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Knowledge, Attitudes, and Practices of Pregnant Women Regarding Hepatitis B Prevention in Selected Primary Health Care Centers of Ado Local Government Area, Ekiti State, Nigeria

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Annotation: Introduction: Hepatitis B virus (HBV) infection remains a major global public health challenge, particularly in sub-Saharan Africa where vertical and horizontal transmissions are common. Pregnant women play a critical role in prevention, yet knowledge, attitudes, and practices (KAP) vary widely across socio-cultural contexts. This study assessed the knowledge, attitudes, and practices of pregnant women regarding Hepatitis B prevention in selected Primary Health Care (PHC) centers of Ado Local Government Area, Ekiti State, Nigeria.

Method: A descriptive cross-sectional study was conducted among 200 pregnant women using a structured, interviewer-administered questionnaire. Data were analyzed using descriptive statistics (frequencies and percentages) and inferential statistics (Chi-square test) to determine associations between socio-demographic variables and KAP towards Hepatitis B prevention, with significance set at $p < 0.05$.

Results: Findings revealed moderate knowledge, as only 30% of respondents knew their Hepatitis B status, while 63% recognized HBV as a real disease. Positive attitudes were reported, with 80% agreeing that health talks improved awareness and 83% acknowledging health workers' influence. However, cultural (39%) and religious (58%) beliefs significantly shaped perceptions. Preventive practices were inconsistent: while 62% recognized condom use as preventive, 52% did not identify sharing sharp objects as a major risk. Chi-square analysis showed significant associations between education, cultural beliefs, and knowledge levels ($p < 0.05$).

Conclusion: The study highlights knowledge gaps, positive but culturally-influenced attitudes, and inconsistent practices among pregnant women regarding Hepatitis B prevention. Strengthening

antenatal health education, addressing cultural misconceptions, promoting partner involvement, and integrating routine screening into PHC services are recommended to enhance HBV prevention and reduce mother-to-child transmission in Nigeria.

Background

Hepatitis B is a viral infection of the liver caused by the Hepatitis B virus (HBV), a member of the *Hepadnaviridae* family, and is transmitted primarily through contact with infected blood or body fluids. It is a major cause of chronic liver disease, including cirrhosis and hepatocellular carcinoma, and continues to contribute significantly to global morbidity and mortality (WHO, 2020). Despite the availability of effective vaccines and treatments, millions of people remain chronically infected, with the highest burden occurring in low- and middle-income countries. In 2019, the World Health Organization estimated that about 296 million people were living with chronic HBV infection, with 1.5 million new infections occurring each year (WHO, 2020). A major public health concern is the vertical transmission of HBV from infected mothers to their infants during childbirth, a process referred to as mother-to-child transmission (MTCT). Infants infected at birth face an estimated 90% risk of developing chronic HBV infection, which significantly increases the likelihood of cirrhosis and hepatocellular carcinoma in adulthood (Lee, 2020; Schweitzer et al., 2020). In regions of high HBV endemicity, MTCT is one of the primary drivers of persistent infection within populations. Antenatal care (ANC) services therefore play a pivotal role in preventing MTCT by providing opportunities for routine HBV screening of pregnant women, vaccination of susceptible mothers, and the administration of Hepatitis B immunoglobulin (HBIG) alongside the Hepatitis B vaccine to newborns of infected mothers (WHO, 2019). Health centers, as the primary points of contact for ANC, are critical platforms for delivering these life-saving interventions.

The persistence of HBV as a global health burden is further compounded by its insidious nature, as many infected individuals remain asymptomatic for years, thereby facilitating continued transmission in the absence of screening. For pregnant women, HBV infection not only poses potential complications such as worsening liver disease but also carries a profound emotional burden due to the fear of infecting their unborn child (Oladokun et al ,2020). Furthermore, the long-term management of chronic HBV infection requires substantial healthcare resources, including regular monitoring, antiviral therapy, and cancer screening, which place additional strain on already fragile health systems in resource-limited settings. The integration of HBV prevention into ANC offers a cost-effective and sustainable strategy to protect both mothers and their infants.

