



## ANALYZING KNOWLEDGE AND AWARENESS OF CHRONIC LIVER DISEASE AND CHRONIC KIDNEY DISEASE

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### ABSTRACT

**Background:** All around the world, the major cause of mortality and morbidity is said to be chronic diseases. Chronic diseases are serious conditions that are persistent for a minimum of one year and need constant medical attention. Certain measures can be taken to prevent these diseases. Those measures include avoiding risk factors, lifestyle modifications, or getting regular baseline tests. If we talk about chronic liver disease (CLD) and its etiological factors, the Hepatitis B virus (HBV) belongs to the family of Hepadnaviridae, which leads to chronic or acute infection. In Pakistan, the rate of infection with Hepatitis C virus is 4.8%, which is the second highest rate of occurrence among developing countries.

**Objective:** This research was conducted to examine the degree of knowledge people have related to chronic kidney disease and chronic hepatitis in Pakistan.

**Study design:** A cross-sectional study

**Place and Duration:** This study was conducted in Suleman Roshan Medical College Hospital Tando Adam from May 2022 to May 2023

**Methodology:** All of the patients included in this research were aged from 17 to 60 years old. A total of 300 people of all ages filled out the questionnaire, out of which the sample size was calculated to be 280 participants who matched the inclusion criteria. The mean and standard deviation were used for certain variables, such as age. Frequency and percentages were used for other variables, like categorical variables.

**Results:** There were a total of 280 participants who were selected for this research. All of the participants' levels of knowledge related to chronic hepatitis and chronic kidney disease were

checked. The average age reported was 33 years. There were a total of 103 males and 177 females. Participants were examined regarding their knowledge of chronic kidney disease (CKD). Only 36 people were aware of this disease, while the others were unaware. Moreover, only 42 people knew that CKD leads to decreased filtration capacity, while the majority had no knowledge about it. The participants were also asked about their knowledge regarding hepatitis B and C. Only 92 people were aware of hepatitis B and C, while all the others were unaware.

**Conclusion:** The survey found an unacceptably low level of awareness, ranging from 80% to 90%, about crucial aspects of two highly prevalent health diseases.

**Keywords:** Hepatitis B, Hepatitis C, chronic liver disease, chronic kidney disease, awareness

## INTRODUCTION

All around the world, the major cause of mortality and morbidity is said to be chronic diseases [1]. Chronic diseases are terms that are serious conditions that are persistent for a minimum of one year and need constant medical attention. Certain measures can be taken to prevent these diseases. Those measures include avoiding risk factors, lifestyle modifications, or getting regular baseline tests conducted [2]. In order to formulate optimal public health responses and policies in a geographical region, it is important to understand the attitudes and knowledge of people dealing with chronic diseases. An estimated glomerular filtration rate (eGFR) of less than 60 ml/min for at least three months is considered to have chronic kidney disease (CKD). This is considered the 9th leading cause of death worldwide [3]. It is reported that the occurrence of chronic kidney disease is increasing quickly worldwide [4]. The occurrence of CKD in Pakistani adults is said to be 21.2% [5].

According to the researchers, the highest occurrence rate of chronic kidney disease in Pakistan was reported to be 29.9%, and the least occurrence rate was 12.5% [6]. There was one group of researchers, Alam et al., who reported the prevalence of CKD according to age, and the highest prevalence of CKD was shown in people who were 50 years of age and older. Moreover, the lowest rate noted was in people less than 30 years old [7]. The most common and well-known cause of end-stage renal disease (ESRD) in Pakistan is hypertension and uncontrolled diabetes. The occurrence of diabetes and hypertension is the highest in Pakistan worldwide. If risk factors are modified, they can lower the mortality and morbidity linked with CKD, including the progression to end-stage kidney disease (ESKD). However, there are some factors that can affect the modification of risk factors. These factors include a patient's level of engagement in health care, a patient's comprehension of the disease processes, and how motivated they are to participate in healthy lifestyles [8].

If we talk about chronic liver disease (CLD) and its etiological factors, the Hepatitis B virus (HBV) belongs to the family of Hepadnaviridae, which leads to chronic or acute infection [9]. In Pakistan, the rate of infection with Hepatitis C virus is 4.8%, which is the second highest rate of occurrence among developing countries [10]. The reasons may be the scarcity of proper health facilities, poor financial status, and a low level of public awareness about the infection and its transmission. Intravenous drug abuse is reported to be the major risk factor in Pakistan for the Hepatitis C virus. Moreover, a large number of people in Pakistan are infected with the hepatitis C virus, and they do not know the status of their virus. This leads to cirrhosis and chronic hepatitis. Hence, this research was conducted to examine the degree of knowledge people have about chronic kidney disease and chronic hepatitis in Pakistan.

## METHODOLOGY

This cross-sectional analysis was conducted in the departments of General Surgery, General Medicine, Ophthalmology, Gynaecology, and Otolaryngology. All of the patients included in this research were aged from 17 to 60 years old. The Department of Gastroenterology and Nephrology was excluded to avoid any bias.

An Iranian study was used to calculate the sample size, which had an average knowledge score of 74 percent. A total of 300 people of all ages filled out the questionnaire, out of which the sample

size was calculated to be 280 participants who matched the inclusion criteria. Every patient was briefed about the research, and informed written consent from the participants was obtained. The Ethical Review Committee approved this research. Data was collected and analyzed using SPSS software version 22. The mean and standard deviation were used for certain variables, such as age. Frequency and percentages were used for other variables, like categorical variables.

