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<http://doi.org/10.5281/zenodo.4271841>Available online at: <http://www.iajps.com>*Research Article***KNOWLEDGE, ATTITUDE AND PERCEPTION OF HAZARA
POPULATION OF QUETTA, PAKISTAN TOWARDS
HEPATITIS B AND C, ADDRESSING FLAGELLATION WITH
MOURNING BLADES AS A HITHERTO UNADDRESSED RISK
FACTOR.****Taimoor Hussain¹, Khalida Walizada², John Joyce³, Ayema Haque⁴, Tuba Khan⁵,
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Article Received: September 2020 **Accepted:** October 2020 **Published:** November 2020**Abstract:**

Objective: Hepatitis B and C is a blood borne infection which attacks the liver, causing both acute and chronic liver disease. It is one of the major causes of end stage liver disease including cirrhosis and hepatocellular carcinoma. Our study is about the knowledge, attitude and perception of Hazara population of Quetta Pakistan regarding hepatitis B and C. Hazaras are the third largest ethnicity in Afghanistan and a minority in Pakistan. Special focus has been given to flagellation practice during "Ashura" in the first Islamic month called "Muharram". The "Mourning of Muharram" marks the martyrdom anniversary of Imam Hussain Ibn Ali at Karbala Iraq by the forces of the second Umayyad caliph "Yazeed". Imam Hussain was the grandson of Prophet Muhammad, peace be upon him. During flagellation the mourners have open wounds, blood splatters all around. The mourners flagellate their back and head with sharp mourning blades and knives. Thus there is a hypothetical risk of hepatitis B and C transmission from those are already infected to others.

Subjects and methods: A cross sectional survey was conducted by a survey questionnaire. The survey questionnaire was generated on google forms and conducted from August 2020 to October 2020. It assessed the knowledge, attitude and perception of Hazara ethnicity of Quetta Pakistan about Hepatitis B and C. The questions were verified and taken from "World Health Organization" and "Center for Disease Control". We adopted convenience sampling. The responses were collected by interviewers. The interviewers visited the five main hospitals serving Hazara population, local academic institutions, neighborhood homes, and roadside shops. In addition the survey was also forwarded on social media. Both English and Urdu version of the questionnaire in the same form was generated. The questionnaire asked about their knowledge of signs and symptoms, modes of transmission, vaccination status, and other general perception, attitude and practices towards hepatitis B and C. The survey also explored Hazara community's perception, practices and attitude towards flagellation with mourning blades. The data from the google form was retrieved and transferred to excel spreadsheet for further analysis.

Results: A total of 650 responses were collected. After excluding incomplete responses and responses from other ethnicities, the following results were obtained for a total of 603 responses. Among the respondents 58.2 % were aged 18-30, female and male constituted 56.88% and 43.11% of the respondents respectively. 30.67 % had graduate degrees. 27.19 % respondents were students while 25.37 % were housewives. The percentage of respondents who knew the sign and symptoms were as follows: fatigue 50.7 %, Jaundice 46.6 %, nausea and vomiting 37.8%. The percentage aware of the modes of transmission were as follows: Unscreened blood transfusion 66.8%, reused syringes 75.78%, tattoo, ear, nose piercing 55.7 %, sexual transmission 54.22. Only 44.4 % knew that hepatitis B has vaccine available where as 54.5 % had not been vaccinated. 49.5 % did not know that hepatitis B and C is quite prevalent in Pakistan. 62 % expressed flagellation as a risk factor. 28.05 % of male respondents (85 out of 218 male respondents) had flagellated which is a considerable proportion of male Hazara population, 23.5 % of whom had exchanged flagellation blades with each other. 15.09 % of respondents do not believe on protective effects of hepatitis vaccine to those who flagellate. A large proportion of those who had flagellated (55.3 %) declined getting screening test for hepatitis B or C.

Conclusion: There is a need of spreading awareness among the Hazara population regarding hepatitis B and C, particularly regarding the flagellation practice, which should also be scientifically investigated as a possible risk factor. Vaccination and avoiding exchange of flagellation blades should be encouraged.

Key words: Hepatitis B and C, flagellation with mourning blades, Muharram, Ashura, Quetta, Pakistan.

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INTRODUCTION:

According to WHO " In 2015, hepatitis B resulted in an estimated 887 000 deaths, mostly from cirrhosis and hepatocellular carcinoma (i.e. primary liver cancer). Acute HBV infection is characterized by the presence of HBsAg and immunoglobulin M (IgM) antibody to the core antigen, HBcAg. During the initial phase of infection, patients are also seropositive for hepatitis B e antigen (HBeAg). HBeAg is usually a marker of high levels of replication of the virus. The presence of HBeAg indicates that the blood and body fluids of the infected individual are highly infectious. Chronic infection is characterized by the persistence of HBsAg for at least 6 months (with or without concurrent HBeAg). In 2016, of the more than 250 million people living with HBV infection, 10.5% (27 million) were aware of their infection. Of those diagnosed, the global treatment coverage is 16.7% (4.5 million). Many people are diagnosed only when they already have advanced liver disease" [1].

Regarding the modes of transmission WHO states that "In highly endemic areas, hepatitis B is most commonly spread from mother to child at birth (perinatal transmission), or through horizontal transmission (exposure to infected blood), especially from an infected child to an uninfected child during the first 5 years of life. Hepatitis B is also spread by needle stick injury, tattooing, piercing and exposure to infected blood and body fluids, such as saliva and, menstrual, vaginal, and seminal fluids. Sexual transmission of hepatitis B may occur" [1].

Chronic hepatitis C is another major concern. As per WHO "Globally, an estimated 71 million people have chronic hepatitis C virus infection. A significant number of those who are chronically infected will develop cirrhosis or liver cancer. WHO estimated that in 2016, approximately 399 000 people died from hepatitis C, mostly from cirrhosis and hepatocellular carcinoma (primary liver cancer)" [2].

