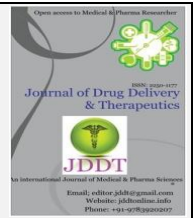




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Research Article

## Knowledge regarding Hepatitis B among staff nurses

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### ABSTRACT

Hospital is a place to get cured from the suffering. Among the members of health team the nurses spend most of their time at the bed side and they are usually considered as angels at the mission of comforting patients. Hepatitis B is a potentially life-threatening viral infection caused by Hepatitis B virus. It can create both acute and chronic diseases and, deemed as a major and serious health problem in the developing countries like India. **Materials and methods:** The descriptive survey approach adopted in the study aimed to assess the knowledge regarding Hepatitis B infection and its prevention among staff nurses. Self administered structured knowledge questionnaire was developed on the basis of objectives of the study by reviewing the literature of relevant topics and discussion with experts. **Result:** The data obtained from 100 staff nurses indicated that majority of the subjects (61%) were in the age group of 21-28 years, 84% were females and 16 % males. More than half of the subjects (55%) were with B. Sc qualification 63% were having 1-5 year experience and 62% of subjects were having monthly income between Rs 10,001-20,000. Only 36% of the subjects acquired information from college/friends. Distribution of staff nurses according to their knowledge showed that 86% had adequate knowledge, 12% had moderate knowledge, and 2% had poor knowledge. **Conclusion:** Nurses have major role in preventive aspect than in curative aspects Nurse through the scientific knowledge and skills are able to collect the data from public. The study results will help the investigators as well as the public to update their knowledge by organizing education programme.

**Keywords:** Hepatitis B, Prevention, Staff nurses.

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### INTRODUCTION

Hepatitis B 'Formally known as "Serum hepatitis" is an acute systematic infection with major pathology in the liver, caused by Hepatitis B virus and is transmitted primarily through blood (percutaneous and permucosal routes).<sup>1</sup>

Hepatitis B is endemic in the world, especially in tropical and developing countries and also in some regions of Europe. Its prevalence varies from country to country and depends upon a complex mix of behavioral, environment and host factors. In general, it is lowest in countries or area with high standard of living. The natural course of Hepatitis B disease is different from one Person to another.<sup>1</sup>

The HBV infection is a global problem, with 66% of all the world's population living in areas where there are high levels of infection.<sup>1</sup> An estimated 2 billion persons worldwide have been infected with HBV, and more than 350 million persons have chronic, lifelong infections. HBV infection is an established cause of acute and chronic hepatitis and

cirrhosis. It is the cause of up to 50% of hepatocellular carcinomas (HCC). The World Health Organization estimated that more than 600,000 persons died worldwide in 2002 of hepatitis B-associated acute and chronic liver disease.<sup>2</sup>

In order to determine the occult phenomenon in the Central Indian population, study was performed in 100 healthy health care workers and 1000 healthy blood donors. The result showed that out of 1000 screened healthy blood donors, 22 cases (2.2%) were positive for the presence of HBV DNA, i.e., Occult Hepatitis B infection with values  $\leq 100$  copies/ml, while no health care worker was reported positive. Out of these 22 cases, 20 were found positive for anti-HBsAg, while 2 were reported negative suggesting seronegative Occult Hepatitis B infection.<sup>3</sup>

Evidence shows that student nurses are at high risk of contracting hepatitis B infection. The risk during clinical training may be higher than in later years for some health care personnel since students are less experienced in safely performing medical procedures, are rotated through certain

high risk settings and are often trained in large cities where there may be a much higher prevalence of infectious patients than in other hospitals.<sup>3</sup>

Nurses are the largest occupational group in any health care agency. By virtue of their job responsibility they are frequently exposed to blood and body fluids. The nurses are risk of exposure to health hazards and the nurse as a cause of iatrogenic infection to the patients are equally facing the challenging issues all over the world.<sup>4</sup>

A Cross sectional study was conducted to assess the knowledge and preventive practice regarding Hepatitis B among nurses. The study comprise of 300 nurses from the selected hospital of Dhaka city Bangladesh who were selected using Convenience sampling technique. The data was collected by using demographic Performa and structured questionnaire. The study result showed that 67.3% of the respondents had adequate level of knowledge on hepatitis B but only half of them 49.3% had good level of preventive practices. Study concluded that compared to knowledge of the respondents on hepatitis B, their preventive practice were low.<sup>5</sup>

Hence the student researchers are made an attempt to assess the knowledge of staff nurses regarding hepatitis infection, which is a killer disease. As the proverb "prevention is better

than cure" Nurse's knowledge helps to prevent her/him from being infected and helps to create awareness to client, community and public. The present descriptive study will help to identify the knowledge through which intervention studies can be planned further.

