

Assessment of knowledge, attitude and practice towards hepatitis among patients visiting the hepatitis clinic in tertiary care hospital, Rawalpindi, Pakistan

Raza-E-Mustafa,¹ Sana Mushtaq,² Naeem Akhtar,³ Muhammad Arfat Yameen⁴

Abstract

Objective: To assess the knowledge, attitude and practice of hepatitis B and C patients towards the disease.

Methods: The cross-sectional, descriptive, questionnaire-based study was conducted at the Rawalpindi Medical University (RMU) and its allied hospitals, Rawalpindi, Pakistan, from October to December 2017, and comprised hepatitis B and C patients aged ≥ 18 years who were visiting the outpatient department. A structured, close-ended, 30-item questionnaire was used to collect data which was then analysed using SPSS 23.

Results: Of the 399 patients, 230(57.6%) were women, 103(26%) did not have any formal education, and TV, radio and the internet was the main source of information regarding hepatitis for 138(34.6%) patients. The overall mean age was 42.82 ± 11.78 years. The sample showed poor knowledge with a mean score of 7.33 ± 2.03 , adequate attitude with a mean of 4.33 ± 1.19 , and poor practice with a mean of 2.97 ± 1.05 . Correlation was statistically significant between knowledge and practice ($p < 0.01$).

Conclusion: Lack of imperative knowledge of hepatitis in patients was the main reason for negative attitude and poor practices.

Keywords: Hepatitis B, Hepatitis C, Hepatitis clinic, OPD patients, KAP study. (JPMA 69: 1136; 2019)

Introduction

Hepatitis is an infectious disease of the liver with two main types: hepatitis B virus (HBV) infection and hepatitis C virus (HCV) infection. Over the globe, these two infections comprise maximum morbidity as far as chronic liver disease (CLD) is concerned. Besides, HBV and HCV infections are the main reason for liver cirrhosis and liver failure if not controlled.¹ HBV alone is responsible for infection of over 350 million people out of the more than 2 billion exposed annually all over the globe,² which shows serious threat to community in the light of morbidity and healthcare cost. About 170 million people get infected with HCV yearly all over the globe and out of which estimated 3-4 million people get infected each year.

Pakistan, a developing country, is also being affected by HBV and HCV infections. It is documented that there is a 2-7% prevalence of HBV infection in Pakistan. However, there is no authentic data to show exact prevalence.³ It is estimated that more than 10 million people in Pakistan are infected with HBV each year. Pakistan Medical Research Council (PMRC) conducted a study back in 2007-08 regarding the prevalence of HBV and HCV infection

across Pakistan. It found that HBV prevailed less with 2.5% than HCV infection that was 4.8% around major parts of Pakistan and the cumulative frequencies of both these infections were 7.6%, with a number of patients crossing the 13 million mark in that period.⁴

Knowledge, attitude and practice (KAP) studies are surveys in which the focus is on data gathering of the population regarding what is known, believed and executed in response to a particular topic or situation. That is why KAP studies are one of the most commonly used survey methods in social health sciences. Knowledge is the public's information regarding particular health-related issue or topic.⁵ Attitude is a predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. Attitude also influences a person's choice of particular response actions, and response towards challenges, rewards, etc.⁵ Practices in healthcare refer to the precise actions or preventive and treatment measures in response to a particular medical condition.⁵ HBV and HCV infections' rate have been increasing immensely in Pakistan for which more effective preventive measures are necessary. KAP studies are imperative to these kinds of strategies because KAP is directly proportional to prevalence.⁶ By assessing patient's knowledge, attitude towards their disease and regular practice, physicians can help improve their patient's lifestyle by improving their awareness level which will positively lead to their best beliefs towards hepatitis and ultimately better practices regarding adherence to

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^{1,2,4}Department of Pharmacy, COMSATS University Islamabad, Abbottabad Campus, Abbottabad, ³Department of Microbiology, Rawalpindi Medical University, Rawalpindi, Pakistan.

