SAS Journal of Medicine
Abbreviated Key Title: SAS J Med
ISSN 2454-5112
Journal homepage: https://saspublishers.com

OPEN ACCESS

Medicine

Hepatitis B Awareness among Adult People in Community Based Medical College, Bangladesh

Dr. Sultan Ahmed[1*], Dr. Mahmud Javed Hasan[2], Dr. Md Abdul Bari[3], Professor Dr. Md. Aminul Islam[4], Professor Dr. Satya Ranjan Sutradhar[5]

[1]Associate Professor, Department of Medicine, Community Based Medical College Bangladesh
[2]Associate Professor and Head of Department of Nephrology Community Based Medical College Bangladesh
[3]Associate Professor, Department of Medicine, Community Based Medical College Bangladesh
[4]Professor, Department of Medicine, Community Based Medical College Bangladesh
[5]Professor And Head of Department of Medicine, Community Based Medical College Bangladesh

DOI: https://doi.org/10.36347/sasjm.2024.v10i08.017 | **Received:** 12.07.2024 | **Accepted:** 16.08.2024 | **Published:** 21.08.2024

***Corresponding author:** Dr. Sultan Ahmed
Associate Professor, Department of Medicine, Community Based Medical College Bangladesh

Abstract **Original Research Article**

Background: Hepatitis B (HB) is a major health issue in Bangladesh, with an approximated percentage ranging from 2-7% among the population of the country. HB remains a significant problem due to lack of awareness and inadequate knowledge regarding its transmission, prevention, and risk factors. ***Objective:*** To evaluate the current state of knowledge and perception regarding hepatitis B infection among the adult patients of Community Based Medical College Hospital in Bangladesh. ***Methods:*** This descriptive cross-sectional study recruited 90 adult patients at the Department of Medicine between July 2022 and June 2023. An interview survey using a structured questionnaire was used to gather data from the respondents. The data analysis was done by descriptive statistics means. ***Results:*** A larger proportion of the respondents were male (61.1%), within the age group of 26-35 years (30%), married (66.7%), and primary education (46.7%). Individuals who acquired their HB information from doctors were the highest at 38.9%. 4% were able to point out accurately that blood can transmit the virus, while 22.2% were still convinced that water could spread HB. As for the means of transmission, only 2% knew that it could be sexually transmitted. Only 9% knew about vaccination, but 22.2% of the respondents had the wrong perception that safe drinking water reduces the risk of getting HB. Doctors were most frequently reported as a high-risk group (38.9%), followed by drug abusers (27.8%). ***Conclusion:*** The findings of this study show that the study population has limited knowledge about hepatitis B and contains misconceptions about the means through which it spreads and the methods of avoiding it. The study emphasizes the imperative of designing effective health education interventions to fill these knowledge deficits with regards to transmission, risk factors, and vaccination coverage. They said that healthcare providers are very important in transmitting information and should be assisted in this regard to help decrease the burden of hepatitis B in the country.

Keywords: Hepatitis B, transmission, prevention, risk factors, vaccination.

INTRODUCTION

Hepatitis B (HB) is a major health concern that has spread worldwide and currently impacts several billion individuals. HBV-induced potentially deadly liver disease that may develop to chronic hepatitis B, cirrhosis, and hepatocellular carcinoma [1]. According to the World Health Organization, approximately 296 million people were living with chronic hepatitis B in 2019, out of which 1.5 million new infections happen every year [2]. Thus, although hepatitis B has a vaccine and treatment, the problem remains actual, primarily in developing countries. Given the fact that it is a heavily populated country in South Asia with limited access to healthcare, Bangladesh has significant barriers to managing hepatitis B in the population [3]. This is further exacerbated by poor knowledge levels of the disease, its mode of spread, and preventive measures among the general public. Hepatitis B is mostly passed on through contact with body fluids, particularly the blood of an infected person [4]. Some of these include mother-to-child during childbirth, use of contaminated needles, blood transfusion, and sexual activity [5]. Similarly, poor healthcare facilities, delayed or inaccessible screening and immunization, and unawareness of the threat in developing countries like Bangladesh play a role in the continued spread of HBV. Hepatitis B is not only a personal problem; it leads to a range of consequences at

the family and community levels and influences the healthcare system [6]. The long-term outcome of chronic HBV infection includes increased risk of morbidity and mortality, decreased quality of life, and economic loss attributable to the expenses incurred during treatment and the cost of lost production [7]. Also, the disease is associated with stigma, which brings about social isolation and discrimination- conditions that worsen the experience of the patients. Hepatitis B is best prevented, and the best method of prevention is through immunization with Hepatitis B vaccines. Since 1982, the hepatitis B vaccine has been very effective, approaching 95% efficacy in preventing HBV infection and its long-term effects [8]. Hepatitis B vaccine was included in the Bangladesh Expanded Programme on Immunization (EPI) in 2003 for newborns and infants only (National Liver Foundation, Bangladesh, 2016). However, the proportion of the adult population that remains at risk due to lack of vaccination is still relatively high. Since the control and prevention of the spread of hepatitis B depends on the awareness and knowledge of the virus, this is an important area of focus [9]. Increased knowledge about the modes of transmission, risk factors, and preventive measures may enable individuals to make the right decisions towards preventing the infection. Nonetheless, a number of studies conducted in different parts of Bangladesh have revealed that the overall knowledge and awareness regarding hepatitis B is still poor among the population. Hospitals and medical colleges are important places where awareness about Hepatitis B can be created because patients coming to these institutions are people of all ages and with different diseases. Knowledge of the knowledge and awareness level of this group can help to develop relevant education and awareness programs [10]. Namely, the topic of hepatitis B awareness among adults in Bangladesh can be researched in the Community Based Medical College Hospital in Bangladesh, which is a large facility and many patients come from different socio-economic backgrounds. Analyzing the presented data about HBV knowledge, attitudes, and practices in the given population, one can evaluate the current level of public awareness concerning the hepatitis B issue and determine further directions for the improvement of health-related campaigns and interventions [11].

