**Knowledge, Attitude and Practice regarding Hepatitis B and C among Male Higher Secondary School Students of District Hyderabad, Pakistan, 2013**

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**Authors Declaration**

I hereby declare that results of this manuscript title *Knowledge, Attitude and Practice regarding Hepatitis B and C among Male Higher Secondary School Students of District Hyderabad, Pakistan, 2013* have not been published previously, are not under submission elsewhere and all co-author is cognizant of the submitted text and agree to its publication in International Journal of Health Research and Innovation.

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**Background:** Poor knowledge, negative attitudes, and risky practices are important risk factors for transmission of hepatitis B and C infection among adolescents. This study was conducted with objective to investigate the knowledge, attitudes, and practices of male students towards hepatitis B and C. **Methods:** A cross sectional study was undertaken from June-August, 2013 in District Hyderabad. Total 721 male students were selected through systematic random sampling; face to face interviews were conducted to gather relevant information. Level of knowledge attitude and practices were measured using scoring system. Chi-square test was used for statistical analysis, p-value <0.05 was considered as statistical significance. **Result:** The study revealed that, knowledge of students was (good 8%, fair 51.5%, poor 40%), attitude (positive 37.3%, negative 62.7%) and practices (good 22%, fair 40.7%, poor 37.1%). Among socio-demographic variables age, study year, residence, father and mother education had a statistically significant association (P value <0.05) with the knowledge and practices. **Conclusion:** The study illustrates that 40% and 37.1% students had poor knowledge and practices respectively, 62.7% had negative attitude against hepatitis B and C. Those unvaccinated against hepatitis B were 71% which makes them susceptible to the infection. Vaccination campaign and college based health education session for students are highly recommended.

**WORD COUNT**: 200

**KEY WORDS**: Knowledge, attitudes and practices, Hepatitis B and C, High school students

**INTRODUCTION:**

Viral hepatitis B and C (HB and C) is an emerging public health problem. Globally, hepatitis B virus attributed to 240 million infected cases out of them 25% develops chronic hepatitis, cirrhosis, and hepatocellular carcinoma [[1](#_ENREF_1),[2](#_ENREF_2)]. Approximately 780,000 persons die each year 650,000 from cirrhosis and liver cancer and another 130 000 from acute hepatitis [[3](#_ENREF_3)].

According to World Health Organization (WHO) 130-180 million of the world’s population is infected by hepatitis C virus and three to four million new incident cases were diagnosed every year [[4](#_ENREF_4), [5](#_ENREF_5)]. HB and C virus together imposed 1.4 million deaths in 2010 as compare other major infectious diseases such as malaria, tuberculosis and HIV which attributed for 660,000 thousand, 1.4 and 1.7 million life losses, in that order [[3](#_ENREF_3)].

The world is divided into three areas on the basis of the prevalence of chronic HBV infection; low (<2%), intermediate (2-8%), and high (>8%) [[6](#_ENREF_6)]. Pakistan is present in the intermediate area as estimated on the basis of prevalence rate of HB 2.5% and HC 4.9% [[7](#_ENREF_7)]. The identified factors which contribute to these rates are unsafe surgical and injection practices, unscreened blood transfusion, contaminated or reused instrument of barbers, low knowledge regarding the etiology, mode of transmission, preventive methods, and poor vaccination against HB [[8](#_ENREF_8)].

A study carried out in District Gujranwala, Pakistan found 1.76% prevalence of Hepatitis B and 2.3% prevalence of Hepatitis C among college students [[9](#_ENREF_9)]. Another study showed prevalence rate of 2.2% for HB and 0.5% for HC among college going students [[10](#_ENREF_10)]. Pakistan Medical Research Council (PMRC) also reported prevalence rate 2.2% for hepatitis B and 4.4% for hepatitis C in 20-29 years age group. The important determinants are high risk behaviors, poor knowledge, negative attitude, and unsafe practices among students which make them vulnerable to HB and C infection [[11](#_ENREF_11), [12](#_ENREF_12)].

