



ORIGINAL ARTICLE

Knowledge and awareness on hepatitis B infection among adult population in some selected villages in Keranigonj, Dhaka, Bangladesh

M Shakil¹✉, MS Laskar², A Farhana³, AKMJ Alam⁴, AU Alam⁵, W Islam⁶

Abstract

This cross sectional descriptive study was conducted among the rural people in some selected villages in Keraniganj upazila, Dhaka, Bangladesh from November 2015 to April 2016 to determine the knowledge and awareness about hepatitis B (HB) infection. The sample was collected using non-probability (purposive) method from the available people in the villages. The sample size was 200. The age most of the respondents were in the 26-35 age range; male respondents were higher than that of female and most of the respondents were married. The majority of respondents (60%) had primary and secondary education level, 42% were housewife, 40% had monthly family income range at 5000-10000 Taka, 45% had >5 persons in their family, 51% lived in pacca house, 52.5% drunk water from deep tube-well, and 82.5% did nothing for purification of water and 80% used sanitary latrine. The results of the study revealed that only 43.5% had knowledge on HB and 37.9% knew about HB from doctors. In case of mode of transmission, risk group and prevention of HB, 50.6% thought it is spread by water, 40.2% thought sex workers are more prone to develop HB and only 29% thought HB can be prevented by vaccination. This study indicates that there is a lack of awareness about HB, its route of transmission and modes of prevention among the rural people and appropriate measures are needed to increase correct awareness on HB for prevention purpose.

Key words: Awareness, hepatitis B, rural population, prevention, Bangladesh.

Introduction

Viral hepatitis is a serious public health problem affecting billions of people globally. Caused mainly by hepatitis viruses A, B, C, D and E, and rarely by cytomegalovirus, Epstein-Barr virus and fungal infections, the spectrum of hepatitis range from sub-clinical to milder and life threatening illness including hepato-cellular carcinoma. Hepatitis B (HB) is a serious blood borne infection that affects

the liver and caused by hepatitis B virus (HBV). It is infectious and the most common cause of chronic hepatitis, liver cirrhosis and hepato-cellular carcinoma.¹ Globally two billion people are infected with HBV, and millions of them have chronic (lifelong) infections that kill more than one million people globally each year. In the Middle East and Indian sub-continent, HBV infection is of intermediate endemicity with chronic HBV

1. M Shakil, MBBS, MPH, Asst. Prof. of Community Medicine, Army Medical College, Comilla. Email: mshakil1470@gmail.com

2. MS Laskar, MD, MPH, PhD, Prof. of Community Medicine, Gazi Medical College, Khulna

3. A Farhana, MBBS, MPH, Asso. Prof. of Community Medicine, MH Samorita Medical College & Hospital, Dhaka

4. AKMJ Alam, MBBS, MPH, Asst. Prof. of Community Medicine, Shahabuddin Medical College, Dhaka

5. MAU Alam, MBBS, DLO, Asst. Prof. of ENT, Eastern Medical College, Comilla

6. W Islam, MBBS, DCH, Asst. Prof. of Pediatrics, Ashiyan Medical College, Dhaka

carriage rate of 2-5% among general population.² Bangladesh is one of the most densely populated countries of the world with poor socioeconomic and hygienic conditions. The incidence of different kinds of liver diseases like hepatitis, cirrhosis and liver cancers is common in Bangladesh. About 4-7% of the population have HB and 1-3% have hepatitis C. About 3.5% of pregnant women have HBV infection. It was reported in a study that 2.3% of girls in a school were diagnosed with HB.³ It is shocking that about 70% of those living with liver disease are completely unaware of their illness.

Most of the liver diseases are preventable by awareness. The National Liver Foundation of Bangladesh is a non-profit organization started with the aim of prevention, treatment, education and research on liver diseases in Bangladesh.⁴ HB was the first to be discovered in 1965 by Baruch Blumberg. Most people who were infected long ago with HBV or hepatitis C virus are unaware of their chronic infection and so can unknowingly transmit the infection to other people. HB, often referred to as the "secret killer," is the most dangerous type of viral hepatitis despite the dramatic increase in the treatment and effective vaccination against the disease. In Africa, the prevalence rate of HB was 10-15%. The 2009 Ghana Health Service report released very scary figures suggesting an increase in the prevalence rate of HB from 8:1 in 2005 to 6:1 in 2009.⁵ This means one out of every sixth person is infected with the disease. There has also been an increase in the number of deaths associated with the disease.⁵

Two strategies are helpful for reducing HBV infection: first, case finding and targeted education and immunization for reducing vertical, sexual and household transmission, and second, universal vaccination and promotion of safe sex practices at community level. After graduating from high school, adolescents may go to college or start a job; in either case, they go to a more open social circumstance and would be more exposed to HBV.

