

Assessment Of Awareness And Knowledge Regarding Hepatitis B Among First Year Medical Students Of Nishter Medical University Multan.

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ABSTRACT

Definition: Hepatitis B is an infectious inflammatory illness of the liver caused by Hepatitis B virus. Originally known as serum hepatitis, the causative virus is the hepadnavirus which interferes with hepatocytes functions by replicating in them. Transmitted by blood, body fluids or peri-natally, factors such as transfusions, dialysis, acupuncture, tattooing and working in health care settings predisposed to infection. General ill-health, anorexia, nausea, vomiting, body aches, mild fever, dark urine and jaundice are its symptoms. An elevated serum ALT and PCR tests are used for diagnosis and special anti-viral therapy is used for its treatment.

Objectives: To assess awareness about various aspects of hepatitis B and evaluate first year students for exposure to potential risk factors for the disease. **Materials and Methods:** A descriptive study was conducted at Nishter Medical University multan from 25th march to 25th June 2017, to assess the awareness and knowledge regarding Hepatitis B among first year medical students. In this regard we used semi-structured, pre-tested questionnaire to get responses from 100 NMU students by non-probability convenient sampling, and then data was analyzed by SPSS version 21 software. **Results:** 100% knew about Hepatitis B, 85% knew about its transmission, 90% knew about its seriousness, 97% knew about its prevention, 91% knew about its treatment. 52.5% were tested for hepatitis B, 71.25% were vaccinated, 39% were positive for ear or nose pricking, 4% were positive for tattooing, 25% were positive for past blood donation, 16% were positive for past blood transfusion, 77% were positive for disposable syringe used in injections, 43% were positive for razors use, 57% were positive for contact with HBV positive person and 47% were positive for maternal HBV screening. **Conclusions:** There are different degrees of awareness regarding Hepatitis B among the first year medical students of NMU Multan. **Keywords:** Hepatitis B, awareness, Nishter Medical University.

1. LITERATURE REVIEW

According to a study conducted by 4th medical students at DOW MEDICAL COLLEGE KARACHI during the year 2014, there was 57% positive nose pricking history, 84% positive IV injection history, history of contact with HBV person was 21%, 64% positive vaccination history, razors used history 41% and tattooing history 2%.

Moreover, according to a study by 4th year students by ALLAMA IQBAL MEDICAL COLLEGE, LAHORE in 2015 there was 59% nose pricking history, 5% tattooing history, 45% razors used history, 83% positive IV injection history, 26% contact with HBV positive person history, 62% vaccination history.

To study the awareness of Pakistani Pakhtoons, a research involved interviewing people from 12 different districts of KHYBER PAKHTUNKHWA over a period of 5 months by a pre-tested questionnaire. 99% people said that they knew about hepatitis B virus and 42% said that they were tested for it. 63.2% knew there was a vaccine available. The proportion of people who said hepatitis B virus can spread by sharing razors, toothbrushes, syringes or sexual contact, was 97.94%, 95%, 99.3%, and 77% respectively. Only 28.7% knew about its vertical spread.

An international research conducted in SAUDI ARABIA learnt that 75% students were aware that HBV is a common cause of hepatitis, 50.7% thought it to be a preventable infection. Availability of vaccine was appreciated more by medical (65.2%) than non-medical students (35.2%). Approximately 70% believed that screening blood for HBV renders blood safe for transfusion. Hepatitis B virus infected student or colleague in the same classroom or working place was accepted by 58% of medical and 46.5% of non-medical students. However, 63.2% of students hesitate to take care of an HBV infected patient.

2. OBJECTIVES OF STUDY

- To find out the degree of awareness and knowledge regarding hepatitis B among first year students of NMU Multan.
- To determine the risks of contracting an HBV infection among the first year medical students.

