

# PREVALENCE AND INCIDENCE OF HEPATITIS B VIRUS AMONG EXPECTANT MOTHERS IN LAGOS ISLAND GENERAL HOSPITAL, NIGERIA

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## ABSTRACT

Hepatitis B Virus (HBV) is an infection characterized as one of the major public health problems in the globe, particularly in Nigeria. This may be because of unguided sexual intercourse and inadequate knowledge of the disease. The study examined prevalence and incidence of HBV among expectant mothers in Lagos Island general hospital, Nigeria. Descriptive survey research design was used for the study. Hat and draw sampling technique was adopted for study location while volunteer sampling method was used to draw a hundred subjects. Instrument used was a revalidated questionnaire using test-retest method of reliability coefficient and the result yielded 0.89. The instrument was factor loaded using exploratory factor analysis setting nunnally criterion at 0.6. Hypotheses were tested using  $X^2$  statistics at 0.05 alpha level. Findings showed significant relationships in incidence of HBV based on unsafe sexual activity ( $X^2=62.8, p<0.05$ ) and inadequate knowledge ( $X^2=53.6, p<0.05$ ). The practice of safe sex and being knowledgeable about HBV may prevent its incidence among expectant mothers. A significant relationship also exists in terms of managing the occurrence of HBV among expectant mothers ( $X^2=47.6, p<0.05$ ). This indicates that though there exist HBV, it can still be managed. The study concluded that inadequate knowledge, unsafe sexual activity may lead to HBV infection.

**KEY WORDS:** Hepatitis B Virus, sexual intercourse and Expectant Mothers

## INTRODUCTION

Hepatitis B virus is a worldwide health threat affecting people across all age groups, most especially the expectant mothers in Nigeria. This may be because of inadequate health knowledge of the disease. HBV remains a global health burden, particularly among parents who may be vulnerable to the infection. Several people have been infected with the disease in African region, and Nigeria happens to fall into this group. Viral hepatitis has been defined as a term commonly used for several clinically similar, yet etiologically and epidemiologically distinct diseases (1). Hepatitis A formerly called infectious hepatitis and hepatitis B formerly called serum hepatitis have been recognized as separate entities since the early 1940s and can be diagnosed with specific serologic tests (1). Delta hepatitis is an infection dependent on the hepatitis B virus (HBV) and may occur as a co-infection with acute HBV or as super infection of an HBV carrier. Hepatitis B virus is an important health problem in developing countries. World Health Report (2000), estimated that HBV infection accounts for about 600,000 disability adjusted life years (DALY) and about 31, 000 deaths annually in Southern Nigeria (2). Four percent (4.0%) of the population is estimated to be carriers of HBV, giving a total of approximately 36 million carriers in Nigeria. HBV is reported to be responsible for 70% of chronic hepatitis and 80% of

cirrhosis cases. It has been affirmed that 80% of Nigerian patients have hepatitis virus associated with liver disease (3). HBV infection is predominantly acquired at an early age in developing countries which includes vertical transmission from mother to child, peri-natal transmission, and horizontal transmission from child to child. However, HBV can also be transmitted sexually, which could be in form of heterosexual and homosexual that account for majority of the transmission occurring in adult life. The prevalence of chronic HBV infection varies widely in different parts of the world. Nigeria is one of the countries with intermediate endemicity in the African region of the World Health Organization. Hepatitis B sero positivity varies between 2% and 7% in the regions with intermediate endemicity. Many people, especially expectant mothers are infected with hepatitis B virus as a result of their unguided sexual behaviour, inadequate knowledge, awareness programmes and information about the infection (4). Hepatitis B called serum hepatitis is a deadly disease with estimation that about two billion people have been infected with the virus from which more than three hundred and fifty million have chronic lower infection (2). The HB virus is pre-dominant among expectant mothers, who serve as primary carrier of the virus to their unborn babies and health workers that are exposed at the time of delivery.

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**Materials and Method**

**Subjects**

Subjects were one hundred expectant mothers who attended antenatal clinic at the Lagos Island General Hospital. Most expectant mothers we spoke to were reluctant to give us audience because of their condition except those volunteered.

