

## Research Article

# Knowledge and Awareness of Hepatitis B Virus Infection among Pregnant Women in Abakaliki Nigeria

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## Abstract

**Background:** Hepatitis B Virus (HBV) infection is highly endemic in Nigeria and about 9-12% of Nigerians are chronic carriers. Informed knowledge of pregnant women about HBV influences the acceptability, practice and success of antenatal screening of Hepatitis B virus.

**Methods:** This was a cross-sectional study of 400 pregnant women accessing antenatal care at the Federal Teaching Hospital, Abakaliki. A pretested questionnaire was administered to women who fulfilled the inclusion criteria and gave consent. Analysis of results was done using the IBM SPSS Statistics, version 20, 2011. Statistical level of significance was set at  $P - \text{value} < 0.05$ .

**Results:** The result showed that 258 (62.5%) of the respondents have heard of HBV infection. Two hundred and eighty six (71.5%) were aware of its occurrence in pregnancy while only 99 (24.8%) knew that hepatitis is a viral infection affecting the liver, 27 (6.8%) thought it is an eye disease while 210 (52.5%) do not know. Mother-to-child transmission and transfusion of unscreened blood were recognized by 283 (72.94%) and 41 (10.3%) of respondents, respectively. Level of Education and parity were associated with the awareness of hepatitis (p-value. 001).

**Conclusion:** This study shows that there is lack of knowledge and awareness of Hepatitis B virus infection in our environment.

**Keywords:** Awareness; Knowledge; Hepatitis B virus; Pregnant woman

## Introduction

Worldwide, about 2 billion people are infected with hepatitis B virus (HBV) [1]. Hepatitis B is a viral infection that attacks the liver and can cause both acute or chronic disease. It is estimated that 350 million people globally are chronic carriers of whom 170 million reside in Africa [2,3]. It is the leading cause of chronic hepatitis, cirrhosis, and hepatocellular carcinoma [3]. The virus is transmitted through contact with the blood or other body fluids of an infected person [1]. Hepatitis B Virus is transmitted between people by direct blood-to-blood contact or semen and vaginal fluid of an infected person. Modes of transmission are the same as those for the human immunodeficiency Virus (HIV), but the hepatitis B virus is 50 to 100 times more infectious [1]. Unlike HIV, the hepatitis B virus can survive outside the body for at least seven days [1]. During this time, the virus can still cause infection if it enters the body of a person who is not protected by the vaccine. In developing countries, common modes of transmission are: perinatal (from mother to baby at birth) early childhood infections (in apparent infection through close interpersonal contact with infected household contacts) unsafe injection practices unsafe blood transfusions unprotected sexual contact [1].

In many developed countries (e.g. those in Western Europe and North America), patterns of transmission are different from those in developing countries. The majority of infections in developed countries are transmitted during young adulthood by sexual activity

and injecting drug users [1]. Hepatitis B is an important occupational hazard for health workers. Hepatitis B is preventable with the currently available safe and effective vaccine.

Areas of particularly high endemicity are in Sub-Saharan Africa and Asia [4,5]. It is highly endemic in Nigeria and about 9-12% of the total population of Nigeria are chronic carriers of hepatitis B surface antigen [4,6,7].

Hepatitis B Virus (HBV) infection is an important cause of liver disease in pregnancy. The seroprevalence of Hepatitis B Surface Antigen (HBsAg) in pregnant women ranges from 0.67% in Spain [10] to 37% in Papua New Guinea [8].

Presently, at the Federal Teaching Hospital, Abakaliki, pregnant women are routinely screened for hepatitis B. Unfortunately, no study has been carried out in Ebonyi State, on the knowledge and awareness of hepatitis B virus infection in pregnancy. In view of these considerations, this study is being undertaken to provide baseline information on hepatitis B virus infection among pregnant women attending antenatal clinic at the Federal Teaching Hospital, Abakaliki Ebonyi State.

This will constitute an important variable that will influence the acceptable practice antenatal screening of Hepatitis B and uptake of hepatitis B vaccination.

## Objectives

The objectives of the study were to assess the knowledge, the

awareness and the factors that influence the knowledge and awareness of Hepatitis B infection among pregnant women attending antenatal clinic at Federal Teaching Hospital, Abakaliki.