It is obvious that for many diseases, having appropriate knowledge, attitude and practice may reduce the probability of disease acquisition among at risk populations. In reality, there is little knowledge about infectious diseases and acceptance of preventive measures could be improved by educating people.⁶ There have been several studies that evaluated the HBV knowledge of Asian minorities in the United States of America such as Vietnamese and Cambodians in Seattle and Vietnamese students in Massachusetts and according to the findings, the knowledge level of the studied subjects was mostly low.^{7,8} On the other hand, studies on Singaporean people showed that their knowledge was suitable.^{9,10} HBV continues to be a major health problem in worldwide including Bangladesh. Vaccination against HBV is now introduced in the expanded programme on immunization. However, there is a large number of populations still 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. Knowledge is usually assessed in order to determine how far community knowledge corresponds to biomedical concepts. If it is needed to deliver a good health service to mass people with limited facilities then awareness about the common diseases and involvement of the people in health care delivery system is an emergent part. This study was carried out to determine the level of knowledge and the vaccination coverage of HB virus in a rural population.

Materials and Method

This descriptive type of cross sectional study was conducted among rural people in Keraniganj upazila, Dhaka, Bangladesh from November 2015 to April 2016 to determine the knowledge and awareness about HB infection. The sample was collected purposively from the availability of the population, and data were collected by using a pretested structured questionnaire. The sample size was 200. The data

were processed and analyzed using Microsoft computer. Results were reported using descriptive statistics and expressed as percentage (%) where appropriate.

Results

Table 1 shows that the most of the respondents were in the 26-35 age range; male respondents were higher than that of

Table 1. Socio-demographic characteristics of the respondents, (n = 200)

Characteristics	Group	%
Age	≤25 years	26.5
	26-35 years	30.5
	36-45 years	20.5
	46-55 years	12.5
	≥56 years	10.0
Gender	Male	54.5
	Female	45.5
Marital status	Married	78.5
	Unmarried	19.0
	Widow	2.5
Educational qualifications	Illiterate	29.0
	Primary	32.0
	Secondary	28.0
	Higher secondary and above	11.0
Occupation	Housewife	42.0
	Service holder	17.0
	Business	16.0
	Farmer	9.5
	Student	6.0
	Others	9.5
Monthly income	<5000 Taka	35.0
	5000-10000 Taka	40.0
	10000-15000 Taka	12.5
	>15000 Taka	12.5
Family members	≤4 persons	45.5
	>4 persons	54.5
Residence	Pacca house	51.0
	Kacha house	25.0
	Semi pacca house	24.0
Source of drinking water	Deep tube-well	52.5
	Tube-well	47.5
Type of water purification	Nothing	82.5
	Boiling	12.5
	Filtration	4.0
	Others	1.0
Type of latrine	Sanitary latrine	80.0
	Service type	19.5
	Open field	0.5

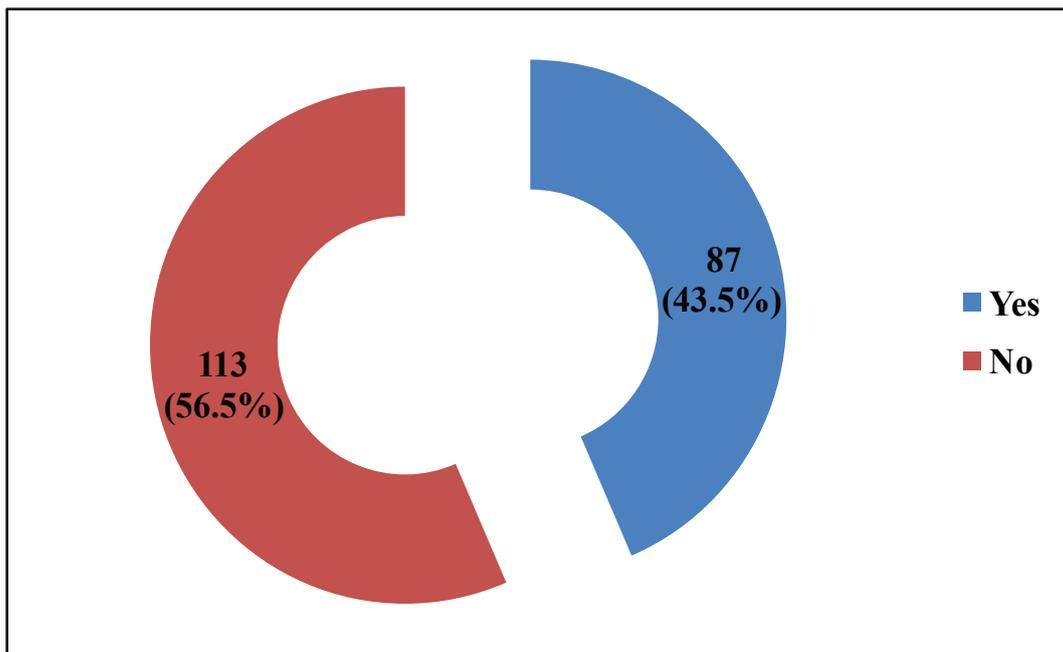


Fig. 1. Distribution of the respondents whether they knew about HB or not, (n = 200).

