

## Research Article

# Exploring the Knowledge, Attitude and Practice Regarding Hepatitis B Infection among Ogbomosho LGA Dwellers: A Cross-Sectional Study

Olaniyan A<sup>1,3</sup>, Oke G<sup>2,3</sup>, Folaranmi P<sup>2,3</sup> and Adetunji B<sup>1,2\*</sup>

<sup>1</sup>Department of Medicine, Ladoke Akintola University of Technology, Nigeria

<sup>2</sup>Department of Medical Laboratory Science, Ladoke Akintola University of Technology, Nigeria

<sup>3</sup>Community Youths Health Campaign Foundation, Nigeria

\*Corresponding author: Busayo Adetunji, Department of Medicine, Department of Medical Laboratory Science, Ladoke Akintola University of Technology, Ogbomosho, Nigeria

Received: October 26, 2020; Accepted: December 15, 2020; Published: December 22, 2020

## Abstract

**Background:** Hepatitis B Virus (HBV) infection causes a global health problem with a high level of morbidity and mortality. Individuals are at higher risk of acquiring the disease. Attitudes related to health are influenced by varying aspects of Knowledge, Attitude, and Practices (KAP). The purpose of this study was to examine the KAP level of Residents towards HBV virus infection in Ogbomosho, Nigeria.

**Methods:** A cross-sectional descriptive locality-based study was conducted in seven (7) L.G.A of Ogbomosho. A pre-tested organized questionnaire was designed and implemented to explore KAP as regards HBV infection. Statistical Package for Social Sciences (SPSS) version 21 was utilized to conduct statistical analysis and examine the data. Chi square test was used to determine the relationship between categorical variable.

**Results:** A total number of 140 respondents were screened and evaluated about their Knowledge on Hepatitis B. 62.1% were male and 37.9% were female. The diagnostic results showed that 93.6% were HBV positive while only 6.4% were negative. About half of the total respondents have knowledge about the mode of transmission of HBV. About only 11.4% were aware of Vaccination. The working experience, Knowledge about HBV and its mode of transmission by the respondents had no significant effect on their current HBV status ( $p>0.05$ ).

**Conclusion:** There is need for transmission communication of with information about Hepatitis B infection to the population. There is a need for more information and investment in vaccination as community dwellers seems to have low knowledge and poor attitude toward HBV vaccination.

## Background

Hepatitis B Virus (HBV) infection creates a global health challenge with significant morbidity and mortality. It is endemic in tropical, under-developed and developing countries such as Africa, East Asia, and Southern Asia. It is associated with inflammation of the liver and can cause permanent liver injury [1]. The liver is essential in storing energy, removal of toxic wastes, metabolizing drugs in our body and regulation of blood clotting. The infection mostly starts without symptoms (asymptomatic) with the exception of cases where acute symptoms are seen. HBV can cause chronic infection and increase the risk of death from Liver failure, cirrhosis, and hepatocellular carcinoma [2]. Although an efficient vaccine against hepatitis B virus infection have been obtainable for over three decades [3,4]. It is the second most common carcinogenic agent after tobacco and a major cause of liver cirrhosis and liver cancer, both of which have poor results regarding morbidity and mortality [5]. It is an infectious disease and ranks as the tenth major cause of death in the universe. HBV could occur with no seasonal spreading [6].

The prevalence of Hepatitis B infection is highest in the WHO Western Pacific Region and the WHO African Region, where 6.2% and 6.1% of the adult population is infected respectively. In the WHO

Eastern Mediterranean Region, the WHO South-East Asia Region and the WHO European Region, an estimated 3.3%, 2.0% and 1.6% of the general population is infected, respectively. And in the WHO Region of the Americas, 0.7% of the population is infected [7]. Such differences are associated with cultural, geographical, and social factors relevant to the varying modes of transmission in these areas [8].

HBV is a DNA virus transmitted percutaneously, sexually and perinatally affects 350-400 million persons worldwide and caused an estimated 1.34 million deaths in 2015 worldwide [9]. Serum HBsAg is a diagnostic marker of HBV infection, Serological markers like anti-HBc, HBeAg and anti-HBe are used to evaluate the different state of the disease and antibodies against HBsAg signify recovery. A serum marker of active viral replication, HBeAg, is accompanied by serum levels of HBV DNA that are 100,000 to 1 million IU per milliliter or higher [10].

