

# A Descriptive Study on the Prevalence and Risk Factors of two Killing Diseases: Hepatitis B (HBV), Hepatitis C (HCV)

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## ABSTRACT

**Background:** Hepatitis B (HBV), and Hepatitis C (HCV) are the two most frequent diseases all over the world, and also the main cause of mortality around the world. In Pakistan HBV and HCV, the Patient population is too high, especially in rural areas.

**Objective:** This study aimed to examine the risk factors that cause HBV and HCV and their prevalence, also sex and gender evaluation.

**Material and Methods:** This descriptive study was conducted in Services Hospital Lahore, from February 2021 to January 2022. In this study, we included 1050 patients with chronic liver failure to examine the frequency and risk factors of Hepatitis B and Hepatitis C viruses.

**Results:** In this study, we examined 1050 patients with liver diseases, out of 1050 We found 135 patients had both Hepatitis B (HBV) and Hepatitis C (HCV), 55 (5.23%) patients were found +Hepatitis C, and 80 (7.62%) patients were found +HBV. The mean age calculated was 36.05 years. Of 135 patients of HBV and HCV, men were 45 (33.33%) and 68 (50.37%) were women while 22 patients were aged <18 years. We observed most frequently Hepatitis B and C in the patients between the ages of 20 to 35 years (45 (56.25%) patients of +HCV and 33(60%) patients of HBV viruses respectively). We found the most prevalent in women (HBV infection women 44(55%) and 24(50.9%) women had HCV). In this study, we also included the detailed history of patients such as age, sex, socio-economic status, literacy, poverty, use of pipe-lined water or pumped water, smoking history, use of drugs with used injection, blood donation history, and organ transplantation history.

Practical implication: Women and adults needs vaccination for HBV and HCV because they affected more.

**Conclusion:** In this study, we found the frequency of these two killing infections HBV and HCV is too high compared to the other developed countries. Mostly women and adults were affected by these viruses.

**Keywords:** Hepatitis B, Frequency, Virus, Diseases, Infections.

## INTRODUCTION

Hepatitis B (HBV) and Hepatitis C (HCV) are the 2 most frequent viruses and main causes of chronic liver failure, hepatocellular carcinoma familiar to chronic liver diseases<sup>1</sup>. As per the research of the World Health Organization (WHO) about three hundred and fifty million populations have been infected with the Hepatitis B virus and one hundred and seventy million population found infected with Hepatitis C Virus<sup>2</sup>. And death ratio is too high due to these two killing viruses. In Pakistan, the ratio of HCV virus is quite high and Pakistan stands second in the world in the frequency of HCV-infected people varying from 4.5 to Eight Percent<sup>3</sup>. The frequency of HBV and HCV is too high in the most frequent causes such as in donors of blood, experts of health departments, abusers of drugs, and severe liver failure patients<sup>4</sup>. Blood donation, use of syringes for drugs, transplantation of organs, shaving from the street barbers, surgeries, dental therapy, and vulnerable sexual relationships are the most common factors of transference of Hepatitis B and Hepatitis C viruses/infections<sup>5</sup>.

HBV and HCV viruses resulted in severe infection but it remains in some patients' body and could be chronic liver failures. Approx 16 to 26 percent of chronic liver patients of HBV have severe liver problems such as hepatocellular and cirrhosis carcinoma. In medical treatment, a vaccine is used for the prevention of HBV but for the prevention of HCV there is no vaccine or medication<sup>6</sup>. The indications of HBV comprise of appetite loss, fever, nausea, abdominal pain, vomiting, joint pain, jaundice, and dark urine.

## MATERIAL AND METHODS

This descriptive study was conducted at Services Hospital Lahore, and the duration of this study was from February 2021 to January 2022. In this study, we included 1050 patients with chronic liver failure to examine the frequency and risk factors causes of Hepatitis B and Hepatitis C viruses. Data was collected through non-probability random sampling technique. All the demographic data was collected through systematically designed questionnaire.

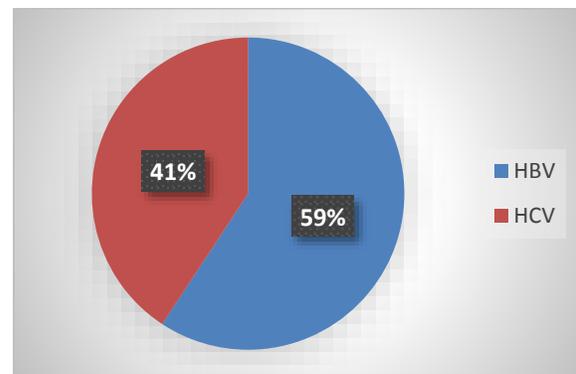
In this study, we also included the detailed history of patients such as age, sex, socio-economic status, literacy, poverty, use of pipe-lined water or pumped water, smoking history, use of drugs with used injection, blood donation history, and organ transplantation history.

