2017). Positive emotions

		• Emotions were expressed as happiness, hope, love, assurance, satisfaction, gratefulness, and relief (Adjei et al., 2020; Na & Na, 2013; Hyun et al., 2021). • Strengthening emotional relationships with relatives (Ezbarami et al., 2017). Social impact Negative social impact • Employment choices (Wallace et al., 2017). • Financial constraints (Na & Na, 2013). • Relationship difficulties; intimate relationships/coworker relationship (Na & Na, 2013). • Social loneliness (Abraham et al., 2021). • Avoidance/social isolation (Adjei et al., 2019). • Social stigma and discrimination (Adjei et al., 2019; Adekanle et al., 2020; Na & Na, 2013; Wallace et al., 2017). • Stigma and social marginalization (Le Gautier et al., 2021; Valizadeh et al., 2018; Wallace et al., 2017). • Protection for legal right for testing for job (Na & Na, 2013). Positive impacts • Social support (Oka et al., 2017; van der Veen et al., 2009). • Stronger relationship and strong societal tides (Na & Na, 2013). • Share illness experiences and treatment diaries (Na & Na, 2013). • Wanting close contacts to get tested and vaccinated (Adjei et al., 2020). • Disclosure of HBV to trusted family (Adjei et al., 2020; Adekanle et al., 2020). Spiritual impacts • Spiritual struggle and self-blame (Ezbarami et al., 2017). • Hope of getting rid of the disease (Ezbarami et al., 2017). • Spiritual growth (Adjei et al., 2017; van der Veen et al., 2009; Mude et al., 2019). • Prayerful (Valizadeh et al., 2018). • Wishing for life balance (Oka et al., 2017). • Having faith and spirituality (Mude et al., 2019).

Theme 1: Attitude and Perception towards HB Information

Out of the 23 studies, 13 (56.5%) of the studies revealed a knowledge gap in the global context (Adjei et al., 2019; Oka et al., 2017; Na & Na, 2013; van der Veen et al., 2009; Abraham et al., 2021; Boye et al., 2020; Ezbarami et al., 2017; Freeland et al., 2021; Hyun et al., 2021; Hwang et al., 2012; Wallace et al., 2013; Davies et al., 2014; Blanas et al., 2015). Of the 13 studies, 12 (92%) of the studies revealed a lack of appropriate and adequate information on the description of HB as a disease (Adjei et al., 2019; Oka et al., 2017; Na & Na, 2013; van der Veen et al., 2009; Abraham et al., 2021; Boye et al., 2020; Ezbarami et al., 2017; Freeland et al., 2021; Hyun et al., 2021; Wallace et al., 2013; Blanas et al., 2015). Only 1 (8%) of the study perceived and described HB as a "scary sickness," "a serious infection," or "a big sickness" and also referred to it as a "silent killer" [61].

Four (31%) of the studies revealed misconceptions about the cause of HB infection to include food and poor hygiene (Wallace et al., 2013), certain foods, worrying, lack of sleep, and alcohol intake (Hwang et al., 2012; Adjei et al., 2019), spiritual causes through food poisoning, bewitchment, and punishment of the gods (Adjei et al., 2019;

Boye et al., 2020). Four (31%) studies revealed the mode of transmission to include sexual route (van der Veen et al., 2009; Abraham et al., 2021), body contact, sharing of sharps and body fluids (Abraham et al., 2021), and saliva (Adjei et al., 2019). One of the studies indicated that HB infection is asymptomatic (Hyun et al., 2021). Meanwhile, another study revealed that the symptoms are based on the viral load (Davies et al., 2014). Two of the studies described the symptom as having jaundice (Boye et al., 2020) and abdominal swelling (Hwang et al., 2012). The complication is due to the manipulation of occult forces (Boye et al., 2020).

Six (46%) of the studies addressed preventive issues (Na & Na, 2013; van der Veen et al., 2009; Ezbarami et al., 2017; Alber et al., 2020; Hwang et al., 2012; Blanas et al., 2015). These include religious (van der Veen et al., 2009), biomedical means; screening and vaccination (Hwang et al., 2012), vaccination of babies born to infected mothers (Na & Na, 2013), education on HB (Alber et al., 2020; Blanas et al., 2015), and wearing of gloves when cooking (Ezbarami et al., 2017).

Theme 2: Attitudes and perception of society towards HB care and healthcare seeking

Society's initial perception was that HBV is not harmful to one's honor but later had a negative reaction due to lack of knowledge (van der Veen et al., 2009). Several factors, including sociocultural issues on HB and barriers to care, social values of health and illness, are more due to ignorance and lack of treatment and not custom-related (van der Veen et al., 2009; Blanas et al., 2015); intercultural misunderstanding of HB; social norms regarding screening are acceptable (van der Veen et al., 2009; Adekanle et al., 2020); trusted family members support socially and financially towards screening (Adjei et al., 2019). PLHB prefer to disclose their disease to close relations with the confidants to conceal and go for screening (Adjei et al., 2020; Adekanle et al., 2020; van der Veen et al., 2009)..

