

## Knowledge, Risk Perceptions, and Behavioral Intentions Related to Hepatitis B among Health Managers in Yazd Province (Iran)

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Hepatitis B is an infection of the liver caused by the hepatitis B virus (HBV). It is a worldwide public health problem of major concern<sup>(1)</sup>. Hepatitis B is spread mainly by exposure to infected blood or bodily secretions such as semen, vaginal discharge, breast milk, and saliva. It is estimated that 350 million individuals worldwide are infected with the virus, which causes 620,000 deaths each year. Over 35% of Iranians have been exposed to HBV, about 3% are chronic carriers, and its frequency ranges from 2 to 3 percent<sup>(2, 3)</sup>. This article reports the knowledge of risk perception and behavioral intentions related to hepatitis B infection and studies how hepatitis B perceptions and intentions vary by individual factors among a group of health managers in Yazd, Iran.

The target population for this survey included all of the 160 health managers of hospitals, laboratories, and urban and rural health centers at Yazd Shahid Sadoughi University of Medical Sciences. All of the participants completed the questionnaire that included five sections: knowledge, general risk perceptions, personal risk perceptions, and behavioral intentions. The clarity and content validity of the questionnaire was performed by using a pilot test and a panel of experts. To determine internal reliability, a Cronbach's alpha was calculated for each scale. Of the sample, which was 55% male and 45% female, 32.5% reported having more than a college education. 6.9% of participants had not had any hepatitis shots. A Spearman's rho test showed that knowledge scores increased by participant's education level. Participants' awareness of some questions was low. More than

96% of participants identified sexual contact with an infected person as a critical risk factor for transmission. A series of analysis of variance (ANOVA) tests showed statistically significant differences on the basis of general and personal risk perceptions and behavioral intention scores by work location. General risk perceptions, personal risk perceptions, and total risk perceptions were significantly related to behavioral intentions related to hepatitis B at the 0.01 level, but none of the risk perceptions were significantly correlated with knowledge. A regression analysis showed that general risk perceptions were the only statistically significant predictor of behavioral intentions related to hepatitis B.

Our results differ from the results of John<sup>(4)</sup>, whose participants were much less likely to identify sexual contact with an infected person as a critical risk factor for transmission. In our study, there was no

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statistically significant difference in knowledge scores by the gender of respondents. Data from a recent study about work location revealed a statistically significant difference on the basis of general and personal risk perception scores by work location. Specifically, respondents who were working in a hospital had a higher perceived level of general and personal risk, followed by respondents who were working in health care centers. These data are consistent with the findings from a study in Egypt, which compared the frequencies of hepatitis B surface antigen (HBsAg) and antibodies to hepatitis B surface antigen (anti-HBs) frequencies by occupational group (5). In a similar study performed on the health workers of the National Iranian Oil Company, the laboratory personnel was found to be at a higher risk than other workers (6), but in our study the laboratory workers had the lowest perception of risk. Many studies about behavioral intentions related to hepatitis B suggest that cultural health beliefs may play a role in the immunization of participants (4). However, the present results indicate that although our health managers had an acceptable level of knowledge (i.e., general and personal risk perceptions), their behavioral intentions related to hepatitis B were not at a sufficient level. To resolve this problem, we must emphasize educational and intervention programs.

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