**RESULTS**

There were a total of 280 participants who were selected for this research. All of the participants’ levels of knowledge related to chronic hepatitis and chronic kidney disease were checked. There were females in the majority. The average age reported was 33 years. Through the questionnaire, the patients were asked if they had ever tested for creatinine. A total of 39 patients were previously tested for creatinine, representing 13.9%. Table 1 shows the number of participants included in this research.

**Table no. 1: number of participants included in this research.**

<b>Gender</b>	<b>N</b>	<b>%</b>
<b>Male</b>	103	36.7
<b>Female</b>	177	63.3

Participants were examined regarding their knowledge of CKD. Only 36 people were aware of this disease, while the others were unaware. Moreover, only 42 people knew that CKD leads to decreased filtration capacity, while the majority had no knowledge about it. Next, only 22 participants were aware of the fact that chronic kidney disease causes proteinuria. Furthermore, only 17 people knew that CKD can be asymptomatic in the early stages. Table 2 summarizes the awareness of lifestyle modification among the participants.

**Table no. 2: awareness of lifestyle modification among the participants**

<b>Lifestyles</b>	<b>N</b>
<b>Exercise</b>	45
<b>BP</b>	78
<b>Diet control</b>	64
<b>Drugs</b>	3
<b>Low salt dietary</b>	64
<b>Sugar Control</b>	84
<b>Low fat dietary</b>	67
<b>Low protein dietary</b>	14

Table number 3 shows the awareness regarding the risk factors associated with CKD.

**Table no. 3: awareness regarding the risk factors associated with CKD**

<b>Risk Factors</b>	<b>N</b>
<b>Diabetes mellitus</b>	84
<b>Hypertension</b>	78
<b>Hyperlipidemia</b>	64
<b>Family history</b>	48
<b>Old age</b>	40
<b>Smoking</b>	25

Participants were also asked about treatment methods. Only 25 people were aware that dialysis is a treatment method for CKD. Only 14 people knew that a kidney transplant was also an option.

The participants were also asked about their knowledge regarding hepatitis B and C. Only 92 people were aware of hepatitis, while all the others were unaware. Table 4 shows awareness regarding symptoms of hepatitis among the participants.

**Table no. 4: awareness regarding symptoms of hepatitis among the participants**

Symptoms	N
Fever	59
Fatigue	59
Dark coloured urine	25
Light coloured stool	25
Loss of appetite	59
Abdominal pain	50
Nausea and vomiting	42

## DISCUSSION

There is a significant lack of understanding of these disorders in poor countries, resulting in a restricted ability to detect early-stage CKD. As a result, preventive efforts are inadequate, and early treatment is postponed, allowing mild and potentially controllable CKD to proceed to the advanced state [11, 12]. The purpose of this study was to assess participants' knowledge and understanding of the prevention, causes, symptoms, diagnosis, treatment, and management of CKD and chronic hepatitis. The findings show that the majority of respondents were unaware of their kidney function, the risk factors for CKD and chronic hepatitis, as well as the preventative strategies and problems associated with these diseases.

As previously established, a lack of understanding will eventually lead to negative health outcomes. Inadequate knowledge of illness progression and symptoms will result in delays in detecting the ailment. Similarly, ignorance about CKD risk factors or hepatitis transmission channels indicates a total lack of preventive action. Chronic factors contribute to the beginning and progression of chronic diseases, putting a tremendous load on third-world countries' already overburdened healthcare systems [13].

In contrast, Shalaby et al. (2007) found that participants in their study in Egypt understood enough about the prevention, transmission, and treatment of HBV infection [14]. Research in Rawalpindi, Pakistan, on the other hand, found minimal information and a reasonable attitude, but poor hepatitis practices [15]. Another study in Saudi Arabia on knowledge, attitude, and practice about viral hepatitis found that the majority of participants (42%) were unfamiliar with hepatitis viruses and had inadequate expertise [16].

Multiple studies in Iran, Brazil, Malaysia, and India also revealed a lack of understanding about viral hepatitis [17, 18]. On a global scale, the largest Australian study examining knowledge and comprehension of the effect, transmission, and treatment of HBV infection among chronically affected people was conducted in Melbourne, Australia [19]. The findings highlighted significant knowledge gaps and misconceptions among participants, emphasising the importance of expanding educational efforts and supporting initiatives. Differences in data collection techniques, research locations, and the study population's diverse demographic make variations in answers explicable.

There is an urgent need for worldwide initiatives aimed at preventing and managing CKD in developing countries such as Pakistan. Seminars and educational events for the general public are essential to ensure that people are properly informed on illness progression, risk factors, symptoms, and prevention strategies [20, 21]. Furthermore, in order to combat HCV infection, the Pakistani government is presently providing free diagnostic tests as well as therapeutic and management solutions to HCV patients, effectively decreasing considerable healthcare costs.

Furthermore, those with HCV now have free access to contemporary oral treatments. This breakthrough will efficiently control and delay the progression of chronic disorders, relieving the burden on the healthcare system. Despite the widespread lack of knowledge and awareness regarding these diseases, a sizable proportion of participants expressed a willingness to seek medical

treatment if diagnosed with either ailment. Similarly, in the case of a hepatitis infection diagnosis, 93% of respondents stated that they intended to share this information with their family or spouse. This emphasizes a positive attitude and illustrates the participants' lack of worry about the social stigma associated with chronic diseases.

Nonetheless, because only people visiting the hospital were assessed, this study had limitations related to selection bias and lacked real representation of the entire community. To address this worry, the questionnaire may have been distributed in numerous venues throughout the city, such as mosques, retail malls, or parks.

## CONCLUSION

The survey found an unacceptably low level of awareness, ranging from 80% to 90%, about crucial aspects of two highly prevalent health diseases. As a result, it is critical to design public health tactics that are consistent with religious and cultural values in order to raise awareness.

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