Perceived benefits and individuals' beliefs pose a challenge to health seeking (Adjei et al., 2020; Boye et al., 2020; Ezbarami et al., 2017), with spirituality affecting recovery (Ezbarami et al., 2017). Society believes that HB is caused by a curse and so consults the village for treatment, which includes giving an enema or concoction to reduce pot belly and tiny limbs (Adjei et al., 2019). They also believe that the outcome is death and the dead will be buried far away in a valley (Adjei et al., 2019). The review revealed that lack of diagnostic facilities and qualified health professionals poses a challenge for preference (Adjei et al., 2019). Others seek care by searching the internet but are verified by health practitioners (Ezbarami et al., 2017).

Lack of knowledge and financial constraints influence HB healthcare (van der Veen et al., 2009; Boye et al., 2020; Hyun et al., 2021). Additionally, cost, language, racism, and lack of understanding of Western and traditional medicine are barriers (Ezbarami et al., 2017). Treatment preference is community-specific, which includes the use of herbal medicine, hospital medicine, or both at the same time (Freeland et al., 2021; also see Hwang et al., 2012 for related discussions). The choice of drugs is based on the efficacy and affordability of the drug (Adjei et al., 2019; Hwang et al., 2012). The most preferable is Chinese medicine. Meanwhile, financially stable individuals in developed countries prefer health supplements (Hwang et al., 2012). Stigmatization, denial of quality healthcare, education, jobs, and social interaction are challenges faced by those with HB (Valizadeh et al., 2018). This impacts HB care (Valizadeh et al., 2018).

Theme 3: Challenges associated with HB healthcare and health seeking

Ten (43.5%) of the studies reviewed were related to challenges PLHB experiences on a daily basis (Adjei et al., 2019; Oka et al., 2017; Na & Na, 2013; Le Gautier et al., 2021; Freeland et al., 2021; Hyun et al., 2021; Mude et al., 2019; Wallace et al., 2013; Davies et al., 2014). The challenges were associated with factors such as individual (Oka et al., 2017; Hyun et al., 2021) and HCPs barriers (Adjei et al., 2019; Mude et al., 2019; Wallace et al., 2013), government policies, and health system barriers (Mude et al., 2019; Wallace et al., 2013).

Individual barriers were identified to include the asymptomatic nature of CHB, which prevents individuals from seeking care (Hyun et al., 2021). Other individual barriers include inability to buy life insurance and pay hospital expenses, life failure due to early retirement and end of marriages (Oka et al., 2017), mistrust of the medical system (Na & Na, 2013), and unmet expectations (Adjei et al., 2019). HCPs faced challenges such as providing misinformation (Adjei et al., 2019) due to a lack of knowledge on HB (Wallace et al., 2013; Davies et al., 2014), problems with the translation of keywords (Freeland et al., 2021; Davies et al., 2014), and prejudices (Davies et al., 2014). Government policies also pose problems as they fail to protect the right of the general practitioner to prescribe for the management of HB (Wallace et al., 2017) and fail to regulate the pharmaceutical market (Wallace et al., 2013).

Healthcare system challenges include language barriers affecting communication (Hyun et al., 2021; Davies et al., 2014), lack of access to HB treatment (Adjei et al., 2019), failure of the government to provide funding for HB treatment, screening, and testing at the lower level of healthcare (Mude et al., 2019; Wallace et al., 2013).

Consultation and follow-up barriers identified include insufficient time spent with doctors, difficulty scheduling and missed appointments, and lengthy waiting times (Mude et al., 2019). There is also a lack of defined referral protocols (Wallace et al., 2013), creating a communication gap in referral feedback that affects clinical care (Mude et al., 2019).

Theme 4: Coping strategies to overcome the HB healthcare and system challenges

Out of the 23 studies, 7 (30%) of the studies revealed how PLHB cope with life challenges and that of HB healthcare and system challenges using both positive and negative means (Adjei et al., 2017; Valizadeh et al., 2018; Na & Na, 2013; Alber et al., 2020; Mude et al., 2019). Personally, individuals try to influence how they cope by encouraging themselves to move on and also rely on the encouragement and support from close relations to reduce stigma and discrimination (Oka et al., 2017) while others hold on to their religious belief and faith as a form of encouragement (Adjei et al., 2017; Mude et al., 2019). Meanwhile, some participants search for health information online as well as medical services and different strategies to manage their condition (Valizadeh et al., 2018; Na & Na, 2013). The option of traditional Chinese medicine for treatment and the use of herbal medicine was also observed (Valizadeh et al., 2018; Mude et al., 2019). Others coped by seeking health and reproductive advice (Na & Na, 2013), established good relationships with General Practitioners and consultants to enhance feedback and follow-ups (Mude et al., 2019), and education on HB management (Wallace et al., 2013).