While keeping in mind the burden of HB and C among young healthy males and the existing low level of knowledge, attitude, and practices [[13](#_ENREF_13)], it is important to focus on the population of college students and educate them in the prevention of infection. Complete knowledge with good preventive practices is a major impediment to the spread of HB and C viral infection. Governments of Pakistan efforts are underway to increase the awareness regarding prevention and control of infection among the community through mass media campaign. To make it more effective, we attempted to assess gaps in existing knowledge by conducting this study in different male colleges of district Hyderabad in 2013 with the objective to assess the level of knowledge, attitude and practice (KAP) toward HB and C infection among college student. The information gathered will be used as a template for policy makers to develop strategies to educate the college students for the prevention and control of HB and C.

**MATERIALS and METHODS:**

**Study Design:** This was a community-based cross-sectional descriptive study. It was conducted among 721 male students of Science Colleges of District Hyderabad from June to August 2013.

**Study Area:** The study was conducted in District Hyderabad Sindh, Pakistan with an area of 3,198 km2 and a population of 4.5 million people. The area is located on the east bank of the Indus River with 4 subdivisions (taluka) i.e. Latifabad, City, Qasimabad and Taluka rural

**Sample Size Determination:** For sample size calculation Epi Info 3.5 software package were used. At the time of study, a total of 3220 male students were enrolled in science section of all public colleges of District Hyderabad. Sample size of 343 was calculated assuming a 50% prevalence of good knowledge, attitude, and practices, 95% confidence level, and 5% bound-on error. Since the source population is less than 10000, we increased the sample size by incorporating the design effect of 2 and adding 10% of 343 (n=34.3) for non-responder. The resulting sample size was 721.

**Sampling Method:** Study participants were selected by using systematic sampling technique. First, we stratified students based on the year of study. Second, the sample size was distributed proportionally to each year of study based on the student population. Finally, using students list, respondents were selected by systematic random sampling (every 4th student). In case of absenteeism, the next number was included in the study.

**Data collection Method and Tool:** A face to face interview was conducted with study participants to collect relevant information on demographic, knowledge, attitude, and practices against HB and C with the help of pre tested semi-structured closed ended questionnaire.

**Questionnaire:** The aim of the questionnaire was to obtain information on the level of HB and C related KAP of the students with sources of information. The questionnaire was developed by the principal investigator after literature review and consulting with experts in the relevant field. Our final questionnaire comprised of four parts. Part I focused on the socio-demographic characteristics of the students, including age, residence, ethnic groups, year of study religion, mother and father education. Part II contained 17 knowledge-related questions on causative organism of HB and C, different mode of transmission, and preventive method. Part III included questions on attitudes, such as risk of acquiring of HB and C infection, immediate reaction after infection, and others. Part IV covered questions about practices related to HB and C, including (1) completion of vaccination against HB, (2) using new syringe at the time of injection and (3) using new blade at the time of shaving or hair cutting and others. Before data collection began, the questionnaire was piloted among 15 students for clarity, feasibility, and appropriateness for the students. The questionnaire was developed in English, then translated into two local languages (Sindhi and Urdu) before data collection and finally translated back into English.

**Scoring:** knowledge was measured by 17 questions. Each correct response was given a score of 1, while an incorrect response was scored 0. The range of total knowledge was 0-17. Knowledge scores from less than 7 was considered as poor knowledge, whereas 7-14 scores were measured as fair knowledge and scores more than 14 were considered good knowledge regarding HB and C. Attitude towards hepatitis B and C was assessed using an 8- item questionnaire. Attitude scores between 0 - 4 were considered as negative attitude, and scores 5 to 8 were considered as positive attitude. High risk practices were assessed using a 7- item questionnaire. A score less than 02 was evaluated as “unsatisfactory practices,” whereas 3-5 score was considered as “satisfactory practices,” and scores greater than 5 reflected “good practices” regarding HB and C.

**Data analysis:** Data were entered and analyzed using SPSS-17 statistical software (SPSS Inc. Chicago, 2007). Descriptive statistics were used to give a clear picture of background variables such as age, year of study, and other variables in well-structured questionnaire. The frequency distribution of both dependent (knowledge, attitude and practice regarding HB and C) and independent (socio-demographic including age, year of study residence, father and mother education) variables were calculated. The association between dependent and independent variables was measured by using chi square. A P-value < 0.05 was considered to be statistically significant.