3. MATERIALS AND METHODS

- **Materials and Methodology**

- ❖ **Study Design:** Descriptive study
- ❖ **Study area:** Nishter Medical University, Multan.
- ❖ **Study population (N):** First year students of NMU Multan.
- ❖ **Study duration:** 3 Months.
- ❖ **Study subjects:** First year students of Nishter Medical University, Multan.
- ❖ **Inclusion criteria:** Students with awareness and knowledge regarding Hepatitis B
- ❖ **Exclusion criteria:** Students without awareness and knowledge regarding Hepatitis B
- ❖ **Ethical clearance:** All subjects were explained the purpose, process and benefits of the study. Assurance was given to protect the privacy and dignity of human study subjects

- **Sampling:**

- ❖ **Size:** We used the EpiInfo software, version 3, to calculate our sample size as follows:

Population size(for finite population correction factor or fpc)(N):	100
Hypothesized % frequency of outcome factor in the population	60%+/-
(p):	5
Confidence limits as % of 100(absolute +/- %)(d):	5%
Design effect (for cluster surveys-DEFF):	1

Putting these values in the following formula:

$$\text{Sample size } n = [\text{DEFF} * Np(1-p)] / [(d^2 / Z^2_{1-\alpha/2} * (N-1) + p * (1-p))]$$

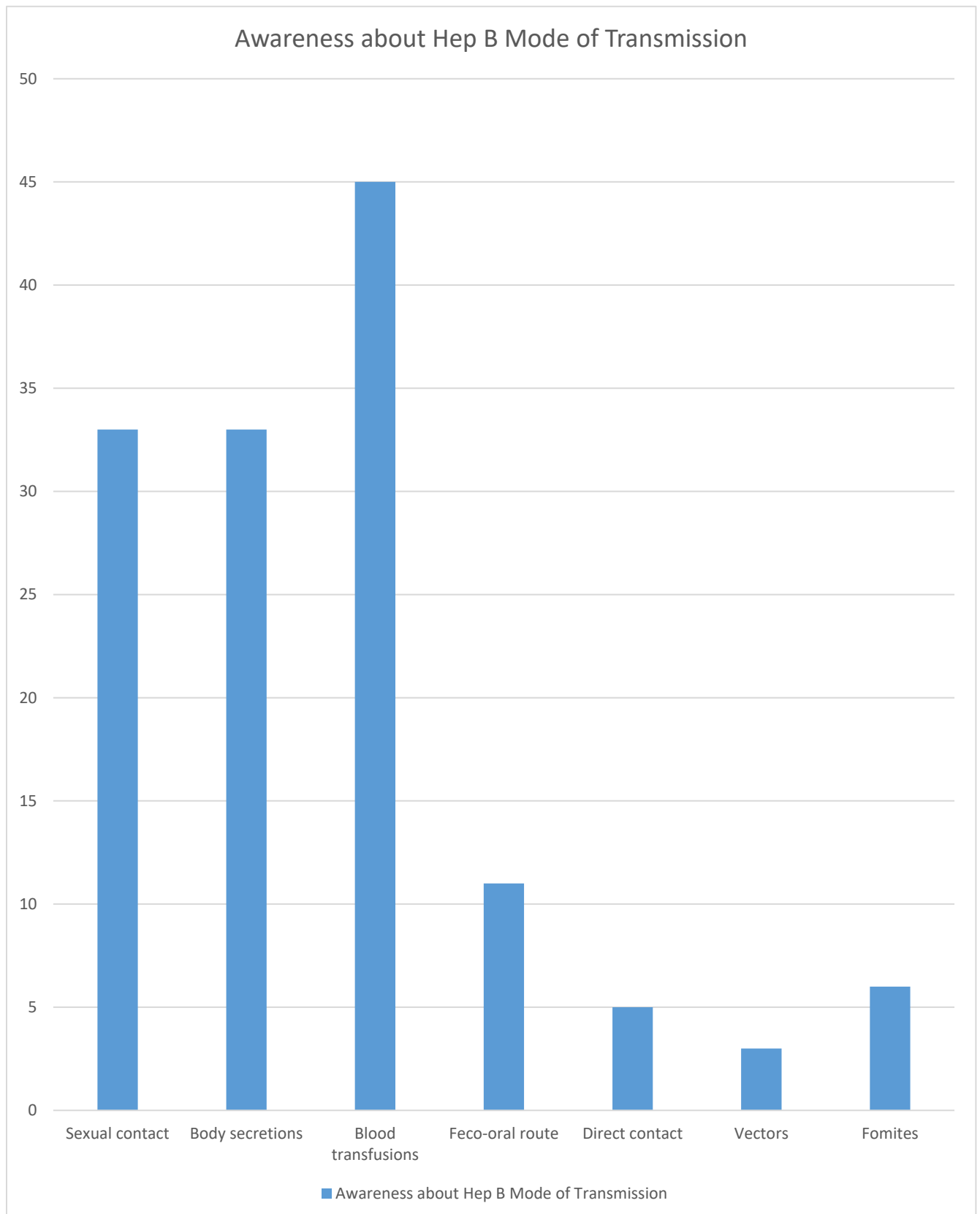
Our answer turned out to be approximately 80, hence our sample size was 80.