Despite the positive coping strategies observed above, some participants use negative means to cope with the challenges and avoid discrimination. The strategies used are mainly in the form of a defense mechanism which include denial of the diagnosis, avoidance of disclosure, and concealment of HB status (Ofori-Asenso & Agyeman, 2016; Valizadeh et al., 2018; Alber et al., 2020). However, advocacy for volunteerism in sharing life experiences with others, community involvement, and partnership were identified as suggested strategies for HB awareness creation (Ofori-Asenso & Agyeman, 2016; Alber et al., 2020).

Theme 5: How do PLHB describe the impact of HB on their Quality of Life

The majority (74%) of the studies reviewed were related to the impact of HB on the four (physical, psychological, spiritual, and social) domains of QoL. The impacts have both negative and positive parts. The study revealed that HB impact on the physical well-being of PLHB. These include fatigue, nausea, abdominal pain, flu-like symptoms (Adjei et al., 2020), sleeplessness, panic, and loss of appetite (Abraham et al., 2021).

PLHB are significantly impacted psychologically, manifesting emotionally and cognitively in both negative and positive ways (Oka et al., 2017; Adekanle et al., 2020; Na & Na, 2013; Le Gautier et al., 2021; Abraham et al., 2021; Ezbarami et al., 2017; Freeland et al., 2021; Alber et al., 2020). Studies revealed that negative emotions were expressed in the form of fear and depression, attempts to commit suicide to avoid shame, discrimination, marginalization, social isolation, and loneliness upon receiving a positive test result (Freeland et al., 2021; Oka et al., 2017; Adekanle et al., 2020; Na & Na, 2013; Le Gautier et al., 2021; Abraham et al., 2021; Ezbarami et al., 2017; Alber et al., 2020).

The study revealed that though there is family rejection, it helps some to guard against their risky behaviours and to conform to social norms such as drinking (Freeland et al., 2021). Meanwhile, eating together as a family strengthens the relationship and social integration (Na & Na, 2013), and social networking (Mude et al., 2019).

The study revealed that in an attempt to cope with the condition, some grow spiritually and become more religious, and leave a responsive behaviour (van der Veen et al., 2009; Na & Na, 2013; Mude et al., 2019). Others exercise their faith and rely on God for healing, sort for spiritual support become more prayerful and spiritually strong (Valizadeh et al., 2018). Meanwhile, the study revealed spiritual struggle through self-blame (Hyun et al., 2021).

4. Discussion

The purpose of this review was to explore the lived experience of people living with HB and its effects on their quality of life. The results of the study have shown that PLHB's lived experiences are important for their quality of life. The current study revealed that there is poor knowledge or lack of biomedical knowledge about HB among individuals, their spouses, and healthcare workers, revealed as myths or cultural beliefs, and misconceptions about the knowledge on HBV infection. This finding is consistent with other studies that reported of lack of knowledge and attributed the cause of HB to tradition (Hsu, Huang, & Nguyen, 2023; Owusu-Ansah, 2012; Vu et al., 2012). The result might suggest that people living with HB do not have the appropriate, correct, and adequate information on HB. The government and healthcare providers need to pay more attention to the education and awareness creation of HB to promote its elimination and reduce related complications.

To ascertain the attitudes and perceptions towards HB and its treatment, the results indicate that HB was not perceived as harmful nor has social norms and values contributed negatively. Rather, ignorance due to lack of knowledge of HB and its treatment influenced attitude and perception. Congruent to this report, other researchers have shown that those who know are more likely to complete HBV screening not only for themselves but for their family, lack of finances compels patients and their relatives to report late with liver-related complications leaving others more vulnerable to infection (Abaah, Ohene, & Adjei, 2023; Duah & Nartey, 2023; World Health Organization [WHO], 2023; Jin, Brener, & Treloar, 2020; Ahmed, Sann, & Rahman, 2016; Shaghaghian, Pardis, & Mansoori, 2014; Wu et al., 2007). On the contrary, perceived benefit and individual health beliefs compels them to consult village doctors for treatment while others search the internet or do not seek care due to a lack of diagnostic facilities and qualified health professionals. Meanwhile, those who can afford treatment prefer supplements to antiviral treatment because of mistrust in the medical system and poor efficacy of the treatment and the disease outcomes (Mugisha et al., 2019). However, attitudes and perceptions vary from one country to the other and can be removed through an intercultural healthcare system that aims at reducing sociocultural and economic barriers to healthcare (Peprah et al., 2021; Nankya-Mutyoba et al., 2019). Hence, healthcare providers need to be more intentional in their routine care to address the issues of lack of knowledge while the policymakers put in measures to make healthcare accessible, available, and affordable across all cultures.