According to WHO estimates " in 2015, there were 1.75 million new HCV infections in the world (23.7 new HCV infections per 100 000 people)" [2]. As per WHO " hepatitis C virus is a blood borne virus: the most common modes of infection are through exposure to small quantities of blood. This may happen through injection drug use, unsafe injection practices, and unsafe health care, transfusion of unscreened blood and blood products, and sexual practices that lead to exposure to blood, particularly in men who have sex with men or those with HIV infection" [2]. Hepatitis C can also be transmitted

from infected mother to her baby however, these modes of transmission is less common [2].

According to a literature review of hepatitis B and C prevalence in Pakistan by Syed Asad Ali "weighted average of hepatitis B antigen prevalence in pediatric populations was 2.4% (range 1.7-5.5%) and for hepatitis C antibody was 2.1% (range 0.4-5.4%). A weighted average of hepatitis B antigen prevalence among healthy adults (blood donors and non-donors) was 2.4% (range 1.4-11.0%) and for hepatitis C antibody was 3.0% (range 0.3-31.9%). Rates in the high-risk subgroups were far higher "[3].

This study focuses on Knowledge, attitude and perception of Hazara population of Quetta Pakistan, regarding hepatitis B and C. It is the first time that flagellation with mourning blades, commonly called "kardi zani" in local language, is being put forth for consideration and discussion as a risk factor for Hepatitis B and C transmission. The Hazaras are believed to have Mongol origin and descendants of Genghis Khan. According to Wikipedia "A historic possibility is that the term, Hazara, refers to the clan name of Togha_Temür, the last claimant to the Shia Mongol-Ilkhanate throne of Persia. Togha Temür, who was unsuccessful in reconquering Persia, was from the clan of HASAR, the younger brother of Genghis Khan. The family was known as the Hasar (Qasar) clan. With the death of Togha Temür at the hands of the Sarbadars of northern Khurasan in mid-1300s, it is possible that the surviving members of the Hasar (Qasar) clan escaped into the mountains of what is today Afghanistan, where their descendants maintained their clan name of Hasar, which evolved over time into Hasara or Hazara. As the Hazara people do not have a written history of their own, nothing can be proven, but this theory is more likely versus the theory that the name Hazara comes from the Persian word for "one thousand," which is actually, "hezar (hezār هزار)." As these Il Khanate Mongols had converted to Shia Islam and married Farsi speaking Persian women, their children had been raised as Shia Muslims with a mixed Mongol-Persian characteristic. This explains the current culture of Hazara people very well "[4].

According to Wikipedia "Hazaras constitute the third largest ethnicity in Afghanistan. They speak Hazaragi dialect of Persian which is mutually intelligible with Dari, one of the two official languages of Afghanistan"[4]. Hazaras are one of the most oppressed groups in Afghanistan, their persecution dates back decades [4]. Following ethnic persecution in 19th century by Abdur Rahman Khan,

causing 60 % of Hazaras to perish or get displaced, they emigrated to neighboring countries like Iran and Pakistan [4]. The majority of Hazaras in Pakistan, approximately 650,000-900,000 live in the city of Quetta, the provincial capital of Baluchistan [4]. A number of terrorist attacks and target killing incidents have occurred in Quetta Pakistan [5]. Many Hazaras have now emigrated to Australia, Europe and USA, New Zealand and Canada [4]. Thus the population at risk is now globally spread in major countries.

Each year with the beginning of first Islamic month of Muharram, Hazaras like other Shia population mourn the martyrdom of Imam Hussain Ibn Ali- The grandson of Hazrat Muhammad (Peace be upon him). Imam Hussain along with his 72 fellows including his family members were besieged and martyred by the forces of the second Umayyad caliph at Karbala Iraq. On the 10th day of Muharram- Ashura - Hazaras mourn Imam Hussain's martyrdom. They organize their largest annual procession where they weep, beat their chest and flagellate their back, head and chest with mourning blades and knives [6]. A rough estimation by local organizers and participants of the procession is that more than fifty thousand people join the procession in the form of around 30 groups representing mosques of local community. Approximately 3000 of them flagellate each year. During the process they have open wounds and blood splattering. Some of them even exchange their flagellation blades also locally called "kardi". Thus there is a hypothetical high risk of Hepatitis B and C transmission from those infected to others, although there is no such scientific research study done in this regard.

MATERIALS & METHODS:

This cross-sectional survey was conducted by a survey questionnaire. The survey questionnaire was

generated on google forms and conducted from August 2020 to October 2020. It assessed the knowledge, attitude and perception of Hazara ethnicity of Quetta Pakistan about Hepatitis B and C. The questions were verified and taken from "World Health Organization" and "Center for Disease Control". They were asked about signs, symptoms, complications and modes of transmission of hepatitis B and C. They were also asked about their perception, attitude and practice of flagellation with mourning blades. We adopted convenience sampling. The responses were collected by interviewers specially educated for the purpose. The interviewers visited the five main hospitals serving Hazara population, local academic institutions, neighborhood homes, and roadside shops. In addition, the survey was also forwarded on social media Facebook and WhatsApp to Hazara contacts. For ease of the respondents both English and Urdu version of the questionnaire in the same form was generated. The data from the google form was retrieved and transferred to excel spreadsheet for further analysis, R software was also used for statistical analysis.

