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ORIGINAL ARTICLE

Awareness of Hepatitis B Vaccination in Rural Area: A Survey

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Abstract

Background: The awareness regarding Hepatitis B vaccination is necessary in the general population of Bangladesh. **Objective:** This study was carried out to determine the level of knowledge and the vaccination coverage of hepatitis B virus in rural population. **Methodology:** This cross sectional study was conducted at Bangladesh Institute of Administration and Management (BIAM), Dhaka, Bangladesh from February 2011 to April 2011. Sirajdikhan upazila of Munshiganj District was taken as a study place. All the villagers with an age group of 15 to 55 years were taken as study population. **Result:** A total number of 30 respondents were recruited of which male (60.0%) is predominant than female (40.0%). The mean age with SD was 23±7.256 years (range 15-53 years). Majority has told about the knowledge regarding the sequel of hepatitis B virus infection (33.3%). Almost all respondents (96.7%) are unknown about the treatment of HBV infection. Majority (76.7%) are unknown regarding taking HBV vaccination. Nobody has given positive answer in response to take vaccine. **Conclusion:** In conclusion information and knowledge regarding HBV infection and vaccination is very poor in the rural area of Bangladesh.

Keywords: Hepatitis B, awareness, vaccination, rural area

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Introduction

Hepatitis B virus continues to be a major health problem in worldwide[1]. As most of the infections are asymptomatic and subclinical, it is almost certain that cases of hepatitis are under-reported in the community[2]. Hepatitis B virus (HBV) infections may result in a wide spectrum of clinical outcomes, ranging from silent anicteric infection to subclinical disease and classical icteric hepatitis to fulminant hepatic failure with coma and occasionally death[1]. Exposure to HBV, particularly in early in life, may also result in an asymptomatic carrier state that can progress to chronic active hepatitis, cirrhosis of the liver and eventually hepatocellular carcinoma[3]. As HBV infections can spread from person to person, the key control of HBV infections is immunoprophylaxis[4].

Bangladesh is a densely populated area[5]. An infectious disease especially hepatitis is alarming disease in this poor developing country and it has

been estimated that about 6% of the population is suffering from the attack of hepatitis B virus[6]. By providing the vaccination it can be saved a large number of the people from the infection of hepatitis B virus[5]. Vaccination against Hepatitis B virus infection is now introduced in EPI program[7]. However, there are a large number of populations still now not aware of hepatitis and its consequences. Knowledge surveys are representative of a specific population to collect information on what is known, believed and done in relation to a particular topic, and are the most frequently used study tool in health-seeking behavior research[8]. Knowledge is usually assessed in order to see how far community knowledge corresponds to biomedical concepts[9].

With this limited facilities if it is needed to deliver a good health service to mass people, then awareness about the common diseases and involvement of the people in health care delivery system in an emergent part. This study was carried out to determine the level of knowledge and the vaccination coverage of hepatitis B virus in rural population.

Methodology

This cross sectional study was conducted at the Department of Microbiology in Shaheed Suhrawardy Medical College, Dhaka from 1 February 2011 to 30 April 2011 for a period of 3 months. Sirajdikhan upazila of Munshiganj District which is situated 45 km from the capital of Dhaka city was taken as a study place. The total area of the study place is 180.19 km with a population of 229085 and male are 51.02% and females are 48.98% having an average literacy rate of 33.9%. This Upazila is constituted by 14 Unions/Wards and 24 Mauzas/Mahallas with a177 villages. All the villagers with an age group of 15 to 55 years were taken as study population. Known case of hepatitis-B virus infected persons was excluded from this study. This social study was carried out purposively among 30 villagers between 15 to 50 years to find out the level of awareness about hepatitis B vaccination in rural area. Findings are analyzed and also suggestion is made to elevate the level of consciousness and to prevent death from hepatitis B virus related diseases. These study people were selected randomly and interviewed with a preformed questionnaire. Data was collected and analyzed in SPSS 19.0 (USA). Descriptive statistics were used to illustrate respondents' demographic characteristics. Categorical variables were measured as percentages while continuous variables were expressed as mean ± standard deviation. Statistical Package for Social Sciences (SPSS) v. 16.0 was sued for data analysis.

Figure I: Map of Study place (Sirajdikhan Upazila, Munshigonj)

Results

A total number of 30 respondents were recruited for this present study after fulfilling the inclusion and exclusion criteria. Male is predominant than female which is 18(60.0%) and 12(40.0%) respectively. The male and female ratio is 1.5:1 (Figure 1).