The purpose of this research is to assess the level of understanding of hepatitis B infection among adult patients at the Community Based Medical College Hospital in Bangladesh. The goals include evaluating participants' awareness of hepatitis B and knowledge on transmission modes, risk factors, and preventive measures, as well as determining the main sources of information among participants. Furthermore, the study will determine the association between socio-demographic characteristics and awareness, as well as the areas of low awareness that could be targeted by health educational interventions [12]. Thus, fulfilling these objectives, this study would be helpful in enriching the existing literature about the awareness of HBV in Bangladesh and could be useful for public health policymakers, healthcare professionals, and HE stakeholders. The results may help design culturally appropriate health communication interventions to increase awareness of hepatitis B, preventive behaviors, and decrease the incidence of hepatitis B in Bangladesh.

MATERIALS AND METHOD

This chronic cross-sectional study was carried out among the adult patients attending the Department of Medicine at Community Based Medical College Hospital, Bangladesh, in the period of July 2022 to June 2023. They recruited ninety participants to complete the research through a convenience sampling technique. Socio-demographic questionnaires were used to elicit information on demographics and knowledge about hepatitis B, ways of its transmission, risk factors, and preventive measures. Data was collected using a structured questionnaire, which was completed through face-to-face interviews with respondents by research assistants. Informed consents were also sought from all respondents, and ethical clearance was sought from the respective institutional ethics committee. Qualitative data were analyzed descriptively, and these were summarized using frequencies and percentages.

RESULTS

The sample used in the study was 90 participants, 61.1% of whom were male. The age also revealed that 30% of the students were within the age range of 26-35 years, while 25% were within the age range of 21-25 years. 6% for those in the 25-year-old group. 66.7% of the participants identified themselves as being married, and 46.7% had primary-level education.

Based on occupation, the largest percentage (33. 3%) consisted of housewives, while service holders accounted for 16. 7%. When it came to the breakdown of the family's monthly income, 33 percent was earned by the father, 32 percent by the mother and 35 percent from other sources. 3% of those respondents earned less than 5000 Taka and 27%. 8% earns between 10,000 to 15000 Taka (Table 1).

Table 1: Socio-demographic characteristics of the respondents, (N = 90)

Characteristics	Group	N	%
Age	≤25 years	23	25.6
	26-35 years	27	30.0
	36-45 years	15	16.7
	46-55 years	20	22.2
	≥56 years	5	5.6

Characteristics	Group	N	%
Gender	Male	55	61.1
	Female	35	38.9
Marital Status	Married	60	66.7
	Unmarried	20	22.2
	Widow	10	11.1
Education	Illiterate	20	22.2
	Primary	42	46.7
	Secondary	23	25.6
	Higher secondary	5	5.6
Occupation	Housewife	30	33.3
	Service holder	15	16.7
	Business	10	11.1
	Farmer	5	5.6
	Student	5	5.6
Monthly Income	<5000 Taka	30	33.3
	5000-10000 Taka	20	22.2
	10000-15000 Taka	25	27.8
	>15000 Taka	15	16.7
Family Members	≤4 persons	55	61.1
	>4 persons	35	38.9