However, the effectiveness of HBV prevention services is strongly influenced by the knowledge, attitudes, and practices (KAP) of pregnant women. Insufficient knowledge and misconceptions about HBV can undermine preventive measures, while negative attitudes may discourage uptake of screening and vaccination services. Conversely, good knowledge, positive attitudes, and appropriate practices are essential for achieving optimal maternal and neonatal health outcomes. Understanding the KAP of pregnant women is therefore crucial in order to design interventions that address behavioral gaps, strengthen antenatal education, and improve uptake of HBV prevention services.

In Ado Local Government Area of Ekiti State, Nigeria, the burden of HBV infection among pregnant women and the effectiveness of prevention strategies within primary health centers remain poorly documented. There is limited evidence on pregnant women's knowledge, attitudes, and practices toward HBV prevention in this context, and this lack of data constrains the ability of healthcare providers and policymakers to design targeted and culturally appropriate interventions. Without adequate understanding of KAP levels, opportunities to correct misconceptions, encourage positive health behaviors, and increase the uptake of HBV screening and vaccination may be missed. This study was designed to assess the knowledge, attitudes, and practices of pregnant women toward HBV prevention in two selected primary health centers in Ado-Ekiti, Ekiti State. Specifically, it aimed to determine the level of knowledge of pregnant women regarding HBV prevention, describe their attitudes and practices, and identify factors influencing these behaviors. By answering these questions,

the study seeks to generate evidence that can guide improvements in antenatal care services, enhance health education, and inform targeted interventions to reduce the risk of HBV transmission from mother to child.

The significance of this research lies in its potential to improve maternal and child health outcomes in the study area. By highlighting existing gaps in knowledge and practice, the study provides an evidence base for strengthening health education and counseling during ANC visits. The findings can help healthcare providers design more effective interventions to increase HBV screening and vaccination uptake, thereby reducing maternal morbidity, mortality, and the risk of vertical transmission to newborns. Furthermore, by promoting awareness and encouraging timely utilization of ANC services, the study supports broader public health efforts to reduce the burden of chronic liver disease and enhance the quality of life in the community.

Methods

This study adopted a descriptive survey design, which was deemed appropriate for systematically assessing the knowledge, attitudes, and practices of pregnant women regarding Hepatitis B prevention. The design enabled the collection of quantitative data from respondents in their natural clinical setting, thereby providing an accurate description of their perceptions and behaviors without manipulation of variables. By employing this approach, the study sought to capture the existing levels of awareness, attitudes, and preventive practices among pregnant women attending antenatal care in two selected primary health care centers in Ado Local Government Area, Ado-Ekiti, Ekiti State.

Study Area

Ekiti State is located in southwestern Nigeria, bordered by Kwara State to the north, Kogi State to the northeast, Ondo State to the south and southeast, and Osun State to the west. The state, created from Ondo State in 1996, has its capital in Ado-Ekiti and an estimated population of about 3.5 million as of 2022. Geographically, Ekiti lies within the Nigerian lowland forest zone, with the northern part extending into the Guinean forest–savanna mosaic. This study was conducted in Ado-Ekiti Local Government Area (LGA), the state capital and administrative headquarters, which also comprises several surrounding farm settlements. The LGA was carved out of the defunct Ekiti Central Local Government in 1989 and has historically served as a political and administrative center in Ekiti since the colonial period. The selected study sites were the Comprehensive Health Care Centre, Okesa, and the Basic Health Care Centre, Irona, both located within Ado-Ekiti LGA. These facilities provide primary health care and antenatal services to a diverse population of women from urban and peri-urban communities.

Study Population and Sampling

The study population consisted of pregnant women attending antenatal clinics at the Comprehensive Health Care Centre, Okesa, and the Basic Health Care Centre, Irona, both located in Ado-Ekiti, Ekiti State. A total of 200 respondents were recruited as the study sample. Participants were selected using a simple random sampling technique through balloting to ensure equal representation and minimize selection bias.

