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Original Article

Knowledge, Attitude and Practice Regarding Hepatitis B among population of Sector O-9 Islamabad, A descriptive Cross Sectional Study

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ABSTRACT

Background: Hepatitis B (HBV) remains a significant public health challenge globally, with varying prevalence and awareness levels across different regions. Understanding the Knowledge, Attitudes, and Practices (KAP) regarding HBV among different populations is crucial for effective public health interventions.

Objective: This study aimed to assess the KAP regarding HBV among residents of Sector O-9, Islamabad, and to identify areas for potential health education and intervention.

Methods: A descriptive, cross-sectional study was conducted involving 372 participants from Sector O-9, Islamabad. Data were collected using a prevalidated questionnaire covering demographic characteristics, and KAP related to HBV. The response rate was 87.94%. Data analysis included descriptive statistics and chi-square tests using SPSS software.

Results: The majority of participants (73%) were aware of HBV, but specific knowledge gaps were evident, with 58% not recognizing HBV as a viral disease. Attitudinally, over 80% did not perceive themselves at risk for HBV. Regarding practices, while a high insistence on new blades for shaving was noted (100%), vaccination rates were low (26.4%), and consistent use of new syringes was reported by only 56.4%. The primary source of HBV information was through media and family/friends.

Conclusion: The study revealed a reasonable level of general awareness about HBV among participants. However, specific knowledge gaps, low vaccination rates, and inconsistent preventive practices indicate the need for targeted health education and improved healthcare services. Public health interventions should focus on filling these gaps to enhance overall HBV management and control.

Keywords: Hepatitis B, Knowledge, Attitudes, Practices, Public Health, Islamabad, Vaccination, Awareness.

INTRODUCTION

Health is a fundamental human right, and in the global context, Hepatitis B (HBV) emerges as a serious public health issue (1-4). Pakistan, with a population of approximately 190 million, is significantly impacted by this disease (5-7). Current estimates indicate that around nine million Pakistanis are affected by HBV, while an additional ten million suffer from Hepatitis C Virus (HCV), and between 0 to 1 million are living with HIV. This prevalence underscores a considerable health burden due to HBV in the country (8-11).

Hepatitis B is a primary cause of severe liver conditions, including cirrhosis and hepatocellular carcinoma. The disease accounts for approximately 563,000 deaths worldwide annually (6, 12-15) . Various factors contribute to the spread of HBV, including therapeutic injections, mother-to-child transmission, tattooing, barber shaves, injection drug use, occupational risks in healthcare and barber professions, and blood transfusion. Specifically, the reuse of razors and unsterilized equipment in barbershops has been identified as a significant factor in the transmission of HBV, akin to patterns observed in countries like Italy.

In Pakistan, the use of safe blood for transfusion remains a challenge. Despite approximately three million blood donations annually, the screening processes are often inadequate, especially in private sector blood banks, leading to a high risk of transmitting blood-borne pathogens like HBV (12).

Ali et al. (2009) conducted a comprehensive review spanning 13 years (1994-2007) and found that the prevalence of HBV in Pakistan's pediatric population was about 2.4%, with regional variations (16). In Baluchistan, for instance, the prevalence rate was as high as 9.3% (17). This study highlighted the pressing need to address the factors contributing to the spread of HBV in Pakistan (18-21).

Further emphasizing the need for intervention, Nguyen et al. (2014) reported a worrying trend in the prevalence of HBV among blood donors in Islamabad (22), with a seroprevalence rate of 2.35%. Their findings called for an urgent improvement in the quality and standardization of blood transfusion services in Pakistan (3, 4, 22).

A study by Janjua and Nizamy (2006) in Rawalpindi and Islamabad revealed a concerning lack of awareness and safe practices among barbers regarding HBV and HCV transmission, highlighting the need for more robust public health education campaigns (23, 24).

Similarly, a study by Ul Haq et al. (2012) on the knowledge, attitude, and practice towards hepatitis B among a health-conscious population in Quetta revealed a significant gap in awareness and preventive practices (24, 25). This gap was particularly pronounced in rural areas, suggesting the need for targeted educational initiatives.

Given this context, our study aims to assess the knowledge, attitudes, and practices regarding Hepatitis B among the residents of Sector O-9, Islamabad. This assessment is crucial for understanding the local dynamics of HBV transmission and for informing future public health strategies and interventions in the region.

