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Assessment of Knowledge, Attitude, and Practice about Hepatitis B among Patient Porters of the Training and Treatment Hospitals of Rafsanjan, 2011

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Abstract

Introduction: Hepatitis B is a viral infection that is potentially life-threatening and is transmitted through contact with the blood or other body fluids of an infected one. Hepatitis B is, therefore, an important professional hazard for health care workers. This aim of this study was to assess the practical knowledge of hepatitis B among the patient porters of the training and treatment hospitals of Rafsanjan.**Material and Methods:** This descriptive study is a cross-sectional study utilizing a self-made questionnaire comprised of four sections on demographic information, attitude towards hepatitis B, knowledge of hepatitis B, and practical measures against hepatitis B. Face and content validity and reliability of the questionnaire was performed. After the completion of the questionnaire, parametric and non-parametric tests were conducted to assess the relationship between the study variables. A P value <0.05 was considered statistically significant. **Results:** In this study, 86 individuals filled the questionnaires (response rate =86%). Results showed that the most prevalent age was between 31 and 40 years old (60%), the dominant sex was male (62.4%), the majority had more than ten years of work experience (64.5%), and a high percentage had a middle school educational level (45.9%). Our results also showed that the majority of the respondents had received training about hepatitis B, and there was no significant relation between some demographic information such as work place and educational level and knowledge, attitude, and practice about hepatitis B. **Conclusion:** The degree of knowledge, attitude, and practice in regard to hepatitis B among the patient porters of the training and treatment hospitals of Rafsanjan was favorable. **[GMJ. 2012;1(2):60-65]**

Keywords: Patient porters; Hepatitis B Infection; Knowledge; Attitude; Practice; Health care worker

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Introduction

Hepatitis B is a potentially life-threatening viral infection caused by hepatitis B virus. It can create both acute and chronic diseases and is, thus, deemed a major and serious health problem the world over. The most serious type of viral hepatitis, hepatitis B can lead to chronic liver disease and put people at high risk of death from cirrhosis of the liver and liver cancer. An estimated two billion people around the globe have been contaminated with hepatitis B virus.[1]

Hepatitis B is avoidable with a readily available and efficacious vaccine. The possibility of hepatitis B virus infection becoming chronic depends upon the age at which a person becomes infected. For example, 90% of infants infected within the first year of life and 30–50% of children infected between one to four years of age are likely to develop chronic infections. Also, 25% of adults who become chronically infected during childhood are known to die from hepatitis B-related liver cancer or cirrhosis, while 90% of healthy adults infected with hepatitis B virus tend to get better and be totally clear of the virus within six months.

The hepatitis B vaccine is the basis of hepatitis B prevention.[1-4] There are estimated 4 million new cases of acute hepatitis B virus infections worldwide each year. About 350 million cases have chronic hepatitis B virus infection, and at least one million chronically infected persons die each year from liver cancer and cirrhosis. Hepatitis B virus is next to tobacco as a known individual carcinogen and is the 10th leading cause of death around the world.[5]

Gurubacharya6 reported that 4% and 61% of health care workers, respectively, were unaware that hepatitis B virus and hepatitis C virus can be transmitted by needle stick injuries.[6] Studies conducted hither to in Iran show that 1.3 to 8.69% of the general population are chronic hepatitis B virus carriers.[7] Tabarestani[8] reported that hepatitis B surface antigen (HBs Ag) was in 1% of controls, 2.1% of professional blood donors, 2.0% of leprosy patients, and 76.1% of acute hepatitis patients in Tehran and Mashhad, in Iran. Furthermore, Iranian midwifery students and graduates and surgeons had an undesirable level of knowledge of hepatitis B virus, whereas dentists were found to have a good knowledge of this infection.[9,10]

Hepatitis B virus has many routes of transmission such as occupational exposure among health care workers, unprotected sexual contact, vertical transmission, intravenous drug use or through blood products, and contamination during medical procedures.[11] The virus is transmitted through contact with the blood or other body fluids of an infected one.

Hepatitis B is an important professional hazard for health care workers.[3] Job-related exposure to percutaneous injuries is a considerable source of infection with blood-borne pathogens among health care workers. It was estimated that 16,000 hepatitis C, 66,000 hepatitis B, and 1,000 HIV infections occurred in the year 2000 worldwide among health care workers due to their occupational exposure to percutaneous injuries.[12] Different studies have revealed that the overall knowledge, attitude, and practice of health care workers about the risk associated with needle-stick injuries, clinical practices, and use of preventive measures is inadequate and suggested that f occupational health services be created in hospital facilities to improve working conditions, streamline infection control programs, better train staff, provide for mandatory vaccination of hospital employees against hepatitis B virus, raise awareness among health care workers about the occupational hazards of blood exposure.[6,13-15]

We sought to assess the attitude, knowledge, and practice vis-à-vis hepatitis B among the patient porters of the training and treatment hospitals of Rafsanjan, in 2011.