Correspondence: Muhammad Arfat Yameen. Email: arfatyameen@yahoo.com

treatment strategy, follow-up and general preventive measures in their everyday routine.⁷

The 69th World Health Assembly approved the Global Health Strategy in 2016. The purposes of these strategies are to eradicate the hepatitis infection by the year 2030 and for that purpose, the World Health Organisation (WHO) set certain worldwide targets to achieve its goal.⁸ These targets include a 90% reduction in new cases of chronic hepatitis C, a 65% reduction in hepatitis C deaths, and treatment of 80% of eligible people with chronic hepatitis C infections. In order to achieve these targets, governments and health authorities should focus on developing epidemiological evidence-based country-level strategies.⁹ To achieve all of these goals, accurate public awareness is imperative and that is why KAP studies are so important for healthcare reforms. KAP data will definitely help in designing and execution of suitable prevention and treatment strategies.¹⁰

The current study was planned to assess KAP levels of HBV and HCV patients towards their disease.

Subjects and Methods

The cross-sectional, descriptive, questionnaire-based study was conducted at the outpatient department (OPD) of Rawalpindi Medical University (RMU) and its allied hospitals, Rawalpindi, Pakistan, which is a tertiary care facility. Since the study was based upon data from a specific set of population at a specific point in time, therefore the sample size was time-dependent. Approval was obtained from the ethics committee of the Department of Pharmacy, COMSATS University Islamabad, Abbottabad Campus, Abbottabad, Pakistan as well as from the RMU, Department of Medical Education. HBV and HCV patients coming to the hepatitis clinic in OPD were approached for the study.

Those selected were patients with established HBV or HCV infection aged ≥ 18 years. Those visiting for the first time without polymerase chain reaction (PCR) report for hepatitis diagnosis were excluded. Verbal consent from each patient was obtained before the interview.

Data was collected using a structured, close-ended, 30-item questionnaire. Apart from the questions related to demographic characteristics of the patients, 16 questions were mentioned in the knowledge section. Each question had three options, 'Yes', 'No' and 'Do Not Know', and was allocated 1 score for a correct and 0 score for a wrong answer. With a range of 0-16, a score of ≥ 9 was considered adequate knowledge, while < 9 was considered poor. There were 7 questions related to attitude. Every question was assigned 1 score for positive attitude and 0 for

negative attitude. Within a range of 0-7, a score of 4 was set as an overall positive attitude.⁶ There were 7 questions in the practice section. Each question was assigned good or poor practice label; score of 1 was given to positive and 0 to the negative response. Total practice score was 7 and the scale categorised good practice with a score of ≥ 4 and poor with a score of < 4 .⁶ Correlations between our study variables were interpreted as: 0-0.25=weak correlation, 0.25-0.5=fair correlation, 0.5-0.75=good correlation and greater than 0.75=excellent correlation.⁶

Knowledge-evaluating questions related to general awareness of hepatitis, its symptoms, transmission, vaccination, diet, etc. Questions to assess attitude targeted patient's attitude towards treatment, physicians, cost of diagnosis and treatment, and regarding the sharing pattern of their disease. The practice section consisted of questions related to patient's lifestyle practices regarding prevention of the disease.

The questionnaire first pilot-tested over 15-20 respondents to check responses to certain types of questions. It was found suitable for every section of the questionnaire. The internal consistency and reliability of the questionnaire was pre-validated as it was obtained from a previous study⁶ with Cronbach's alpha value ≥ 0.7 . The pilot study was basically conducted to ensure and investigate the response rate of the patients. It was not part of the validation process but was aimed at confirming that this particular instrument could be employed easily with maximum response rate from the specific population subset. The questionnaire was in the English language and patients' responses were filled up by the data-collecting team. Each question was verbally elaborated and explained in the local language to the respondents at the time of interview.

Data was analysed using SPSS 23. Demographic characteristics were analysed through descriptive statistics. Categorical variables were measured as frequencies and percentages, and continuous variables as mean and standard deviation (SD). The nature of data distribution was assessed using Kolmogorov Smirnov Test. The study data was not normal due to its small size, so inferential statistics, including Mann Whitney U test and Kruskal Wallis H test, were applied to analyse the difference between patient characteristics and study variables. Spearman's correlation was used to elaborate the correlation/association among KAP items.⁶ The 95% probability level ($p < 0.05$) was used as significant for Mann Whitney U, Kruskal Wallis tests as well as for correlation analysis.