**Ethical Consideration:** The research protocol was approved by the Research Ethics Review Committee of Muhammad Medical College, Mirpurkhas. Informed written consent was obtained from each study participant after explanation about the aim and objective of the study were communicated. For confidentiality, the name of the participants was not typed on the questionnaire.

**RESULTS: -**

**Socio-demographic characteristics:**

A total of 721 students (first year 360; 49.9% and second year 361; 50%) of science colleges were approached, all of them were participated in the study making response rate of 100%. Mean age was 16.8 +0.8 years (range 16-24) with predominate 460 (63.8%) age group 19–21 years. Majority of the students 462 (64%) were living in urban area. Among total, 657 (91%) of the respondents were Muslim and 318 (44%) were Mohajir (Urdu speaking). (Table 1)

**Assessment of knowledge towards HB and C:**

As illustrated in Table 2, 95% (n=685) mentioned that liver is affected by this disease, and 74 (10%) respondents were unaware that hepatitis infectious is caused by a Virus. Overall, the knowledge about the route of transmission was low. Accordingly, 210 (29%) of respondents knew that HB and C can be transmitted through reuse of syringes, needles, and surgical instruments. Only 139 (19%) were aware that HB and C can be transmitted via contaminated blood & blood products. The limited numbers of students, 132 (18%) and 121 (16.7%), identified reuse of blades at the barber shop and unsafe sex as modes of transmission respectively. However, there were misconceptions about routes of transmission. For example, 74 (10%) and 51 (7%) of the respondent incorrectly thought that HB and C could be transmitted by eating/drinking from the same utensils and hugging/kissing.

Table 2 also summarizes the knowledge about prevention from HB and C. A total of 327 (45%) mentioned that HB and C is a preventable disease. The most frequently preventive method identified was practicing safe sex 126 (17.4%), vaccination against HB 109 (15%), use of new disposable syringe 89 (12%), use of new blade 74 (10%), and screening of blood before transfusion 59 (8%).

Out of the 721 participants, 372 (51.5%) scored poor in knowledge range, whereas 291 (40.3%) and 58 (8%) had fair and good knowledge respectively. (Table 8)

**Association between socio-demographic variables with the knowledge:**

Among the socio-demographic variables age (χ2= 44.9, P-value < 0.00), year of study in the college (χ2 = 14.7, P-value < 0.00) and residence (χ2 = 8.7, P-value < 0.00) had a statistically significant association with the knowledge about HB and C. Additionally, father’s and mother’s education also had a statistically significant association (χ2 = 35.4, P-value < 0.00), and (χ2 = 172, P-value < 0.00), respectively with knowledge. (Table 3)

**Assessment of attitude towards Hepatitis B & C’**

Overall attitudes of the students are illustrated in Table 4. Out of the 721 respondents, 528 (73%) never thought to contract HB or C infection. Four hundred sixty nine 65% respondents stated that the immediate reaction after getting HB or C will be fear. Overall, 584 (81%) respondents were ready to disclose their disease to their parents followed by 80 (11%) friends. In addition, 326 (45%) agreed to consult with medical specialist at Health facility as their first choice of treatment. Two hundred fifty two (35%) indicated that they will visit to the health facility as early as possible after realization that the symptoms are of HB and C. Two hundred seventeen (30%) and 149 (21%) students agreed that banning reuse of injection and reuse of blade can control the spread of HB and C respectively.

Accordingly, 272 (37.7%) of students scored in between 5 to 8 and were classified as having a positive attitude towards hepatitis B and C, while 449 (62.2%) were scored in between 0 to 4 and classified as negative attitude. (Table 8)

**Association between socio-demographic variables with the attitude:**

Statistically, a significant difference was seen between negative and positive attitude of students in terms of age (χ2 = 12.43, P-value < 0.00), father’s education (χ2 = 42.13, P-value < 0.00) and mother’s education (χ2 = 74.6, P-value < 0.00). The study year (χ2 = 0.63, P-value < 0.42) and residence (χ2 = 1.36 P-value < 0.24) have no association with attitude towards HB and C. (Table 5)