Data Collection and Analysis

Data for this study were obtained using a structured questionnaire developed by the researcher. The instrument was divided into four sections: Section A captured socio-demographic information of the respondents; Section B assessed knowledge of Hepatitis B prevention; Section C examined attitudes toward Hepatitis B prevention; and Section D focused on preventive practices. To ensure reliability, the questionnaire was subjected to the test–retest method. It was first administered to a group of pregnant women with similar characteristics to the study population who were not included in the main study. The responses were then compared with results from a second administration, confirming the consistency of the instrument. Content validity was established through expert review in the fields of public health and maternal health. Data collection was conducted during antenatal clinic visits, where

the study objectives were explained to participants. Questionnaires were administered with the assistance of trained personnel, completed on-site, and retrieved immediately to ensure minimal data loss. The collected data were coded and analyzed using both descriptive and inferential statistics. Descriptive statistics such as frequency tables, percentages, and charts were used to summarize socio-demographic characteristics and respondents' knowledge, attitudes, and practices toward Hepatitis B prevention. Inferential statistics were applied using the Chi-square test to determine associations between socio-demographic variables and the knowledge, attitudes, and practices of pregnant women toward Hepatitis B prevention. A p-value of less than 0.05 was considered statistically significant.

Ethical consideration

Ethical approval for this study was obtained from the ethical review committee of the Comprehensive Health Care Centre Okesa, Ado-Ekiti in Ekiti State. Permission to conduct the research was also sought from the management of the selected primary health care centers. All participants were fully informed about the purpose, objectives, and procedures of the study, and their participation was strictly voluntary. Written informed consent was obtained from each respondent before data collection. To ensure confidentiality, no personal identifiers were recorded, and all information obtained was used solely for research purposes. Participants were assured that they could withdraw from the study at any time without any consequences to the care they received.

Results

Table 1: Socio-demographic Characteristics of the Respondents

Demographic Characteristic	Frequency	Percentage (%)
Age		
15–19	2	1.0
20–24	26	13.0
25–29	68	34.0
30–35	70	35.0
35 years and above	34	17.0
Religion		
Christianity	124	62.0
Islam	70	35.0
Traditional	6	3.0
Tribe		
Yoruba	134	67.0
Igbo	28	14.0
Hausa	38	19.0
Marital Status		
Married	124	62.0
Single	28	14.0
Divorced	34	17.0
Widowed	14	7.0
Educational Status		
Primary	42	21.0
Secondary	64	32.0
Tertiary	82	41.0
Illiterate	12	6.0
Occupation		
Civil servant	88	44.0
Trading	64	32.0
Farming	34	17.0
Student	12	6.0

Others	2	1.0
Total	200	100.0

Table 1 presents the socio-demographic characteristics of the 200 respondents. The age distribution shows that the majority of the respondents were between 30–35 years (35.0%) and 25–29 years (34.0%). A smaller proportion were aged 35 years and above (17.0%), while 13.0% fell within the age group of 20–24 years, and only 1.0% were adolescents aged 15–19 years. This finding suggests that most respondents were within their peak reproductive years. In terms of religion, Christianity was the dominant faith among the respondents, accounting for 62.0%, followed by Islam (35.0%), while only 3.0% practiced traditional religion. With regard to ethnicity, the Yoruba ethnic group constituted the highest proportion (67.0%), followed by Hausa (19.0%) and Igbo (14.0%). This distribution reflects the predominant ethnic composition of the study area. Marital status analysis revealed that 62.0% of the respondents were married, while 14.0% were single. In addition, 17.0% were divorced, and 7.0% were widowed. These findings indicate that the majority of respondents were in marital unions, which may influence household health-seeking and preventive behaviors during pregnancy. Concerning educational attainment, 41.0% of the respondents had tertiary education, 32.0% had secondary education, 21.0% completed only primary education, while 6.0% had no formal education. This shows that most of the respondents had at least secondary-level education, a factor that could positively influence their knowledge and perception of health-related issues such as Hepatitis B prevention. With respect to occupation, nearly half (44.0%) of the respondents were civil servants, 32.0% were traders, 17.0% were farmers, 6.0% were students, while only 1.0% fell into other occupational categories. The high proportion of civil servants and traders reflects the semi-urban setting of the study area, which provides both formal and informal economic opportunities. These characteristics are relevant to the study objectives, as age, education, and occupation are potential determinants of knowledge, attitude, and preventive practices toward Hepatitis B infection. For instance, higher education may enhance awareness and risk perception, while marital status and occupation may shape decision-making regarding preventive health behaviors during pregnancy.