Challenges associated with HB healthcare and the healthcare system were identified as personal barriers, healthcare workers' attitudes, and healthcare system factors. Specifically, the challenges include lack of knowledge or awareness of HB among PLHB, financial constraints and cost of care, language barrier, racism, understanding of Western Medicine, and usage of traditional medicine. Consulting and follow-up barriers were also identified including insufficient time spent with the doctor, difficulty rescheduling missed appointments, and long waiting times. At the same time, lack of political commitment, infrastructure, qualified personnel, referral protocol, and feedback were identified as health system challenges. These findings support other studies that reported on socio-economic status, lack of qualified personnel, financial constraints, and lack of knowledge on HB and its care among PLHB (Jin et al., 2020; Abubakar et al., 2022; Yeo & Nguyen, n.d.; Tan et al., 2020; Franklin et al., 2018; Cooke et al., 2019).

On the contrary, researchers have attributed the challenges to community decision-making, socio-economic and health status, poor road network, high cost of HB treatment and inequality in healthcare, fear of disclosure, stigma limiting access to timely HB screening, vaccination, treatment, and follow ups, poor implementation of infection prevention protocol creating a risky environment for nosocomial infection and leaving people vulnerable to the HB infection thereby increasing the prevalence rate and decrease quality of care (World Health Organization, 2023; Yeo & Nguyen, n.d.; Ghazzawi et al., 2023; Ahenkorah et al., 2022; Al Bakri et al., 2021; Alhassan, 2021; Evon et al., 2022). Hence, there is a need for policymakers to factor in free screening in the National Health Insurance scheme, ensure free compulsory vaccination, and subsidized HB treatment, allocate funds for awareness creation, establish HB clinics for early reporting, diagnosis, and management, and organize continuous professional education on HB for the HCWs.

To overcome these challenges, both negative and positive strategies were identified. The positive strategies include personal encouragement and support from close relations which helps to reduce stigma and discrimination, holding on to religious belief and faith, searching for health information online, and use of traditional Chinese medication or herbal medicine. Others sought health and reproductive advice, establish good relationships with General practitioners and consultants. Congruently, social support, family roles, and cultural beliefs have been identified to be more significant and closely associated with coping as it brings about social enhancement thereby decreasing psychological pressures such as depression and anxiety, improving mood and motivation, reduce complaints, and fear of stigma and discrimination which hurt the therapeutic effect of the treatment and health outcomes (Evon et al., 2022; Kong et al., 2020; Sohail et al., 2019; Konlan et al., 2016). Other reports show that being married, and having social networking may provide the needed social, psychological, and economic support to

improve the opportunity to live healthier and achieve positive quality of life (Chabrol et al., 2019; Mokaya et al., 2018; Robards et al., 2012; Liu & Umberson, 2008). On the contrary, avoidance of smoking and drinking alcohol, adherence to weight reduction strategies, and intake of a well-balanced diet, when adopted, will improve QoL (Cui et al., 2019; Hepatitis B Foundation, 2020). Additionally, negative coping strategies were identified to include denial, avoidance of disclosure, concealment of HB status, and minimization of symptoms. Similar studies reported expressions of feelings of loneliness, distress, and unpreparedness to cope with their infection while others avoid or quit jobs that will demand their HB status (Chabrol et al., 2019; Ibrahim et al., 2023).

Quality of life is said to improve if all its domains of well-being are well connected and functioning. However, it is the individual who can best describe his/her quality of life (Center for Disease Control and Prevention, 2016). This study revealed that some reported no physical symptoms while the majority were diagnosed with their initial symptoms of fatigue, nausea, pain in the abdominal region, and other flu-like symptoms, sleeplessness, panic, and loss of appetite. Congruent to this study, physical symptoms or changes have been identified to include extreme fatigue, lack of energy to complete any given task, general body pain, loss of appetite, nausea, constipation, and inadequate sleep (Abaah et al., 2023; Ibrahim et al., 2023; Janik et al., 2018).

This study provided documented evidence of psychological well-being which manifests emotionally or cognitively due to disclosure, discrimination, and stigmatization, which is expressed as fear and depression in anticipation of death due to slow deterioration of their system and the belief that HB is a silent killer. Some attempt to commit suicide to avoid shame, discrimination, marginalization, depression, social isolation, and loneliness. These findings are supported by other studies that outlined the psychological impact to include fear, anxiety, depression and worry about the progress and long-term effects of the condition such as extreme lack of funds, and insecure employment leading to increased hospital expenses which later affects relationships putting them at risk of feeling lonely, socially isolated and predisposes the individual to a suicide attempt (Cohen et al., 2020; Ibrahim et al., 2023; Kong et al., 2020; Oka et al., 2017; Tu et al., 2020).