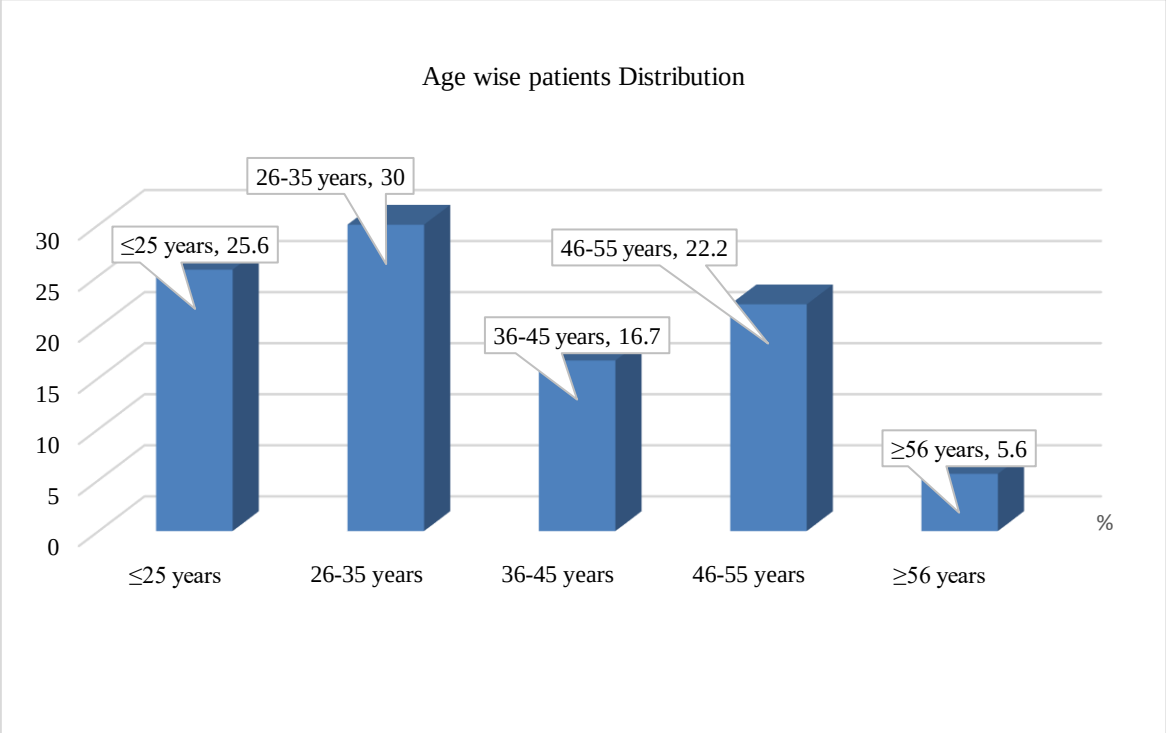

Figure I: Bar chart showed distribution of the patients by age (N=90)

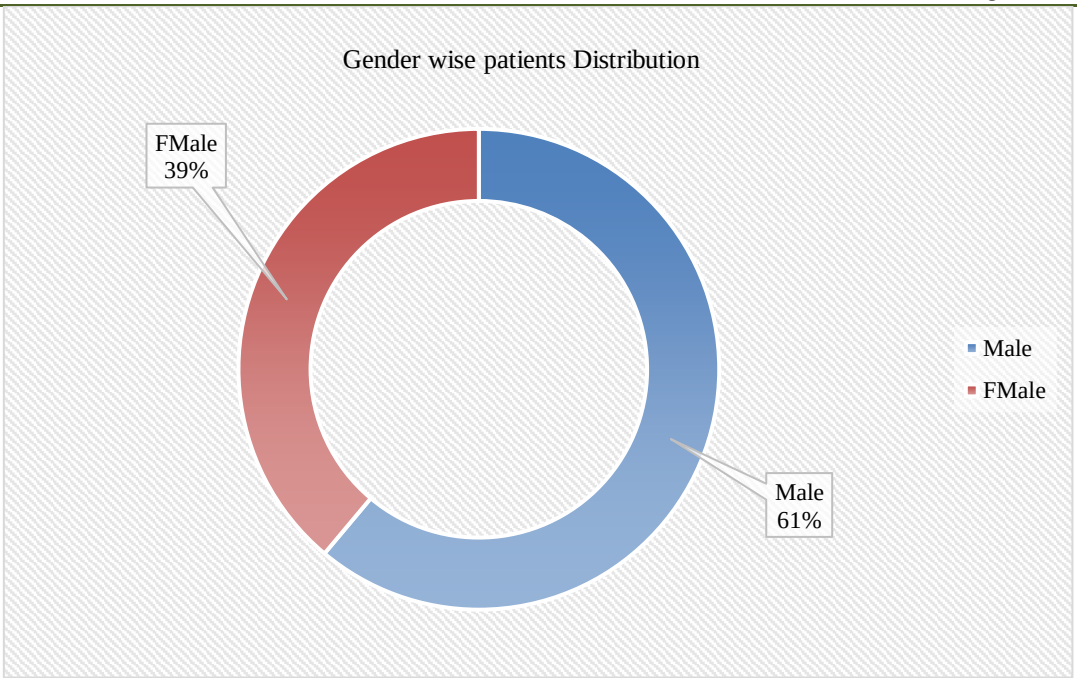

Figure II: Pie chart showed distribution of the patients by Gender (N=90)