## Methodology

This was a cross-sectional study of 400 pregnant women accessing antenatal care at the Federal Teaching Hospital, Abakaliki. Four hundred expectant mothers who consented to participating were consecutively recruited into the study. Written informed consent was obtained from each of them. A structured pretested questionnaire was given to each participant by trained research assistants. The participants were free to seek further explanation or clarification from the trained personnel or investigator on the sections of the questionnaire that are not clear to them.

Information obtained included sociodemographic variables, knowledge, awareness and mode of transmission of hepatitis B. All data generated from the study was analysed. Statistical calculation was done using SPSS version 16 2007. Chi square ( $X^2$ ) test was employed to examine the significant association between variables where applicable. Statistical significance was set at 0.05

Formal approval was obtained from the Research and Ethics Committee of the Federal Teaching Hospital, Abakaliki.

## Results

At the conclusion of the study 400 questionnaire were completely filled and analysed (Table 1). Illustrates some background characteristics of the studied women. The mean age of participants was  $27 \pm 2$  years, 2.3% of the women are of age group (<20) while 40.2% are of (25-29) years and was the highest number of respondents, 8.5% of them are (35-35) years. The educational level of the women showed that majority of the women 34.8% had no formal education, 33.8% had secondary education while 28.3% had tertiary education.

The hepatitis B knowledge results are given in (Table 2) only 24.8% of the study group knew that HBV is a viral infection affecting the liver, 6.8% thought it is an eye disease while 52.5% do not know.

Regarding knowledge about the mode of transmission, mother-to-child transmission and transfusion of unscreened blood were recognized by 72.94% and 10.3% of respondents, respectively. Multiple Sexual partners was identified by 41.2% of the respondents, 5.6% identified contact with infected person while sharing sharp objects was identified by 1.5% of the respondents. Only 4.3% of respondents indicated that tattooing could spread the virus while 2.8% of respondents had the mistaken belief that the virus could be contracted by shaking hand with infected persons. Thirty three percent of the respondents do know the mode of transmission (Figure 1). Figure 1 showed that, 71.5% of the respondents have heard of HBV infection while tables 3 and 4 showed the association of awareness of hepatitis B and educational status as well as parity.

## Discussion & Conclusion

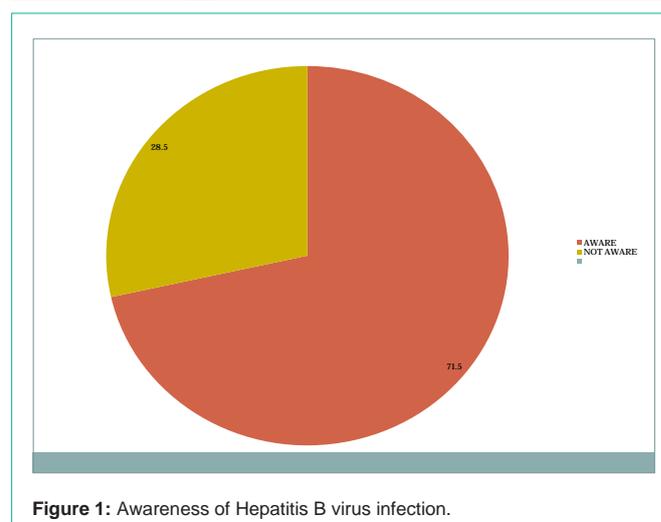
The incidence of Hepatitis b virus infection appears to be increasing in most part of the world especially in developing countries. Despite the implementation of neonatal immunization programmed, and the routine screening of pregnant women as part of antenatal care, there was still a high prevalence of HBV infection in the local

**Table 1:** Sociodemographic characteristics.

Characteristics	no	Frequency%
<u>Age group</u>		
<20	9	2.3
20-24	97	24.3
25-29	162	40.5
30-34	98	24.5
35-39	34	8.5
<u>Educational status</u>		
No formal Education	139	34.8
Primary	13	3.3
Secondary	135	33.8
Tertiary	113	28.3
<u>Parity</u>		
0	169	42.3
1	91	22.8
2	41	10.3
3	46	11.3
4	25	6.3
>5	28	7.1

**Table 2:** Knowledge of Hepatitis B infection.

Variables	Number	Percentage%
<u>What is hepatitis B infection</u>		
Eye Disease	27	6.8
Heart Disease	21	5.2
Do not know	210	52.5
Kidney Disease	9	2.2
Viral infection of the Liver Disease	99	24.8
Malaria	18	4.5
Typhoid	16	4.0
<u>Modes of transmission</u>		
Do not know	132	33
Use of unsterilized instrument	5	1.3
Hand shake	11	2.8
Contact with affected person	22	5.6
Multiple sexual partners	166	41.2
Sharing sharp objects	6	1.5
Tattoo	17	4.3
Transfusion of unscreened blood	41	10.3
<u>Mothr-to-child transmission</u>		
Yes	283	72.94
No	117	27.06



**Figure 1:** Awareness of Hepatitis B virus infection.

obstetric population in south east Nigeria [9].