**Assessment of practices towards Hepatitis B & C:**

Practices against HB and C were assessed by asking seven questions, as shown in Table 6. Majority of the students 89% (n=642) never went for HB screening and 29% (n=210) were vaccinated against HB out of which only 19% (n=137) completed three doses of vaccination schedule. Only 114 (16%) respondents asked for blood screening before transfusion to him or their relatives. Five hundred twelve 71% respondents asked for a new syringes at the time of injection, and 68% (n=491) asked for new blades at the time of shaving or hair cutting at the barber shop. A total of 75% (n=541) students mentioned that they normally avoid meeting Hepatitis B and C infected patients. Only 17% (n=123) attended health education program related to HB or C

Out of the 721 participants, 268 (37%) were within the poor practices range whereas 294 (40.7%) showed fair practices and 159 (22%) presented good practices. (Table 8)

**Association between socio-demographic variables with the practices:**

Among the socio-demographic variables age (χ2 = 16.3, P-value < 0.05), year of study in the college (χ2 = 7.69, P-value < 0.02) and residence (χ2 = 67.5, P-value < 0.00) had a statistically significant association with the practices towards hepatitis B and C. Additionally, father’s and mother’s education also had a statistically significant association with the practices at (χ2 = 111.3, P-value < 0.00), and (χ2 = 44.5, P-value < 0.00), respectively. (Table 7)

When students were asked their sources of information, 50% (n=360) mentioned television, 17% (n=123) health education program, 13% (n=94) teachers, 12% (n=87) family and friends, and remaining 8% (n=57) got information from the doctors.

**DISCUSSION:**

Individual or community knowledge regarding HB and C causative agent, mode of transmission, risk perception, and preventive measures helps in reduction of disease spread in the community and also decreases the associated burden on health care system.

The current study sought to evaluate KAP towards HB and C among male students of colleges. Results of the study revealed poor knowledge towards HB and C. A small percentage of respondents actually knew about transmission of HB and C. Lack of knowledge regarding HB and C transmission and preventive measures can be attributed to rise in the frequency of HB and C infection among the adolescent population. Only 29% and 10% of participants were identified that reused of syringes and unsterilized surgical instruments as mode of transmission of HB and C respectively, which is again a major sign of concern. These finding are in consistent with the result from studies from other parts of Pakistan [[14](#_ENREF_14), [15](#_ENREF_15)] and world [[16](#_ENREF_16), [17](#_ENREF_17)] where the overall knowledge of the students regarding HB and C was reported low. This study also reported some misconception regarding mode of transmission which are in agreement with the findings reported from Pakistan ([14](#_ENREF_14)) and King Saudi Arabia [[16](#_ENREF_16)]. The lack of student's knowledge about HB and C etiology, mode of transmission, and preventive measures may be account to decrease covering of this important topic in colleges either lack of disease information in college curriculum and absence of health education program in colleges. On the contrary Arun G *et al*. (2014) in India reported that participants had adequate knowledge towards transmission, preventive measures and treatment of HB [[18](#_ENREF_18)]. Possible reasons that can be attributed to this variance are difference in gender of the target population, study location and method of data collection. Students from the rural area had low knowledge as compared to students from the urban area, which might be due to the limited accessibility of information in the rural area. This finding urges the need of health education campaign about HB and C in the rural areas of the country.

We noted that 37.7% student’s attitude toward HB and C was positive which is very important and needed in the prevention and control of HB and C. Twenty seven percent students reported that they believe they are susceptible to getting HB and C, which need to be encouraged as perceived susceptibility and perceived severity are important components of health belief model of behaviour change [[19](#_ENREF_19)] This result is inconsistent from the study conducted in secondary school [[3](#_ENREF_3)] The difference may be contributed to different levels of education of target population. Over one third 40% of the students were reluctant to visited to the health facility for treatment of HB and C, which may be attributed to un-affordable cost of treatment due to poverty, myths, cultural beliefs, level of perceived severity of disease or looking for alternative methods of treatment like Hakeem, traditional healers or others. In low middle income countries like Pakistan, access to the traditional healers is cost-effective than seeking treatment at health care facilities [[15](#_ENREF_15)]. It is imperative to account that delay in seeking medical treatment for the infection results can cause further deteriorate the health of the individual and spread of infections.