RESULTS:

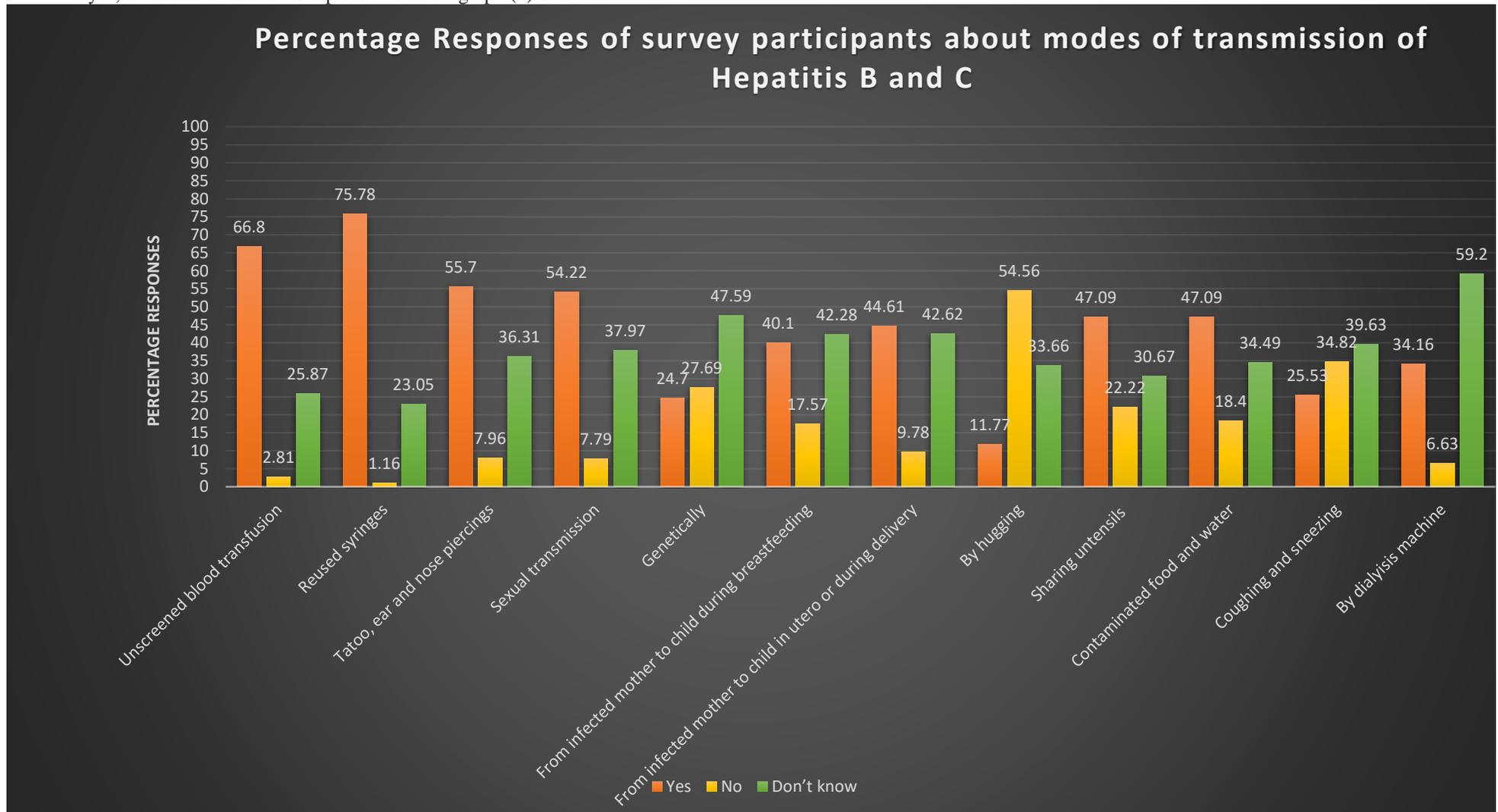
A total of 650 responses were collected. After excluding incomplete responses and responses from other ethnicities, the following results were obtained for a total of 603 responses. Among the respondents 58.20 % were aged 18-30, female and male constituted 56.88 % and 43.11 % of the respondents respectively. 30.67 % had graduate degrees. 28.19 % respondents were students while 25.70 % were housewives. Average family income of 20,000-30,000 Pak Rupees constituted the largest group with 28.68 %. The details of demographic data is represented in the following tables (1).

Table 1: Demographic details of survey respondents.

Gender	
Male	260 (43.11 %)
Female	343 (56.88 %)
Age	
Less than 18	24 (3.98 %)
18-30	351 (58.20 %)
31-40	107 (17.7 %)
41-50	64 (10.61 %)
51-60	40 (6.63 %)
Greater than 60	18 (2.98 %)
Address	
Alamdard road and surrounding Hazara residential areas	409 (67.3 %)
Hazara town and surrounding Hazara residential areas.	194 (32.17 %)
Education	
Uneducated	114 (18.9 %)
Primary school	36 (5.97 %)
High school	92 (15.25 %)
College	121 (20.06 %)
Graduate (M.A, and M.Sc.)	185 (30.67 %)
Professional degrees (Doctor, engineer, law etc.)	39 (6.46 %)
Post-Graduation (MPhil, PhD)	13 (2.15 %)
Diploma	2 (0.3%)
Undergraduate	1 (0.16 %)
Job	
Student	170 (28.19 %)
Housewife	155 (25.70 %)
Teacher	62 (10.28 %)
Shopkeeper	43 (7.13 %)
Government employee	30 (4.97 %)
Tailor	22(3.64 %)
Daily Labor	1 5(2.48 %)
Driver	14 (2.32 %)
Business man	8 (1.32 %)
Other jobs (including dispensers, bankers, plumber, beautician, watchmen, welder, electrician and jobless)	84 (13.93 %)
Income	
Less than 20,000 Pakistani Rupee.	103 (17.08 %)
20,000-30,000 Pakistani Rupee.	173 (28.68 %)
31,000-40,000 Pakistani Rupee.	128 (21.22 %)
41,000-50,000 Pakistani Rupee.	76 (12.60%)
Greater than 50,000 Pakistani Rupee.	123 (20.39 %)
Marital status	
Single	303 (50.24 %)
Married	282 (46.76 %)
Widow	15 (2.48 %)
Divorced	4 (0.6%)

