

Barbers' awareness about Hepatitis B in Sindh Pakistan

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Abstract:

Introduction: Hepatitis B is the serious public health problem and a leading cause of chronic liver disease worldwide. HBV alone is responsible for 0.5-1 million annual deaths globally due to cirrhosis and hepatocellular carcinoma.

Methodology: This Cross-Sectional study was carried out in 8 different union council of Khairpur Taluka/ tehsils in district KhairpurMirs district from December 2014 to April 2015. Selection of barbers was done through two staged cluster sampling. In first stage 8 different Union Councils (UCs) of Khairpur Taluka of KhairpurMirs district were randomly selected. In Second stage 25 Barbers from each selected UC practicing was included in the study after random selection.

Objectives: Main purpose of the study was to assess the Knowledge, Attitude and Practice regarding Hepatitis B among barbers working in different union councils of Khairpur tehsil/ taluka of district KhairpurMirs.

Results: Majority (19%) of our study participants belong to UC Shah Latif while large proportion (30%) of participants belongs to age group 26-30 years. When questions related to knowledge of Hepatitis B were asked from our participant, majority (84%) of them knew that hepatitis B is a disease, while only 9% of them said that using of already used razors or blades by barbers is the main mode of spread of hepatitis B and 27% of them said that using contaminated water the reason for spread of hepatitis B. Majority (46.6%) of participants replied that there is no any vaccine available for hepatitis B prevention. Surprisingly almost 65% of them don't have any information about Government free hepatitis vaccination program. Half of the participants believe that changing of blades every time with every new client can also prevent spread of HBV. 76% of participants use to clean their instruments with disinfectants between the clients and 46% of them use new blades on every new client. Majority of the participants were not vaccinated for Hepatitis B.

Conclusion: Findings of our study demonstrate that despite the many mass media health educational campaigns related to the awareness of Hepatitis B in Sindh, barbers in KhairpurMirs district had no detailed understanding of diseases.

Keywords: knowledge, attitude, practice, Hepatitis B, Barber

Introduction: Hepatitis B also called inflammation of the liver and is one of the deadliest types of hepatitis. It is the most common liver infection worldwide, which is caused by a DNA-virus, the hepatitis B virus (HBV)^{1, 2} Transmission routes of HBV may be horizontal and vertical. Horizontal transmission usually occurs during teenage years or childhood, sexual exposure (throughout life time, needle prick (accidental as well as through I/V drug use), and transfusion of blood)². Vertical transmission of HBV occurs when the virus directly transmits from the infected mother to her neonate. Such transmissions are usually possible when the pregnant women suffering from an acute infection of hepatitis B or a chronic carrier during pregnancy³. Hepatitis B is a potential life-threatening liver infection caused by the Hepatitis B Virus⁴. Globally, it is the 9th leading cause of death and approximately 2 billion people (almost 1 out of every 3 people) are infected by HBV, and one in twelve lives with chronic Hepatitis B⁵. Every year about 10% of newly infected cases of hepatitis B may develop chronic disease which if left untreated may cause chronic Liver disease as well as increases the risk of developing cirrhosis (scarring) and lead to higher risk of death due to liver cancer^{5, 6}. There are more than 300 million carriers people have chronic liver infections and more than 780 000 people die each year because of acute or chronic hepatitis B^{7, 8}. Annually, about 1 million deaths occur as a result of viral hepatitis infections.

Together, hepatitis B and C are the leading causes of liver cancer in the world that accounts for 78% of cases⁹. According to the WHO, the Western pacific region accounts for about 50% of the world's chronic hepatitis B infection¹⁰. Pakistan is among the intermediate endemic area in the region along with Singapore, Cambodia, China and Indonesia, where the prevalence of hepatitis B ranges between 7 to 20%. In urban areas of Pakistan, the prevalence of HB is reportedly lower (2-5%) than rural areas, where the prevalence is reported to range between 30-35%.¹¹ In Sindh, according to the report published by the Pakistan medical and research council (PMRC) hepatitis has emerged as a great public health threat. About 3million people are carriers of hepatitis and the prevalence of hepatitis B in is 2.5-3%¹². The purpose of this study was to evaluate the Knowledge, Attitude and Practices (KAP) regarding Hepatitis B among Barbers working in of District KhairpurMirs Sindh.