- ❖ **Technique:** Non- probability convenient sampling

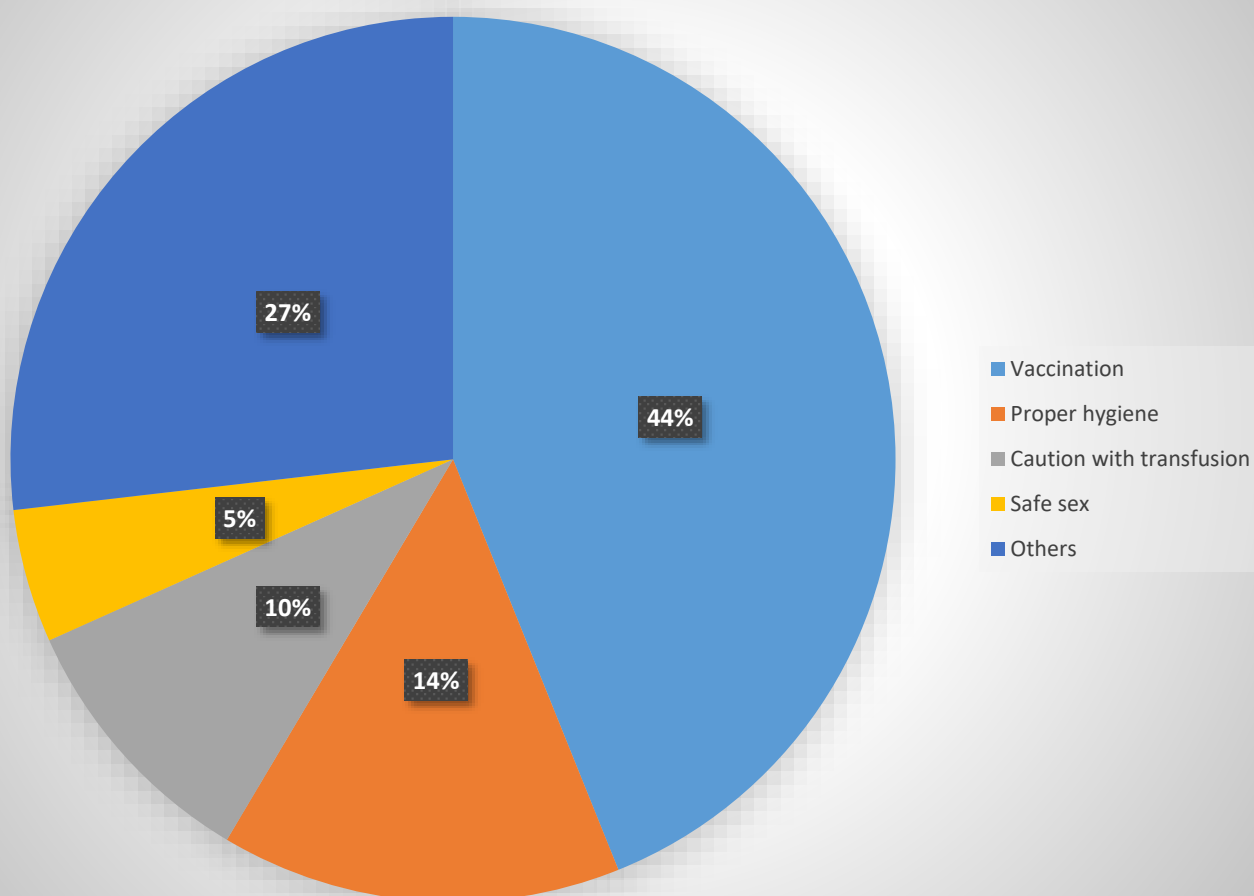
- **Data collection and analysis program:**