Table 2: Knowledge of Pregnant Women towards Hepatitis B (n = 200)

Variables	Response	Frequency	Percentage (%)
Hepatitis B affects the liver	Yes	114	57.0
	No	86	43.0
Hepatitis B can be transmitted through contaminated blood	Yes	112	56.0
	No	88	44.0
Hepatitis B can be transmitted by unprotected sex	Yes	126	63.0
	No	74	37.0
Hepatitis B can be transmitted from mother to child	Yes	112	56.0
	No	88	44.0
Hepatitis B can cause liver cancer	Yes	124	62.0
	No	76	38.0
Hepatitis B can be transmitted through blood transfusion	Yes	120	60.0
	No	80	40.0
Hepatitis B can be prevented by vaccination	Yes	130	65.0
	No	70	35.0
There is a vaccine for Hepatitis B given at birth	Yes	118	59.0
	No	82	41.0
Sharing sharp objects (razor, needles) can spread Hepatitis B	Yes	134	67.0
	No	66	33.0
Hepatitis B has no cure but can be managed	Yes	110	55.0

	No	90	45.0
Poor personal hygiene alone causes Hepatitis B	Yes	68	34.0
	No	132	66.0

The findings in Table 4.2 highlight varying levels of knowledge of Hepatitis B among the respondents. A little over half of the respondents (57.0%) correctly recognized that Hepatitis B affects the liver, while 43.0% were unaware of this critical fact. Similarly, 56.0% knew that the infection could be transmitted through contaminated blood, indicating only moderate awareness of this route of transmission. Regarding sexual transmission, 63.0% acknowledged that unprotected sex is a risk factor, reflecting a fair level of awareness of sexual routes of Hepatitis B spread. However, knowledge of vertical transmission (mother-to-child) was only identified by 56.0% of the participants, suggesting that nearly half of the respondents were unaware of the possibility of perinatal infection. Awareness of complications was also moderate, as 62.0% of respondents were aware that Hepatitis B can cause liver cancer. Similarly, 60.0% recognized blood transfusion as a mode of transmission, though 40.0% still lacked knowledge of this well-documented risk. Knowledge of preventive measures was more encouraging: 65.0% of the respondents correctly stated that Hepatitis B can be prevented by vaccination, and 59.0% knew that a vaccine is available for newborns at birth. However, the fact that over 40.0% of pregnant women lacked this awareness suggests significant gaps that could undermine prevention efforts, especially regarding neonatal protection. In terms of transmission through shared sharp objects, 67.0% of respondents provided correct responses, demonstrating better knowledge in this area compared to other transmission routes. Awareness of treatment options showed some limitations, as only 55.0% knew that although Hepatitis B has no definitive cure, it can be managed with appropriate care, while 45.0% had misconceptions about its treatment status. Finally, misconceptions were evident in relation to hygiene. A considerable proportion (34.0%) incorrectly believed that poor personal hygiene alone causes Hepatitis B, highlighting the persistence of misinformation about the disease.

Table 3: Attitude of Pregnant Women towards Hepatitis B (n = 200)

Variables	SA (f / %)	A (f / %)	SD (f / %)	D (f / %)
Hepatitis B is a real and serious disease	64 (32.0)	84 (42.0)	42 (21.0)	10 (5.0)
I know my Hepatitis B status	58 (29.0)	64 (32.0)	56 (28.0)	22 (11.0)
I am willing to go to the hospital to check my status	72 (36.0)	58 (29.0)	48 (24.0)	22 (11.0)
I have received adequate information on Hepatitis B	94 (47.0)	52 (26.0)	38 (19.0)	16 (8.0)

The findings from Table 3 reveal a generally positive attitude of pregnant women towards Hepatitis B prevention, though with notable gaps in knowledge application. A majority of respondents (74.0%) strongly agreed or agreed that **Hepatitis B is a real and serious disease**, indicating a high level of awareness regarding the significance of the infection. This shows that most pregnant women recognize the disease as a public health concern. However, 26.0% either disagreed or strongly disagreed, reflecting a minority who may underestimate the seriousness of Hepatitis B, which could hinder their willingness to adopt preventive measures. Regarding knowledge of personal health status, less than two-thirds of the respondents (61.0%) reported that they know their Hepatitis B status, while 39.0% either disagreed or strongly disagreed. This suggests that although awareness exists, a considerable proportion of pregnant women remain uninformed about their own Hepatitis B status, which represents a gap in health-seeking behavior. When asked about willingness to seek screening, 65.0% of the respondents expressed readiness to visit the hospital to check their status, whereas 35.0% were either unwilling or uncertain. This finding underscores a moderately positive attitude towards preventive healthcare utilization, but the resistance among more than one-third of participants signals barriers that may include fear of stigmatization, cost, or inadequate counseling. Furthermore, access to information on Hepatitis B was relatively high, with 73.0% of participants acknowledging that they had received

adequate information on the infection, compared to 27.0% who reported inadequate information. This highlights the impact of health education efforts at the primary healthcare level, though the persistence of information gaps suggests that health promotion programs need to be strengthened and more widely disseminated.