Table 2. Respondents according to the source of HB information, (n = 87)

Source of knowledge about HB	Number	%
Doctor	33	37.9
Health Assistant	22	25.3
Friend	5	5.7
Neighbor	6	6.9
Kobiraj	3	3.4
Media	18	20.8
Total	87	100.0

Table 3. Distribution of the respondents by their knowledge about mode of transmission of HB, (n = 87)

Mode of transmission	Number	%
By blood	35	40.2
By water	44	50.6
By touch	2	2.3
By air	1	1.2
By multiple use of syringe	3	3.4
By sexual activity	2	2.3
Total	87	100.0

female and most of the respondents were married. The majority of respondents (60.0%) had primary and secondary education level, 42.0% were housewife, 40.0% had monthly family income range at 5000-10000 Taka, 45% had >4 persons in their family, 51.0% lived in pacca house, 52.5% drunk water from deep tube-well, and 82.5% did nothing for purification of water and 80.0% used sanitary latrine.

Fig. 1 shows that according to their knowledge about HB, most of the respondents (113, 56.5%) did not know about HB.

Table 2 shows that according to the source of knowledge about HB, the proportion of the respondents knew about HB from doctor, health assistant, media, neighbor, friend and kobiraj was 37.9%, 25.3%, 20.8%, 6.9%, 5.7% and 3.4%, respectively.

Table 3 shows that according to their knowledge about HB transmission, the proportion of respondents knew about HB transmission by water, blood, multiple use of syringe, touch, sexual activity and air was 50.6%, 40.2%, 3.4%, 2.3%, 2.3% and 1.2%, respectively.

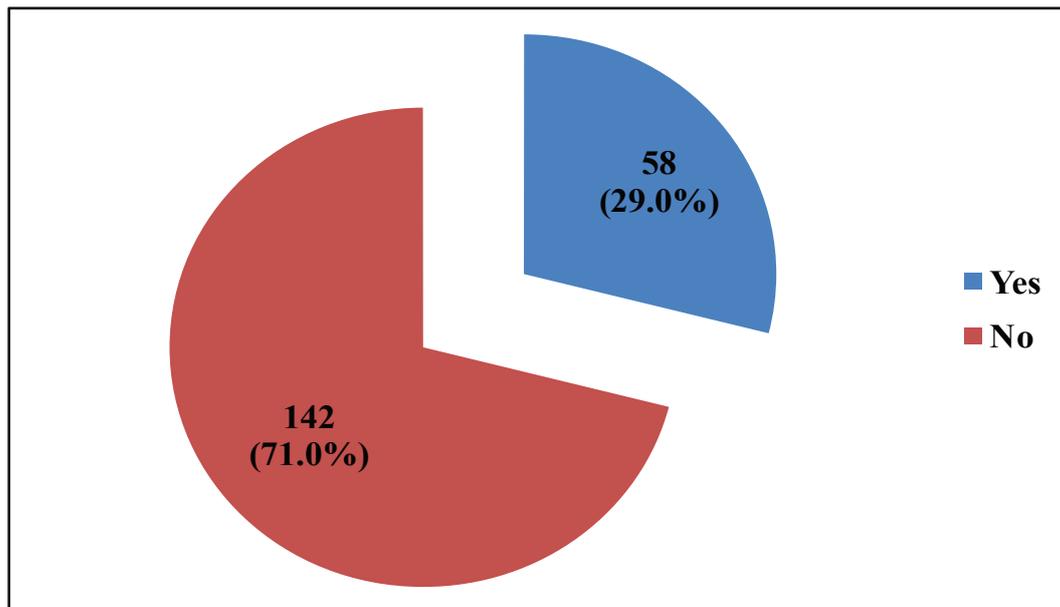


Fig.2. Distribution of the respondents whether they thought HB is preventable or not, (n = 200).

