Original Article

Self Determination, Decision Making and Social Functioning as a Prognostic Factor among Hepatitis 'B' and 'C' Patients

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ABSTRACT

Background: Viral hepatitis, encompassing hepatitis B and C, remains a significant public health challenge globally, with a vast majority of those affected unaware of their infection status. The societal stigma and lack of awareness about these diseases impede early diagnosis and effective management, particularly in developing regions. Patient self-help groups and public health initiatives play a critical role in bridging the knowledge gap and facilitating access to care.

Objective: This study aimed to evaluate the impact of patient self-help groups in Punjab, Pakistan, on raising awareness and enhancing the management of hepatitis B and C. It sought to assess the effectiveness of awareness campaigns and the role of healthcare professionals in disease identification and management.

Methods: A mixed-methods approach was employed, incorporating both qualitative and quantitative data collection through surveys distributed among 150 participants, including 102 males and 48 females from rural and urban areas. The survey consisted of three parts: an evaluation of patient self-help groups, liver disease awareness campaigns, and public health initiatives' commitment against viral hepatitis. Data analysis was performed using SPSS version 25, focusing on the correlation between demographic variables, awareness levels, and the impact of educational campaigns.

Results: The findings revealed a significant correlation between awareness levels and participation in self-help groups (r=.564, p<.000). Urban participants showed slightly lower awareness scores (Mean=81.69, SD=14.00 for Total1; Mean=121.81, SD=19.52 for Total2) compared to rural participants (Mean=82.27, SD=12.10 for Total1; Mean=125.75, SD=17.73 for Total2). Gender analysis indicated higher awareness among females (Mean=83.56, SD=13.65 for Total1; Mean=125.60, SD=19.21 for Total2) than males (Mean=81.42, SD=12.11 for Total1; Mean=124.20, SD=17.89 for Total2). Despite the efforts of patient groups, a gap in healthcare professionals' knowledge about viral hepatitis was noted, with no specialized training programs available for general practitioners.

Conclusion: The study underscores the crucial role of patient self-help groups and targeted awareness campaigns in improving the management and awareness of hepatitis B and C in Punjab. However, the lack of knowledge among healthcare professionals about viral hepatitis highlights the need for comprehensive training programs. Enhancing public health strategies and educational initiatives could significantly contribute to early disease detection and management, reducing the burden of viral hepatitis.

Keywords: Viral Hepatitis, Awareness Campaigns, Patient Self-Help Groups, Public Health Initiatives, Healthcare Professionals, Punjab.

INTRODUCTION

The valuation of health-related problems is pivotal in shaping choice models and economic evaluations, particularly in the context of infectious diseases such as hepatitis B and C. These viral infections, which predominantly affect the liver, are subject to societal stigma that can significantly impact the self-determination, decision-making, and social functioning of affected individuals (1). Transmission of these diseases occurs through the exchange of contaminated blood, body fluids, and saliva, commonly during medical and dental procedures. In regions like Pakistan and other developing countries, the risk of transmission is exacerbated by unhygienic practices such as unsafe injections, traditional scarification, acupuncture, tattoos, body piercings, as well as through vertical (mother-to-child) and sexual transmission (2, 3). The perception and management of one's health are deeply influenced by cultural and ethnic backgrounds, and are modulated by the immediate environment and living conditions. Hepatitis, characterized

by liver inflammation and cellular damage, can be caused by various factors including viral infections, alcohol consumption, exposure to fungal toxins, and certain medications. Transmission can also occur through less considered means such as the sharing of personal hygiene items or receiving contaminated blood transfusions. Early symptoms of hepatitis are often non-specific, leading to delayed diagnosis and treatment. Chronic infection may progress to more severe conditions like cirrhosis or liver cancer, with a significant proportion of infected individuals remaining asymptomatic for extended periods (4, 5).