Materials and Methods

This descriptive study was designed as cross-sectional and employed a self-made questionnaire to evaluate the knowledge, attitude, and practice vis-à-vis hepatitis B of the patient porters of the hospitals affiliated with Rafsanjan University of Medical Sciences in 2011. The patient porters of the training and treat-

ment hospitals of Rafsanjan were targeted for the study. The study questionnaire was distributed at work places, and participants were requested to answer the questionnaire.

The questionnaire included four sections of demographic information, questions about knowledge of hepatitis B, attitude toward hepatitis B, and practical measures against hepatitis B. Face and content validity of the questionnaire was performed by experts at the Social Medicine Department, as well as infection disease specialists and nursing specialists in Rafsanjan University of Medical Sciences (CVR=1 and CVI=0.95). For reliability, the questionnaire was piloted with 10 respondents for Internal Consistency with Cronbach's coefficient Alpha of 0.80. The instrument was ready for data collection after the stabilization of reliability and validity of the questionnaire

After the completion of the questionnaire, descriptive statistics were used to illustrate the respondents' demographic characteristics. The categorical variables were measured as percentages, while the continuous variables were expressed as mean ± standard deviation. The Kolmogorov-Smirnov test was applied to declare the normal distribution of the data. Parametric and non-parametric tests (ANOVA, independent t-test, Mann–Whitney U test, and Kruskal Wallis test) were utilized to assess the relationship between the study variables. A P value <0.05 was considered statistically significant. Statistical Package for Social Sciences (SPSS) 17.0 was used for data analysis.

Table 1. Distribution of the study population according to age, work experience, sex, educational level, work place, and training history

Frequency variable		Absolute	Proportional	Missd Case
Age	20-30	15	17.6	1
	31-40	51	60	
	>40	19	22.4	
	Total	85	100	
Work experience (year)	1-10	27	35.5	10
	>10	49	64.5	
	Total	76	100	
Sex	Male	53	62.4	1
	Female	32	37.6	
	Total	85	100	
Educational level	Illiterate	2	2.4	1
	Primary school	7	8.2	
	Middle school	39	45.9	
	Diploma and upper	37	43.5	
	Total	85	100	
Work place	Ali-Ebne-Abitaleb Hospital	51	61.5	3
	Moradi Hospital	22	26.5	
	Niknafs Maternity Hospital	10	12	
	Total	83	100	
Training history	Yes	51	61.5	3
	No	22	26.5	
	Not sure	10	12	
	Total	83	100	

Result

In this study, 86 respondents completed the questionnaires (response rate =86%). The results showed that the most prevalent age was between 31 and 40 years old (60%), the dominant sex was male (62.4%), the majority had more than ten years of work experience (64.5%), and a high percentage had a middle school educational level (45.9%). Our results also demonstrated that the majority of the respondents had received training about hepatitis B (Table 1).

Table 2. Mean, standard deviation, and minimum and maximum scores of knowledge, attitude, and practice vis-à-vis hepatitis B infection.

	Mean± SD	Minimum	Maximum
Knowledge Score	52.78 ± 9.7	12	66
Attitude Score	36.33 ± 5.9	22	50
Practice Score	27.92 ± 2.56	19	30

The results of this study revealed that the mean and standard deviation of the knowledge score was 52.87 ± 9.7 from 68, the attitude score was 36.33 ± 5.9 from 50, and the practice score was 27.92 ± 2.56 from 30. Table 2 presents the minimum and maximum of these factors.
The mean of the knowledge and practice scores did not have a normal distribution; the non-parametric test Kruskal-Wallis test was, therefore, employed to analyze the difference between the mean of knowledge and practice scores about hepatitis B infection and age: there were significant differences between knowledge and age group (Table 3).Analysis via the Mann-Whitney test showed differences between the mean of practice about hepatitis B disease and sex: the females' practice scores were higher than those of the males. Although both knowledge and attitude scores were higher in the females, their differences were not significant (Table 3). Analysis via the Mann-Whitney test also demonstrated significant differences between the mean of knowledge of hepatitis B disease and work experience: the knowledge scores of the respondents with more than ten years of work experience were higher than those of the respondents who had 1-10 years of work experience. There were no differences, however, between attitude and practice and work experience (Table 3).Analysis via the Kruskal-Wallis test showed significant differences between the mean of knowledge of hepatitis B disease and educational level: the respondents with a middle school educational level had the highest scores of attitude than those with high school diplomas and higher levels. Those who were illiterate had the lowest scores of attitude (Table 3).Analysis via the Kruskal-Wallis test also revealed significant differences between knowledge and training history: the respondents with no history of training had the best scores of attitude (Table 3). There were no significant differences in terms of the mean of knowledge, attitude, and practice scores between the cases (P value >0.05).