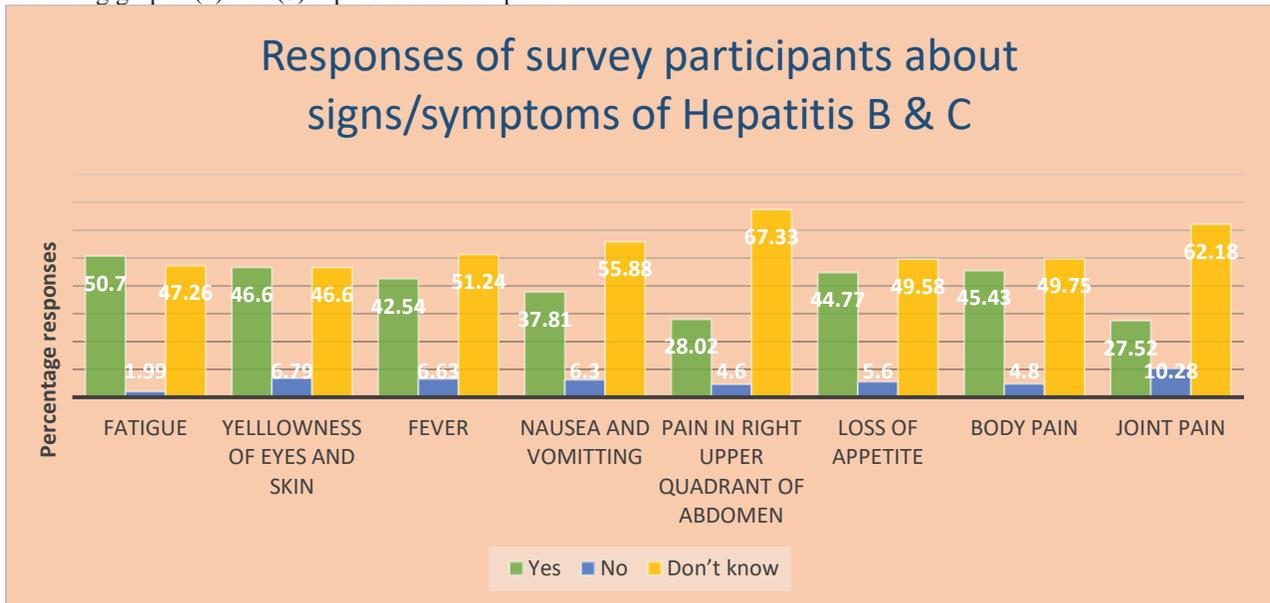
Knowledge of signs, symptoms, complications and modes of transmission of hepatitis B and C among Hazara Population:

Participants were asked to identify the provided factors as the mode of transmission of hepatitis B and C. The details of their responses in terms of “percentage yes, no and don’t know” is represented in the graph (1) below.

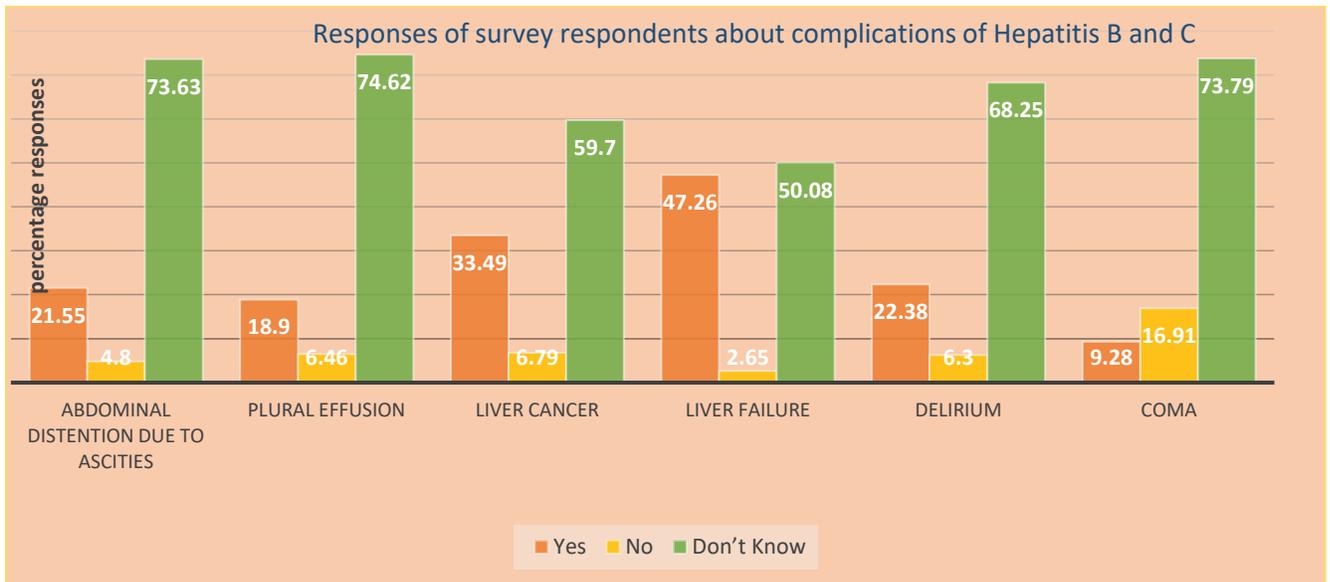


Graph 1: Responses of survey participants about modes of transmission of hepatitis B and C.

Participants were then asked to identify the sign and symptoms and complications of Hepatitis B and C. The following graphs (2) and (3) represent their responses.