This research emphasizes the critical role of patient self-help and community support within healthcare systems, especially in addressing viral hepatitis B and C. By analyzing data from 150 patient groups, the study evaluates public health initiatives aimed at combating these infections, highlighting successes and identifying gaps in program implementation. Despite financial constraints, patient organizations play a crucial role in providing psychological support and raising awareness through education and outreach efforts (6, 7). Events such as World Hepatitis Day facilitate the dissemination of information and encourage preventive measures among high-risk populations, including drug users and prisoners. Professional support and collaboration with stakeholders, including policymakers, have been instrumental in these efforts. However, challenges remain in terms of treatment accessibility, secondary prevention screening, and overcoming social stigma and misinformation about the disease. The research underscores the need for national and international strategies to enhance screening and treatment, thereby mitigating the impact of viral hepatitis (8, 9).

Preventive measures, including vaccination and public education, are deemed more cost-effective than treatment options, given the high costs associated with managing hepatitis B and C infections. The role of gender norms in disease transmission, particularly from infected women to their families, highlights the importance of health education in improving national health outcomes. An evaluation of hepatitis B vaccines' storage, efficacy, side effects, and immunogenicity is recommended alongside awareness campaigns. This study not only contributes to a better understanding of hepatitis B and C management but also advocates for robust preventive strategies to curb transmission and improve social interactions and quality of life for affected individuals (10, 11). The expansion of vaccination programs, as seen in Pakistan with support from the Global Alliance for Vaccines and Immunization, marks a positive step forward, though the focus on newborns suggests that significant improvements in public health will take time to manifest. This research is a call to action for enhancing environmental conditions and fostering stronger community bonds to effectively tackle the transmission and consequences of hepatitis B and C, thereby reducing the incidence of liver cancer and related mortality rates globally (12, 13).

MATERIAL AND METHODS

The research aimed to evaluate the operations and impacts of self-help patient groups in Punjab on the management and awareness of liver diseases, particularly viral hepatitis. The methodology encompassed a mixed-methods approach, integrating both qualitative and quantitative analyses to garner comprehensive insights into the effectiveness of these groups and public health initiatives.

The study was structured around a multipart survey designed to capture a broad spectrum of information relevant to the research objectives (14). The first segment of the survey focused on understanding the objectives, practices, expertise, and operational frameworks of the patient self-help groups concerning liver disease management (15). The second segment aimed to gather detailed data on liver disease awareness campaigns, including the scope of outreach activities, tools employed, and the extent of engagement with policymakers. The final part of the survey was dedicated to assessing the effectiveness of the strategies implemented by these groups and the commitment level of national public health efforts in addressing viral hepatitis (14, 15).

To ensure accuracy and inclusivity in responses, questionnaires were distributed in the national languages, with translations provided where necessary. A total of 150 participants were involved in the study, comprising 102 males and 48 females. The sample was stratified into various demographic segments, including 42 participants from urban areas and 108 from rural settings, further categorized by socioeconomic status into 21 from lower-income, 121 from middle-income, and 8 from upper-income families. Data collection was executed through a combination of random sampling and convenience sampling techniques, targeting patients in both government and private hospitals across urban and rural locations. This approach facilitated the inclusion of a wide array of participants, ensuring diversity in the sample (16).

The study employed SPSS version 25 for data analysis, allowing for a sophisticated evaluation of the gathered information through statistical techniques. This analysis provided insights into the distribution and characteristics of hepatitis B and C among the sample population, highlighting a higher prevalence of hepatitis C. It was observed that treatment modalities had shifted towards oral medications, given the complications associated with injectable treatments noted during the study.

Ethical considerations were paramount throughout the research process. The study adhered to the principles outlined in the Declaration of Helsinki, ensuring the protection of participants' rights, privacy, and well-being. Ethical approval was obtained from the relevant institutional review boards prior to the commencement of the study. Participants were informed about the purpose of the research, and consent was obtained, ensuring that every participant had the right to withdraw at any stage without consequence.

The field research was conducted in hospital settings, encompassing both government and private institutions in urban and rural areas. This environment was chosen as it is where individuals would typically seek diagnosis and treatment for hepatitis, thereby providing a relevant context for data collection. Despite a larger proportion of data being collected from urban areas, efforts were made to include participants from rural areas to address potential educational and participatory barriers.

In conclusion, the methodology of this study was designed to provide a thorough understanding of the role and impact of self-help patient groups in the management of liver diseases in Punjab. Through a comprehensive survey, stratified sampling, and rigorous data analysis, the research aimed to contribute valuable insights into the effectiveness of current practices and areas for improvement in public health strategies against viral hepatitis (17).