Results

Of the 399 patients, 230(57.6%) were women, 103(26%)

Table-1: Demographic characteristics of the study participants.

Characteristics	N (%) n= 399
Mean Age (years)	(42.82 ± 11.78)
18-27	48 (12)
28-37	95 (23.8)
38-47	113 (28.3)
48-57	102 (25.6)
58 and above	41 (10.3)
Gender	
Male	169 (42.4)
Female	230 (57.6)
Education	
Illiterate	103 (25.8)
Religious	59 (14.8)
Primary	68 (17)
Matric	81 (20.3)
Intermediate	39 (9.8)
Graduation	47 (11.8)
Post-graduation	2 (0.5)
Occupation	
Unemployed	239 (59.9)
Govt. servant	38 (9.5)
Private servant	30 (7.5)
Self employed	92 (23.1)
Locality	
Urban	207 (51.9)
Rural	192 (48.1)
Source of hepatitis information	
Newspapers and magazines	56 (14)
Health workers	60 (15)
Family/friends/neighbours	105 (26.3)
TV, radio and internet	138 (34.6)
Religious teachers/leaders	21 (5.3)
Leaflets, brochures posters etc.	19 (4.8)

did not have any formal education, and TV, radio and the internet was the main source of information regarding hepatitis for 138(34.6%) patients. The overall mean age was 42.82±11.78 years (Table-1).

The sample showed poor knowledge with a mean score of 7.33±2.03 (Table-2), adequate attitude with a mean of 4.33±1.19 (Table-3), and poor practice with a mean of 2.97±1.05 (Table-4). Correlation was statistically significant between knowledge and practice ($p<0.01$) (Table-5).

There was a weak correlation between knowledge and attitude, fair correlation between knowledge and practice, and weak correlation between attitude and practice (Table-6).

Discussion

The study focussed on the assessment of knowledge, attitude and practice of HBV and HCV patients about their

Table-2: Participant's knowledge towards hepatitis.

Hepatitis Knowledge Items	Yes N (%)	No N (%)	Do not know N (%)
Have you heard of a disease termed as hepatitis before?	258 (64.7)	140 (35.1)	1 (0.3)
Is hepatitis a viral disease?	61 (15.3)	17 (4.3)	321 (80.5)
Can hepatitis affect liver function?	212 (68.2)	22 (5.5)	105 (26.3)
Can hepatitis affect any age group?	40 (10.0)	42 (10.5)	317 (79.4)
Do you know the early symptoms of hepatitis?	55 (13.8)	324 (81.2)	20 (5.0)
Jaundice is one of the common symptoms of hepatitis?	346 (86.7)	31 (7.8)	22 (5.5)
Are nausea, vomiting and loss of appetite common symptoms of hepatitis?	92 (23.1)	131 (32.8)	176 (44.1)
Are there no symptoms of hepatitis in some patients?	27 (6.8)	144 (36.1)	228 (57.1)
Can hepatitis be transmitted by un-sterilized syringes, needles and surgical instruments?	355 (89.0)	23 (5.8)	21 (5.3)
Can hepatitis be transmitted by contaminated blood and blood products?	327 (82.0)	18 (4.5)	54 (13.5)
Can hepatitis be transmitted by blades of the barber/ear and nose piercing?	281 (70.4)	40 (10.0)	78 (19.5)
Can hepatitis be transmitted from mother to child?	121 (30.3)	152 (38.1)	126 (31.6)
Can hepatitis be transmitted by contaminated water/food prepared by person suffering with these infections?	297 (74.4)	37 (9.3)	65 (16.3)
Is hepatitis curable/treatable?	192 (48.1)	104 (26.1)	103 (25.8)
Is vaccination available for hepatitis?	84 (21.1)	153 (38.3)	162 (40.6)
Is specific diet required for the treatment of hepatitis?	118 (29.6)	131 (32.8)	150 (37.6)