Socially, people living with HB report stigma, marginalization, and discrimination causing such people to be neglected and rejected by society. These were manifested in the area of education, employment choices, financial privileges, and intimate relationships while others have to relocate to access healthcare. These findings support the report of other studies that outlined social impact to include isolation, role conflicts, financial burden or poverty, limitations to healthcare, employment, and affection/sexual function leading to fear of loosen loved ones or divorce and sometimes depression (Ibrahim et al., 2023; Lee et al., 2016; Maglalang et al., 2015; Sriphanlop et al., 2014). The result further revealed some positive impacts which include avoidance of alcohol intake due to social rejection and inability to conform to social norms of drinking because they have to guard their liver against further destruction. Relationships and societal tides were kept firm and stronger as people tended to sympathize with those who could not conform to societal norms while communal eating habits believed to strengthen relationships were avoided. However, poor understanding of the infection among the general public and healthcare workers has also been reported to impact social status (Feng et al., 2011; Chao et al., 2013). Despite the numerous experiences outlined, an informational need was the most influencing factor in determining most healthcare decisions and behavior.

The findings of this study revealed spiritual impact including spiritual increase and spiritual and post-traumatic growth. Congruent to these findings, religiosity, spirituality, and life satisfaction have been reported to be significant and have been generally expressed as low levels of spiritual health which include pain and death, guilt and shame, reconciliation and forgiveness, freedom and responsibility, hope and despair, love, and peace (Arndt, 2021; Mohmood et al., 2021). This implies that people living with hepatitis B rely on spiritual support as they seek inner peace, be full of hope, find meaning in life, give and receive love, and be recognized and forgiven (Mojtaba et al., 2020; Fang, n.d.). Noor and colleagues (2015) concluded that internationalizing spirituality helps people living with diseases such as hepatitis B to resist stigma and impact health outcomes positively thereby improving the quality of life for the individual sufferer and those around them.

Contrary to the above reports, QoL among HB patients and their significant others is influenced by factors such as length of time diagnosed, environmental support, routine treatment and complications, the severity of the disease, and economic factors (Miftahussurur et al., 2020). Other researchers have suggested that assessment of QoL should be part of routine assessment due to HB's impact on individuals, families, HCPs, and the healthcare system (Kim & Zane, 2016).

4.1 Study Limitations

The review process is lengthy and complicated, which might lead to bias in article selection, insufficient blending or comparison of papers, selective outcome reporting, and even inconsistency in outcome reporting because primary researchers do not say the same thing (Doleman et al., 2021). The themes extracted from the studies covered larger areas of the phenomenon, causing the aggregation of the findings into categories and synthesis to be tedious. But, the support and detailed explanation as well as in-depth discussion with the supervisor, realistic categorizations, and synthesized findings were arrived at.

The review of a study completed by the researchers before the review provided its retrospective qualities, making data verification hard, resulting in a limitation because the reviewers have to work with existing data. The usage of smaller datasets is likely to create a bias as well (Sutton et al., 2019). Meanwhile, the databases used were credible and authentic for such exercises to be carried out.

5. Conclusion

We found informational needs and financial constraints impacting their perception and attitude towards HB which were exhibited in stigmatization and discrimination causing delays in seeking appropriate HB healthcare thereby impacting their quality of life physically, psychologically, socially, and spiritually. These experiences are likely to impede the HB elimination process as people find it hard to understand the disease process and are financially constrained to access quality healthcare within their geographical jurisdiction. The policymakers and stakeholders could team up and focus on improving the socioeconomic status of people living with HB and also allocate funds to enhance awareness creation and training within the formal and informal settings, free screening for all, and subsidize HB treatment in the health sector by enrolling it unto the Health insurance scheme of the various countries were the studies were carried out. Legalization of anti-stigmatization in various countries may help secure jobs for people living with HB thereby improving their socioeconomic status by and large their quality of life.

Author Contributions

FA and MM conceived the initial idea of the paper. FA wrote the first draft. MM critically revised the first draft. Both authors were involved in the revision of the final manuscript.

Data Availability Statement

The data set used/analyzed during the current study are available from the corresponding author upon request.

Ethical Approval

Most of the primary studies analyzed obtained ethical approval and so no ethical approval was sought.

Funding

None.

Informed Consent

Obtained.

Provenance and Peer Review

Not commissioned; externally double-blind peer reviewed.

Data Availability Statement

The data that support the findings of this study are available on request.

Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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Table 2 Data Extraction Sheet

No.	Study information	Aim of the study	Study design	Participants	Summary of author's findings
1.	Freeland et al., 2021 Global (32 countries)	To assess the most critical needs and concerns of those affected by HBV	Qualitative study Queries in email Random sample	338 unique queries from participants across the globe Gender of participants were not indicated.	Three thematic groups were revealed: 1. health specific challenges associated with diagnosis and treatment. 2. emotional needs related to experiences with HBV stigma, discrimination, fear, social isolation, and distress. 3. information needs related to HBV prevention and transmission, and interpretation of laboratory tests.
2.	Le Gautier et al., 2020 Australia Community	To investigate the personal and social implications of chronic hepatitis B and the extent to which these implications including experiences of stigma and marginalization affect individuals' overall quality of life.	Qualitative study Semi-structured interview Purposive sampling	37 People living with Hepatitis B; 22 Vietnamese;14 women and 8 men and their ages ranged from 19 to 78 years with a median of 43.5 years. 15 Chinese-born participants, 8 women and 7 men with their ages ranging from 28 to 79 years with a median of 40 years.	1.Personal impact of diagnosis 2. Familial impact of CHB 3.Issues of disclosure, stigma and marginalization
3.	Freeland et al., 2021 United States	To explore the working conceptual framework of health-related quality of life for those living with chronic hepatitis B within the United States	Qualitative study In-depth telephone interview Purposive sampling	19 participants Men (10) No report on the gender of the remaining 9.	1. Psychological implications after diagnosis include fear and anxiety 2. Physical symptoms presented prior to diagnosis include fatigue, nausea abdominal pain and other flu 3. Social functioning indicated is more of a concern about a transmission and disclosure and stigma, 4. Concern of current treatment experiences is of varying opinions.
4.	Wallace et al., 2017 China Clinical setting and Non-governmental organization	To identify the social impact of chronic hepatitis B for people living with the infection in China. It sought to understand the personal, interpersonal, economic and social consequence of the disease.	Qualitative study 1 telephone interview and 40 face to face interview	41 People living with HB; 12 women, 29 men 32 were under 35 years, 9 were over 35 years	1. General practitioner knowledge gaps and poor Community knowledge 2. There is a relationship issue with specialist clinic due to poor referral practices, feedback from the specialist to the GP Health system challenges which include resourcing, over sourcing

5.	Adjei et al., 2017 Ghana 1 mission hospital 1 government hospital	The study explored the experiences of people with hepatitis B in the Accra metropolis	Qualitative exploratory descriptive design Purposive sampling Face- to- face In-depth interview using semi-structured interview guide	14 participants aged between 26 and 45 years Females 11 Males 3	1. Individual level factor which include lack of awareness 2. Responsive behavior after diagnosis include shock/shame/disbelief and stigma 3. Coping strategies adapted include religiosity, denial and lifestyle modification
6.	Mude et al., 2019 Australia Home and Community library	To understand how participants, describe their experiences with and explain their responses to seeking hepatitis B treatment and care.	Qualitative, interpretative phenomenological framework Purposive sampling technique Semi-structured interviews	15 participants Males (8) Females (7)	1. Barriers and facilitators to clinical follow ups. Barriers observed include; time constraints, perceived inadequate clinical support, short consulting time, long waiting time, challenge with rescheduling of missed appointment. 2. Facilitating factors include being referred to specialist, being aware of the risk of liver cancer and sending remainders about appointment. 3. Treatment and support seeking practices involve the patronage of biomedical and alternative therapies. 4. Coping responses to HB were identified to include social network and support, religious beliefs and individual resilience.
7.	Na & Na, 2013 China Community	This study investigated an online support group for persons living with HBV in China, the major environmental barriers they face, their coping behaviors, and notable personal characteristics.	Mixed method Posted invitation on bulletin board system for persons living with HB	893 participants 306 women 587 men	1. Barriers identified include institutional discrimination, relationship difficulties, limitation to healthcare due to financial constraints, social norm, pharmaceutical market challenges 2. Coping behaviours include seeking health and reproductive advise, avoiding disclosure and discrimination, Promoting legal right and preventing outreach support behavior. 3. At the interpersonal level, a combatant identity was constructed in the online community which was significantly associated with high self efficacy, positive emotions and outreaching support behavior.