Negative attitude of respondents, such as delay or not visited to health facilities for treatment, not willing to care HB or C infected person at their family or community should be corrected by implementation of health education system in the colleges. It is very interesting that students were poor in knowledge but they were average in some attitudes. It shows that knowledge alone is not enough to change attitudes. There are other social and cultural factors that can affect attitude and these need further investigation.

In our study, 37% of respondents scored poor in practices toward HB and C. Majority of the respondents never screened for HB and C, which may be attributed to lack of students’ knowledge, and absence of college administration motivation to arrange screening camp in their colleges. Students from the other part of the Pakistan [[15](#_ENREF_15)] and Ethiopia [[20](#_ENREF_20)] also reported similar practices. Majority of the participants were not concerned about the safety measures (vaccination against HB, use of new syringe and blade) which defiantly expose them to the threat of acquiring HB or C infection. Literature review suggested that excessive and unnecessary use injections and reuse of unsterilized syringes are leading mode of transmission for HCV in Pakistan [[21](#_ENREF_21)] in the same way reuse of blades by barbers is consider as a quite common and major risk factor for HCV infection [[22](#_ENREF_22)]. Similar poor practices against vaccination, syringes and blades were also reported by published studies from Pakistan [[14](#_ENREF_14), [15](#_ENREF_15), [17](#_ENREF_17)] from Iran [[23](#_ENREF_23)] and Kingdom of Saudi Arabia.[[3](#_ENREF_3)]

As reported previously the electronic media constituted the most important modes of dissemination of information about HB and C [[14](#_ENREF_14)]. In our study also, TV was reported to be leading source of information regarding HB and C. Teachers and Health workers could be important source of information but unfortunately, this was not the case in our study. Probably, the knowledge, skill to convey health information and facilities to conduct such activities in colleges is deficient among teachers and health personnel.

**CONCLUSION:**

The present study concludes that students’ knowledge regarding HB and C, route of transmission and mode of prevention were low, attitude and preventive practices were adequate. Those unvaccinated against HB were 71% which makes them susceptible to the disease. The study highlighted some misconceptions about etiology, mode of transmission, intolerant attitudes, and risky practices, which need to be addressed. 83% of the students were never attended health education program related to Hepatitis-B and C. Age, study year, residence, father and mother education had a statistically significant association (P value <0.05) with the knowledge and practices. However same variables also showed significant association with attitude except study year and residence.

**RECOMMENDATIONS:**

#### HB and C is a very serious health problem affecting almost 10% of the population in Pakistan and require strategic planning to combat its risks factors. It is highly needed to initiate college based health education and vaccination campaign with the corroboration and coordination of health and education department. It is also suggested that important information about HB and C such as etiology, mode of transmission, preventive measures and from where they will get treatment against hepatitis B /C should be added in curriculum of college students.

#### LIMITATIONS:

The study was conducted in one city and therefore results of the research are not representative of the entire population of Pakistan.

**CONFLICT OF INTEREST:**

No competing interests and no funding was received for this study.

**AUTHOR CONTRIBUTION:**

This work was carried out in collaboration between all authors. MA was the primary researcher, conceived the study, designed, participated in data collection, conducted data analysis and drafted the manuscript for publication. Authors ZAG, MNS and MAB assisted in data collection and preparation of first draft of manuscript. All authors interpreted the results, and reviewed the initial and final drafts of the manuscript.

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Table 1: Socio-demographic characteristics of the study population (N=721)

|  |  |  |
| --- | --- | --- |
| Variables | Frequency | Percentage |
| Age | Mean = 16.8 year Range =16 -24 years | |
| 16-18 Years | 141 | 19.5% |
| 19-21Years | 460 | 63.8% |
| 22-24 Years | 120 | 16.6% |
| Year of Study |  |  |
| First Year | 360 | 49.9% |
| Second Year | 361 | 50% |
| Residence |  |  |
| Rural | 259 | 35.9% |
| Urban | 462 | 64% |
| Father Education |  |  |
| Illiterate | 236 | 32.7% |
| Middle | 210 | 29% |
| Intermediate | 185 | 25.6% |
| Graduation | 90 | 12.4% |
| Mother Education |  |  |
| Illiterate | 364 | 50.4% |
| Middle | 227 | 31.4% |
| Intermediate | 75 | 10.4% |
| Graduation | 55 | 7.6% |
| Religion |  |  |
| Muslim | 657 | 91% |
| Non-Muslim | 64 | 9% |
| Ethnic group |  |  |
| Mohajir | 318 | 44% |
| Sindhi | 255 | 35% |
| Punjabi | 75 | 10.4% |
| Pathan | 51 | 7% |
| Balochi | 22 | 3% |