In this study, we have assessed the knowledge and awareness of HBV in Abakaliki, most of the respondents have no formal education and are predominantly farmers. The knowledge of hepatitis B virus among the study group was low. Inadequate knowledge is an

**Table 3:** Awareness of hepatitis and educational status.

Awareness of hepatitis B	Education Status				P-value
	No formal education	Primary	Secondary	Tertiary	
Yes	26	4	101	68	0.001
No	113	9	34	45	
Total	139	13	135	113	

**Table 4:** Awareness of hepatitis and parity.

Awareness of hepatitis B	parity			P-VALUE
	0	1-4	≥5	
Yes	23	124	16	0.001
No	146	79	12	
Total	169	203	28	

important factor in Hepatitis B Virus (HBV) infection, only 24.8% of the study group could identify HBV infection as a Viral infection affecting the liver, 33% do not know the modes of transmission while 27.06% do not know that it be transmitted in utero. Also, 68.8% did not know that HBV is transmitted via sexual intercourse. This finding is consistent with recently published study of HBV knowledge in the obstetric population in which only 47% of the respondents realized that HBV can be transmitted by sexual intercourse [9].

This study revealed gaps in public knowledge about the mode of transmission of HBV. Specifically, only 41.2% of the respondents recognized that sexual contact; sharing sharp objects 1.5%; and tattooing 4.3% could spread the virus. This finding corroborated previous overseas studies [11,12]. Thirty three percent of the respondents do know the mode of transmission while only 1.3% recognized use of unsterilized instrument as a mode of transmission.

In this study 71.5% of the respondents have heard about HBV 47.2% do not know whether they are screened only 30.66% knew that it can be prevented by immunization and 17.59% do not know any preventive measures. In pregnancy 26.5% were not aware of Hepatitis B virus while 47.2% do not know whether they were screened. The awareness of HBV in the study group is low. Level of Education and parity were associated with the awareness of hepatitis (p-value.001).

The most effective means to prevent HBV infection is through vaccination. The protective efficacy of the vaccine is well established [13,14].

HBV vaccination has been shown to be the most effective method in preventing HBV infection and its sequel in children as well as the adult population, especially in high-risk groups 1 In this study, only 39.8% of the respondents knew HBV vaccination is available, 30.66% knew that HBV could be prevented by vaccination and the uptake rate of HBV screening was only 26.3% (Table 5 & 6).

The findings in the study show that the development of a health promotion intervention regarding HBV should raise awareness about the risk of HBV in this population, and particularly address the serious consequences of HBV This study highlights a need to increase the public awareness of HBV infection in Abakaliki with emphasis on its mode of transmission and measures to reduce the risk of contracting the virus

Educational interventions with special attention to persons of

**Table 5:** Showed that 39.8% knew that HBV vaccine is available for adults while, only 26.3% had been screened for HBV in the index pregnancy.

Variables	frequency	%
<u>Were you screened for hepatitis B in this pregnancy</u>		
I do not know	189	47.2
No	106	26.5
Yes	105	26.3
<u>Awareness of vaccine</u>		
Yes	159	39.8
No	241	60.2

**Table 6:** The commonest preventive measure identified was screening of blood before transfusion 31.66%, immunization was recognized by 30.66% while 17.59% of the respondents do not know the preventive measures.

Ways of prevention	Frequency	Percent
I do not know	70	17.59%
Abstinence from sex	8	2.01%
Avoid sharp objects	10	2.51%
Being faithful	12	3.02%
Immunization	122	30.66%
Improve personal hygiene	8	2.01%
Limit alcohol intake	9	2.26%
Practice safe sex	35	8.79%
Screening blood before transfusion	126	31.66%
Total	400	100.00%

lower education levels are needed to promote HBV screening and increase vaccination coverage.

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