Table 1: Distribution of Study Population According to Age (n=30)

Age Group	Frequency	Percentage %
15 – 25	15	50.0
26 – 35	12	40.0
36 – 45	2	6.6
46 – 55	1	3.3
Total	**30**	**100.0**

*Mean±SD=23±7.256 years (range 15-53)

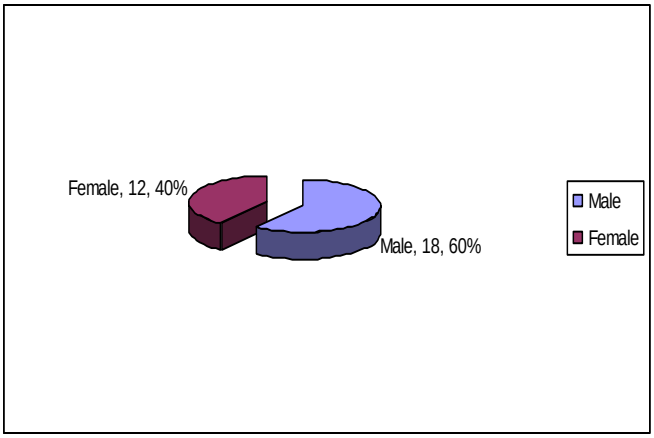

Figure II: Showing the distribution of Study Population according to Sex (n=30)

Most of the respondents were below the age group of 35 years which is 27(90.0%) followed by 36 – 45 years group and 46 – 55 years age group which were 2(6.6%) and 1(3.3%) respectively. The mean age with SD was 23±7.256 years with a range of 15 to 53 years (Table 1).

Table 2: R**espondents Distribution According to Educational Status (n=30)**

Education Level	Frequency	Percentage
Not Passed class V	4	13.0
Passed class V	13	47.0
Passed class X	10	33.0
Passed HSC	3	10.0
Total	**30**	**100.0**

Majority of the study population were below class ten which was 27(90.0%) respondents and the rest 3(10.0%) respondents were passed the HSC exam (Table 2).

Table 3: Knowledge about Sequel of Hepatitis B virus infection

Knowledge	Frequency	Percentage
Known	10	33.3
Not Known	20	66.7
Total	**30**	**100.0**

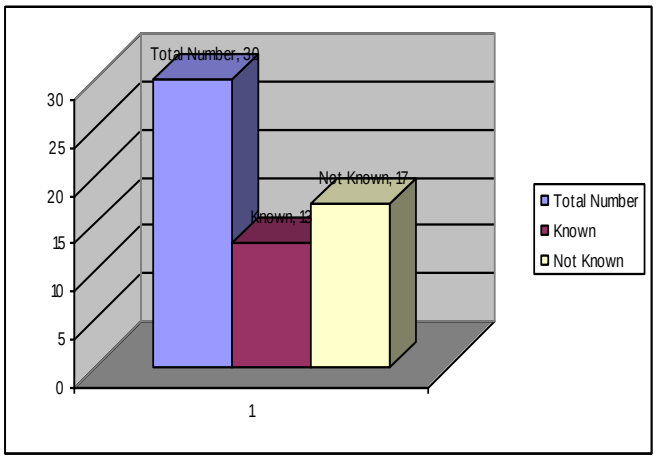

Figure 3: Answer of the People regarding the question do you know about Hepatitis B.

Knowledge about the sequel of Hepatitis B virus infection is very little among the study population. Majority has told about the knowledge regarding the sequel of hepatitis B virus infection which is 10(33.3%) respondents and the rest 20(66.7%) respondents are unknown about the sequel (Table 3).

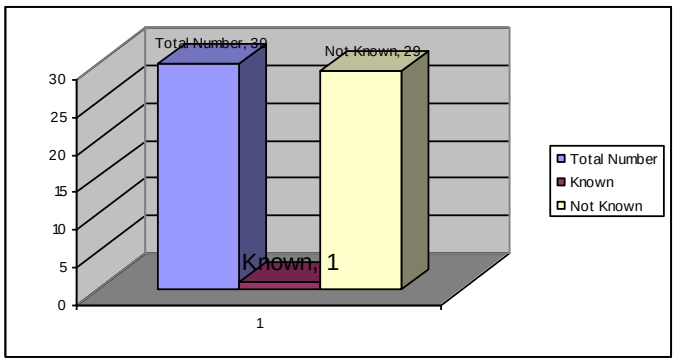

Figure 4: Answer of the People regarding the treatment of Hepatitis B virus infection.

Almost all respondents are unknown about the treatment of HBV infection which is 29(96.7%) respondents. Knowledge about taking HBV vaccination is very little among the study population. Majority are unknown regarding taking HBV vaccination which is 23(76.7%) respondents and the rest 7(23.3%) respondents are familiar with it (Table 4).