Risk factors for HBV infection include transfusion of infectious blood and Mother to Child Transmission (MTCT) of the virus, contaminated personal hygiene items, exposure to unsterilized piercing, and improper waste disposal. Hepatitis B infection transmission chain can be interrupted through vaccination; complete

vaccination confers immunity for at least 20 years [11]. Adherence to safety precautions during sterilization of medical equipment, handling of infectious waste legit waste handling. The DNA virus is much stable than other RNA virus such as influenza and no mutation has been reported. Thus, hepatitis B can be eradicated if administration of vaccine cuts across all age groups.

Knowledge, Attitude, and Practice (KAP) survey is often used in determining the health-seeking behavior of any population [12]. The knowledge refers to the understanding of any given topic [13,14]. Attitude refers to their feelings towards this subject, preconceived ideas that they may have as regards the subject, intention to a specific attitude and tendency to react in a particular way to a certain situation [15-17]. Practice can be said to be knowledge and attitude is demonstrated *via* action [17]. This study aimed to assess the levels of knowledge, attitude and practice related to hepatitis B among Ogbomosho LGA and the associated factors (socio-demographic factors and past history related to hepatitis B) to give room for intervention study if the levels were found to be low. This study expectantly can get the readers to enhance their viewpoint regarding viral hepatitis to improve health outcomes. This would help to inform the strategies for prevention and control of HBV infection in Ogbomosho, Nigeria.

## Method

The study was a cross-sectional descriptive locality-based study was conducted in seven (7) LGA of Ogbomosho. A pre-tested structured questionnaire was formulated and put into effect to investigate KAP in relation to HBV infection. Statistical Package for Social Sciences (SPSS) version 21 was used to perform statistical analysis and examine the data collected. Chi square test was used implemented to determine the relationship between categorical variable. The study was conducted among random community dwellers in Ogbomosho who came out to be part of a free hepatitis screening and vaccination campaign. The community dwellers were educated after the data collection. The ethical approval was gotten from Ladoke Akintola University of Technology, Ogbomosho Teaching Hospital Ethical Committee.

## Result

This chapter presents the analysis and interpretation of the data obtained through the questionnaires given to the respondents. The results were presented in tables, histogram and bar charts through descriptive analysis. Chi-square was used to determine the level of significant relationship between variables at a 0.05 level of variable.

### Demographics information

It can be shown from the (Table 1) that about 87 (62.1%) of the respondents are males while 53 (37.9%) of the respondents are female. It could also be seen that majority 57 (40.7%) of the respondents are between the ages of 18-29, 17.1% between the ages of 30-39, 17.1% between the ages of 40-49 and 25.0% are 50 years and above.

From the table above as well, it could be shown that 64 (45.7%) are married while 76 (55.4%) are single. The table also presents that majority (65.7%) of the respondents completed their High school, 5.7% completed diploma, 17.1% completed their bachelor's degree and 11.4% had completed either their masters or doctorate degrees.

**Table 1:** Showing the socio-demographic characteristics of respondents.

| Variables      | Categories            | Frequency | Percent (%) |
|----------------|-----------------------|-----------|-------------|
| Sex            | Male                  | 87        | 62.1        |
|                | Female                | 53        | 37.9        |
|                | Total                 | 140       | 100.0       |
| Age            | 18-29                 | 57        | 40.7        |
|                | 30-39                 | 24        | 17.1        |
|                | 40-49                 | 24        | 17.1        |
|                | 50 and Above          | 35        | 25.0        |
|                | Total                 | 140       | 100.0       |
| Marital status | Married               | 64        | 45.7        |
|                | Single                | 76        | 54.3        |
|                | Total                 | 140       | 100.0       |
| Education      | High school           | 92        | 65.7        |
|                | Diploma               | 8         | 5.7         |
|                | Bachelor's            | 24        | 17.1        |
|                | Master's or Doctorate | 16        | 11.4        |
|                | Total                 | 140       | 100.0       |