8.	Alber et al 2020 United State and Canada	To examine the experiences of the individuals telling their stories	Qualitative study Purposive sampling	23 participants; 13 were living with hepatitis B, while 10 either had immediate family members affected by hepatitis B or worked directly with hepatitis B patients. Twelve of the participants were female and 11 were male. The age of the participants ranged from 19 to 75 years old	1. The need for more publicity resources and partnership to expand the reach of stories have within the general population. 2. Increase community involvement to improve awareness about HB.
9.	Blanas et al., 2015 New York Community (Local mosques, community centers, hair braiding salons and taxi garages)	To explores a theoretical adaptation of the Andersen Model to the needs of West African immigrants in HBV with regards to HBV screening and linkage-to-care	Qualitative method Purposive sampling Focus group discussion	39 participants 2 community health workers 12 females and 27 males	1. Participants identify the need to increase knowledge of HBV opportunities to access care in culturally sensitive manner devoid of fatalism and stigmatization. 2. Engaging religious establishment and social networking that will employ internet in disseminating HBV- relevant information. 3. Cost of health were identified as future challenge to address undocumented immigrants who are ineligible.
10.	Adjei et al 2019 Ghana Community (Homes of persons with HB) Clinical(1 tertiary &1 regional hospital)	To explore barriers to treatment and care for people with Hepatitis B (PWHB) in Ghana, paying particular attention to beliefs about aetiology that can act as a barrier to care for PWHB.	Exploratory qualitative design Purposive sampling and via advertisement Face-to-face interview 4 FGD	65 participants 18 Persons with HB 15 Healthcare workers; Physicians, nurses & midwives. 4 FGD with a 8 HCPs in each group totaling 32	Three main cultural barriers 1. the belief that chronic Hepatitis B is a punishment from the gods to those who touch dead bodies without permission from their landlords 2. the belief that bewitchment contributes to chronic Hepatitis B 3. the belief that chronic Hepatitis B is cause by spiritual poisoning
11.	Ezbarami et al., 2021 Iran Research center for Gastroenterology and hepatology	To explain the perception of patients with chronic hepatitis B regarding problems in the Iranian society	Descriptive qualitative study Purposive sampling	27 patients with CHB 15 males 12 females Age ranges from 25 years to 52 years	7 themes were observed. These includes 1. Insufficient selfcare 2. misperception regarding the nature of the disease 3. stigmatization present in a form of feeling of being rejected by society 4. psychological issues present in a form of depression and anxiety and fear of victimization or transmitting the disease

					5. failure to achieve personal goals 6. spiritual struggling 7. post traumatic growth include appreciating life and spiritual growth.
12.	Wallace et al., 2013 Australia 7 Public hospitals	To identify the challenges general practitioners face in effectively responding to chronic hepatitis B	Qualitative study Purposive sampling 21 face-to-face, 5 telephone interviews using semi-structured interview guide with follow up questions	26 General practitioners; males (18) Females (8) with working experiences ranging from 15 to 30 years	Four main challenges act as barriers to affecting clinical management. These include; 1. Lack of knowledge and awareness among general practitioners 2. Relationship between general practitioners and clinical specialist 3. Health system challenges 4. Communicating with people living with CHB
13.	Valizadeh et al 2018 Iran Clinical (Medical/Health centers)	To demonstrate the experiences of HB carriers in coping with the disease.	Qualitative study Purposive sampling Face - to - face unstructured and in-depth interviews	18 Participants men (10) women (8) between the ages of 23 and 50 years old with a mean age of 35. 16 were married 2 were single. 10 had an appropriate level of education above grade 12 8 had an educational level below grade 12.	Participants attempt an active expansion of interaction by adopting the following as coping strategies 1. denial of the disease by downplaying its existence or concealing it 2. protecting oneself or others by adhering to follow up schedules, immunization and use of alternative treatment 3. coping with the disease with time and appealed for religious support
14.	Davies et al., 2014 Northern Australia Clinical setting	To explore the knowledge, perceptions and experiences of remote dwelling Indigenous adults and their health care providers relating to hepatitis B infection with a view to using this as the evidence base to develop a culturally appropriate educational tool.	Participatory Action Research (PAR) design	32 participants 11 clinic patients with HB 9 community members 12 key informants 18 females 14 males Mean age of 45 years	Low levels of biomedical knowledge about Hepatitis B, negative perceptions of Hepatitis B, communication (particularly language) and culture were the major themes that emerged from the data. Accurate concepts grounded in Indigenous culture such as “only your blood can tell the story” were present but accompanied by a feeling of disempowerment due to perceived lack of “medical” understanding, and informed partnerships between caregiver and patient. Culturally appropriate

					discussions in a patient’s first language using visual aids were identified as vital to improving communication.
15.	Oka et al., 2017 Japan	To clarify the employment-related hardships experienced by Japanese HBV victims, and the relationships between these hardships and daily life suffering, including poverty	Qualitative and quantitative study Purposive sampling Semi-structured interview guide and questionnaire	107 participants; 68 males with mean age 58.9 years 39 females with mean age of 55.3 years	1.Participants have intention to work but there is lack of understanding of HBV in the workplace 2.Inability to buy life insurances create burden due to medical expenses and life failure 3.Participannts expressed their dissatisfaction with the system and desired for life balance.
16.	Boye et al., 2020 Senegal Both community and clinical setting	To evaluate how these groups explained these signs and symptoms (jaundice, ascites or cachexia) and to examine whether they knew the term “hepatitis B” and could describe this disease	Qualitative study Snow ball sampling Purposive sampling focus groups discussion (6) individual interviews	149 participants individual interviews among 105 lay people (pregnant women, fathers and mothers, and elder women living in the three health post catchment areas) and 31 informal (traditional healers, traditional birth attendants, community health workers, and bajenu gox, or village women serving as intermediaries with local health posts) and 13 formal health workers (physicians, nurses, and midwives) The median age of study participants was 40 years (range: 16–96 years); most (114/149) were women.	Lay population indicated that they have heard and recognize signs and symptoms of end stage of liver which they indicate that is due to manipulation of occult forces. 1. They prefer patronage of traditional of healers instead of formal medical structures to treat such illnesses. 2. Formal and informal health workers have limited knowledge on HBV, difficulties identifying terms in local languages to explain the diseases 3. Communication strategies will enhance awareness to increase screening, commitment to lifelong treatment in Africa.
17.	Adekanle et al., 2020 South West Nigeria A tertiary hospital	To assess disclosure of infection status within the family and among friends and their associated problems	Mixed method Purposive sampling In-depth interview (qualitative) questionnaire	25 participants with ages ranging from 21 to 46 years 11 females 14 males 11 married 14 singles 205	1. Infected persons expressed shock and depression at a positive test leading to fear and deceptions that put close associate at risk. 2. Infected persons have high rate of disclosure. 3. Family problems can be solved through public enlightenment and counselling