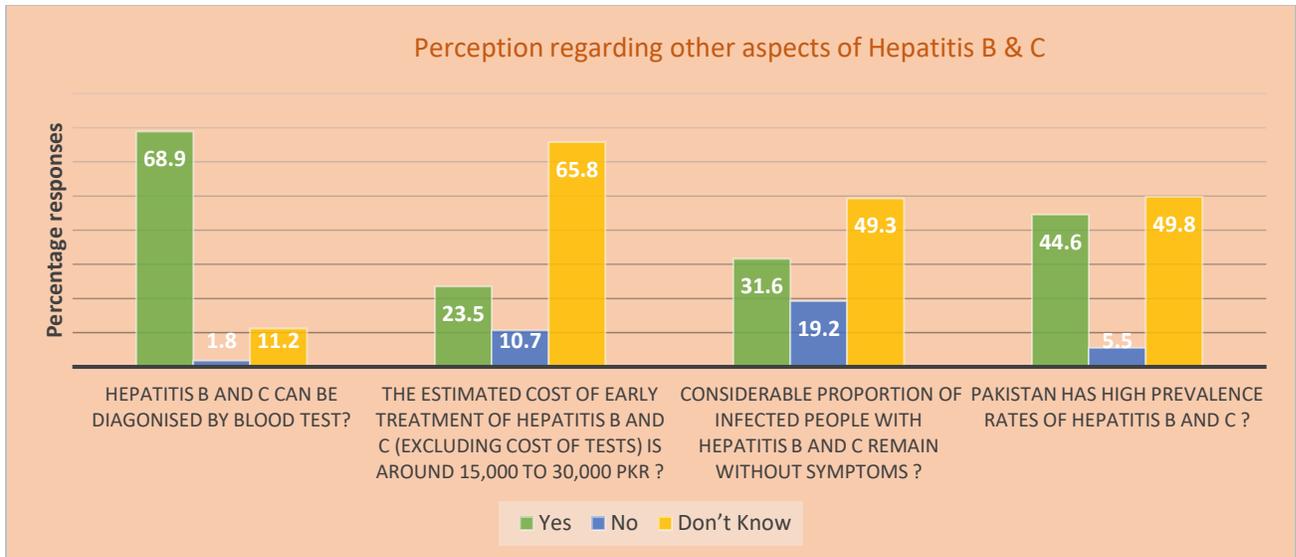
Graph (2): Responses of survey participants about signs/symptoms of Hepatitis B & C



Graph (3): Responses of survey participants about signs/symptoms of Hepatitis B & C.

Perception regarding other aspects of Hepatitis B and C among Hazara population:

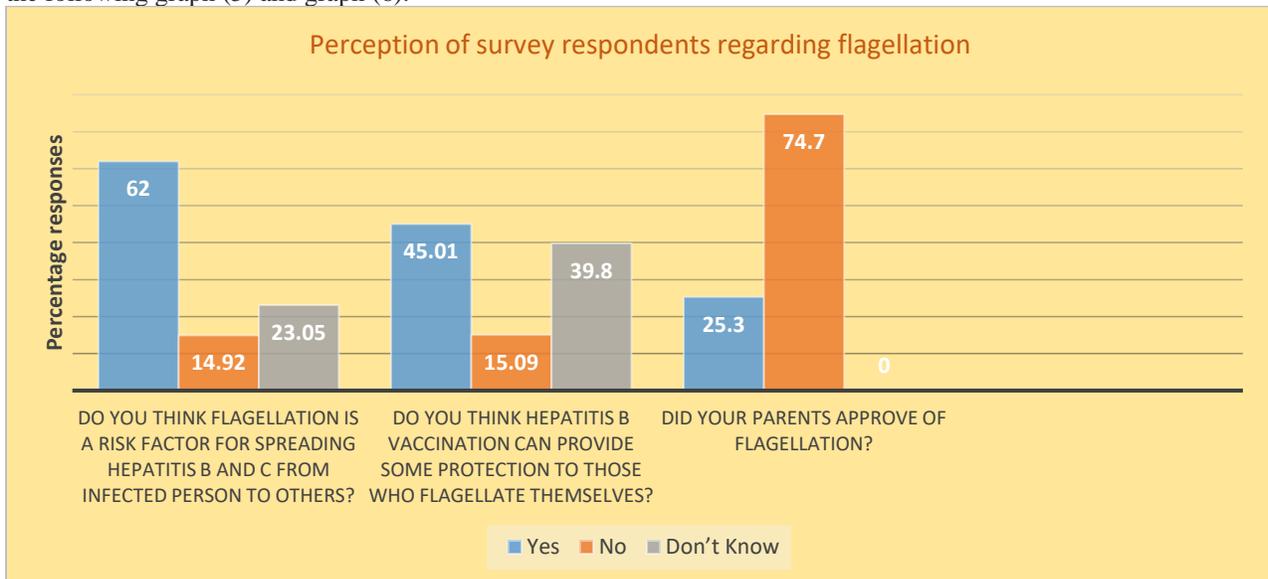
Participants perceptions regarding other aspects of hepatitis B and C were explored with additional questions, presented in the following graph (4) below.