|  |  |  |
| --- | --- | --- |
| Table 2 Knowledge about causative agent, mode of transmission and prevention of HB & C (N=721) | | |
| Questions | **Yes** | **No** |
| F (%) | F (%) |
| Knowledge regarding causative agent |  |  |
| Disease affects the liver | 685 (95%) | 36 (4.9%) |
| HB and C caused by virus | 74 (10%) | 647 (89.7%) |
| HB and C caused by Bacteria | 198 (27.4%) | 523 (72.5%) |
| HB and C caused by contaminated water | 239 (33%) | 482 (66.8%) |
| HB and C caused by contaminated food | 124 (17%) | 597 (82.8%) |
| Knowledge regarding mode of transmission |  |  |
| HB and C transmitted by reused of syringes or needles | 210 (29%) | 511 (70.8%) |
| HB and C transmitted by unsterilized surgical instruments | 74 (10%) | 647 (89.7%) |
| HB and C transmitted by contaminated blood | 139 (19%) | 582 (80.7%) |
| HB and C transmitted by reuse of used blade | 132 (18%) | 589 (81.6%) |
| HB and C transmitted by unsafe sex | 121 (16.7%) | 600 (83.2%) |
| HB and C transmitted by hugging or kissing | 51 (7%) | 670 (92.9%) |
| HB and C transmitted by eating/drinking from the same utensils | 74 (10%) | 647 (89.7) |
| Knowledge regarding preventive measures |  |  |
| HB and C prevented by safe sex? | 126 (17.4%) | 595 (82.5%) |
| HB prevented by vaccination? | 109 (15%) | 612 (84.8%) |
| HB and C prevented by use of new disposable syringe? | 89 (12%) | 632 (87.6%) |
| HB and C prevented by use of new blade? | 74 (10%) | 647 (89.7%) |
| HB and C prevented by screening of blood before transfusion? | 59 (8%) | 662 (91.8%) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table 3:** Association between socio-demographic variables with the knowledge of respondents about HB and C | | | | | | |
|  |  | Knowledge | | |  |  |
|  | N= 721 | Poor  n=372 | Fair  n=291 | Good  n=58 | χ2 | P value |
| Age |  |  |  |  |  |  |
| 16-18 Years | 141 | 71 (50%) | 46 (32.6%) | 24 (17%) | 44.98 | 0.00 |
| 19-21Years | 460 | 232 (50.4%) | 212 (46%) | 16 (3.4%) |  |  |
| 22-24 Years | 120 | 69 (57.5%) | 33 (27.5%) | 18 (15%) |  |  |
|  |  |  |  |  |  |  |
| Study Year |  |  |  |  |  |  |
| First | 360 | 174 (48.3%) | 167 (46.3%) | 19 (5.2%) | 14.75 | 0.00 |
| Second | 361 | 198 (54.8%) | 124 (34.3%) | 39 (10.8%) |  |  |
|  |  |  |  |  |  |  |
| Residence |  |  |  |  |  |  |
| Rural | 259 | 115 (44.4%) | 122 (47%) | 22 (8.4%) | 8.70 | 0.01 |
| Urban | 462 | 257 (10.8%) | 169 (36.5%) | 36 (7.7%) |  |  |
|  |  |  |  |  |  |  |
| Father Education | |  |  |  |  |  |
| Illiterate | 236 | 127 (53.8%) | 99 (42%) | 10 (4.2%) | 35.46 | 0.00 |
| Middle | 210 | 112 (53.3%) | 86 (41%) | 12 (5.7%) |  |  |
| Intermediate | 185 | 98 (52.9%) | 72 (38.9%) | 15 (8%) |  |  |
| Graduation | 90 | 35 (38.8%) | 34 (37.7%) | 21 (23.3%) |  |  |
|  |  |  |  |  |  |  |
| Mother Education | |  |  |  |  |  |
| Illiterate | 364 | 228 (62.6%) | 131(36%) | 5 (1.3%) | 172.07 | 0.00 |
| Middle | 227 | 112 (49.3%) | 104 (45.8%) | 11 (4.8%) |  |  |
| Intermediate | 75 | 25 (33.3%) | 33 (44%) | 17 (22.6%) |  |  |
| Graduation | 55 | 7 (12.7%) | 23 (41.8%) | 25 (45.4%) |  |  |