MATERIAL AND METHODS

The study was conducted in Sector O-9, Islamabad, a newly developed residential area located approximately 2 kilometers west of the Islamabad-Rawat Highway. This sector houses a diverse population of over 10,000 people, living in around 1,500 households. The residents, comprising a mix of serving personnel, businessmen, laborers, and retirees, had predominantly relocated from various parts of Islamabad and Rawalpindi, including Sector I and Satellite Town Pindora. The study utilized a descriptive, cross-sectional design to investigate the knowledge, attitudes, and practices regarding Hepatitis B among these residents.

The sampling method involved a multi-stage process. Initially, the sector was divided into several blocks, from which a random selection was made. Subsequently, households within the selected blocks were randomly chosen to participate in the study. This stratified random sampling approach ensured a representative sample, covering different socio-economic groups within the community. A total of 1,200 residents expressed their willingness to participate, fulfilling the inclusion criteria of being above 18 years of age and a resident of Sector O-9 for at least one year.

Data were collected using a comprehensive, prevalidated questionnaire, which was designed to assess demographic characteristics, knowledge, attitudes, and practices related to Hepatitis B. The questionnaire was divided into sections, including demographic information such as gender, age, education level, occupation, and primary sources of information about HBV. Knowledge-related questions focused on understanding HBV, its symptoms, modes of transmission, and treatment options. Practice-related questions delved into HBV screening, vaccination, use of new syringes, and safe blood transfusion practices.

The questionnaire was distributed to a subset of 423 randomly selected participants from the initial pool. Prior to distribution, the study's objectives were clearly explained to the participants, ensuring informed consent. The participants were also assured of their anonymity and the confidentiality of their responses. Out of the distributed questionnaires, 372 were completed and returned, providing the data for analysis.

The study was conducted in accordance with ethical standards. Participants were informed of their right to withdraw from the study at any point without any consequences. Additionally, they were assured of the confidentiality of their responses and personal information (19, 26, 27).

The collected data were entered and analyzed using SPSS software, version 21. Descriptive statistics, including frequencies and percentages, were calculated to summarize the demographic characteristics and responses to the questionnaire. The Chi-square test was employed to examine the significance of associations between

demographic variables and knowledge, attitudes, and practices related to HBV. The findings from this analysis are presented in the results section of this report, offering insights into the community's understanding and management of Hepatitis B.

RESULTS

This table presents the demographic profile of the study participants and their primary sources of information about Hepatitis B. Out of 372 participants, the majority (62.4%) were male, and 37.6% were female. In terms of age distribution, the participants were evenly spread across different age groups: 16.1% were aged 15-25, 18% were between 26-35 years, 25% were aged 36-45, 19.9% were in the 46-55 range, and 21% were 56 years or older.

Table 1 Demographic Characteristics and Source of HBV Information of Participants

Characteristics	Frequency (n=372)	Percent (%)
Gender		
Male	232	62.4
Female	140	37.6
Age (Years)		
15-25	60	16.1
26-35	67	18.0
36-45	93	25.0
46-55	74	19.9
56+	78	21.0
Education		
Illiterate	33	8.9
Matric	115	30.9
Graduation	146	39.2
Higher	78	21.0
Source of HBV Information		
Health Professionals	67	18.0
Newspapers	71	19.1
Family/Friends	96	25.8
TV/Radio/Internet	82	22.0
Posters/Brochures	56	15.1

Regarding education, 8.9% of participants were illiterate, 30.9% had completed matriculation, 39.2% were graduates, and 21% had higher education. In terms of sources of information about HBV, family and friends were the most common source (25.8%), followed by TV, radio, and the internet (22%), newspapers (19.1%), health professionals (18%), and posters or brochures (15.1%).

Table 2 Attitude towards Hepatitis B among Participants

Attitude Variables	Response (%)
Perceived Susceptibility to HBV	17.3
Preferred Communication about HBV (Multiple Responses Allowed)	
- Parents	22.1
- Spouse	51.3
- Relatives	3.0
- Friends	11.2
- Physicians	12.4
Reaction on HBV Incidence	
- Visit Health Facility	43.7
- Consult Hakeem	40.2

Attitude Variables	Response (%)
- Opt for Homeopathic	16.1
Perception of Diagnosis/Treatment Expense	
- Reasonable	8.3
- Somewhat Expensive	49.4
- Expensive	30.0
- Do Not Know	12.1
Worries about HBV	
- Social Isolation	43.2
- Fear of Spread to Family	22.3
- Cost of Treatment	7.4
- Fear of Death	27.1

Regarding reactions to HBV incidence, 43.7% would visit a health facility, 40.2% would consult a Hakeem (traditional healer), and 16.1% would opt for homeopathic treatment. Concerning the expenses of diagnosis and treatment, 49.4% perceived them as somewhat expensive, 30% as expensive, 8.3% as reasonable, and 12.1% did not know. In terms of worries related to HBV, the highest concern was social isolation (43.2%), followed by fear of death (27.1%), fear of the virus spreading to family members (22.3%), and the cost of treatment (7.4%).