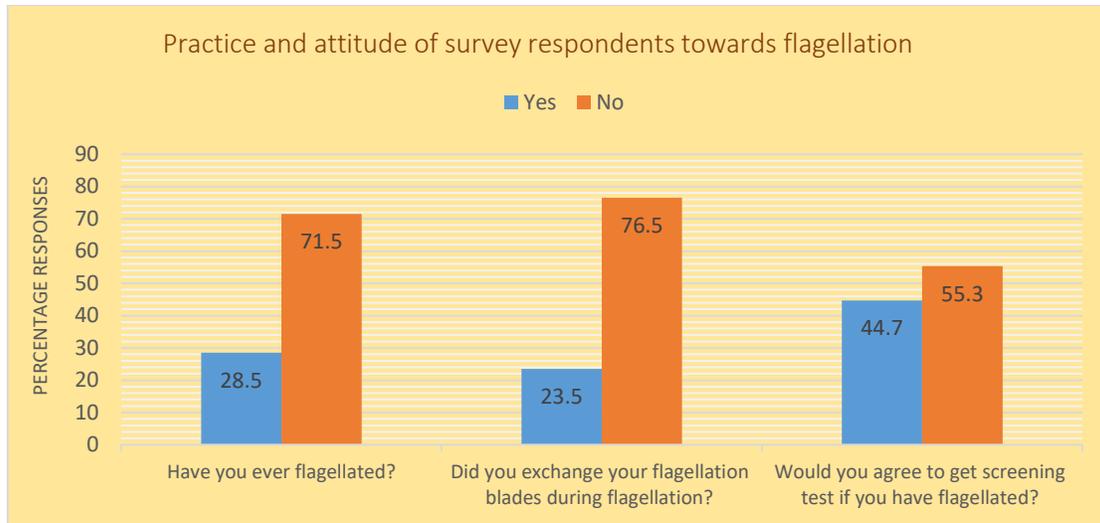
Graph (4): Participants perception about diagnosis, cost of early treatment, prevalence of hepatitis B and C in Pakistan and asymptomatic infection.

Attitude and Perception of Hazara population regarding flagellation:

Attitude and Perception of Hazara population regarding flagellation was also asked. 36.2 % of the participants responded they had not done flagellation, 14.1 % of total respondents (85 males out of a total 298 males =28.5 % of male respondents) said they have done flagellation, whereas females don't flagellate and chose not applicable constituting 49.7 % of the respondents. 42.4 % of the participants responded they had done flagellation more than 10 times. Among those who had flagellated, 50.6 % percent said they would not flagellate again, 43.5% said they would flagellate again, whereas 5.9 % expressed they may flagellate again. The responses of the participants is depicted in the following graph (5) and graph (6).



Graph (5): Perception of survey respondents regarding flagellation



Graph (6): Practice and attitude of survey respondents towards flagellation

Among those who had flagellated and denied screening test, they gave various reasons. They were allowed to give multiple reasons. Quoting the major reasons, 41.2 % said they have no symptoms, 32.9 % stated that flagellation does not put you at risk of getting infected by hepatitis B or C. An image of the "Ashura" procession where mourners are flagellating is shown in Image (1) and Image (2).



Image (1)



Image (2)

(Images 1 and 2 courtesy of Hazaranewspakistan.wordpress.com)

Statistical analysis:

We did statistical analysis using "R software" to find association between different demographic variables especially for the attitude towards flagellation versus vaccination status. No significant relationship between vaccination status for hepatitis B versus age, income, education, and gender or flagellation practice was found. The co-efficient of association for these variables are not reported for the same reason of being insignificant. However, vaccination status for hepatitis B is associated with belief in protective effect of vaccination to those who flagellate, 0.0211 level of significance, 0.1141 strength of association. The one who believes that flagellation is a risk factor for hepatitis B and C, tends to get vaccinated. The test of association between vaccination status and the perception that flagellation is a risk factor of hepatitis B and C transmission is highly significant, with 0.01979 level of significance and the strength of association is 0.11.

The details of statistical analysis is provided in the following table (2).

Variables		Vaccination status for hepatitis B			
		No	Yes	Chi-square significance	Coefficients of association
Gender	Female	179	164	0.2429	
	Male	149	111		
Average Income	20,000-30,000	82	91	0.1939	
	31,000-40,000	70	58		
	41,000-50,000	45	31		
	Greater than 50,000	68	55		
	Less than 20,000	63	40		
Education level	College (grade 11th to 12th)	69	52	0.2784	
	Diploma	1	1		
	Graduate (M.A, M.Sc., B.A, and B.Sc.)	108	77		
	High school (grade 5th to 10th)	52	40		
	Postgraduate	7	6		
	Primary school (till grade 5)	22	14		
	Professional Degree	15	24		
	Undergraduate	0	1		
	Uneducated	54	60		
Age	18-30	192	160	0.6704	
	31-40	56	51		
	41-50	32	32		
	51-61	22	18		
	Greater than 60	13	5		
	Less than 18	13	9		
Have you flagellated?	No	124	94	0.2216	
	Not applicable	153	147		
	Yes	51	34		
Vaccination provides some protection to those who flagellate	Don't know	147	93	0.02119**	0.1141
	No	47	44		
	Yes	134	138		
Flagellation is a risk factor for hepatitis B and C transmission.	Don't know	90	49	0.01979**	0.1141
	No	47	43		
	Yes	191	183		

Table 2: Table of association between respondent's demographic variables, general questions regarding flagellation versus vaccination status.

The following table of association illustrates that the "belief in protective benefits of vaccination to those who flagellate is associated with the perception that flagellation is a risk factor for transmission of hepatitis B and C". The test of association is highly significant and the coefficient of association is 0.2919 between the variables. The details are presented in the following table (3).

	Flagellation as a risk factor of hepatitis B and C transmission				Chi-square significance	Coefficient of association
	Don't know	NO	Yes			
Vaccination can provide some protection to those who flagellate?	Don't know	103	35	102	0.0000***	0.2919
	NO	8	23	60		
	Yes	28	32	212		

Table 3: Table of association between "perception of flagellation as risk factor for hepatitis B, C and belief in the protective benefits of vaccination to those who flagellate."

The following table of association illustrates that "willingness to test after flagellation is associated with average income level and exchange of flagellation blades with 0.094 and 0.01905 significance, respectively". The coefficient of association between willingness to test for hepatitis B or C after flagellation and average income level is 0.3055. The coefficient of association between willingness to test after flagellation and exchange of flagellation blades is 0.2822.

The details are presented in the following table (4).