disease. When the respondents were asked regarding knowledge about their disease, it was found poor regardless of the fact that they had actually been going through the condition. Low mean knowledge score indicated a lack of essential information of patients regarding aetiology, symptoms, transmission, management and prevention strategies, which may be attributed to comparatively greater rate of prevalence among the population.¹¹ The results are in line with the findings of another study which reported that level of the disease knowledge of even well-educated patients regarding disease transmission and complication was poor.¹² However, one study conducted in Pakistan regarding KAP towards HBV and HCV among barbers, matched our findings and established that only 36% participants were actually aware about the transmission of the disease because of used razors and other instruments.¹⁰ Our results are also consistent with another study conducted in Quetta, Pakistan, with similar aims, which also reported that almost 76% patients had a poor range of knowledge of their disease and this poor

Table-3: Participant's attitude towards hepatitis.

Attitude Items	N (%)
Did you think before that you could get hepatitis?	
Yes*	123 (30.8)
No	276 (69.2)
What was your reaction when you first found out that you had hepatitis?	
Fear*	147 (36.8)
Shame	72 (18)
Surprise	77 (19.3)
Sadness	103 (25.8)
Who did you first talk to about your illness?	
Parents	48 (12)
Spouse	112 (28.1)
Physician	68 (17)
Other relative	52 (13)
Friends	22 (5.5)
Child	28 (7)
No one‡	69 (17.3)
What did you do first when you found out that you had symptoms of hepatitis?	
Visited hospital*	181 (45.4)
Visited Hakeem	62 (15.5)
Visited homeopathic center	39 (9.8)
Done nothing	117 (29.3)
If you had symptoms of hepatitis, at what stage you will go to the health facility?	
Own treatment fails	21 (5.3)
After 3-4 weeks of symptoms	46 (11.5)
As soon as I realize the symptoms of hepatitis*	308 (77.2)
Will not go to the physician	24 (6)
How expensive do you think is the diagnosis and treatment of hepatitis?	
Free	88 (22.1)
Reasonable	32 (8)
Somewhat expensive	24 (6)
Very expensive	174 (43.6)
Don't know‡	81 (20.3)
What worries you most of your illness?	
Fear of death	176 (44.1)
Fear of spread into family	73 (18.3)
Cost of treatment	72 (18)
Isolation from the society‡	78 (19.5)

*Positive attitude, ‡Negative attitude.

knowledge was reflected in answers to questions related to transmission and sign and symptoms of hepatitis.⁵ On a global scale, lots of studies have reported similar findings, especially poor knowledge towards HBV.¹³ However, findings of one study, conducted among barbers and their customers in Egypt, contrary to our results, showed that overall knowledge was good as far as transmission of the disease was concerned.¹⁴ This difference in knowledge may be due to different demographic characteristics, study setting or survey

Table-4: Participant's practices towards hepatitis.

Hepatitis Practice Items	Yes N (%)	No N (%)
Would you recommend your other family members for hepatitis screening?	352 (88.2)	47 (11.8)
Do you ask for new syringe every time before use?	51 (12.8)	348 (87.2)
Do you ask for screening of donor before blood transfusion?	91 (22.8)	308 (77.2)
Do you ask your barber to change blade/or for safe equipment for ear and nose piercing?	125 (31.3)	274 (68.7)
In case your family member is diagnosed with hepatitis, would you go for further investigation and treatment?	388 (97.2)	11 (2.8)
Do you avoid meeting hepatitis patients?	91 (22.8)	308 (77.2)
Have you ever participated in health education programme related to hepatitis?	89 (22.3)	310 (77.7)

instrument used for data collection.⁶

Our results are a bit different than most studies conducted in Pakistan regarding attitude towards hepatitis as it was found to be on the positive side. This is perhaps due to the fact that many participants showed a positive intent towards actions like going to the physicians rather than to alternative medicine or self-medication. These findings are contrary to the results of a similar study conducted in Quetta, which reported that 79% of the participants were within the negative attitude scale.⁵ Health Belief Model highlights an imperative feature of the patient care which shows that patient's attitude and beliefs towards their illness indicate their response and behaviour towards that particular medical condition.¹⁵ Although our results showed that overall attitude was positive, but lots of respondents showed negative behaviour regarding going to physician or health facility without delay. This can be explained by the fact that almost half of the participants reported the cost of the diagnosis and treatment of the disease to be very high, which is a main matter of concern in a developing country like Pakistan where alternative treatment methods are much preferred over standard medical treatment simply because of the lower costs.⁶