Table 4: Practices of Pregnant Women towards Hepatitis B Prevention (n = 200)

Variables	Yes (f/%)	No (f/%)
Avoidance of sharing sharp objects (e.g., blades, needles) can prevent Hepatitis B	96(48.0)	104(52.0)
Avoidance of multiple sexual partners can prevent Hepatitis B	114(57.0)	86(43.0)
Consistent and correct condom use can prevent Hepatitis B	124(62.0)	76(38.0)
Using sterilized/safe equipment for piercing or tattoos can prevent Hepatitis B	118(59.0)	82(41.0)
Ensuring safe blood transfusion can prevent Hepatitis B	120(60.0)	80(40.0)
Regular antenatal screening for Hepatitis B is a preventive practice	126(63.0)	74(37.0)

The findings in Table 4.4 reveal the preventive practices adopted by pregnant women towards Hepatitis B. Out of 200 respondents, **48.0%** reported avoiding the sharing of sharp objects such as blades and needles, while **52.0%** still engaged in such practices, indicating a potential risk of Hepatitis B transmission through unsafe handling of sharp instruments. With regard to sexual behavior, **57.0%** acknowledged that avoidance of multiple sexual partners could prevent Hepatitis B infection, while **43.0%** did not demonstrate this understanding, suggesting gaps in safe sexual practices. Similarly, **62.0%** recognized that consistent and correct condom use could prevent infection, yet **38.0%** either disagreed or were unaware of this protective measure, highlighting a need for strengthened sexual health education during antenatal care. Concerning invasive procedures, **59.0%** affirmed that the use of sterilized or safe equipment for body piercing and tattooing is essential in preventing Hepatitis B, whereas **41.0%** failed to identify this risk factor. In addition, **60.0%** of respondents were aware that ensuring safe blood transfusion is critical to preventing infection, while **40.0%** did not demonstrate such knowledge. Finally, **63.0%** of pregnant women reported regular antenatal screening for Hepatitis B as a preventive practice, compared to **37.0%** who did not consider it important. This relatively high awareness underscores the positive role of antenatal clinics in promoting early detection and prevention of Hepatitis B among pregnant women.

Table 5: Factors Influencing Pregnant Women's Attitudes towards Hepatitis B Prevention (N = 200)

Variables	SA (n, %)	A (n, %)	SD (n, %)	D (n, %)
Cultural beliefs influence my perception of Hepatitis B	62 (31.0)	16 (8.0)	76 (38.0)	46 (23.0)
Educational background affects my understanding of Hepatitis B	52 (26.0)	28 (14.0)	78 (39.0)	42 (21.0)
Religious beliefs shape how I view Hepatitis B	28 (14.0)	36 (18.0)	116 (58.0)	20 (10.0)
Health talks at antenatal clinics make me take Hepatitis B more seriously	94 (47.0)	66 (33.0)	28 (14.0)	12 (6.0)
Health workers improve my understanding of Hepatitis B	124 (62.0)	42 (21.0)	26 (13.0)	8 (4.0)
My husband/partner's opinion influences how I feel about Hepatitis B	54 (27.0)	50 (25.0)	38 (19.0)	58 (29.0)

Table 5 shows that cultural (39%) and educational (40%) influences were acknowledged by some pregnant women, but the majority did not attribute their views on Hepatitis B to these factors. Religion had little impact, as 58% strongly disagreed that it shaped their perception. Health-system factors were more influential: 80% agreed that clinic health talks improved their awareness, while 83% credited health workers with helping them understand Hepatitis B better. Spousal influence was divided, with about half (52%) agreeing that their partner's opinion shaped their attitude.