**Table 2:** Showing the working experience of respondents.

| Variables          | Categories        | Frequency | Percent (%) |
|--------------------|-------------------|-----------|-------------|
| Ownership of Bike  | Yes               | 108       | 77.1        |
|                    | No                | 32        | 22.9        |
|                    | Total             | 140       | 100         |
| Working Experience | 6 months-2 years  | 88        | 62.9        |
|                    | 3 years-10 years  | 20        | 14.3        |
|                    | 11 years-19 years | 32        | 22.9        |
|                    | Total             | 140       | 100         |

**Table 3:** Showing the Testing Results of respondents.

| Variables                        | Categories | Frequency | Percent (%) |
|----------------------------------|------------|-----------|-------------|
| First time Testing for Hepatitis | Yes        | 87        | 62.1        |
|                                  | No         | 53        | 37.9        |
|                                  | Total      | 140       | 100.0       |
| Previous result positive         | Yes        | 3         | 2.1         |
|                                  | No         | 137       | 97.9        |
|                                  | Total      | 140       | 100.0       |

From (Table 2) above, it could be shown that majority (77.1%) were bike owners while 22.9% of the respondents are not bike owners. Majority (62.9%) of the respondents have working experience between 6 months-2 years, 14.3% has working experience between 3-10 years and 22.9% has working experience between 11-19 years. From (Table 3) above, 6.4% tested negative of HBV while, majority, 93.7% tested positive. 62.1% are having their first time testing for Hepatitis while 37.9% attested that this was not their first time testing. 2.1% of the respondents have once been tested positive of the virus while 97.9% have never tested positive to the virus. From (Table 4) above, it can be shown that majority (35.7%) had no idea of what HBV was, 21.4% heard through people (friends and Family), 6.4% through newspaper,

**Table 4:** Showing the respondents' knowledge of Hepatitis B virus.

| Variables                          | Categories              | Frequency | Percent (%) |
|------------------------------------|-------------------------|-----------|-------------|
| How did you get to know about HBV  | Radio                   | 26        | 18.6        |
|                                    | TV                      | 25        | 17.9        |
|                                    | Newspaper               | 9         | 6.4         |
|                                    | People (family/friends) | 30        | 21.4        |
|                                    | No                      | 50        | 35.7        |
|                                    | Total                   | 140       | 100.0       |
| Hepatitis B compared with HIV      | More dangerous          | 97        | 69.3        |
|                                    | Not as dangerous        | 26        | 18.6        |
|                                    | Don't know              | 17        | 12.1        |
|                                    | Total                   | 140       | 100.0       |
| NURTW work can put someone at risk | Don't Agree             | 65        | 46.4        |
|                                    | Probably                | 53        | 37.9        |
|                                    | Agree                   | 16        | 11.4        |
|                                    | High risk               | 6         | 4.3         |
|                                    | Total                   | 140       | 100.0       |
| Medication can treat Hepatitis B   | Don't know              | 89        | 63.6        |
|                                    | Yes                     | 27        | 19.3        |
|                                    | No                      | 24        | 17.1        |
|                                    | Total                   | 140       | 100.0       |
| Hepatitis B can be prevented       | Don't know              | 64        | 45.7        |
|                                    | Yes                     | 50        | 35.7        |
|                                    | No                      | 26        | 18.6        |
|                                    | Total                   | 140       | 100.0       |

17.9% through television and 18.6% through radio means. Majority (69.3%) believes that HBV was more dangerous than HIV, 18.6% thinks it is not as dangerous as HIV and 12.1% do not know which is more dangerous. 46.4% do not agree that being an NURTW staff puts you at risk of the virus, 37.9% are uncertain, 11.4% agrees that being an NURTW staff puts you at risk while 4.3% thinks it puts you at a high risk. From the (Table 4) above, 63.6% of the respondents do not know if medications are able to treat Hepatitis, 19.3% thinks medications can treat Hepatitis while 17.1% believes that medications cannot treat Hepatitis. Majority (45.7%) do not know if Hepatitis could be prevented, 35.7% thinks it could be prevented while 18.6% thinks it cannot be prevented at all. From (Table 5) above, it could be shown that 50% of the respondents thinks Hepatitis could be transmitted through blood, 20.7% thinks it cannot be transmitted through blood while 29.3% thinks they do not know. Majority (62.1%) thinks Hepatitis could be transmitted through saliva, 15.0% thinks it cannot be transmitted through saliva while 22.9% do not know it could be transmitted through saliva. Majority (55.0%) thinks it could be transmitted through sweat, 33.6% thinks it cannot be transmitted through sweat while 11.4% do not know if it could be transmitted through sweat. 38.6% believes it could be transmitted through other body fluids, 28.6% thinks it cannot be transmitted through other body fluids while 32.9% do not know if it could be transmitted through other body fluids. Majority (66.4%) thinks Hepatitis could not be transmitted through insects bites while 33.6%