Our results showed poor practice of the patients with regard to their disease. The finding is consistent with those of other KAP studies conducted in Pakistan and worldwide among patients as well as in the general public,^{16,17} which reported that the participants had overall poor practices towards hepatitis. However, these results seem contrary to a study which reported good practices about hepatitis among patients.¹⁴

In the light of the discussion above, there is a need to establish the fact that patients' demographic characteristics had an impact on their KAP towards the

Table-5: Comparison of demographic characteristics and mean knowledge (MKS), attitude (MAS) and practice (MPS) scores.

Description	N (399)	MKS	p- value	MAS	p- value	MPS	p- value
Age*			0.001		0.149		0.007
18-27	48	8.00		4.00		3.00	
28-37	95	8.00		5.00		3.00	
38-47	113	8.00		4.00		3.00	
48-57	102	6.00		4.00		3.00	
58 and above	41	7.00		4.00		2.00	
Gender**			0.005		0.003		0.001
Male	169	8.00		5.00		3.00	
Female	230	7.00		4.00		3.00	
Education*			0.001		0.006		0.001
Illiterate	103	6.00		4.00		3.00	
Religious only	59	7.00		4.00		2.00	
Primary	68	7.00		4.00		3.00	
Matric	81	8.00		4.00		3.00	
Intermediate	39	8.00		4.00		3.00	
Graduation	47	10.00		5.00		4.00	
Post-Grad.	2	11.00		5.50		5.50	
Occupation**			0.001		0.001		0.001
Unemployed	239	7.00		4.00		3.00	
Govt. servant	38	9.00		5.00		4.00	
Private. Servant	30	9.50		5.00		3.00	
Self employed	92	8.00		5.00		3.00	
Locality**			0.001		0.006		0.001
Urban	206	8.00		5.00		3.00	
Rural	193	7.00		4.00		3.00	

*Kruskal Wallis H test, **Mann Whitney U Test.

Table-6: Correlation between knowledge, attitude and practice.

Variable	Correlation coefficient	p-value*
Knowledge-Attitude	0.128	<0.05
Knowledge-Practice	0.383	<0.01
Attitude-Practice	0.192	<0.01

*Correlation significant at 0.01 level (2 tailed).

disease. The level of education especially had a major impact on the knowledge of the study participants, which is against the findings in another study¹² which established that level of education had no impact on knowledge of the participants. Age was not found to be a significant factor in this regard except on patient's attitude. These facts clear one thing that patient characteristics do have an impact on the knowledge, attitude as well as practice of the patients.

Linear positive correlation among knowledge, attitude and practice showed that these variables had a direct impact on one another. The finding is line with another study that showed better knowledge about the disease definitely had a positive impact on patient's attitude and beliefs towards their disease, which ultimately led to

good practices regarding prevention strategies.¹⁸ The current study was conducted at a public health facility in which most of the visiting patients had poor socio-economic status as well as poor educational level. As such, the study may not entirely represent the whole population. Also, the study was conducted at a single centre, and, as such, the results may not be generalised.

Despite the limitations, the study does bring to fore the act that lack of imperative knowledge of hepatitis in patients was the main reason of negative attitude and poor practices. Attention should be given towards improving public knowledge regarding chronic diseases like hepatitis and empowering the population will help eradicate these infectious diseases from the community. A collaborative approach involving different healthcare providers, like physicians, pharmacists and nurses, is recommended so that better healthcare facilities can be made easily accessible to the population.

Conclusion

Lack of knowledge of hepatitis in HBV and HCV patients was the main reason behind negative attitude and poor practices. However, positive linear correlation between knowledge, attitude and practice highlighted that

improved knowledge can lead to better attitude towards the disease and ultimately better practices for treatment and prevention.

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