Variables		Will you agree to get tested If you have Flagellated?			
		No	Yes	Chi-square significance	Coefficients of association
Average income level	20,000-30,000	10	11	0.094*	0.3055
	31,000-40,000	17	8		
	41,000-50,000	2	8		
	Greater than 50,000	13	7		
	Less than 20,000	5	4		
Did you exchange flagellation blades during flagellation?	NO	41	6	0.01905**	0.2822
	Yes	24	14		

Table 4: Table of association between "willingness to get tested for hepatitis B, C after flagellation, and average income, exchange of flagellation blades during flagellation". The incomes are in Pakistani rupee.

DISCUSSION:

Our study revealed that on average 50% of the respondents did not know about the acute signs, symptoms and complications. They were better aware of acute signs and symptoms than the complications. 50.08 % and 59.7 % did not know that hepatitis B and C can cause liver failure and liver cancer respectively. Their knowledge of acute sign and symptoms stems from their observation of the more common hepatitis A, which is similar in acute

presentation. Findings of knowledge deficiency about signs and symptoms were revealed by Noman ul Haq in his survey of "knowledge, attitude and practice among Hepatitis-B patients of Quetta, Pakistan"[7]. Similar results of knowledge deficiency were observed in his survey of healthy population of Quetta Pakistan [8]. However Hazara respondents had slightly better knowledge than the overall population of Quetta surveyed by the mentioned author. Thus a

great need of mass public awareness is felt by every means possible. Awareness of signs and symptoms will lead to healthy attitude to avoid the risk factors and be familiar with the symptoms for timely diagnosis and treatment. This will also prevent them from adopting unapproved and deceitful remedies in the form of local self-proclaimed healers with no authenticity. Similar misconceptions were prevalent about the mode of transmission. 47.09 % and 25.53 % expressed that hepatitis B and C is spread by contaminated food/water and coughing/sneezing respectively. Our survey revealed 47.09 % believed sharing utensils can spread hepatitis B and C from infected person to others. Center for disease control states that "Hepatitis C is not spread by sharing eating utensils, breastfeeding, hugging, kissing, holding hands, coughing, or sneezing. It is also not spread through food or water"^[9]. The same is mentioned for hepatitis B by Center for disease control which states that "Hepatitis B is not spread through food or water, sharing eating utensils, breastfeeding, hugging, kissing, hand holding, coughing, or sneezing"^[10]. 40.1 % of survey respondents had expressed hepatitis B and C is transmitted to baby during breastfeeding. 11.77 % believed hepatitis B and C is spread by hugging while 33.66 % did know if it is a mode of transmission or not. Hepatitis C is not spread by breastfeeding and casual contact such as hugging ^[9]. Neither breastfeeding nor casual contact spreads hepatitis B ^[10]. This knowledge will prevent stigmatization and social isolation of hepatitis B and C patients. Breast feeding has the best health benefits for the mother and child. This awareness will encourage mothers to continue breastfeeding their babies as it is completely safe. Perinatal transmission of Hepatitis B and C is possible as per WHO. Awareness of perinatal mode of transmission will definitely promote positive attitude to get screened for both infections in every pregnancy and get timely treatment for mother and child in case of infection.

The 10th day of Muharram, "Ashura" is attended by thousands of Hazaras each year and a considerable proportion of them flagellate. 28.05 % of male respondents (85 out of 218 male respondents) had done flagellation which is a considerable proportion of male Hazara population. Flagellation has not been investigated as a risk factor. The mechanism of transmission of hepatitis B or C during flagellation is quite plausible, although hypothetical. The wounds of mourners are open, blood splatters around, they stand at close distance to each other, adding to that the exchange of flagellation blades with each other (23.5 %), all adds to the risk of getting hepatitis B or C. A good proportion of whom (42.4 %) have flagellated

more than 10 times adding their individual risk of exposure further. 43.5 % of the respondents expressed doing flagellation again, thus maintaining their risk of exposure. This particular risk factor needs to be researched and the general masses educated about the hitherto unproven risk, although hypothetically quite logical. A large proportion of those who have flagellated (55.3 %) declined getting screening test for hepatitis B or C. Among those who declined a good proportion denied based on the multiple reasons. 41.2 % said they have no symptoms, 32.9 % stated that flagellation does not put you at risk of getting infected by hepatitis B or C.

It is also interesting to note that majority which is 62 % expressed flagellation as a risk factor. 74.6 % of parents did not approve of flagellation. Still a considerable proportion flagellate each year, with each new generation joining the older ones. Many start at young age lower than 15 years, following their predecessors, having little awareness about their risk of getting exposed. As they age and mature they prefer not to do it anymore. Thus it is our collective responsibility - parents, academic and religious institutions - to spread awareness in this regard. It is pertinent to mention here that religious authorities do not approve of flagellation practice even if they do not clear cut prohibit it as mentioned in an article "Tatbir" on Wikipedia ^[11].

Hepatitis B Vaccine is available, safe and has protective benefits. Only 44.4 % of survey respondents knew that hepatitis B has vaccine available where as 54.5 % had not been vaccinated. 15.1 % of respondents do not believe on protective effects of hepatitis vaccine for those who flagellate. WHO estimates that "the proportion of children under five years of age chronically infected with HBV dropped to just under 1% in 2019 down from around 5% in the pre-vaccine era ranging from the 1980s to the early 2000s. This marks the achievement of one of the milestone targets to eliminate viral hepatitis in the Sustainable Development Goals — to reach under 1% prevalence of HBV infections in children under five years of age by 2020 ^[1].