Why Barbers? Hepatitis B infection is the most devastating health problem in the world. Despite the availability of very effective vaccine, hepatitis B infection is still considered as a serious public health problem around the globe¹³. Among the developing countries, many traditional and low-paid barbers earn their livelihood by providing hair cutting, dying and shaving services in the bazaar, on the road side and under trees in villages¹⁴. Pakistan is among the countries bearing the high burden of this deadly disease. In Pakistan, barbers

perform not only perform hair cutting but also nail trimming, shampooing, dying of hair and in addition to circumcision and abscess drainage, especially in rural areas and urban slums. These barbers are important professionals of Pakistani community which are still cared, owned and financed by the community especially the rural one but majority of them do not have any perception of unhealthy working practices in barbering^{15,16}.

Methodology: The current Cross-Sectional study was carried out from December 2014 to April 2015 in the 8 different selected union councils (UCs) of Khairpur Taluka/tehsils in KhairpurMirs district. Barbers working in the selected UCs of district's rural and urban areas were invited to participate in the current study. Selection of barbers was done through two staged cluster sampling. In first stage 8 different Union Councils (UCs) of Khairpur Taluka of KhairpurMirs district were randomly selected. In Second stage 25 Barbers from each selected UC practicing was included in the study after random selection. Total 25 barbers from each Union Council (UC) were included in the study after random selection. Assuming the knowledge regarding hepatitis B among barbers 60% and a 95% Confidence level, with a Confidence interval (CI) of $\pm 5\%$ for a nonresponse rate estimated at 50%, calculated sample size was 195 barbers.

A pre-tested structured questionnaire was used to collect information regarding knowledge, attitude and practice of barbers regarding hepatitis B. Data was analyzed using statistical software SPSS ver. 16. Descriptive analysis was done by calculating proportions. Even though, no harm expected to occur to any of the study participant, but to ensure the full confidentiality, a verbal consent was sought from all the participants of the study. Those who consented and fulfilled the selection criteria were invited to become the part of study.

Results:

A total of 195 barbers showed their consent to participate in this particular study with the response rate of 97.5%. Among the participants of our study, majority (19%) of them belongs to union council (UC) Shah Latif while 8% of them belong to UC Jilani and UC Babrloi. Majority (30%) of barbers belongs to age group 26-30 years in comparison to the barbers with the age group of 16-20 years (9%). Almost 2/3rd of them were married, while 84% don't have any education. A maximum percentage of participants had experience of < 10 years.

TABLE1: DISTRIBUTION OF SOCIO-DEMOGRAPHICS OF BARBERS (N=195)

VARIABLE	(n)	%
AGE GROUP		
16-20 Years	17	9%
21-25 Years	35	18%
26-30 Years	58	30%
31-35 Years	47	24%
> 35 Years	38	19%
MARITAL STATUS		
UNMARRIED	51	26%
MARRIED	136	70%
SEPARATED/WIDOWER	8	4%
EDUCATION		
NO EDUCATION	164	84%
PRIMARY EDUCATION	31	16%
WORKING EXPERIENCE		
1-5 YEARS	39	20%
6-10 YEARS	93	48%
ABOVE 10 YEARS	63	32%

When we asked them, question related to the knowledge of Hepatitis B, all of the participants replied that they had heard of medical condition of hepatitis B. While 13% of them believe that hepatitis B is the curse of GOD. Majority (46.6%) of them said that this disease is common in the area they belong (Table 2).

TABLE 2: REPLIES RELATED TO KNOWLEDGE OF HEPATITIS B (N=195)

QUESTIONS	n	%
WHAT DO YOU KNOW ABOUT HEPATITIS B?		
DISEASE	164	84%
VACCINATION	2	1%
OTHER NAME OF T.B	4	2%
CURSE OF GOD	25	13%
IS THIS DISEASE COMMON IN HERE IN THIS AREA?		
YES	91	46.6%
NO	34	17.4%
D.K	70	36%

Surprising replies were reported by the barbers, when they were asked about the questions related to the mode of Hepatitis B spread, where majority (27%) of them think that contaminated water is the main reason of hepatitis B spread while only 9% of them said that using of already used razors or blades can spread Hepatitis B. Among options of mode of hepatitis B spread, 24% respondents knew that HBV can be contracted through infected blood Transfusion, while 21% think that sexual contact is the main reason for spreading this disease and 19% said that use of unsterilized needles or instruments is the mode of hepatitis B spread. (Chart 2)