			(quantitative)	(quantitative)	
18.	Hwang et al., 2012 United State of America Community	To explore attitudes about prevention, screening, and treatment of hepatitis B virus infection in Chinese, Korean and Vietnamese	Qualitative study Stratified sampling 4 Focus group discussions 1 community leader group 2 general community member groups 1 less acculturated group.	108 participants 1 did not indicate gender. 12 focus groups,113 Of adults who self-reported their ethnicity to be Chinese 39:21(males) 18(females) Korean 32: 17(males), 15(females) or Vietnamese 36:17(males) 19(females) Remaining 1 did not indicate the gender with ages from age 18 years and over ages mostly 51 to 64 years. 50.9% males 49.1% females	Three themes emerged—1.Several common opinions were identified many of which were misconception that participants held about the etiology and prevention, screening, 2. attitudes about treatment including complementary alternative medicine (CAM), 3. suggestions for outreach delivery
19.	Hyun et al., 2021 America	To identify and evaluate various sociocultural factors and how they interact with health literacy to impact CHB care and health seeking in a Korean American population.	Qualitative study Self-recruited by signing and consented 5 Focus group discussion	28 participants 16 men 12 women Aged ranged from 20 to 69 with mean age of 54 years	1. low risk perception and knowledge CHB a. asymptomatic nature b.chronic nature and other complication 2. Language, immigrants status and stigma as barriers to care
20.	van der Veen et al., 2009 Netherland Community (Regional vocational centre)	To investigate behavioural and socio-cultural determinants associated with hepatitis B screening in the Turkish population in the Netherlands, in order to develop culturally appropriate interventions.	Mixed method Purposive sampling 7 Focus group discussion	54 participants Women (31) men (23)	Socio-cultural factors were identified to include 1.social perception of hepatitis B 2.social norm regarding vaccination 3. social support regarding HBV screening

21.	Abraham et al., 2021 Ghana Clinical (A teaching hospital)	To explore how media messaging on HBV influence coping among persons infected with HBV	Qualitative exploratory descriptive research designs Purposive sampling 12 in-depth interview	12 participants Males 5 Females 7	Media reportage on HBV infection, effects of media reportage on clients following diagnosis and clients suggestions for media reportage on HBV
22.	Adjei et al., 2019 Northern & Southern Ghana	To explore beliefs contributing to hepatitis B stigma, and the ways in which hepatitis B stigma manifests from the perspectives of people with chronic hepatitis B and healthcare providers in Northern and Southern Ghana	Qualitative Exploratory design Purposive sampling through advertisement and HCPs 18 in-depth interviews for PWHB 15 in-depth for HCPs 4 FGD composed of 8 HCPs in each group.	65 participants 18 PWHB 47 HCPs (8 physicians, 34 nurses and 5 midwives) 18 years	1.Beliefs about HB as highly contagious, as a curse 2.Mainifestation of stigmatization include avoidance, social isolation 3.Stigmatization in the healthcare settings; excessive cautiousness, procedure postponement or task-shifting 4. Breaches of confidentiality usually by HCPs
23.	Adjei et al., 2020 Ghana (Greater Accra & Upper East) 1 teaching hospital & 1 regional hospital	To explore reasons for and against disclosure of chronic hepatitis B status in the Greater Accra and Upper East region of Ghana.	Exploratory qualitative study Purposive sampling Face–to-face interview in participants' home using a semi-structured interview guide.	18 participants 10 from teaching hospital 8 from regional hospital with age 18 years and above Age ranging from 21 to 57 years	1.Reasons for non-disclosure of chronic hepatitis B include fear of stigmatization, previous negative experiences with disclosure. 2.Disclosure of chronic hepatitis B status by participants may be due to prevention of the spread to close relations, trusting the disclosure target and only when they need support relating to treatment.

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