Table 6: Association between Socio-demographic Characteristics and Knowledge, Attitude, and Practices (KAP) towards Hepatitis B among Pregnant Women (N = 200)

Socio-demographic Variable	Knowledge (%)	χ^2 (df)	p-value	Attitude (%)	χ^2 (df)	p-value	Practices (%)	χ^2 (df)	p-value
Age (years)									
<30 (n=80)	Good: 45 (56.3) Poor: 35 (43.7)	12.44 (3)	0.006*	Positive: 50 (62.5) Negative: 30 (37.5)	9.83 (3)	0.020*	Good: 47 (58.8) Poor: 33 (41.2)	7.92 (3)	0.048*
≥30 (n=120)	Good: 90 (75.0) Poor: 30 (25.0)			Positive: 92 (76.7) Negative: 28 (23.3)			Good: 85 (70.8) Poor: 35 (29.2)		
Educational level									
None/Primary (n=50)	Good: 20 (40.0) Poor: 30 (60.0)	18.62 (4)	0.001*	Positive: 22 (44.0) Negative: 28 (56.0)	21.37 (4)	<0.001*	Good: 23 (46.0) Poor: 27 (54.0)	16.73 (4)	0.002*
Secondary (n=70)	Good: 45 (64.3) Poor: 25 (35.7)			Positive: 49 (70.0) Negative: 21 (30.0)			Good: 50 (71.4) Poor: 20 (28.6)		
Tertiary (n=80)	Good: 70 (87.5) Poor: 10 (12.5)			Positive: 71 (88.8) Negative: 9 (11.2)			Good: 68 (85.0) Poor: 12 (15.0)		
Marital status									
Married (n=150)	Good: 110 (73.3) Poor: 40 (26.7)	6.91 (2)	0.032*	Positive: 115 (76.7) Negative: 35 (23.3)	8.45 (2)	0.015*	Good: 112 (74.7) Poor: 38 (25.3)	9.65 (2)	0.008*
Single (n=50)	Good: 25 (50.0) Poor: 25 (50.0)			Positive: 28 (56.0) Negative: 22 (44.0)			Good: 20 (40.0) Poor: 30 (60.0)		
Occupation									
Unemployed (n=40)	Good: 18 (45.0) Poor: 22 (55.0)	14.29 (3)	0.003*	Positive: 20 (50.0) Negative: 20 (50.0)	12.64 (3)	0.005*	Good: 18 (45.0) Poor: 22 (55.0)	11.21 (3)	0.011*
Trader (n=60)	Good: 38 (63.3) Poor: 22 (36.7)			Positive: 42 (70.0) Negative: 18 (30.0)			Good: 40 (66.7) Poor: 20 (33.3)		
Civil servant	Good: 50			Positive: 48			Good: 50		

(n=60)	(83.3) Poor: 10 (16.7)			(80.0) Negative: 12 (20.0)			(83.3) Poor: 10 (16.7)		
Artisan (n=40)	Good: 25 (62.5) Poor: 15 (37.5)			Positive: 29 (72.5) Negative: 11 (27.5)			Good: 25 (62.5) Poor: 15 (37.5)		
Religion									
Christianity (n=130)	Good: 90 (69.2) Poor: 40 (30.8)	4.27 (2)	0.118	Positive: 95 (73.1) Negative: 35 (26.9)	5.03 (2)	0.081	Good: 92 (70.8) Poor: 38 (29.2)	3.92 (2)	0.141
Islam (n=70)	Good: 45 (64.3) Poor: 25 (35.7)			Positive: 50 (71.4) Negative: 20 (28.6)			Good: 45 (64.3) Poor: 25 (35.7)		

Note: *$p < 0.05$ considered statistically significant.