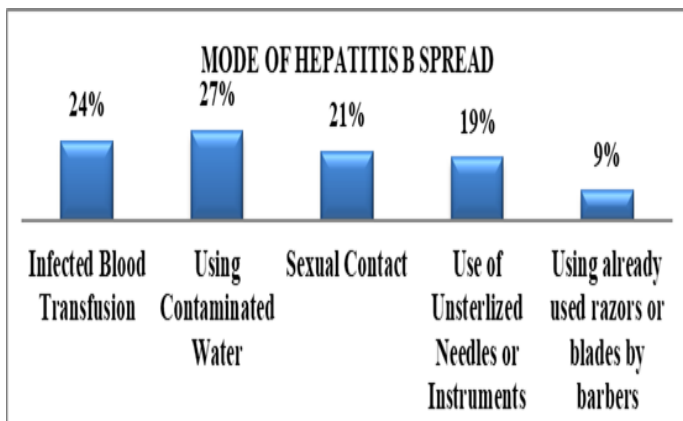


CHART1: DISTRIBUTION OF REPLIES REGARDING MODE OF HEPATITIS B SPREAD

Question related to the organ that is affected by hepatitis B majority (49%) of our participants were aware and correctly replied that Liver is affected due to Hepatitis B. Surprisingly, a relatively high proportion 40% of our participants don't know about which organ is affected due to hepatitis B. (Chart3).

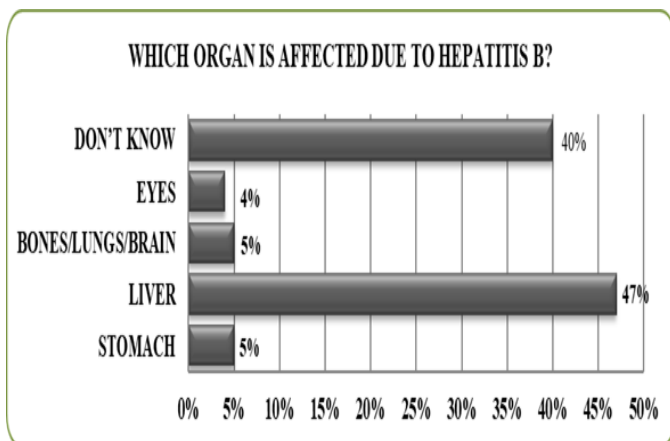


CHART2: DISTRIBUTION OF PARTICIPANT'S REPLY ABOUT ORGAN AFFECTED DUE TO HEPATITIS

One of the questions we asked that "can hepatitis be transmitted to other members of family (household contacts)", to which majority (45.5%) of them replied that hepatitis B can be transmitted to other members of family (household contacts) while 40.5% of them don't have any knowledge related to this question. 46.6% of them said that there is no vaccine available for protection from hepatitis B. About the treatment of hepatitis B, 68% replied in negative while 21% of them said that they don't know about it. Large majority (59.5%) of our participants don't know anything about the government's free hepatitis B control and vaccination program. (Table 3)

TABLE 3: DISTRIBUTION OF REPLIES RELATED TO KNOWLEDGE OF HEPATITIS B (n=195)

QUESTIONS	n	%
CAN HEPATITIS B BE TRANSMITTED TO OTHER MEMBERS OF FAMILY (HOUSEHOLD CONTACTS)?		
YES	89	45.5%
NO	27	14%
D.K.	79	40.5%
DOES HEPATITIS B CAUSE JAUNDICE?		
YES	132	67.5%
NO	21	11%
D.K.	42	21.5%
IS THERE ANY VACCINE AVAILABLE FOR HEPATITIS B PREVENTION?		
YES	43	22%
NO	91	46.6%
D.K.	61	31.4%
IS THERE ANY TREATMENT AVAILABLE FOR HEPATITIS B		
YES	21	11%
NO	133	68%
D.K.	41	21%
DO YOU HAVE ANY INFORMATION ABOUT GOVT. FREE HEPATITIS B VACCINATION PROGRAM?		
YES	69	35.4%
NO	126	64.6%

Barbers were asked that from where they heard of hepatitis B, majority (27%) of them replied that they received information related to hepatitis B from NGOs. While 21% of participants heard of hepatitis B from their relatives or friends and 19% of them reported that they heard of hepatitis B different doctors as well as from FM/Radio. Surprisingly, only very small proportion of them said that they heard of hepatitis from Government campaigns. (Chart 4)