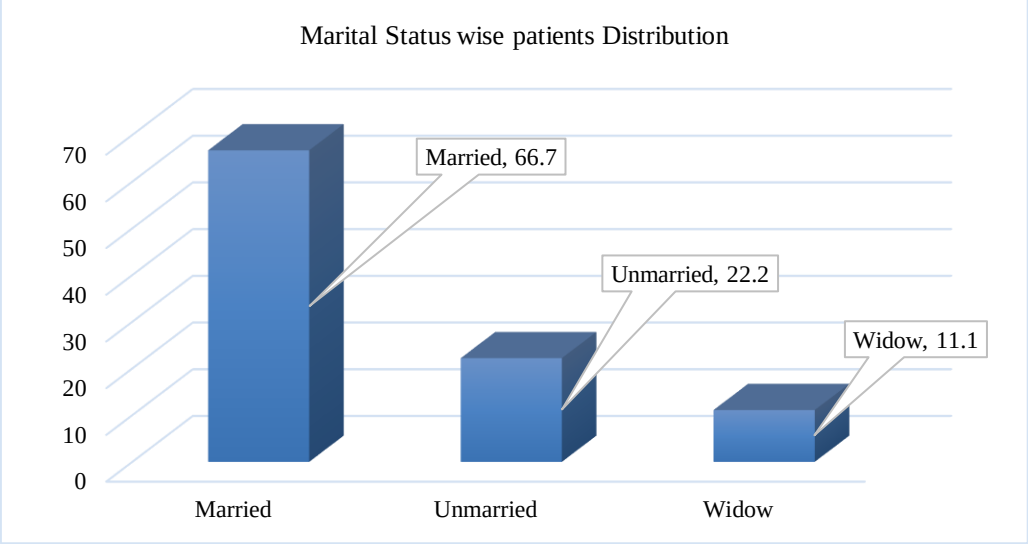

Figure III: Bar chart showed distribution of the patients by Marital Status (N=90)

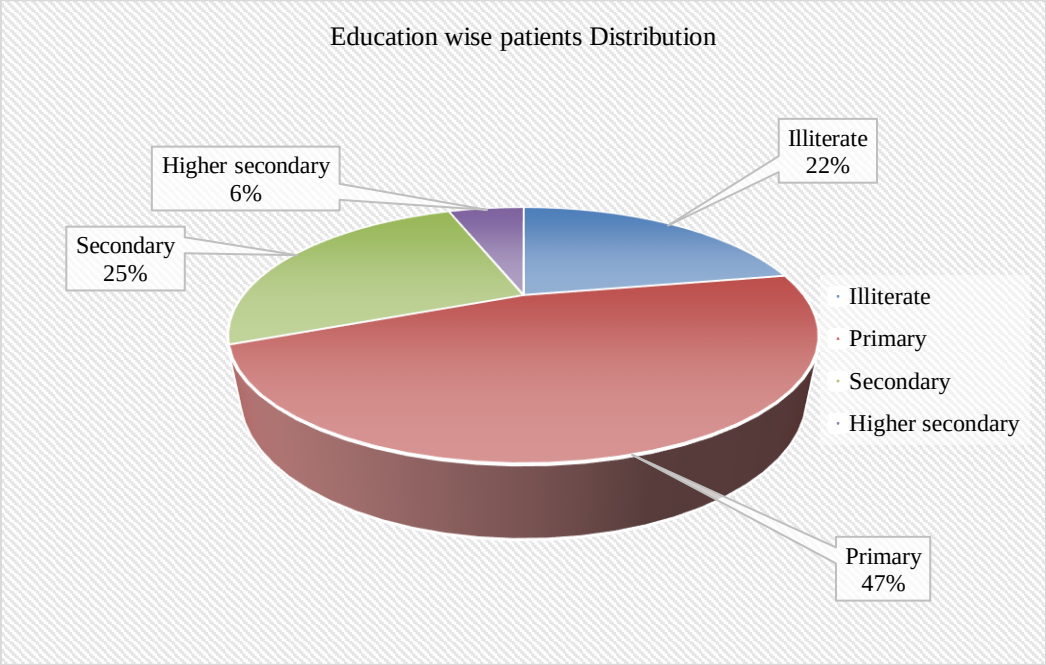

Figure IV: Bar chart showed distribution of the patients by Education (N=90)