- ❖ **Data Collection Tool:** Semi-structured, pre-tested questionnaire survey was used for data collection.
- ❖ **Data Analysis Plan:** SPSS version 21 software

4. RESULTS



Awareness about Hep B Prevention Methods



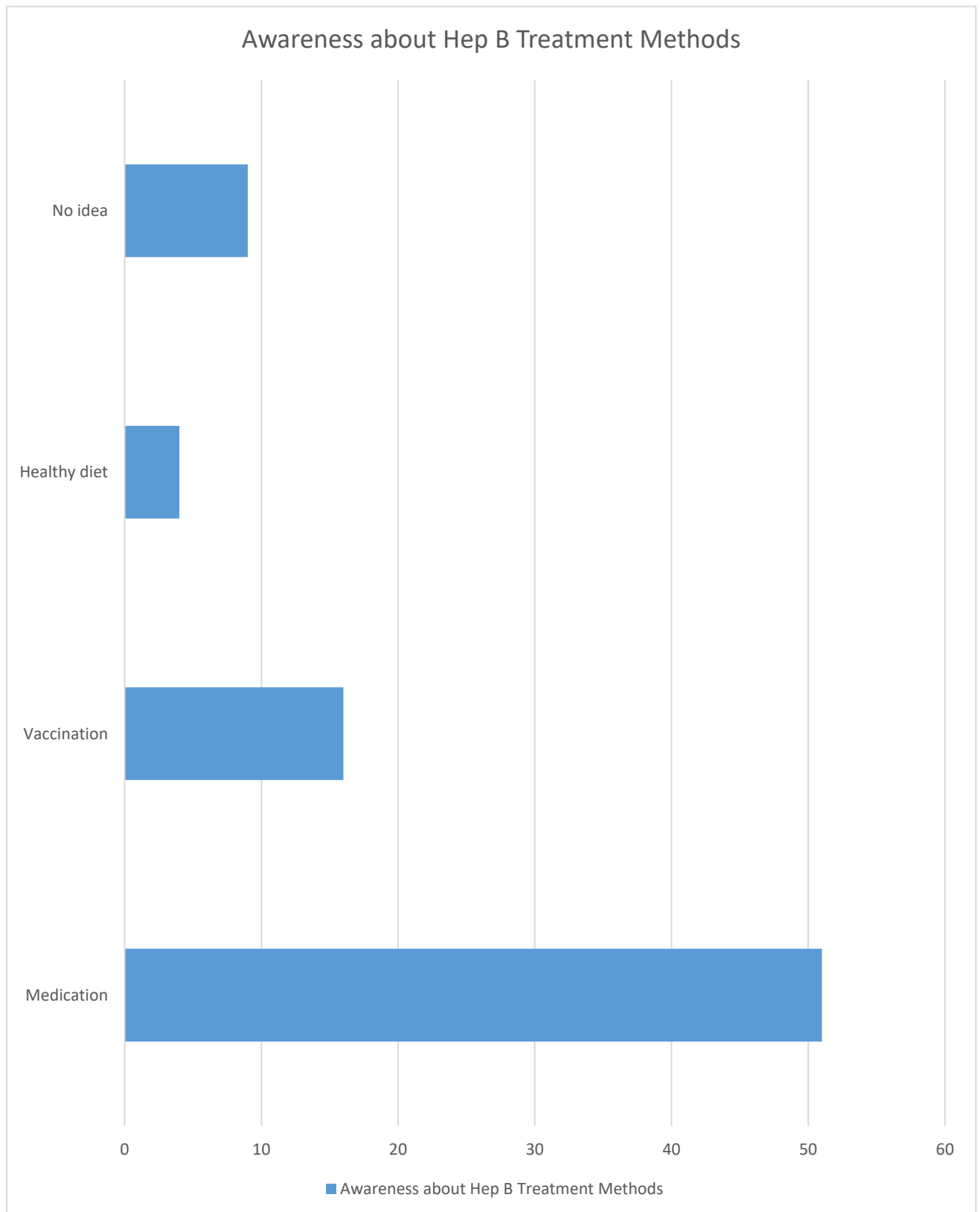


Table: Medical History Related to Hepatitis B

Medical History	Positive	Negative	Uncertainty
Testing for Hep B	42	29	5
Vaccination for Hep B	57	11	12
Ear/nose pricking	31	49	0
Tattooing	3	77	0
Dental surgeon visits	50	29	1
Past blood donation	20	60	0
Past blood transfusion	13	67	0
IM, IV Injection administration	68	7	5
Razor use	46	34	0
Unprotected sexual contact	0	80	0
Disposable syringe use	62	15	3
Contact with HBV +ve person	23	46	11
Maternal HBV screening	24	38	18
Alcohol consumption	1	79	0
Increased visits to HBV-endemic sites	38	29	13

Foot note: Majority of subjects were tested and vaccinated for Hepatitis B, and had positive histories for razor use, disposable syringe use for injections, increased visits to HBV endemic sites and dental surgeon visits, while negative histories for maternal HBV screening, alcohol consumption, unprotected sex, ear/nose pricking, tattooing, and pas blood donation/transfusion.

4. DISCUSSION

HBV infection is amongst the major health burden all over the world. Alarming Pakistan is ranked amongst the most affected and at risk population for this infection. In Pakistan the risk factors for HBV infection include IV drug use, malpractices, blood transfusions and accidental injuries such as caused by razors, nose pricking, tattooing and dental surgery. According to the synopsis, the awareness of HBV