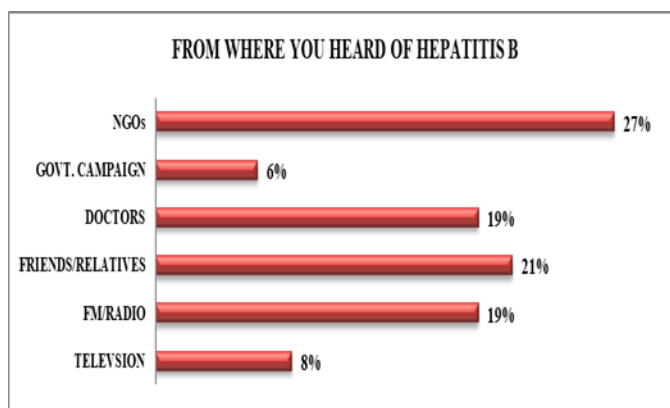


CHART 4: PARTICIPANTS REPLY OF QUESTION ASKED RELATED TO HEPATITIS B

Majority (42%) of participant barbers completely agreed that using of disposable razor instead of reusable razors by the barbers can prevent the spread of hepatitis B.

TABLE 4: DISTRIBUTION OF REPLIES RELATED TO ATTITUDE OF PARTICIPANTS TOWARDS HEPATITIS B n=195)

QUESTIONS	Completely Agree	Disagree	Not Sure
One of the methods to prevent Hepatitis B spread is by using disposable razors by the barbers?	82 (42%)	48 (25%)	65 (33%)
Proper washing of instruments with anti-septic solution in barber's shop can also prevent spread of Hepatitis B	77 (39.5%)	86 (44%)	32 (16.5%)
Disposing off of used blades in garbage/ municipal waste can also prevent in spread of this disease	111 (57%)	69 (35%)	15 (8%)
Changing of blades every time with every new client can also prevent spread of this disease	97 (50%)	84 (43%)	14 (7%)
Proper vaccination of barbers and other people can be effective in prevention of hepatitis B	49 (25%)	127 (65%)	21 (10%)
Isn't it better to go to some hospital for circumcision then to come to barbers for it?	81 (42%)	63 (32%)	51 (26%)

Whereas, 44% of them believe that washing of instruments in barber's shop cannot prevent the spread of the disease. Surprisingly 65% of them replied that they disagree with the point that proper vaccination of barbers and other people can be effective in prevention of hepatitis B. While 42% of them thinks that circumcision must be performed in hospitals or proper clinics instead of the barber's hops.

Majority of barbers (76%) said that they clean razors instrument with the disinfectants between the costumers. Among the participants, majority (46%) of them replied that they always use new blades on every new client or customer.

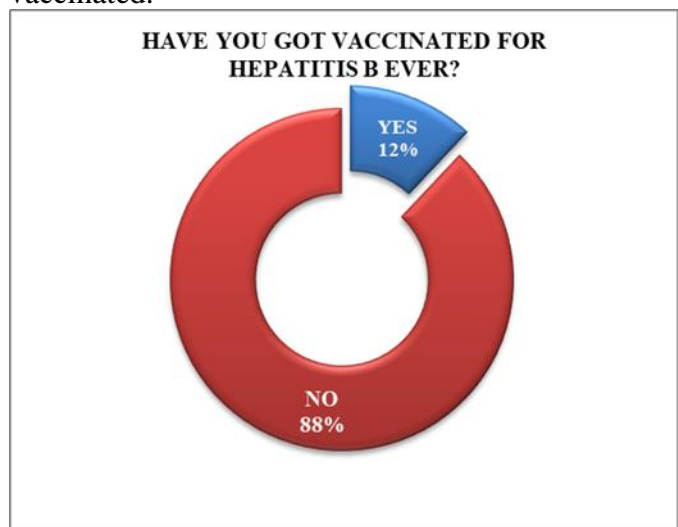
TABLE 5: DISTRIBUTION OF REPLIES RELATED TO ROUTINE PRACTICE QUESTIONS (n=195)

QUESTIONS	ALWAYS n (%)	NEVER n (%)	RARELY n (%)
Do uses new blade on new client?	90 (46%)	41 (21%)	64 (32%)
Do you wash razor with tap water before	159 (81.5%)	5 (2.5%)	31 (16%)

use on the next client?			
Do you Disinfects skin cuts of your costumers?	79 (40%)	23 (12%)	93 (48%)
Do you dispose-off blades in garbage/ municipal waste?	68 (35%)	15 (8%)	112 (57%)
Do you use same used blades for armpit shaving?	37 (19%)	60 (31%)	98 (50%)
Do you perform circumcision?	41 (21%)	89 (45.6%)	65 (33.4%)
Do you use disposable blades for circumcision?	14 (7%)	159 (81.5%)	22 (11.5%)
Do you wash instruments with antiseptics after every circumcision? (n=106)	79 (74.5%)	9 (8.5%)	18 (17%)

While 81.5% of them routinely wash their razors with tap water before they use them on their next client. About (40%) of them replied that they use to disinfect skin cuts of their customers. Whereas, only 35% of them use to dispose-off blades in garbage/ municipal waste and 50% of them replied they rarely use same used blade for armpit shaving. 21% of them perform circumcision i their shops while only 7% of them use the disposable blades for circumcision and 81.5% of them never use disposable blades for circumcision. While almost 2/3rd (74.5%) of them wash their instruments with antiseptics after every circumcision.