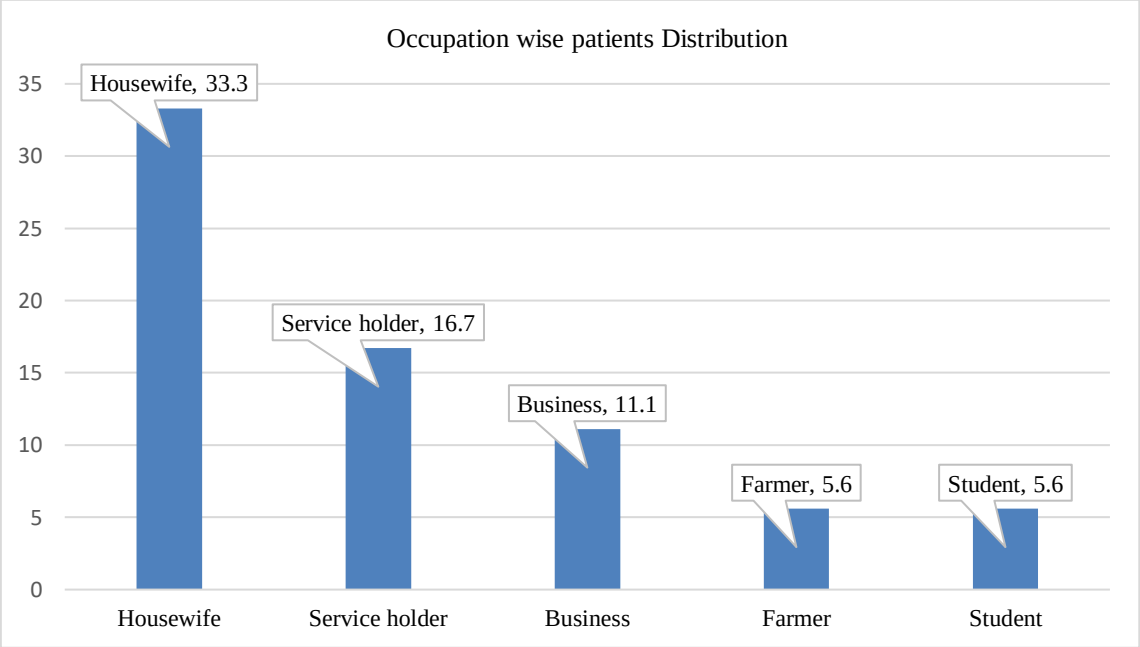

Figure V: Bar chart showed distribution of the patients by Occupation (N=90)

As observed in table 2, Regarding the knowledge about hepatitis B, the following responses were obtained; Overall awareness of the disease= 38. As for the source of information, 9% recorded doctors as their primary source, health assistants (27. 8%) and media (22. 2%).

Table 2: Respondents according to the source of HB information, (N = 90)

Source of Knowledge about HB	N	%
Doctor	35	38.9
Health Assistant	25	27.8
Friend	6	6.7
Neighbor	14	15.6
Media	20	22.2
Total	90	100.0

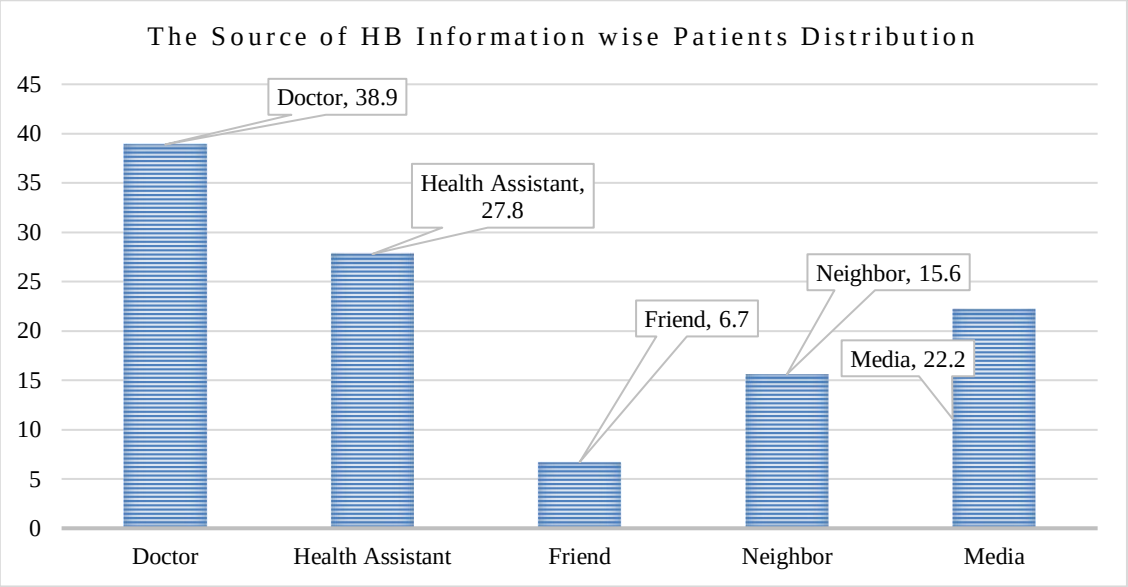

Figure VI: Bar chart showed distribution of the patients by The Source of HB Information (N=90)

Evidence from knowledge about transmission routes showed that 44 : 4% was able to associate blood as a means of transmission while, 22. 2% of the participants got it wrong by perceiving that water can act as a medium for transmission. As for the mode of transmission, only 2% had an understanding of sexual transmission.

Table 3: Distribution of the respondents by knowledge about mode of transmission of HB (N = 90)

Mode of Transmission	N	%
By Blood	40	44.4
By Water	20	22.2
By Touch	5	5.6
By Air	4	4.4
By Multiple Use Of Syringe	10	11.1
By Sexual Activity	11	12.2
Total	90	100.0

Figure VII: Bar chart showed distribution of the patients by knowledge about mode of transmission of HB (N=90)

In table 4, 38.9% identified doctors as being at high risk, while 27.8% identified drug abusers as such. On the knowledge about prevention methods, it was established that 38.9% knew that vaccination was preventive, while 22.2% thought that safe drinking water could help eradicate hepatitis B.