infection is 100%, about its transmission 85% and about its seriousness 90%. Our results are comparable to other studies. Some reports from a study in Karachi showed a much greater awareness about its transmission and seriousness. In the present study no history of vaccination, presence of HBV in close contacts, lack of education, use of razors, IV injections, nose pricking and tattooing are major risk factors associated with HBV infection. Our findings reveal 61% positive nose pricking history, 4% tattooing history, 43% razor use history 85% positive IV injections history, 29% positive history of contact with HBV positive person, 57% positive vaccination history. On the other hand, according to a study conducted by 4th medical students at DOW MEDICAL COLLEGE KARACHI during the year 2014, there was 57% positive nose pricking history, 84% positive IV injection history, history of contact with HBV person was 21%, 64% positive vaccination history, razors used history 41% and tattooing history 2%.

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To study the awareness of Pakistani Pakhtoons, a research involved interviewing people from 12 different districts of KHYBER PAKHTUNKHWA over a period of 5 months by a pre-tested questionnaire. 99% people said that they knew about hepatitis B virus and 42% said that they were tested for it. 63.2% knew there was a vaccine available. The proportion of people who said hepatitis B virus can spread by sharing razors, toothbrushes, syringes or sexual contact, was 97.94%, 95%, 99.3%, and 77% respectively. Only 28.7% knew about its vertical spread. [13]