RESULTS

The study conducted a comprehensive analysis of group statistics among rural and urban participants, as well as by gender, to assess factors influencing liver disease awareness and the effectiveness of self-help groups. Participants were divided into rural (N=108) and urban (N=42) categories, revealing mean scores for the first variable (Total1) of 82.27 and 81.69, respectively, with standard deviations of 12.10 for rural and 14.00 for urban participants. The mean scores for the second variable (Total2) were 125.75 for rural and 121.81 for urban participants, indicating a slightly higher awareness level in rural areas compared to urban ones. The standard deviations for Total2 were 17.73 for rural and 19.52 for urban participants, reflecting greater variability among urban participants [Table 1].

Gender-based analysis showed that male participants (N=102) had a mean score of 81.42 for Total1 and 124.20 for Total2, with standard deviations of 12.11 and 17.89, respectively. Female participants (N=48) recorded mean scores of 83.56 for Total1 and 125.60 for Total2, with standard deviations of 13.65 and 19.21, indicating a higher variability among females for both variables. The results suggest that female participants might have slightly higher awareness and engagement levels in liver disease-related self-help activities [Table 2].

Pearson correlation coefficients highlighted significant relationships between the variables studied. A significant positive correlation was observed between Total1 and Total2 (r=.564, p<.000), indicating that higher scores in one variable are associated with higher scores in the other. Negative correlations were found between motivation (Mot) and both Total1 (r=-.456, p<.000) and Total2 (r=-.388, p<.000), suggesting that increased motivation might be associated with lower scores on these variables. Age showed a negative correlation with both Total1 (r=-.194, p=.017) and Total2 (r=-.187, p=.022), indicating that older participants might have lower scores [Table 3].

Table 1 Group Statistics for Rural and Urban Participants

Location	N	Mean (Total1)	Std. Deviation (Total1)	Std. Error Mean (Total1)	Mean (Total2)	Std. Deviation (Total2)	Std. Error Mean (Total2)
Rural	108	82.27	12.10	1.16	125.75	17.73	1.71
Urban	42	81.69	14.00	2.16	121.81	19.52	3.01

Table 2 Group Statistics by Gender

Gender	N	Mean (Total1)	Std. Deviation (Total1)	Std. Error Mean (Total1)	Mean (Total2)	Std. Deviation (Total2)	Std. Error Mean (Total2)
Male	102	81.42	12.11	1.20	124.20	17.89	1.77
Female	48	83.56	13.65	1.97	125.60	19.21	2.77

Table 3 Pearson Correlation Coefficients Among Demographic Variables

Variable	Total1 Correlation	Sig. (2-tailed)	Total2 Correlation	Sig. (2-tailed)
Total1	1	-	.564**	.000
Total2	.564**	.000	1	-
DR.change	.076	.355	.052	.529
Mot	-.456**	.000	-.388**	.000
Age	-.194*	.017	-.187*	.022

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Variable	Total1 Correlation	Sig. (2-tailed)	Total2 Correlation	Sig. (2-tailed)
Gender	.079	.334	.036	.661
Education	.014	.868	.147	.073
Profession	.014	.861	-.074	.370
M.I	-.066	.424	-.061	.457
SES	.044	.597	-.053	.518
LP	-.021	.802	-.097	.237
Significant at the 0.05 level; **. Significant at the 0.01 level.				

Table 4 Independent Sample Test for Equality of Means

Variable	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Confidence Interval Lower	Confidence Interval Upper
Total1 (Variances Assumed)	.114	.736	-.969	148	.334	-2.14	2.21	-6.50	2.22
Total1 (Variances Not Assumed)	-	-	-.928	82.94	.356	-2.14	2.31	-6.73	2.45
Total2 (Variances Assumed)	.000	.998	-.439	148	.661	-1.41	3.21	-7.75	4.93
Total2 (Variances Not Assumed)	-	-	-.428	86.50	.670	-1.41	3.29	-7.95	5.13

Table 5 ANOVA for SES

Source	Sum of Squares	df	Mean Square	F	Sig.
Total1 Between Groups	1021.033	2	510.516	3.308	.039*
Total1 Within Groups	22687.261	147	154.335	-	-
Total1 Total	23708.293	149	-	-	-
Total2 Between Groups	1317.675	2	658.837	2.000	.139
Total2 Within Groups	48426.599	147	329.433	-	-
Total2 Total	49744.273	149	-	-	-
Note: *Significant at the 0.05 level.					