Table 4: Distribution of the respondents according to their knowledge about high-risk group of HB, (N = 90)

Source of Knowledge about High-Risk Groups	N	%
Doctor	35	38.9
Health Assistant	15	16.7
Drug Abuser	25	27.8
Working Abroad	5	5.6
Others	10	11.1
Total	90	100.0

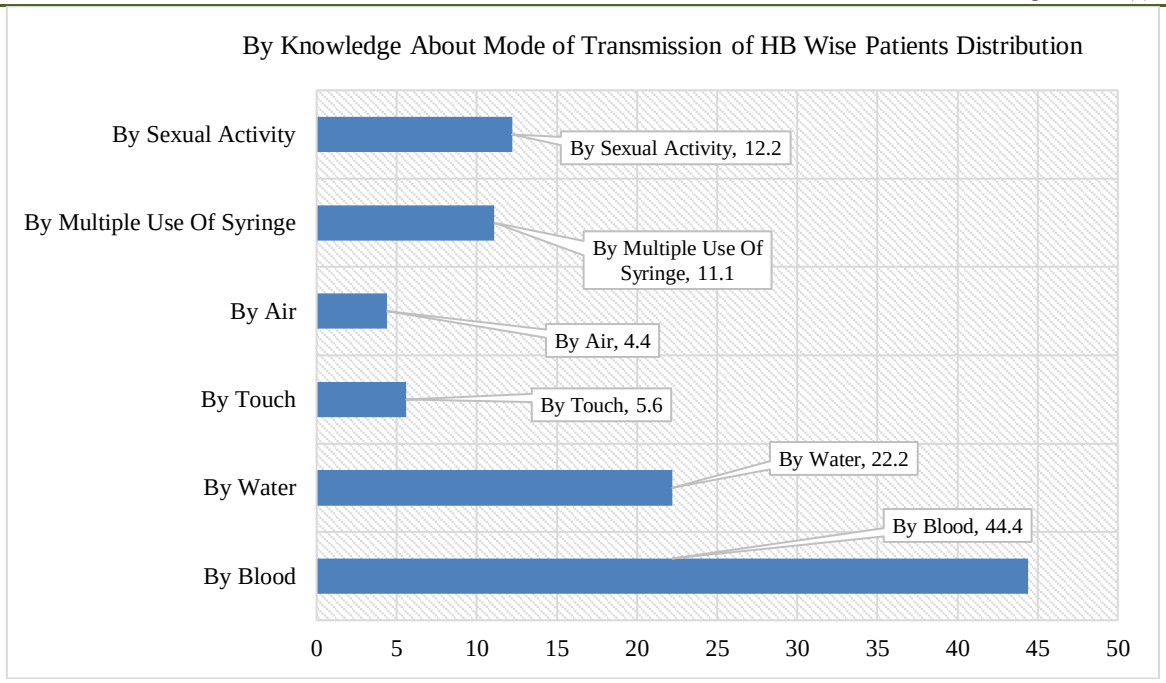

Figure VIII: Bar chart showed distribution of the patients by Knowledge About High-risk Group of HB (N=90)

Table 5: Distribution of the respondents according to knowledge about mode of prevention of HB, (N = 90)

Knowledge about Mode of prevention	N	%
By Vaccination	35	38.9
By Safe Sex	15	16.7
By Safe Drinking Water	20	22.2
Others	10	11.1
Total	90	100.0

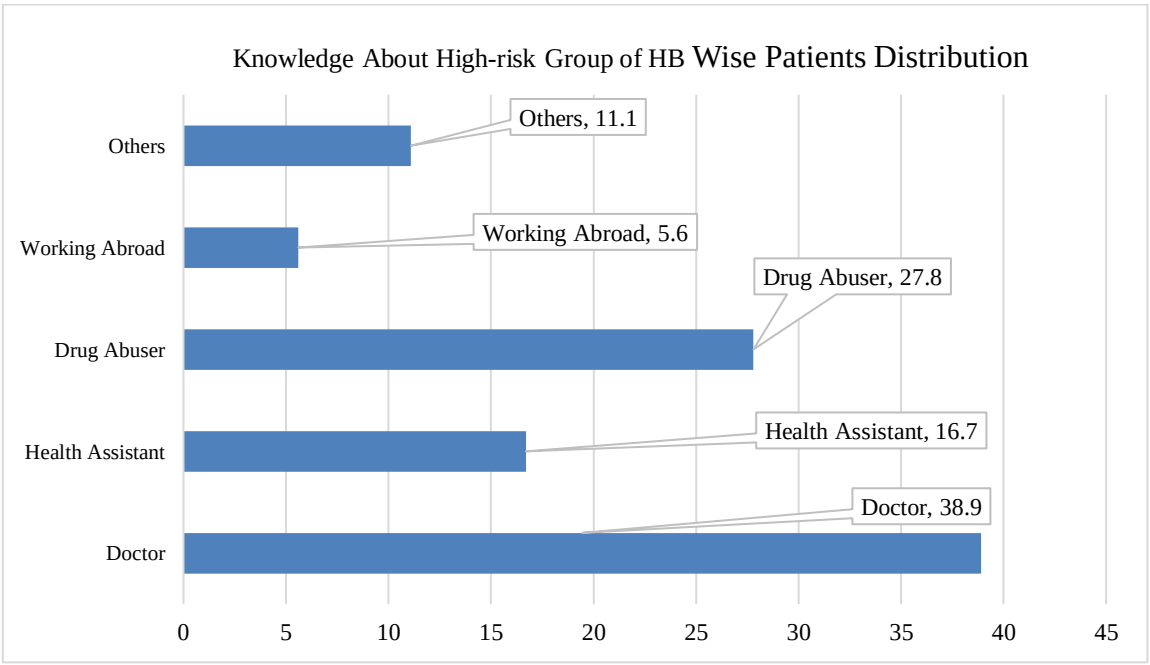

Figure IX: Bar chart showed distribution of the patients by Knowledge About Mode of Prevention of HB (N=90)