Title of the study was to assess the knowledge regarding Hepatitis B infection and its prevention among staff nurses of selected hospital of Mangaluru. Objectives of the study were to assess the knowledge regarding hepatitis B infection and its prevention among staff nurses and to find the association between the knowledge score and socio demographic variable.

## METHODOLOGY

A descriptive survey design was used for the study and 100 staff nurses were selected by using simple random sampling technique. Instrument used for data collection were socio demographic performa and structured knowledge questionnaires to assess the knowledge regarding Hepatitis B and its prevention. Reliability of the tool is checked by split half using Karl person's correlation coefficient method. And the validity of the tool checked by giving to the subject experts. The data obtained were analyzed based on the objectives and hypothesis using descriptive and inferential statistics.

## RESULTS

**Table 1: Description of samples based on demographic characteristics (n=100)**

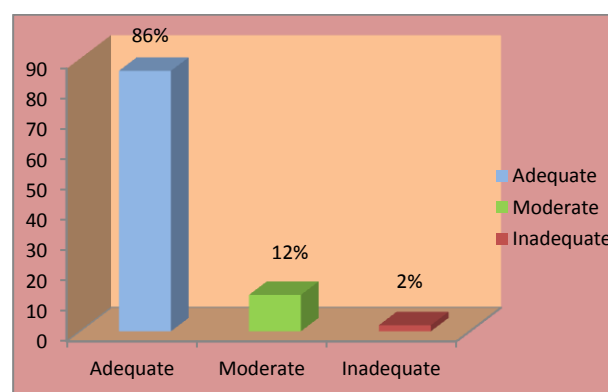
| Sl no | Sample characteristics | Category    | Frequency | Percentage (%) |
|-------|------------------------|-------------|-----------|----------------|
| 1     | Age in year            | 21-28       | 61        | 61%            |
| 2     | Gender                 | Female      | 84        | 84%            |
| 3     | Qualification          | B.Sc        | 55        | 55%            |
| 4     | Year of experience     | 1-5 years   | 66        | 66%            |
| 5     | Monthly income         | 10001-20000 | 62        | 62%            |
| 6     | Source of information  | CNE's       | 36        | 36%            |

Table 1 indicates that majority of the subjects (61%) were in the age group of 21-28 years, 84% were females and 16 % males. More than half of the subjects (55%) were with B. Sc qualification, 63% were having 1-5 year experience and 62%

of the subjects were having monthly income between Rs 10,001-20,000. Only 36% of the subjects acquired information from college/friends.

**Table 2: Distribution of samples according to the knowledge score**

| Level of Knowledge   | Category | Score     | Frequency  | Percentage  |
|----------------------|----------|-----------|------------|-------------|
| Inadequate Knowledge | <50%     | 1-10      | 2          | 2%          |
| Moderate Knowledge   | 51-75%   | 11-20     | 12         | 12%         |
| Adequate knowledge   | 75%      | 21-30     | 86         | 86%         |
| <b>Total</b>         |          | <b>30</b> | <b>100</b> | <b>100%</b> |



**Figure 1: Percentage distribution of subjects according to knowledge scores**

Table 2 depicts the distribution of subjects according to the knowledge scores. Data shows that 86% of the staff nurses of Yenepoya Medical College Hospital Mangaluru that of nurses

had adequate knowledge, 12% had moderate knowledge and 2% with inadequate knowledge regarding Hepatitis B and its prevention.

**Table 3: Association between knowledge of Staff nurses regarding the knowledge of hepatitis B and its prevention and selected socio demographic variables (N=100)**

| SL NO | ITEM                        |                  | Less than or equal to 27 | Above or equal to 28 | $\chi^2$ | p value | df | Remark |
|-------|-----------------------------|------------------|--------------------------|----------------------|----------|---------|----|--------|
| 1     | Age in years                | 21-28            | 25                       | 35                   | 4.10     | 0.25    | 3  | NS     |
|       |                             | 29-36            | 19                       | 14                   |          |         |    |        |
|       |                             | 37-44            | 1                        | 0                    |          |         |    |        |
|       |                             | 45-52            | 0                        | 1                    |          |         |    |        |
| 2     | Gender                      | Male             | 6                        | 9                    | .347     | 0.5     | 1  | NS     |
|       |                             | Female           | 39                       | 46                   |          |         |    |        |
| 3     | Education                   | PBSc             | 8                        | 3                    | 1.5      | 0.46    | 2  | NS     |
|       |                             | GNM              | 13                       | 18                   |          |         |    |        |
|       |                             | BSc              | 27                       | 31                   |          |         |    |        |
| 4     | Year of experience          | 1-5              | 29                       | 37                   | 4.31     | .2      | 3  | NS     |
|       |                             | 6-10             | 15                       | 10                   |          |         |    |        |
|       |                             | 11-15            | 4                        | 3                    |          |         |    |        |
|       |                             | 16-17            | 0                        | 2                    |          |         |    |        |
| 5     | Individual income per month | <10000           | 16                       | 16                   | 1.82     | .40     | 2  | NS     |
|       |                             | 10001-20000      | 30                       | 32                   |          |         |    |        |
|       |                             | 20001-30000      | 1                        | 4                    |          |         |    |        |
|       |                             | >30000           | 1                        |                      |          |         |    |        |
| 6     | Source of information       | Text book        | 14                       | 14                   | 4.88     | .43     | 5  | NS     |
|       |                             | Journals/website | 6                        | 9                    |          |         |    |        |
|       |                             | News paper       | 3                        | 7                    |          |         |    |        |
|       |                             | Health talk      | 3                        | 7                    |          |         |    |        |
|       |                             | CNE's            | 1                        | 0                    |          |         |    |        |
|       |                             | Colleges/friend  | 19                       | 17                   |          |         |    |        |

