

# Socio-Economic Factors Affecting Hepatitis B in Nomadic Community: A Case Study of Faisalabad District

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## ABSTRACT

**Introduction:** Hepatitis B is a chronic infection of the liver that can cause liver failure and cancer. This may create high risk of death among the people. The virus of Hepatitis is shifted from one person to another through the blood or fluids of infected person. This may affect the people living in the nomadic community. **Objective:** The objective of this study was to investigate empirical association between Socio- economic factors and hepatitis B (HBV) among nomadic community in district Faisalabad. **Study design:** Cross-sectional study. **Settings:** Department of Economics, GC University Faisalabad. **Duration:** June, 2018 to July, 2018. **Sample size:** The calculated sample was 300 nomadic individuals. **Sampling techniques:** A questionnaire comprising of variables gender, smoking, house hold income and life satisfaction was developed to collect primary data by using snow-ball technique in 300 individuals of different age groups. **Data Analysis:** Gender, Smoking, Dental hygiene, Living standard and Life satisfaction were the different variables included in this study. The data was analyzed with E-views software package. The Binary logistic regression and the Kruskal-Wallis tests are applied to see influence of socioeconomic factors on hepatitis B (HBV). **Results:** Around 71.7% people were very poor while 28.3% were poor. From the total respondents 38.00% were found to be the patients of Hepatitis B while 56.33% were found to be quite healthy and 5.67% did not know their status regarding hepatitis B. **Conclusion:** This study concluded that lack of health care facilities and low household income has negative effect on occurrence of hepatitis B infection. **Suggestions:** Government should invest more budget on health care facilities and awareness of nomadic community to improve their life.

**Keywords:** Hepatitis, Nomads, Socioeconomic status, Faisalabad.

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## INTRODUCTION

Hepatitis B is a chronic infection of the liver that causes liver damage and ultimately leading to liver failure and liver tumor. This is a global issue which results in high risk of death among the people suffering from this disease.<sup>1,2</sup> Almost half of the population of Pakistan is harboring this disease resulting in high morbidity and mortality. Around 35 million people suffered from this disease worldwide and it also became a cause of death in around 1 million people annually. Many individuals remain only in carrier state while it also results in cirrhosis, liver failure and hepatocellular carcinoma. Hepatitis virus infection is still major issue in the world despite the availability of vaccination for this disease.<sup>3</sup> Hepatitis B virus is a non-retrovirus which involves reverse transcription.<sup>4</sup> The virus of Hepatitis is transferred from one person to another through the blood and body fluids of infected person mainly. The HBV is transmitted from one person to another through perinatal, parenteral and sexual routes. Hepatocytes are the main target of the infection by hepatitis virus.<sup>5,6</sup> According to the World Health Organization report, two billion people have been tainted with HBV. It has been reported in certain areas that about 650,000 populace pass away each year from the disease of chronic hepatitis B (CHB).<sup>7,8</sup> Presently, chronic hepatitis B is treated by nucleoside analogs (NAs), which reduce growth of virus duplication but it cannot completely

eradicates the virus from the body of infected persons.<sup>9</sup> It has also been evaluated that most of infected populations from chronic hepatitis B reside in developing countries. Fortunately, awareness and knowledge regarding problems of Hepatitis is improving rapidly.<sup>10</sup>

People residing in the nomadic communities reflect very poor segment of the society. The majority of nomadic communities live in suburbs and surroundings area of villages in South East Asia, including Pakistan. They use animals for transportation from one place to another. This is not different in the Asian countries.<sup>3</sup> Some member of nomadic communities moves here and there to celebrate and share their grieves during post death religious activities, marriage ceremonies and other celebrations events from where they bring abundance of remaining food.<sup>11</sup> It is also stated that living style of nomadic communities reflect perfect image of traditional societies and they have deep roots in anthropology and they increase their level of self-sufficiency by moving from one place to another. The lack of education, sanitation, health and drinking water system is common in nomadic communities which may result in spread of different chronic infectious diseases like hepatitis.<sup>12-15</sup>

The rationale of this study is to find the impact of socioeconomic factors that how socioeconomic factors affects the prevalence Hepatitis B infection among nomadic community.

## METHODOLOGY

**Study Design:** Conducted by taking cross-sectional data.

**Settings:** Department of Economics, Government College University Faisalabad-Pakistan.

**Duration:** From June, 2018 to July, 2018

**Sample Size:** Consisted of 300 individuals.

**Sampling Technique:** A questionnaire comprising of variables gender, smoking, house hold income and life satisfaction was formed to collect primary data by using snow-ball technique. The language used in this study was quite easy that was understandable for the subjects. Available individuals of different age groups were selected randomly. Consent of each individual participating in the study was taken. Questionnaire was completed with known hepatitis B patients and the other who were not known hepatitis B patients. On the basis of annual income individuals were divided into very poor, poor and rich groups having income of rupees less than one hundred thousand, one hundred thousand to two hundred thousand and more than two hundred thousand respectively. Among these 300 respondents, data of individuals with known disease of hepatitis B was separated for the purpose of analysis. The study was approved in the Advanced Study Research Board (ASRB). Further, the ethical rules and regulations were strictly followed.

**Data Analysis:** Gender, Smoking, Dental hygiene, living standard and Life satisfaction were the different variables included in this study. Binary Logistic regression was applied to analyze the data by using the statistical software E. views.