Table 4. Distribution of the respondents according to their knowledge about high risk group of HB, (n = 87)

Knowledge about high risk group	Number	%
Doctor	1	1.2
Health Assistant	2	2.3
Sex worker	35	40.2
Drug abuser	29	33.3
Driver	5	5.7
Working abroad	8	9.2
Others	7	8.1
Total	87	100.0

Fig. 2 shows that according to their knowledge about prevention of HB, most of the respondents (142, 71.0%) did not think that HB is preventable, only 58 (29.0%) of them thought.

Table 4 shows that according to their knowledge about high risk group to develop HB, the proportion of respondents knew about high risk groups as sex worker, drug abuser, working abroad, others, driver, health assistant and doctor was 40.2%, 33.3%, 9.2%, 8.1%, 5.7, 2.3% and 1.2%, respectively.

Table 5. Distribution of the respondents according to their knowledge about mode of prevention of HB, (n = 58)

Knowledge about Mode of prevention	Number	%
By vaccination	32	55.2
By safe sex	5	8.6
By safe drinking water	19	32.8
Others	2	3.4
Total	58	100.0

Table 5 shows that according to their knowledge about HB prevention, 55.2% of the respondents thought HB is preventable told that it can be prevented by vaccination, followed by safe drinking water (32.8%), by safe sex (8.6%) and others (3.4%).

Discussion

HB is the world’s most common blood borne viral infection, accounting for 2 billion infections, 350 million carriers and 6 lakh deaths annually. The virus is transmitted mainly by blood, and the complications of infection are chronic hepatitis, cirrhosis, and hepatocellular carcinoma. Approximately 100 million HB carriers, more than 5.6% of the total

HB is the world's most common blood borne viral infection, accounting for 2 billion infections, 350 million carriers and 6 lakh deaths annually. The virus is transmitted mainly by blood, and the complications of infection are chronic hepatitis, cirrhosis, and hepato-cellular carcinoma. Approximately 100 million HB carriers, more than 5.6% of the total population, live in the member countries of the World Health Organization South-East Asia Region.^{11,12} More than 300000 people are estimated to die each year due to the chronic consequences of HB, particularly cirrhosis and liver cancer. It has been clearly documented that HBV is far more infectious than human immunodeficiency virus in occupational health care settings.

Fortunately, HBV infection is largely preventable by vaccination. Transmission of infection is rare in persons who have been immunized.¹³ The general characteristics of the respondent in this study revealed that The age most of the respondents were in the 26-35 age range; male respondents were higher than that of female and most of the respondents were married. The majority of respondents (60.0%) had primary and secondary education level, 42.0% were housewife, 40.0% had monthly family income range at 5000-10000 Taka, 45.0% had >5 persons in their family, 51.0% lived in pacca house, 52.5% drunk water from deep tube-well, and 82.5% did nothing for purification of water and 80.0% used sanitary latrine.

The results of the study revealed that only 43.5% of the respondents had knowledge on HB, whereas the rate of knowledge on HB was 53.8% in nursing college students in Tamil Nadu, India, and 59.2% of the students of Rural Dental College, Maharashtra, India had correct knowledge on HB infection.¹³⁻¹⁵

According to the source of knowledge about HB, the proportion of the respondents knew

about HB from doctor, health assistant, media, neighbor, friend and kobiraj was 37.9%, 25.3%, 20.8%, 6.9%, 5.7% and 3.4%, respectively. In a study, Misra et al found that source of information regarding HB included television (75.0%), newspapers (55.0%), and radio (26.0%).¹⁶ According to their knowledge about HB transmission, the proportion of respondents knew about HB transmission by water, blood, multiple use of syringe, touch, sexual activity and air was 50.6%, 40.2%, 3.4%, 2.3%, 2.3% and 1.2%, respectively; whereas 71.0% of the nursing students in Tamil Nadu, India had correct knowledge about mode of transmission.¹⁴ Another study conducted among the students of University of Kassala, Sudan reported poor knowledge on causative agents and mode of transmission.¹⁷

In this study, according to knowledge about high risk group to develop HB, the proportion of respondents knew about high risk groups as sex worker, drug abuser, working abroad, others, driver, health assistant and doctor was 40.2%, 33.3%, 9.2%, 8.1%, 5.7, 2.3% and 1.2%, respectively. Most of the respondents (71.0%) did not think whether HB is preventable, only 29.0% of thought that it is preventable. According to their knowledge about HB prevention, 55.2% of the respondents thought that HB is preventable told that it can be prevented by vaccination, followed by safe drinking water (32.8%), by safe sex (8.6%) and others (3.4%). A study carried out among the nursing students in Tamil Nadu, India showed that 69.3% had correct knowledge that it is a vaccine preventable disease.¹⁴

This study indicates that there is a lack of awareness about HB, its route of transmission and modes of prevention among the rural people and appropriate measures are needed to increase correct awareness on HB for prevention purpose.

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