**Table 5:** Showing the respondents' knowledge on mode of transmission.

| Variables   | Categories | Frequency | Percent (%) |
|---|------------|-----------|-------------|
| Hepatitis B can be transmitted by blood             | Yes        | 70        | 50.0        |
|   | No         | 29        | 20.7        |
|   | Don't know | 41        | 29.3        |
|   | Total      | 140       | 100.0       |
| Hepatitis B can be transmitted by saliva            | Yes        | 87        | 62.1        |
|   | No         | 21        | 15.0        |
|   | Don't know | 32        | 22.9        |
|   | Total      | 140       | 100.0       |
| Hepatitis B can be transmitted by sweat             | Yes        | 77        | 55.0        |
|   | No         | 47        | 33.6        |
|   | Don't know | 16        | 11.4        |
|   | Total      | 140       | 100.0       |
| Hepatitis B can be transmitted by other body fluids | Yes        | 54        | 38.6        |
|   | No         | 40        | 28.6        |
|   | Don't know | 46        | 32.9        |
|   | Total      | 140       | 100.0       |
| Hepatitis B can be transmitted by bites of insect   | Yes        | 47        | 33.6        |
|   | No         | 93        | 66.4        |
|   | Total      | 140       | 100.0       |

**Table 6:** Showing the respondents' knowledge about vaccine.

| Variables                        | Categories | Frequency | Percent (%) |
|----------------------------------|------------|-----------|-------------|
| Have you heard about the vaccine | Yes        | 16        | 11.4        |
|                                  | No         | 124       | 88.6        |
|                                  | Total      | 140       | 100.0       |
| Received the vaccine             | Yes        | 0         | 0           |
|                                  | No         | 140       | 100.0       |
|                                  | Total      | 140       | 100.0       |

**Table 7:** Showing the respondents' Opinion about Campaign/advocacy.

| Variables                        | Categories | Frequency | Percent (%) |
|----------------------------------|------------|-----------|-------------|
| Opinion about Campaign /advocacy | Yes        | 140       | 100         |
|                                  | No         | 0         | 0           |
|                                  | Total      | 140       | 100.0       |

thinks it could be transmitted through insects bites. From (Table 6) above, it could be shown that majority (88.6%) have no knowledge about vaccines for virus while 11.4% have heard about vaccines available for Hepatitis. It could also be seen from the table above that 100% of the respondents have not been vaccinated against the virus. From the (Table 7) above, 140 (100%) of the respondents are of the opinion which attests the campaign for advocacy against Hepatitis virus. When tested, there was a significant relationship between respondents knowledge about mode of transmission and first time testing because the *p*-value was greater than 0.05, then the null hypothesis will be accepted. There was also no significant relationship between the respondents knowledge of Hepatitis virus and their test results. Furthermore, there was no significant relationship between

the respondents knowledge on Hepatitis B virus and their test result and also no significant relationship between the respondents level of education and the mode of transmission of Hepatitis virus.

Meanwhile, there was no significant relationship between the respondents' level of education and mode of transmission of Hepatitis B virus. There was no significant relationship between the respondents knowledge of the mode of transmission and being tested for Hepatitis. Lastly, there was a significant relationship between the respondents' knowledge about the mode of transmission and being tested for the Hepatitis B virus.