The findings of the study reveal alterable levels of awareness and knowledge of the population under study regarding the transmission, risks, and protective measures of hepatitis B. The survey has revealed that although there is some level of knowledge about the disease, there are certain myths people still hold, especially about how the disease spreads and how to avoid it.

DISCUSSION

The findings of this study are important to understand the level of knowledge and awareness about hepatitis B among the adult outpatients of a community-based medical college hospital in Bangladesh. They indicate that there is a generally moderate level of awareness and that there is potential to improve awareness levels in some key areas. The participants' socio-demographic details indicate that they are not very different from the expected typical patient population in a community hospital. It is important to note that the majority of participants are male (61.1%), which might suggest cultural bias or differences in healthcare-seeking behavior among the male and female population in Bangladesh. This has been evidenced by previous studies that have reported that more men than women attend hospitals, and the finding re-emphasizes the importance of increasing access to health information and services among women. The participants also fall in the right age bracket for hepatitis B prevention programs, with a majority of them aged 26-35 years. This age group is a sexually active group and may participate in activities likely to lead to HBV infection. The relatively high rate of marriage (66.7%) also raises awareness of household transmission and the need to focus on educating families. The majority of the participants had only attained primary education level (46.7%), and 22.2% of the participants were illiterate. It is aligned with the national literacy rate of the general population of Bangladesh and underlines the importance of creating and promoting health educational materials and programs for illiterate people. That is why we may suggest future interventions based on the use of visual aids, community-based education programs, and oral communication strategies for this group of the population. Concerning the occupational status of the participants, it is clear that the majority of them were housewives (33.3%), followed by service holders (16). This diversity can therefore be seen as a mixed blessing in terms of hepatitis B awareness campaigns. Recommendations that are targeted and relevant to various occupations and highlight their threats and lifestyles are critical for the spread of health information. Sensitivity of hepatitis B and information sources shows some peculiarities. Concerning the sources of health information, doctors (38.9%) and health assistants (27.2%) were revealed as the most important sources of health information. We concur with Shakil *et al.,* (2017) [13], who conducted a study in the rural area of Bangladesh and identified the healthcare providers as important sources of hepatitis B information. Although the proportion as low as media sources (22.2%) points to the possibility of using mass media and social media in imparting more information on hepatitis B. The current perception of transmission routes of hepatitis B also has many unknowns and myths. 4% of the participants were able to identify blood as a means of transmission, discouraging 22%. 2 percent of the respondents had a wrong perception of water as a mode of transmission. This misconception about water transmission was also observed in the study by Shakil *et al.,* (2017) [13], where 50.6% of respondents said that HB could be contracted through water. They include misguided preventive measures and a lack of focus on real risk factors.

The low level of awareness of sexual transmission (12.2%) is specially alarming and points to one of the more important fields of concern for public health. This contrasts with studies in other countries, like the cross-sectional survey of university students in Ethiopia, conducted by Mesfin and Kibret (2013) [14], which reported higher awareness of sexual modes of transmission. The current study's finding of low awareness of sexual transmission in our study population may be due to cultural sensitivity around discussing sexual health issues or poor sexual health education in Bangladesh. As for the high-risk groups, there is some level of awareness regarding doctors (38.9%) and drug abusers (27.8%) as occupational and behavioral risk factors. Still, other potentially vulnerable groups are not as well recognized, for instance, people working abroad (5.6%), which indicates the necessity of increasing awareness about various risk factors associated with HBV infection. Awareness of the prevention measures shows that despite 38.9% mentioned that vaccination is a preventive measure. 22.2% believed that safe drinking water could prevent hepatitis B, again showing that the rumor about water-borne transmission of the disease is still prevalent. On the awareness of vaccination as a preventive measure, the percentage is slightly high compared to other related studies, though lower than expected. For instance, in a study conducted by Swarnalatha in 2014 [15], it was established that 69. Only 3% of the nursing students in Tamil Nadu, India, had the knowledge that hepatitis B is a vaccine-preventable disease. These gaps in knowledge hold significant potential for future public health approaches in Bangladesh. It is therefore evident that culturally appropriate and comprehensive health education programs that aim to correct misconceptions about infection transmission and highlight preventive measures such as immunization are essential [16]. These programs should be directed to people of different ages and social statuses, with a focus on women and those with low education levels. Healthcare providers who are the first point of contact regarding health information should be assisted and encouraged to adequately enlighten their patients about hepatitis B. However, engaging the media platforms and implementing community-based strategies may be useful in keeping people informed better [17].