**Table 4: Attitude related to HB and C among students (N =721)**

|  |  |  |
| --- | --- | --- |
| Questions related to Attitude | Frequency | Percentage |
| Have you ever think you could get HB or C? |  |  |
| Yes\* | 193 | 27% |
| No | 528 | 73% |
| What will be your reaction if you get infection? |  |  |
| Fear\* | 469 | 65% |
| Shame | 29 | 4% |
| Surprise | 74 | 10% |
| Sadness | 149 | 21% |
| To whom will you talk to about your illness? |  |  |
| Physician | 50 | 7% |
| Parents\* | 584 | 81% |
| Friends | 80 | 11% |
| No one | 7 | 1% |
| From where you will get treatment against hepatitis B /C |  |  |
| Medical specialist at Health facility\* | 326 | 45% |
| Hakeem | 232 | 32% |
| Homeopath | 123 | 17% |
| Traditional healer | 40 | 5.5% |
| If you had symptoms of Hepatitis B, at what stage you will go to the health facility? | | |
| Soon as I realize the symptoms are of Hepatitis B\* | 252 | 35% |
| After 3-4 weeks of the appearance of symptoms | 108 | 15% |
| Own treatment fails | 73 | 10% |
| Will not go to health facility | 288 | 40% |
| Banning reuse of injection can control the spread of HB and C |  |  |
| Yes\* | 217 | 30% |
| No | 504 | 70% |
| Banning reuse of blade can control the spread of HB and C |  |  |
| Yes\* | 149 | 21% |
| No | 572 | 79.3% |
| If one of your relative, who is HB and C positive, becomes ill, would you be willing to care for her/him in your house or community? | | |
| Yes\* | 193 | 27% |
| No | 528 | 73% |

Positive attitude**\***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table 5:** Association between socio-demographic variables with the attitude of respondents about Hepatitis B and C | | | | | |
|  |  | Attitude | |  |  |
|  | N=721 | Positive  n=272 | Negative  n=449 | χ2 | P value |
| Age |  |  |  |  |  |
| 16-18 Years | 141 | 37 (26%) | 104 (73.7%) |  |  |
| 19-21Years | 460 | 194 (42%) | 266 (57.8%) | 12.43 | 0.00 |
| 22-24 Years | 120 | 41 (34%) | 79 (65.8%) |  |  |
|  |  |  |  |  |  |
| Study Year |  |  |  |  |  |
| First | 360 | 141 (39%) | 219 (60.8%) | 0.63 | 0.42 |
| Second | 361 | 131 (36.2%) | 230 (63.7%) |  |  |
|  |  |  |  |  |  |
| Residence |  |  |  |  |  |
| Rural | 259 | 105 (40.5%) | 154(59.4%) | 1.36 | 0.24 |
| Urban | 462 | 167 (36%) | 295 (56%) |  |  |
|  |  |  |  |  |  |
| Father Education | |  |  |  |  |
| Illiterate | 236 | 107 (45.3%) | 129 (54.6%) |  |  |
| Middle | 210 | 89(42.3%) | 121(57.6%) | 42.13 | 0.00 |
| Intermediate | 185 | 69 (37%) | 116 (89.7%) |  |  |
| Graduation | 90 | 7 (7.7%) | 83 (92.2%) |  |  |
|  |  |  |  |  |  |
| Mother Education | |  |  |  |  |
| Illiterate | 364 | 174 (47.8%) | 190 (52.1%) |  |  |
| Middle | 227 | 91 (40%) | 136 (59.9%) | 74.66 | 0.00 |
| Intermediate | 75 | 6 (8%) | 69 (92%) |  |  |
| Graduation | 55 | 1 (1.8%) | 54 (98%) |  |  |