## Discussion

It was shown that majority of respondents got to know about the disease from their friends and family and there is also a poor level of knowledge of respondents as most of the respondents believe that hepatitis B is more dangerous than HIV. This is inconsistent with Saquib et al., [19]. Moreover, there is a poor level of knowledge of respondents about Hepatitis B prevention and transmission and this is also consistent with Gebrecherkos et al., [17]. Also there was a similar conclusion by Gebrecherkos et al., [17] as there was a poor level of knowledge and practices of hepatitis B vaccine. Also, there was a poor level of knowledge about the transmission of hepatitis B. The level of education was significant in the study just as Saquib et al., [19]. The level of knowledge and attitude exhibited in the study shows that most of the respondents are aware of the virus. Also in this study, which was based on another at-risk population, there was low hepatitis vaccination [18].

## References

- Lemoine M, Nayagam S, Thursz M. Viral hepatitis in resource-limited countries and access to antiviral therapies: Current and future challenges. *Future Virol.* 2013; 8: 371-380.
- Puri P. Tackling the Hepatitis B disease burden in India. *J Clin Exp Hepatol.* 2014; 4: 312-319.
- Ganem D, Prince AM. Hepatitis B virus infection--natural history and clinical consequences. *Engl J Med.* 2004; 350: 1118-1129.
- Wright TL, Lau JY. Clinical aspects of hepatitis B virus infection. *Lancet.* 1993; 342: 1340-1344.
- Lavanchy D. Hepatitis B virus epidemiology, disease burden, treatment, and current and emerging prevention and control measures. *J Viral Hepat.* 2004; 11: 97-107.
- Kennedy PTF, Litwin S, Dolman GE, Bertoletti A, Mason WS. Immune Tolerant Chronic Hepatitis B: The Unrecognized Risks. *Viruses.* 2017; 9: 96.
- WHO (2019). Hepatitis-b. 2020.
- Zuckerman AJ. More than a third of the world's population has been infected with the hepatitis B virus. *BMJ.* 1999; 318: 1213.
- global hepatitis report, 2017-World Health Organization. *Engl J Med.* 2008; 359: 1486-500.
- Lahariya C, Subramanya BP, Sosler S. An assessment of hepatitis B vaccine introduction in India: Lessons for roll-out and scale-up of new vaccines in immunization programs. *Indian J Public Health.* 2013; 57: 8-14.
- Haq N, Hassali MA, Shafie AA, Saleem F, Farooqui M, Haseeb A, et al. Across-sectional assessment of knowledge, attitude and practice among Hepatitis-B patients in Quetta, Pakistan. *BMC Public Health.* 2013; 13: 448.
- Kaliyaperumal K. Guideline for conducting a Knowledge, Attitude and Practice (KAP) study. *Commun Ophthalmol.* 2004; 4: 7-9.
- Badran IG. Knowledge, attitude and practice: the three pillars of excellence and wisdom, place in the medical profession. *East Mediterr Health J.* 1995; 1: 8-16.
- Haq N, Hassali MA, Shafie AA, Saleem F, Farooqui M, Haseeb A, et al. A cross-sectional assessment of the knowledge, attitude and practice among Hepatitis-B patients in Quetta, Pakistan. *BMC Public Health.* 2013; 13: 448.
- Kaliyaperumal K. Guideline for conducting a Knowledge, Attitude and Practice (KAP) study. *Commun Ophthalmol.* 2004; 4: 7-9.
- Badran IG. Knowledge, attitude and practice: the three pillars of excellence and wisdom, a place in the medical profession. *East Mediterr Health J.* 1995; 1: 8-16.
- Teklay G, Getu G, Mulualem L, Markos N. Knowledge, Attitude, and Practice towards Hepatitis B Virus among Pregnant Women Attending Antenatal Care at the University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia. *International Journal of Hepatology.* 2020. 1-10.
- Mursy SMM, Mohamed SOO. Knowledge, attitude, and practice towards Hepatitis B infection among nurses and midwives in two maternity hospitals in Khartoum, Sudan. *BMC Public Health.* 2019; 19: 1597.
- Saquib S, Ibrahim W, Othman A, Assiri M, Al-Shari H, Al-Qarni A. "Exploring the Knowledge, Attitude and Practice Regarding Hepatitis B Infection Among Dental Students in Saudi Arabia: A Cross-Sectional Study." *Open Access Maced J Med Sci.* 2019; 7: 805-809.