When we asked them whether they got vaccinated for hepatitis B, astonishingly more than 2/3rd of them (88%) replied in negative and only 12% among them got vaccinated.



Discussion:

Our study was aimed to assess and describe barber's knowledge about the transmission of Hepatitis B, their attitude towards prevention of the hepatitis B spread and their routine practices. The results of our study showed low awareness about the different modes of spread and risk factors of HBV. In this study only 9%–27% of respondents knew about the different modes of transmission of hepatitis. These findings are similar to findings of other studies about specific routes of HBV transmission¹⁷, 7% of barbers in Rawalpindi/ Islamabad and Hyderabad knew that HBV could be prevented by vaccination compared with the higher proportion (22) of barbers in the current study^{15, 16}.

In Pakistan, campaigns regarding the hepatitis B infection and preventive immunization against HBV through mass media regarding these diseases and HBV immunization had been introduced in recent years, these campaigns seem to have had a low impact regarding knowledge of HBV immunization 95. In our study 8% and 19% (TV and FM/Radio respectively) of barbers reported that they heard of hepatitis b from these medium. It may be that poor people cannot afford to benefit themselves of the opportunity for vaccination and therefore are less likely to be aware about immunization. This could also be because these infections are perceived to be common diseases in Pakistan.

Reuse of blades and non-sterilized of instruments creates a risk of transmission of blood-borne infection from person-to-person^{18, 19}. In the present study, half of the participant believes that changing of blades every time can prevent the spread of HBV but in practice 21% don't change the blade. Blade reuse and risk of transmission of diseases with similar practices have also been reported from surveys of barbers in Turkey and India^{20, 21}.

Majority 76% of our study participants used to wash their instruments with the disinfectants between clients or costumer, 81.5% use tap water to wash their instruments with tap water while 40% of them used to clean skin of their costumers during shaving. Similar findings were reported by the study conducted among barbers in Hyderabad by Jokhioet. al¹⁷.

In Pakistan and elsewhere, barbers also carry out other very risky procedures such as circumcision, incisions and wound drainage^{16, 22}. Of great significance among the various minor procedures performed by the barbers is the circumcision which is an important religious

procedure performed during early infancy. More than 90% of the children will develop chronic HBV infection who acquires HBV infection during the perinatal period. Likewise, of those infected between one and five years of age, 25% to 50% will end up with chronic HBV infection¹⁰⁰. In our study, 21% of barbers reported that they always perform circumcision while 81% of them don't use disposable blades for circumcision.

Almost 2/3rd (76%) of our study participants sterilized their hair cutting and shaving instruments before use by dipping it into an antiseptic contained in a bowl; however, the solution was not changed regularly. The present study also observed that barbers used public waste bins, openly disposing of razors and thus posing a major hazard to sweepers and waste handlers; this practice is also a risk for transmitting infections¹⁹. This finding also compares with the observations of a previous finding reported by another study²³.

Conclusion:

Findings of our study demonstrate that despite the many mass media health educational campaigns related to the awareness of Hepatitis B in Sindh, barbers in KhairpurMirs district had no detailed understanding of diseases caused by HBV and their mode of transmission and are busy in risky practices implicated in transmitting the virus of this disease. Majority of our participants aren't aware of any preventive vaccine for HBV. Prevention of transmission is the best strategy to deal with these diseases. Barber's attitude towards the use of new blade in every new client and disposal of sharps in garbage was very good. But in practice their attitude doesn't reflect as majority of them rarely dispose-off the sharps in public waste bins as well as majority of them use same blade in facial and armpit shaving which is again can lead to spread of the disease. Large proportion of them uses to perform circumcision without using disposable blade which is the main source of spread of the disease in new born parenterally. Attitude of barbers towards the preventive vaccination was not satisfactory. This might be the reason of number of subjects in this study have been vaccinated against hepatitis B is a matter of concern.

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