An international research conducted in SAUDI ARABIA learnt that 75% students were aware that HBV is a common cause of hepatitis, 50.7% thought it to be a preventable infection. Availability of vaccine was appreciated more by medical (65.2%) than non-medical students (35.2%). Approximately 70% believed that screening blood for HBV renders blood safe for transfusion. Hepatitis B virus infected student or colleague in the same classroom or working place was accepted by 58% of medical and 46.5% of non-medical students. However, 63.2% of students hesitate to take care of an HBV infected patient. [12]

We have explored the following points regarding the differences in these observations:

- 1) Health facilities are better in the developed cities of Pakistan like Karachi and Lahore as compared to Multan
- 2) Most of the population living in the developing cities of Pakistan have a rural background like Multan.
- 3) Rural background implies that the level of education is poorer then that in the developed cities.
- 4) Trends like nose pricking are more common in rural backgrounds while trends like tattooing are more common in the urban population.
- 5) Urban lifestyles tend to be more advanced then rural lifestyles since they have access to better health care facilities and better education.
- 6) Personal and environmental hygiene are observed more in urban areas then in the rural areas which decreases their chances of exposure to HBV.

These are the possible reasons why the results of our research are different from those conducted in Karachi and Lahore.

5. CONCLUSION

There are varying degree of awareness and knowledge regarding the various aspects of Hepatitis B among the first year medical students of NMU Multan. As Hepatitis B is a serious prevalent problem in the society its awareness is a matter of serious concern from the health perspective.

6. LIMITATIONS

Only first year medical students of Nishtar Medical University Multan were taken as subject of research.

7. RECOMMENDATIONS

- A higher prevalence of known etiological risk factors for HBV infection and varying level of awareness among students as documented in our research should not go without serious concern.
- Public awareness programs should be launched through mass media to discourage the malpractices related to risk factors.
- There should be surveillance programs for the monitoring of individuals, especially high risk individuals, for Hepatitis B.
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ANNEXURE

Serial #: _____

Name: _____

Age: _____

Gender: _____

Marital status: _____

Address: _____

Have you ever heard about hepatitis B?

Yes. No. Not sure.

Is hepatitis a transmissible disease?

Yes. No. Not sure.

What do you know hepatitis B spreads by?

Blood. Body secretions. Sexual contact. Fomites. Direct contact. Feco-oral route.

Is it a dangerous disease?

Yes. No. Not sure.

Is it a preventable disease?

Yes. No. Not sure.

If yes then how it will it be?

Is there any isolation required for hepatitis B?

Yes. No. Not sure.

Is it a treatable disease?

Yes. No. Not sure.

If yes then how will it be?

Do you think certain foods can cause hepatitis B?

Yes. No. Not sure.

Do you think certain drugs can cause hepatitis B?

Yes. No. Not sure.

Are there any dietary restrictions required for hepatitis B?

Yes. No. Not sure.

Have you ever been tested for HBV?

Yes. No. Not sure.

Have you ever been vaccinated for hepatitis B virus?

Yes. No. Not sure.

Have you ever going for nose, ear pricking?

Yes. No. Not sure.

Have you ever going for tattooing?

Yes. No. Not sure.

Have you ever visited a dental surgeon?

Yes. No. Not sure.

Have you ever donated blood previously?

Yes. No. Not sure.

Have you ever undergone blood transfusion?

Yes. No. Not sure.

Have you ever used IV/IM injections?

Yes. No. Not sure.

Do you use razors?

Yes. No. Not sure.

Have you ever undergone any surgery?

Yes. No. Not sure.

Have you had unprotected sexual contact?

Yes. No. Not sure.

Do you used disposable syringe each time?

Yes. No. Not sure.

Have you ever had contact with HBV positive person?

Yes. No. Not sure.

Has your mother been screened for Hepatitis B virus?

Yes. No. Not sure.

Do you use alcohol?

Yes. No. Not sure.

Are you working in an area where there is increased risk for hepatitis B transmission like blood labs, hospitals etc?

Yes. No. Not sure.

Have you ever experienced any of the following symptoms?

Jaundice. Dark urine. Nausea. Fever. Joint pain. Loss of appetite.