## RESULTS

Results of this study were collected by evaluating the data of 300 participants of the study residing in the nomadic society of Faisalabad, Pakistan. Gender, smoking, living standard, life satisfaction were the different variables included in this study. The findings of the study are given below in Table 1

**Table 1: Frequency analysis of different variables in Nomadic Society**

Variables		Frequency	Percentage
Gender	Male	196	65.33
	Female	104	34.67
Smoking	Yes	200	67.00
	No	100	33.00
Living Standard	Poor	85	28.3
	Very Poor	215	71.7
Hepatitis B	Yes	114	38.00
	No	169	56.33
	Unknown	17	5.67
Life Satisfaction	Unsatisfied	146	48.66
	Neither satisfied nor unsatisfied	52	17.33
	Satisfied	68	22.66
	Very satisfied	3	1.00
Dental Hygiene	Do not know	31	10.33
	Good	58	19.33
	Poor	78	26.00
	Very Poor	164	54.67

Out of total 300 sample size the males were about 65.33% and females were 34.67%. The smokers among the study were 67% and non-smokers were 33%. Around 71.7% people were very poor while 28.3% were poor. From the total respondents 38.00% were found to be the patients of Hepatitis B 56.33% were found to be healthy and 5.67% individuals did not know their status regarding hepatitis B disease. The study regarding living standard also elaborated that the unsatisfied people were about 48.66% while the satisfied persons were 22.66%. Only one percent of the studied subjects were very satisfied. Dental hygiene was very poor in 54.67% individuals.

**Table 2: Findings of logistic regression model**

Variables	Labels	Coefficient	Std. Error	Z-stat	Prob
Constant	C	.0064	0.897	0.897	0.994
Gender	Gen	-0.54	0.330	-0.74	0.081
Smoking	SMO	0.74	0.338	2.20	0.027
Household income	IN	-0.41	0.111	-3.73	0.00
Life satisfaction	LS	0.43	0.331	1.30	0.193
Number of observations: 300      Log likelihood = - 170.3559					

Data has been evaluated by applying binary logistic regression analysis. It was concluded that the males had .081 less probability to have hepatitis as compared to females included in the sample. Smoking had .027 more probability to have hepatitis B. Household income was another variable that influenced as an important factor affecting the occurrence of hepatitis B. The poor had more likelihood to become patients of hepatitis B as compared to the rich persons of the society. As per as Life satisfaction is concerned, less satisfied persons had 0.193 more chances to have hepatitis disease as compared to the satisfied persons.

## DISCUSSION

Nomads are the peoples belonging to race or who does not have a fixed residence place and they remain changing their residing place to meet their living needs. They are one of the most neglected segments of the society. They have isolated culture and norms of life.<sup>3</sup> This study was conducted in the District Faisalabad consisted of Jaranwala, Chakjumra, Samundri, Tandlianvala, Faisalabad city and Faisalabad Sadar areas. The most of the people were belonging to the poor and very poor class. They suffer from many infectious diseases simultaneously.<sup>12</sup>

World Health Organization (2015) Guidelines for the Prevention Care and Treatment of Persons with Chronic Hepatitis B Infection have highlighted this issue. High standard people and elite class are having all necessary measures to prevent the infection causing reasons. They were using clean water. Furthermore, the rich people are more educated and aware regarding the preventive measures of hepatitis B infection. The household income has also negative impact on occurrence of hepatitis B. The results were considered better as evaluated by

in his study of regarding this disease.<sup>16,17</sup> Male to female ratio was found different in our study as compared to the other study done by Little et al (2006)<sup>18</sup> and Lok (2013)<sup>6</sup> in their concerned region. In another study<sup>15</sup> Akhtar had evaluated that the R<sup>2</sup> was .055 that revealed that there was 5% variation in study. In the same way the p-value was about .01. However, smoking had a positive and significant impact on the disease. Non-smokers had less likelihood to cause disease as compared to the smokers. There was a significant relationship among the said variables in a study by Khan (2011) concluded that there was a significant relationship between the disease and smoking.<sup>10</sup> It was also noted from the study that more than 75% persons selected for study were males who had an easy access to the smoking ingredients such as Tobacco etc. Similar results were concluded by Lozano R in 2012 as they were working on different data sets of different countries.<sup>8</sup> Life satisfaction was considered as a significant variable and it had a positive impact on the occurrence of disease. Some other studies done in same scenario evaluated that life satisfaction exhibited positive impact on disease. Life satisfaction was the most important thing that was causing a disease among different patients.<sup>13-15</sup> Oral hygiene was very poor in 54-67% which also reflect the ignorant brought up of those individuals. Peter T in 2017 studied 361 and concluded that common sense and family brought up of the people do affect these variables like dental hygiene. They must be educated for the oral hygiene.<sup>19</sup>

## CONCLUSION

This study concluded that lack of health care facilities and low household income has negative effect on occurrence of hepatitis B infection.

## SUGGESTIONS

Nomadic community is part of our society who belonged to deprived class and they had no access to the basic necessities of life. Therefore, it is suggested that Government should invest on nomadic community and improve their living standards and socio-economic status. It will enable nomadic community to be a sensible part of the society having a disease-free living.

## CONFLICT OF INTEREST

There is no conflict of interest regarding this research.

## ACKNOWLEDGEMENT

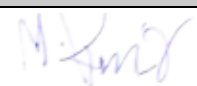


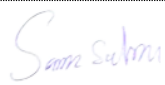


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