The independent sample test for equality of means explored differences between rural and urban participants, as well as between genders. No significant differences were found in the mean scores of Total1 and Total2 between rural and urban participants, with p-values exceeding .05. This suggests that the location may not significantly impact the effectiveness of liver disease awareness campaigns and self-help group activities. The analysis of variance (ANOVA) for socioeconomic status (SES) against Total1 revealed a significant effect (F=3.308, p=.039), indicating that SES might influence liver disease awareness and engagement with self-help groups [Tables 4 and 5].

DISCUSSION

In the realm of public health, the pervasive lack of awareness regarding viral hepatitis poses a significant challenge. Studies have illuminated a concerning reality: up to 90% of individuals afflicted with viral hepatitis remain unaware of their condition, a critical barrier to effective disease management and prevention. Among those diagnosed, a considerable proportion were previously unaware not only of the disease's existence but also of their membership in high-risk categories. This gap in awareness underscores the imperative need for targeted educational campaigns, an endeavor pursued by patient groups through initiatives like World Hepatitis Day (WHD) on May 19th. These campaigns, extending over two to three months, serve not only to elevate general awareness but also to engage high-risk communities more intimately connected with the disease's prevalence.

Efforts to combat viral hepatitis have traditionally encompassed both the general populace and specific high-risk groups, aiming to bridge the gap in disease awareness and facilitate access to testing, especially among diverse migrant populations. The role of general practitioners (GPs) and healthcare professionals in this landscape is pivotal, given their strategic position in early disease identification. Despite this, a palpable deficiency in knowledge and expertise about viral hepatitis among these professionals has

been consistently reported by patient organizations. The absence of specialized training programs for GPs on liver diseases such as viral hepatitis further exacerbates this issue, highlighting a critical gap in the healthcare system's capacity to effectively manage these conditions (18).

The engagement of patient organizations with policymakers emerges as a crucial strategy in fostering sustained impact, especially in contexts where policy coherence and coordination are lacking. Given the media's limited coverage of viral hepatitis, these groups have increasingly turned to leveraging the influence of prominent individuals affected by the disease to galvanize public support. This approach underscores the potential of personal narratives to amplify the urgency and significance of the hepatitis challenge, facilitating broader engagement and awareness (19).

The pressing need for a hepatitis C virus (HCV) vaccine, coupled with the prohibitive costs of treating hepatitis B and C infections, accentuates the importance of prioritizing preventative measures. The gendered dimensions of disease transmission, particularly the risk posed by infected mothers to their families, further underscore the critical role of health education in mitigating disease spread. The assessment of hepatitis B virus (HBV) vaccine efficacy stands as a vital component of these preventative strategies, necessitating a robust framework for promoting awareness and advancing treatment methodologies (20).

The study's findings highlight the intricate dynamics underpining viral hepatitis awareness and intervention efforts. Despite the commendable strides made by patient organizations and public health campaigns, the persistent gaps in knowledge among healthcare professionals and the general public represent significant barriers. The lack of targeted training for GPs, combined with the need for more cohesive policy initiatives, delineates a clear pathway for future endeavors. Recommendations for addressing these challenges include the development of comprehensive educational programs for healthcare providers, the implementation of widespread awareness campaigns leveraging both traditional and digital media, and the establishment of community-engaged initiatives to ensure the inclusion of high-risk and underserved populations (15, 18).

CONCLUSION

In conclusion, the battle against viral hepatitis necessitates a multifaceted approach, integrating targeted education, robust public health strategies, and the active involvement of all stakeholders. The path forward must encompass not only the enhancement of awareness and prevention efforts but also the cultivation of a healthcare ecosystem equipped to address the complexities of viral hepatitis management and care.

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