|  |  |  |
| --- | --- | --- |
| Table 6: Practice related to Hepatitis B and C among students (N=721) | | |
| Questions related to practice | **Yes** | **No** |
|  | F (%) | F (%) |
| Have you done screening for HB & C | 79 (11%) | 642 (89%) | |
| Have you got yourself vaccinated against HB? | 210 (29%) | 511 (71%) | |
| Do you ask for screening of blood before transfusion? | 114 (16%) | 607 (84%) | |
| Do you ask for a new syringe at the time of injection? | 512 (71%) | 209 (29%) | |
| Do you ask barber to change blade at the time of shaving / cutting | 491 (68%) | 230 (32%) | |
| Do you avoid meeting Hepatitis B and C infected patients? | 542 (75%) | 170 (15%) | |
| Have you ever attend health education program about HB & C? | 123 (17%) | 598 (83%) | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table 7:** Association between socio-demographic variables with the practices of respondents about Hepatitis B and C | | | | | | |
|  |  | Practices | | |  |  |
|  | N =721 | Poor  n=268 | Fair  n=294 | Good  n=159 | χ2 | P value |
| Age |  |  |  |  |  |  |
| 16-18 Years | 141 | 41(29%) | 76(54%) | 24(17%) | 16.39 | 0.00 |
| 19-21Years | 460 | 189(41%) | 169(36.7%) | 102(22%) |  |  |
| 22-24 Years | 120 | 38(31.6%) | 49(40.8%) | 33(27.5%) |  |  |
|  |  |  |  |  |  |  |
| Study Year |  |  |  |  |  |  |
| First | 360 | 121(33.6%) | 165(45.8%) | 74(20.5%) | 7.69 | 0.02 |
| Second | 361 | 147(40.7%) | 129(35.7%) | 85(23.5%) |  |  |
|  |  |  |  |  |  |  |
| Residence |  |  |  |  |  |  |
| Rural | 259 | 147 (56.7%) | 78 (30%) | 34 (13%) | 67.5 | 0.00 |
| Urban | 462 | 121(26%) | 216 (46.7%) | 125 (27%) |  |  |
|  |  |  |  |  |  |  |
| Father Education | |  |  |  |  |  |
| Illiterate | 236 | 124 (52.5%) | 89 (37.7%) | 23 (9.7%) | 111.3 | 0.00 |
| Middle | 210 | 69 (32.8%) | 102 (48.5%) | 39 (18.5%) |  |  |
| Intermediate | 185 | 57 (30.8%) | 84 (45.4%) | 44 (23.7%) |  |  |
| Graduation | 90 | 18 (20%) | 19 (21%) | 53 (58.8%) |  |  |
|  |  |  |  |  |  |  |
| Mother Education | |  |  |  |  |  |
| Illiterate | 364 | 167 (45.8%) | 148 (40.6%) | 49 (13.4%) | 44.56 | 0.00 |
| Middle | 227 | 73 (32%) | 88 (38.7%) | 66 (29%) |  |  |
| Intermediate | 75 | 17 (22.6%) | 31 (41.3%) | 27 (36%) |  |  |
| Graduation | 55 | 11 (20%) | 27 (49%) | 17 (31%) |  |  |

|  |  |  |
| --- | --- | --- |
| Table 8: Students’ scores of Knowledge, attitude and Practices | | |
| Variables | Frequency (N-721) | %age |
| Knowledge Score1 |  |  |
| Poor | 372 | 51.5% |
| Fair | 291 | 40.3% |
| Good | 58 | 8% |
|  |  |  |
| Attitude Score2 |  |  |
| Positive | 272 | 37.7% |
| Negative | 449 | 62.2% |
|  |  |  |
| Practices Score3 |  |  |
| Poor | 268 | 37% |
| Fair | 294 | 40.7% |
| Good | 159 | 22% |
| 1For knowledge 17 questions, score ≤ 07 = “Unsatisfactory”, 7-14 =”Satisfactory” and > 14 =“Good”  2For attitude 8 questions, score 0-4 = Negative attitude and 5-8 = Positive attitude  3Forpractices 7 questions, score ≤ 02 = “Unsatisfactory” 3-5= “Satisfactory” and > 5=“Good” | | |