The results of this study are in concordance with existing studies conducted in Bangladesh and other developing countries, which indicate poor knowledge about hepatitis B and high prevalence of (mis)conceptions regarding the disease. Although study findings have revealed common misconceptions globally, the trends established in this study are useful in understanding the right strategies to use in setting up the

right awareness arrangements for such diseases in the country.

CONCLUSION

Therefore, this study shows the lack of awareness and knowledge of hepatitis B among the adult patients visiting a community-based medical college hospital in Bangladesh. Some knowledge of the disease exists, but there are many misconceptions, especially concerning ways of infection and possible preventive measures. The study underscores the necessity of such specific health education attempts that help fill these gaps in knowledge regarding transmission risks, potential risks, and vaccination. Of particular importance are healthcare providers for the purposes of information dissemination, and they should be assisted. Subsequent population-level interventions should include integrated educational campaigns on hepatitis B, with a focus on the socio-demographic requisites of the beneficiaries, to ensure a sustainable impact on hepatitis B in Bangladesh.

REFERENCES

1. Sujatha, P., & Sudha, K. S. (2014). Assessment of knowledge regarding hepatitis B among medical students in Rangaraya Medical College, Kakinada, Eastgodavari District, Andhra Pradesh. International Journal of Innovative Medical Science, 1(7), 45-47.
2. Cohen, C., Alber, J. M., Bleakley, A., Grossman, S., Freeland, C., Alarcon, K., & Merchant, R. M. (2020). Social Media for Hepatitis B Awareness: Young Adult and Community Leader Perspectives. Health Promotion Practice, 20(4), 573–584. https://doi.org/10.1177/1524839918765438
3. Ashraf, H., Alam, N. H. & Rothermundt, C., (2010). Prevalence and risk factors of hepatitis B and C virus infections in an impoverished urban community in Dhaka, Bangladesh. BMC Infectious Diseases, 10, 208. https://doi.org/10.1186/1471-2334-10-208
4. Lu, W., Mak, B., Lim, S. G., Aung, M. O., Wong, M. L., & Wai, C. T. (2007). Public misperceptions about transmission of hepatitis B virus in Singapore. Annals of the Academy of Medicine, Singapore, 36(10), 797-800.
5. Laskar, M. S., Harada, N., & Khan, F. (1997). Prevalence of hepatitis B surface antigen (HBsAg) in Viqarunnessa Noon Girls' School children in Dhaka, Bangladesh. Central European Journal of Public Health, 5(4), 202-204.
6. Sweety, K. N., & Mimi, S. A. (2014). Awareness of hepatitis B vaccination in rural area: a survey. Journal of Current Advances in Medical Research, 1(1), 3-7.
7. Ghana Health Service. (2009). Annual report - Ghana Health Services, 2009. Retrieved from http://www.ghanahealthservice.org/.../Final_Draft_2009_GHS_Annual_Report%20final%final
8. Taylor, V. M., Jackson, J. C., Chan, N., Kuniyuki, A., & Yasui, Y. (2002). Hepatitis B knowledge and practices among Cambodian American women in Seattle, Washington. Journal of Community Health, 27(3), 151-163.
9. Akumiah, P. O., & Sarfo, L. A. (2015). Assessing the level of awareness on viral hepatitis among educated people. Applied Research Journal, 1(2), 45-56.
10. Roushan, N., Toosi, M. N., Meysamie, A., Esteghamati, A. R., & Hajrassuliha, H. (2013). Hepatitis B knowledge among Iranian adolescents: A national survey. Iranian Red Crescent Medical Journal, 15(12), e11558.
11. Wai, C. T., Mak, B. & Chua, W., (2005). Misperceptions among patients with chronic hepatitis B in Singapore. World Journal of Gastroenterology, 11(32), 5002-5005.
12. Taylor, V. M., Choe, J. H., Yasui, Y., Li, L., Burke, N., & Jackson, J. C. (2005). Hepatitis B awareness, testing, and knowledge among Vietnamese American men and women. Journal of Community Health, 30(6), 477-490
13. Shakil M, Laskar MS, Farhana A, Alam AKMJ, Alam AU, Islam W. Knowledge and awareness on hepatitis B infection among adult population in some selected villages in Keranigonj, Dhaka, Bangladesh. Mediscope 2017;4(2):13-9.
14. Mesfin, Y. M., & Kibret, K. T. (2013). Assessment of knowledge and practice towards hepatitis B among medical and health science students in Haramaya University, Ethiopia. PLoS ONE, 8(11), e79642. https://doi.org/10.1371/journal.pone.0079642
15. Swarnalatha, N. (2014). Do nursing students know about hepatitis B? A study from nursing college in Tamil Nadu. International Journal of Health Rehabilitation Science, 3(2), 69-74.
16. Saini, R., Saini, S., & Sugandha, R. S. (2010). Knowledge and awareness of hepatitis B infection amongst the students of Rural Dental College, Maharashtra, India. Annals of Nigerian Medicine, 4, 18-20.
17. Misra, B., Panda, C., Das, H. S., Nayak, K. C., & Singh, S. P. (2009). Study on awareness about hepatitis B viral infection in coastal Eastern India. Hepatitis B Annual, 6(1), 19-28.