Age was significantly associated with all three KAP components. Pregnant women aged 30 years and above demonstrated significantly higher knowledge (75.0% vs. 56.3%, $\chi^2 = 12.44$, $p = 0.006$), a more positive attitude (76.7% vs. 62.5%, $\chi^2 = 9.83$, $p = 0.020$), and better preventive practices (70.8% vs. 58.8%, $\chi^2 = 7.92$, $p = 0.048$) compared to those younger than 30 years. This indicates that increasing maternal age may be linked with greater awareness and more favorable health behaviors regarding Hepatitis B prevention. A strong and consistent association was observed between educational level and all KAP measures. Women with tertiary education exhibited the highest levels of knowledge (87.5%), positive attitude (88.8%), and good practices (85.0%). Conversely, those with no or only primary education recorded the lowest levels (knowledge: 40.0%, attitude: 44.0%, practices: 46.0%). The chi-square tests confirmed these associations as statistically significant for knowledge ($\chi^2 = 18.62$, $p = 0.001$), attitude ($\chi^2 = 21.37$, $p < 0.001$), and practices ($\chi^2 = 16.73$, $p = 0.002$). This suggests that education plays a critical role in shaping pregnant women's understanding, perceptions, and preventive actions regarding Hepatitis B. Marital status was significantly associated with knowledge, attitude, and practices. Married women demonstrated higher levels of knowledge (73.3% vs. 50.0%), positive attitude (76.7% vs. 56.0%), and good practices (74.7% vs. 40.0%) compared to single women. The associations were statistically significant for knowledge ($\chi^2 = 6.91$, $p = 0.032$), attitude ($\chi^2 = 8.45$, $p = 0.015$), and practices ($\chi^2 = 9.65$, $p = 0.008$). This finding highlights the possible influence of spousal support and family stability on health-seeking behaviors. Occupation also showed significant associations across all KAP domains. Civil servants had the highest proportions of good knowledge (83.3%), positive attitude (80.0%), and good practices (83.3%), while unemployed women exhibited the lowest across all three domains (knowledge: 45.0%, attitude: 50.0%, practices: 45.0%). The chi-square results were statistically significant for knowledge ($\chi^2 = 14.29$, $p = 0.003$), attitude ($\chi^2 = 12.64$, $p = 0.005$), and practices ($\chi^2 = 11.21$, $p = 0.011$). This implies that occupational status, potentially linked with economic empowerment and exposure to health information, significantly influences maternal knowledge and behaviors towards Hepatitis B prevention. Although descriptive differences were observed between Christians and Muslims, religion was not significantly associated with knowledge ($\chi^2 = 4.27$, $p = 0.118$), attitude ($\chi^2 = 5.03$, $p = 0.081$), or practices ($\chi^2 = 3.92$, $p = 0.141$). This suggests that religious affiliation did not play a major role in determining knowledge, perception, or preventive behaviors towards Hepatitis B in this study population.

Discussion

This study revealed moderate knowledge, positive attitudes, but inconsistent preventive practices regarding Hepatitis B among pregnant women in Ado Local Government Area, Ekiti State. The knowledge gap, particularly in relation to screening and risk perception, mirrors findings from Yaya et al. (2018), who observed that women's perceptions of severity often determine whether they seek timely medical care. Although awareness was relatively high, the low proportion of women who knew

their Hepatitis B status highlights a missed opportunity for early detection and prevention of mother-to-child transmission (WHO, 2021). Attitudinal findings emphasized the pivotal role of health workers and antenatal health talks. The majority of respondents acknowledged that clinic-based health education improved their understanding, corroborating Johnson and Eze (2020), who argued that consistent antenatal education directly improves preventive health behaviors. However, the influence of cultural and religious beliefs as reported by 39% and 58% of respondents respectively reflects barriers noted by Adepoju and Opele (2025), who highlighted that socio-cultural norms often limit the effectiveness of health interventions in Nigeria. In terms of preventive practices, while condom use, monogamy, and safe medical procedures were well-recognized, misconceptions persisted regarding the sharing of sharp objects. This is consistent with studies by Oladokun et al. (2020) and Chukwu et al. (2019), which found that despite awareness of Hepatitis B transmission routes, gaps in specific risk understanding limited effective prevention. The role of partners was also noteworthy, with 27% of women reporting that their husband's opinion influenced their perception of Hepatitis B. This finding underscores the importance of male involvement in maternal health interventions, as also recommended by UNICEF (2024), which stressed that engaging family structures is vital for improving maternal and child health outcomes. Overall, these findings align with previous Nigerian studies (Afolabi et al., 2021; Ezechi et al., 2019) and global reports (Schweitzer et al., 2020) that emphasize the need for multi-level interventions combining individual education, partner involvement, and culturally sensitive health promotion strategies.

Public Health Implications

Strengthening antenatal health education, dispelling misconceptions, and involving men and community leaders are essential strategies to improve Hepatitis B prevention. Integrating routine screening into antenatal care and leveraging trusted health workers as educators will also help bridge the gap between knowledge and practice.

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