Table 3 Knowledge and Practice Variables Regarding HBV

Variables Category	Knowledge/Practice Variables	Yes (%)	No (%)
Knowledge			
	Awareness of HBV	73	27
	HBV as Viral Disease	42	58
	HBV Cause of Cirrhosis	47	53
	Known Symptoms of HBV	68	32
	Nose and Ear Piercing as Transmission Risk	37	63
	HBV as Curable Disease	53	47
Practice			
	Insistence on New Blade for Shaving	100	0
	HBV Screening	28.7	71.3
	Vaccination against HBV	26.4	73.6
	Use of New Syringe	56.4	43.6
	Screening Blood before Transfusion	67.5	32.5
	Avoidance of Contact with HBV Patients	73.2	26.8
	Participation in HBV Education Program	5.9	94.1

The knowledge and practice variables regarding HBV highlight a mixed level of understanding and preventive behaviors among participants. Regarding knowledge, 73% of participants were aware of HBV, but only 42% recognized it as a viral disease. Around 47% knew that HBV could cause cirrhosis, and 68% were aware of its symptoms. Only 37% considered nose and ear piercing as a risk for transmission, and 53% believed HBV to be a curable disease.

In terms of practices, all participants insisted on using a new blade for shaving. However, only 28.7% had been screened for HBV, and just 26.4% were vaccinated against it. About 56.4% always used a new syringe, and 67.5% reported screening blood before transfusion. A significant majority (73.2%) avoided contact with HBV patients, and only 5.9% had participated in an HBV education program.

DISCUSSION

This study aimed to assess the knowledge, attitudes, and practices (KAP) regarding Hepatitis B among the residents of Sector O-9, Islamabad. The findings reveal significant insights, which can be compared and contrasted with previous studies to understand the broader implications and the potential for public health interventions.

The results indicated that 73% of participants were aware of Hepatitis B, which is a positive sign of general health awareness in the community. This level of awareness is higher compared to some previous studies in similar settings. For instance, a study conducted in a rural area of Pakistan reported lower awareness levels, underscoring the urban-rural divide in health knowledge. However, a concerning finding was that 58% of participants did not recognize HBV as a viral disease, and 53% were unaware that HBV could lead to liver diseases like cirrhosis. This gap in specific knowledge highlights the need for more focused educational campaigns, as understanding the nature and consequences of HBV is crucial for effective prevention and management.

The study revealed that a significant majority (over 80%) of participants did not perceive themselves as susceptible to HBV. This complacency could be attributed to a lack of understanding of the disease's transmission modes and risk factors. It contrasts with studies in high-risk populations, where perceived susceptibility is often higher due to direct exposure to risk factors. Regarding communication about HBV, the majority preferred to discuss it with their spouses, indicating the importance of family dynamics in health communication. This finding aligns with other studies that emphasize the role of family in health-related decision-making in South Asian contexts.

The practice-related findings showed a discrepancy between knowledge and actual behavior. While there was a high insistence on using new blades for shaving, only about 26.4% were vaccinated against HBV, and just over half used new syringes consistently. These practices are crucial in preventing the spread of HBV, and the low adherence rates suggest a significant area for improvement. The reluctance to get vaccinated, in particular, is a critical concern and may be attributed to various factors, including vaccine availability, cost, or lack of awareness about the importance of vaccination . This finding is in line with other studies that report low vaccination rates in similar populations (7, 10, 15).

The findings suggest a relatively better KAP profile in Sector O-9, Islamabad, compared to some rural areas (28). This difference could be due to higher education levels and better access to information sources. However, the gaps in specific knowledge and certain practices, like low vaccination rates and inconsistent use of new syringes, point to the need for targeted public health interventions (29).

Public health campaigns should focus not just on raising general awareness about HBV but also on educating the public about the nature of the virus, its transmission, and the importance of vaccination and safe practices. There's also a need for strategies to increase the accessibility and affordability of vaccinations, especially in lower-income groups.

CONCLUSIONS

In conclusion, while the residents of Sector O-9, Islamabad, demonstrate a satisfactory level of general knowledge about HBV, there are significant gaps in specific knowledge and certain preventive practices. These findings can inform future public health strategies, not only in urban areas like Islamabad but also in rural and underserved regions. There's a clear need for comprehensive education programs and improved healthcare services to enhance the overall KAP regarding HBV. Such efforts could significantly contribute to controlling and eventually reducing the burden of Hepatitis B in Pakistan.

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