As mentioned by WHO guidelines "treatment is available for hepatitis B. Developing chronic hepatitis B infection depends on age. In infants and children 80-90% of infants infected during the first year of life develop chronic infections; and 30-50% of children infected before the age of 6 years develop chronic infections. In adults less than 5% of otherwise healthy persons who are infected as adults will develop chronic infections. 20-30% of adults who are

chronically infected will develop cirrhosis and/or liver cancer. Thus infants should receive vaccination and hepatitis B treatment in case of infection immediately after birth" [1]. In addition there is treatment available for hepatitis C and antiviral medications can cure more than 95 % of hepatitis C infection" [2]. As per WHO "Around 30% (15-45%) of infected persons spontaneously clear the virus within 6 months of infection without any treatment. The remaining 70% (55-85%) of persons will develop chronic HCV infection. Of those with chronic HCV infection, the risk of cirrhosis ranges between 15% and 30% within 20 years" [2]. 41 % of survey respondents did not know that hepatitis B and C has treatment. This is a crucial information which needs to be disseminated to the general masses. They need to be screened for earlier detection and treatment. Medical treatment is available which will prove lifesaving and improve quality of life as well provided it is caught at earlier stages with timely intervention. Treatment cost has been reduced significantly in Pakistan. In addition Government sponsored initiatives are there for screening test, treatment and vaccination. The cost of early treatment course is considerably lower than many countries. Majority (65.9 %) had neither any idea about the cost of treatment nor they (49.8 %) knew that hepatitis B and C is quite prevalent in Pakistan [3]. They had lack of awareness that a considerable proportion of hepatitis B and C infected people are asymptomatic. This is an additional factor of their aloofness. 49.5 % did not know this fact and 19.1 % disagreed with it. All of these factors are like fuel to fire, which upon increasing awareness can be significantly reduced. This would be one of the best example of primary prevention at community level.

CONCLUSIONS:

The result of survey exposed the lack of awareness regarding hepatitis B and C. On average 50 % of survey participants were unaware of modes of transmission, signs and symptoms, particularly the complications of hepatitis B and C. Many did not know that the infection can also be asymptomatic in a considerable proportion of those infected. They remain unaware and do not bother take precaution, test and treat. Awareness sessions is a need of time so that people know the importance of vaccination and avoid the risk factors of hepatitis B and C transmission. The disease is treatable and the earlier it is detected the better will be the treatment outcome. Flagellation as a possible risk factor for hepatitis B and C transmission should be investigated scientifically. Flagellation is practiced by millions of Shia Muslims around the world each year, thus a large population is always at risk of exposure. Awareness regarding vaccination and

avoiding exchange of flagellation blades can have significant health benefits for those who flagellate. Prevention is better than cure. Scientific research and mass awareness will have far reaching community health improvements than spending millions to treat end stage disease complications.

Acknowledgment

The authors acknowledge the participations of Hazara community for survey participation. No funding was taken from any organization.

Ethics and Consent:

Consent was taken from survey participants at the start of survey, and it was conducted in accordance with ethical standards.

Conflict of interest:

There is no conflict of interest.

REFERENCES:

1. [Hepatitis B.](https://www.who.int/news-room/fact-sheets/detail/hepatitis-b) (2020). Accessed: 10 October 2020: [https://www.who.int/news-room/fact-sheets/detail/hepatitis-b.](https://www.who.int/news-room/fact-sheets/detail/hepatitis-b)
2. [Hepatitis C.](https://www.who.int/news-room/fact-sheets/detail/hepatitis-c) (2020). Accessed: 9 October 2020: [https://www.who.int/news-room/fact-sheets/detail/hepatitis-c.](https://www.who.int/news-room/fact-sheets/detail/hepatitis-c)
3. Syed Asad Ali: [Rafe M.J.Donahue, Huma Qureshi, et al.: Hepatitis B and hepatitis C in Pakistan: prevalence and risk factors.](#) International Journal of Infectious Diseases, [online. 2009, 13:9-19. [10.1016/j.ijid.2008.06.019](https://doi.org/10.1016/j.ijid.2008.06.019)
4. [Hazaras.](https://en.wikipedia.org/wiki/Hazaras) (2020). Accessed: 10 October. (2020). [https://en.wikipedia.org/wiki/Hazaras.](https://en.wikipedia.org/wiki/Hazaras)
5. [Persecution of Hazara people.](https://en.wikipedia.org/wiki/Persecution_of_Hazara_people) (2020). Accessed: 10 October. (2020). [https://en.wikipedia.org/wiki/Persecution_of_Hazara_people.](https://en.wikipedia.org/wiki/Persecution_of_Hazara_people)
6. [Mourning of Muharram.](https://en.wikipedia.org/wiki/Mourning_of_Muharram) (2020). Accessed: 10 October. (2020). [https://en.wikipedia.org/wiki/Mourning_of_Muharram.](https://en.wikipedia.org/wiki/Mourning_of_Muharram)
7. Noman ul Haq, Mohamed Azmi Hassali, Asrul Akmal Shafie, et al.: [A cross-sectional assessment of knowledge, attitude and practice among Hepatitis-B patients in Quetta, Pakistan.](#) BMC Public Health. 2013, 13:1. [10.1186/1471-2458-13-448](https://doi.org/10.1186/1471-2458-13-448)
8. Noman ul Haq, Mohamed Azmi Hassali, Asrul A Shafie, et al.: [A cross sectional assessment of knowledge, attitude and practice towards Hepatitis B among healthy population of Quetta, Pakistan.](#) BMC Public Health. 2012, 12:1. [10.1186/1471-2458-12-692](https://doi.org/10.1186/1471-2458-12-692)

9. [Hepatitis C Questions and Answers for the Public.](#) (2020). Accessed: 10 October. (2020). <https://www.cdc.gov/hepatitis/hbv/bfaq.htm>.
10. [Hepatitis B Questions and Answers for the Public](#) | CDC. (2020). Accessed: 10 October. (2020). <https://www.cdc.gov/hepatitis/hcv/cfaq.htm>.
11. [Tatbir](#). (2020). Accessed: 10 October 2020: <http://https://en.wikipedia.org/wiki/Tatbir>.