Discussion

Hepatitis B (HB) is a serious and common infectious disease of the liver[6]. The World Health Organization[10] reported HB to infect nearly 2 billion people around the globe. Furthermore, out of those 2 billion, 350 million suffered from chronic, lifelong infection[10]. Moreover, an estimated 15-40% of chronic HB carriers were susceptible to develop liver cirrhosis and hepatocellular carcinoma[2]. HB is a confronting ailment and results in 0.6 million deaths annually[11]. Although HB is classified as 'disease of priority,' there is an incessant increase in detection of new cases worldwide[4].

Table 4: Knowledge about taking HBV vaccination

Knowledge	Frequency	Percentage
Known	7	23.3
Not Known	23	76.7
Total	**30**	**100.0**

Furthermore, HB is widespread in the Asia Pacific region and 10 to 15 million of the population suffer from this disease[12]. A total number of 30 respondents were recruited for this present study after fulfilling the inclusion and exclusion criteria. Male (60.0%) is predominant than female (40.0%). The male and female ratio is 1.5:1. Most of the respondents were below the age group of 35 years which is 27(90.0%) followed by 36 – 45 years group and 46 – 55 years age group which were 2(6.6%) and 1(3.3%) respectively. The mean age with SD was 23±7.256 years with a range of 15 to 53 years. Majority of the study population were below class ten which was 27(90.0%) respondents and the rest 3(10.0%) respondents were passed the HSC. Illiteracy is the main factor regarding lack of knowledge about the HBV infection as well as the HBV vaccination[6]. In this present study the rural people are detach from the social media like newspaper or poster. Similar to the present study Shalaby et al[13] has reported that lack of education is the main factor regarding the HBV infection related information.

Knowledge about the sequel of Hepatitis B virus infection is very little among the study population. Majorities (66.7%) have lack of knowledge regarding the sequel of hepatitis B virus infection and the rest (33.3%) respondents know about the sequel. Similar to the present study Haq et al[6] have reported that a small percentage of respondents actually knew about sequel of HBV vaccination. Lack of knowledge about sequel of HBV infection can be attributed to rise in the frequency of HBV infection. Haq et al[6] added that only 28.2% of the participant believed that HB can cause liver cancer, which is again a major sign of concern.

Almost all respondents (96.7%) are unknown about the treatment of HBV infection. It has been well established that the primary source of information was through family, friends and neighbors regarding the gathering the knowledge of HBV infection[6]. These results are in line with the findings from studies reported from other parts of world where the overall knowledge of the general population regarding HB was reported low[14].

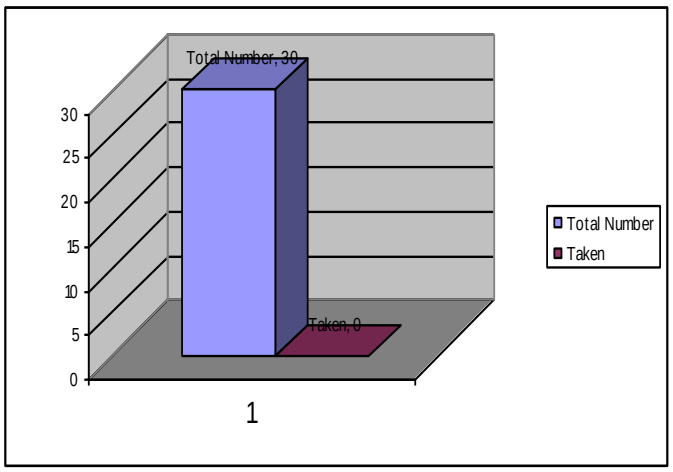

Figure 5: Answer of the People regarding Have you taken the vaccine. Nobody has given positive answer (100.0%)

Poor knowledge regarding HB also is also reported in other studies[15-17]. On the contrary Shalaby et al[13] in Egypt reported that participants had adequate knowledge towards transmission, vaccination and treatment of HB. Possible reasons that can be attributed to this difference of response are demographic variation of the study population, study location and as well as the study tool used for data collection.

Knowledge about taking HBV vaccination is very little among the study population. Majorities (76.7%) are unknown regarding taking HBV vaccination and the rest (23.3%) respondents are familiar with it. Nobody has given positive answer regarding taking vaccine (100.0%). Similar results have been reported by Lim and Rashwan[1] and have mentioned that a low vaccination rate among participants from rural areas is probably due to the low level of knowledge about the diseases and the availability of the vaccines. Bangladesh had incorporated hepatitis B vaccination into the national immunization programme. Therefore it is unlikely to miss the HBV vaccination among the rural people.

Conclusion

In the conclusion it can be drawn that a little is known to village people about Hepatitis B vaccination. Awareness programme against Hepatitis B virus infection should be included in primary and secondary education. Doctor, Health assistant and family welfare visitor should counsel with villagers during home and hospital management Mass media like radio, Television, newspaper, poster should be used extensively to create awareness about Hepatitis B virus infection and vaccination.

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