## RESULTS

In this detailed study, we included 1050 patients with liver diseases, out of 1050 We found 135 patients had both Hepatitis B (HBV) and Hepatitis C (HCV), 55 (5.23%) patients were found +Hepatitis C and 80 (7.62%) patients were found +HBV.

Table 1: Frequency of HBV and HCV Viruses

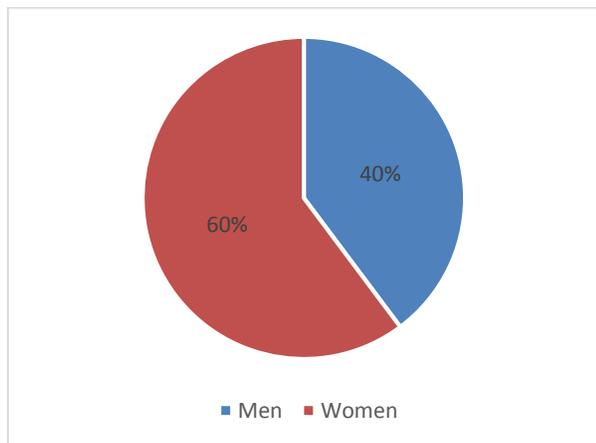
Virus	Frequency	%age
Hepatitis B	80	7.62
Hepatitis C	55	5.23



The mean age calculated was 36.05 years. Of 135 patients of HBV and HCV, men were 45 (33.33%) and 68 (50.37%) were women while 22 patients were aged <18 years.

Table 2: Gender Wise Distribution

Characteristics	HBV-HCV	%age
Men	30-15	33.3
Women	44-24	50.4
<18 years	14-8	16.3



We observed most frequently Hepatitis B and C in the patients between the ages of 25 to 35 years (45 (56.25%) patients of +HCV and 33 (60%) patients of HBV viruses respectively). We found most prevalence in women (HBV infection women 44(55%) and 28(50.9%) women had HCV)

Table 3: Age-wise Distribution Of Patients

Age	HBV Patients n/% Total 80	HCV Patients n 55/%age
5-15	14 17.5%	8 14.5%
15-25	10 12.5%	6 10.9%
25-35	45 56.25%	33 60%
35-45	7 8.75%	5 9.1%
>45	4 5%	3 5.5%

In this study, we also included the detailed history of patients such as age, sex, use of pipe-lined water or pumped water, smoking history, use of drugs with used injection, blood donation history, and organ transplantation history.

Table 4: Risk Factors Associated With HBV and HCV

Characteristics	Frequency	%age
Using Pipe-Line Water		
Home pumped water	100	9.52
Smoking persons		
Abuser of drug	400	38.09
Blood donor	200	19.04
	100	9.52
	250	23.80

**DISCUSSION**

Hepatitis B (HBV) and Hepatitis C (HCV) are the 2 most frequent viruses and main causes of chronic liver failure, hepatocellular carcinoma familiar to chronic liver diseases<sup>7</sup>. HBV and HCV patient ratio is too high in developing countries. In this study, we observed a similar condition as compared to the other developing countries<sup>8</sup>. In this study, we included 1050 patients related to liver diseases, in which we found 135 patients having both viruses Hepatitis B and Hepatitis C respectively. We observed that the prevalence of HBV and HCV is too high in women compared to men. We observed most frequently Hepatitis B and C in the patients between the ages of 25 to 35 years (45 (56.25%) patients of +HCV and 33 (60%)

patients of HBV viruses respectively). We found the most prevalent in women (HBV infection women 44(55%) and 28(50.9%) women had HCV)<sup>9</sup>.

In this study, we included a detailed history of all 1050 patients. We found 100 patients with liver diseases using Pipe Lined water, 400 patients using Home pumped water, 200 were smokers and 100 were drug abusers and 250 patients were blood donors<sup>10-11</sup>. Blood donation, use of syringes for drugs, transplantation of organs, shaving from the street barbers, surgeries, dental therapy, and vulnerable sexual relationships are the most common factors of transference of Hepatitis B and Hepatitis C viruses/infections. It is similar to the other studies related to HBV and HCV<sup>8-9</sup>. There is a vaccine for the treatment of the HBV virus but, there is no vaccine for HCV patients. It may be caused by to increase in the ratio of morbidity and mortality<sup>12-13</sup>. Moreover, this is not sufficient research, we evaluate the significance and factors related to this disease for better treatment to reduce morbidity, and improve the quality of life of infected patients.

**CONCLUSION**

In this study, we observed the frequency of HBV and HCV is too high as compared to other national studies. It may be due to fewer literacy levels, poverty, lack of facilities, and unawareness about these diseases.

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