Value of  $\chi^2$  tested at 0.05 level of significance

Table 3 revealed that the obtained chi square value regarding age ( $\chi^2 = 4.10$ ,  $df=3$ , table value =7.82), gender ( $\chi^2=.347$ ,  $df=1$ , table value=3.84), education ( $\chi^2=1.5$ ,  $df=2$ , table value=5.99), year of experience ( $\chi^2=4.31$ ,  $df= 3$ , table value=7.82), individual income ( $\chi^2=1.82$ ,  $df=2$ , table value=5.99) and source of information ( $\chi^2=4.88$ ,  $df= 5$ , table value =11.07) are not significantly associated with the knowledge score. Hence, research hypothesis is rejected.

## DISCUSSION

This study indicates that majority of the subjects (61%) were in the age group of 21-28 years. In the presence study female are 85% and male 50%. Majority 63% are having 1 to 5 years of experience. Majority of nurses (55%) had B.Sc level of education. Most of the nurses have acquired knowledge from the college and friends. Majority of the nurses (62%) have individual income of Rs /-10,000 to 20,000. The study indicated that majority 86% have adequate knowledge 12% have moderate knowledge and 2% inadequate knowledge. This study supported with another study conducted among staff nurses in Hyderabad medical complex, Peshawar on knowledge attitude and practices regarding Hepatitis B infection. The result revealed that, the main age of the respondent was 34.8\ - 9.5 years with significant differences in socio demographic pattern previous source of knowledge about HBV during nursing training school was 914 through work shop .Nurses with job duration more than 4 years used gloves while handling Hepatitis B patient increasing duration of job was significantly associated with knowledge about Hepatitis B virus and it spread.<sup>6</sup>

Present study findings show that 86% of staff nurses had adequate knowledge and 12%, had moderate knowledge and

2% had inadequate. The result was supported with other study conducted among staff nurses from selected hospital of Dhaka city, Bangladesh. The study result shows that (67.3%) of the respondents had adequate level of knowledge on hepatitis B but only half of them (49.3%) had good level of preventive practices. In conclusion it can be said that compared to knowledge of the respondents on hepatitis B, their preventive practice was low.<sup>7</sup>

Chi square test was used to find the association between knowledge of staff nurse and demographic variables which revealed that there was no significant association between knowledge score with demographic variables such as age ( $\chi^2=4.10$ ), gender ( $\chi^2=0.347$ ), education ( $\chi^2=1.5$ ), year of experience ( $\chi^2=4.31$ ), individual income ( $\chi^2=1.82$ ), source of information ( $\chi^2=4.88$ ). A similar study was conducted to determine the seropositivity of hepatitis B infection, associated risk factors and history of vaccination among staff in 3 teaching hospitals in Khartoum. The study was carried out from March 2006 to March 2007. Participants comprised 245 randomly selected hospital staff; 12 (4.9%) reacted positively for HBsAg, 6 of whom were nurses, 4 domestic staff and 2 laboratory staff. Only 37 participants (15.1%) said that they had attended training courses in biosafety. Just over 50% indicated that they had had needle-stick or sharps injuries during work; 61 (24.9%) indicated that they always followed the bio-safety precautions, 52 (21.4%) said that they always wore gloves during their work while 43 (17.6%) said they never wore them. Only 11 (4.5%) of the participants had received the full vaccination dose for hepatitis.<sup>8</sup>

## CONCLUSION

The study revealed that majority of the subjects (84%) had adequate knowledge, 12% & 2% subjects were with moderate and inadequate knowledge respectively. This shows that there is a need for upgrading the knowledge among staff nurses which in turn helps in planning for the continuing education and also by organizing education programme in future.

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