**ProcedAure**

Descriptive survey research design was adopted for the study. Hat and draw sampling technique was used to select the study location while volunteer sampling method was employed to pick a hundred expectant mothers as subjects. Questionnaire was used to gather information from subjects. To reduce the items to a meaningful and manageable structure, an exploratory factor analysis with varimax correlation, extraction and rotation was conducted for each item. Criteria for retention of an item on a factor were set at 0.6. Instrument was therefore, administered on the subjects and informed that their participation in the exercise was voluntary. Prior to this, ethical approval was sought from Lagos State Government Ethical Consideration Committee.

**RESULTS**

The results of demographic attributes by age and religion are shown below

Age	Frequency	Percent
21-30years	27	27%
31-40years	43	43%
41-50years	29	29%
51 and above	1	1.0%
Total	100	100.0

**Table I: Distribution of subjects by age**

Age attributes of the subjects revealed that 21 –30 years are within 27% , 31-40years fall between 43%, 41-51years are within 30%.

Religion	Frequency	Percent
Christian	62	62%
Muslims	38	38%
Total	100	100.0

**Table II: Distribution of subjects by religion**

On the religion affiliation of the subjects, the results showed that, Christianity falls within 62% while Islam falls within 38% respectively.

**DISCUSSION OF FINDINGS**

The X<sup>2</sup> value of 62.8 is significant at 5%. Hypothesis one which stated that sexual activity and level of education will not be a significant determinant of HBV among expectant mothers is hereby jettisoned. This implies that the more knowledgeable an individual is about a particular disease, the better for him. The observation of relatively low knowledge made in this study supports that of (5) who found that overall knowledge among their respondents regarding hepatitis B was poor and inaccurate with low level of knowledge about HBV transmission (6). Margolis *et al.*, (7), support the findings that individuals who at risk with the infection are men who have sex with their fellow men, patients on hemodialysis and those exposed to blood products. They went further that hepatitis B is spread predominantly parenterally through intimate personal contact and perinatally. Also, sex related factors could be associated with HB infection among expectant mothers. The X<sup>2</sup> value of 53.6 is significant at 5%. Hypothesis two that stated HBV will not significantly affect health of the unborn child is hereby jettisoned. In a study by Centers for Disease Control and Prevention in the year 2014 (8) reported that, infection during pregnancy can cause unborn babies to have serious birth defects with devastating, life-long consequences or even die before birth. Hock *et al.*,(9) affirmed that careful clinical diagnosis should be done prior to delivery to avoid the risks of mothers to child HB infection. Exposure to HB infection by a pregnant woman may affect the infants, especially if vaccination is not done before delivery. Bai *et al.*, 2007 also reported that without prophylaxis, the risk of mother-to-child transmission is very high. It varies with the HBeAg/anti-HBe status of mothers, being 70%-90% for HBeAg-positive mothers, 25% for HBeAg-negative/HBeAb-negative mothers and 12% for HBeAg-negative/anti-HBe-positive mothers (10). The X<sup>2</sup> value of 47.6 is significant at 5%. Hypothesis three which stated there is no significant relationship between ignorance and incidence of HBV among expectant mothers is hereby jettisoned.

**CONCLUSION AND RECOMMENDATIONS**

The prevalence of chronic HBV infection varies

Variables	Value	Df	Sig p	Remarks
Sexual Activity and low level of education determine the incidence of HBV among expectant mothers.	62.8	10	.000	Sig
Reduction in peripartum blood exposure can lower the rate of mother to child transmission of HBV	53.6	11	.000	Sig
The scarcity of data on the prevalence of HBV in Nigeria makes planning of prevention and intervention strategies more difficult	47.6	10	.000	Sig

**Table III: Results of X<sup>2</sup> statistics**

widely in different parts of the world. Nigeria is one of the countries with intermediate endemicity in the African region of the World Health Organization. Hepatitis. This, in fact is an eye opener that people are advised to go for medical checkups, at least twice a year, particularly expectant mothers. The study therefore, recommends among others; more awareness about the incidence of the infection is needed, expectant mothers should practice safe sex; appropriate blood screening should be conducted by medical practitioners before blood transfusion on patients; in addition, once expectant mothers are tested HBV positive, they should be referred to the specialized hospitals.

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