Table 3. Comparison between the mean of and knowledge, attitude, and practice about hepatitis B disease according to age, sex, work experience, and history of training

Variable		Attitude	Knowledge	Practice
Age (years)	20-30	35.93	41.50	39.46
	31-40	37.37	47.82	41.97
	>40	33.57	31.24	35.28
		F=3.03 P=0.05	X^2= 6.35 P=0.04	X^2= 1.198 P=0.5
Sex	Male	36.25	39.50	32.88
	Female	36.26	45.11	44.36
		F=0.020 P=0.8	Z= -1.01 P=0.3	Z= -2.234 P=0.02
Work experience (years)	1-10	35.55	34.36	34.54
	>10	37.04	46.02	37.61
		T=-1.10 P=0.3	Z=-2.21 P=0.02	Z=-6.22 P=0.5
Educational level	Illiterate	36	35.00	4.50
	Primary school	31.42	17.93	42.43
	Middle school	35.82	50.05	44.32
	Diploma and upper	37.67	40.74	36.31
		F=2.48 P=0.06	X^2=10.99 P=0.01	X^2=7.57 P=0.05
History of training	Yes	36.45	41.82	40.94
	No	36.22	50.02	40.03
	Not sure	35.90	25.25	27.75
		F=0.390 P=0.9	X^2=7.31 P=0.02	X^2=3.124 P=0.2

Discussion

The Ahmady study[16] assessed the amount of knowledge, attitude, and practice of the cleaning staff regarding hepatitis B virus and reported that the cleaners had a positive attitude toward this infection and implementation of universal precautions. In addition, the cleaners had a moderate level of practical knowledge of the modes of transmission. Therefore, it was recommended that comprehensive educational programs be offered to cleaning staff regarding universal precautions. This result chimes in with the findings of our study insofar as our results showed that the mean and standard deviation of knowledge, attitude and practice scores

were desirable. Our study also showed that the knowledge score of the patient porters about hepatitis B was desirable. The Singh study[17] showed that the mean knowledge, attitude, and practice scores were 3.75, 3.40, and 3.35, respectively, and the level of knowledge and practice of infection control measures was poor among dental students. The study recommended rigorous training on infection control measures prior to graduation and mandatory hepatitis B immunization of students before exposure to clinical practice. This finding was not similar to the results of our study. It seems the educational level cannot assign the level of knowledge about a matter definitely. It may be more effective to offer training in a particular subject in specific groups.

The Khan study[18] demonstrated that 49.8% of the respondents had favorable knowledge regarding the spread of hepatitis B through dental procedures, and 76% of the participating medical students did not have any knowledge about post-exposure prophylaxis for hepatitis B and C. Additionally, 74% of the participants indicated that hepatitis patients should not be isolated. The overall KAP study group showed satisfactory outcomes, and the results are similar to those of our study. Ul Haq et al.[4] reported extremely poor knowledge, attitude, and practice of healthy population towards hepatitis B. The authors suggested that extensive health educational campaigns be launched for the general population and especially the residents of rural areas. Chan[19] reported that factors associated with insufficient knowledge about hepatitis B virus included women outside the healthcare sector, lower educational levels, and no previous hepatitis B virus testing.Gurubacharya[6] showed that health care workers' knowledge about the risk associated with needle-stick injuries and use of preventive measures was inadequate and suggested that health care workers be made aware of hazards, preventive measures, and post-exposure prophylaxis to needle-stick injuries. The Moghimi study[10] reported that only 12.9% of surgeons always used double gloves and older surgeons never used double gloves (P value =0.001). They study also reported that Iranian surgeons were not aware of the correct percentage of infected patients with and seroconversion rate of blood-borne diseases and did not use double gloves adequately and suggested that educational meetings, pamphlets, and facilities be provided to health care workers so as to inform them about hazards, prevention, and post-exposure prophylaxis to needle stick injuries, vaccination efficacy, and wearing double gloves. Our study had similar findings about surgeons. Consequently, the level of academic education does not seem to have a significant effect.

We believe that all high-risk groups such as health care workers, surgeons, dentists, students, and patient transporters should receive continuous training and education.

Conclusion

This study showed no significant relationship between some demographic information, including work place and educational level, and knowledge, attitude, and practice vis-à-vis hepatitis B infection. The score of knowledge, attitude, and practice of the patient porters of the training and treatment hospitals in Rafsanjan was desirable.

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