

Evaluation of Dental Interns' Knowledge and Attitude Regarding Occupational Blood Exposure Accidents

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ABSTRACT

Background: Occupational blood exposure accidents (OBEA) are harmful because they put the involved individual at risk of contracting infectious agents transported by the blood, such as human immunodeficiency virus, Hepatitis B, Hepatitis C, and Herpes viruses. Almost 385,000 health-care employees are exposed to such diseases each year. **Aim:** The aim of the study was to assess dental trainees' knowledge and attitudes concerning OBEA. **Materials and Methods:** A cross-sectional questionnaire-based survey was conducted among the Interns of VSPM Dental College and Research Centre, Nagpur. **Results:** About 69.8% (60) interns did not know emergency measures in case of OBEA while 30.2% (26) interns were aware of them, 89.5% (77) interns did not have a history of an OBEA while 10.5% (9) interns had a history of an OBEA out of which 63.6% (6) interns had a history of an OBEA once, while 36.4% (3) had it twice. **Conclusion:** The knowledge and attitude with regards to OBEA are moderately present among dental interns. Even then, there is a need for imparting knowledge by conducting awareness programs to upgrade the information regarding OBEA's among dental under graduate students.

Key words: Knowledge, attitude, dental interns, occupational blood exposure accidents

INTRODUCTION

Occupational blood exposure accident (OBEA) is described as a percutaneous damage or touch of mucous membrane or skin with blood, tissue which can be doubtlessly infectious. Such injuries encompass needlestick damage or nick with a pointy object. It is greater risk if the uncovered pores and skin is abraded or inflicted with dermatitis.^[1] The reasons for such injuries are kind and layout of needle, recapping activity, collision among fitness care workers, during clean up, managing sharp tool, and failure to cast off needles in puncture proof container.^[2] Preventing exposures to blood and body fluids (i.e., foremost prevention) is the maximum crucial approach for stopping occupationally received human immunodeficiency virus (HIV) infection. Both character health-care companies and the establishments that appoint

them must ensure to make certain adherence to the ideas of "Standard Precautions."^[3]

These occupational exposure injuries are risky because they predispose the concerned individual to the hazard of transmission of infectious sellers carried through way of means of the blood such as: HIV, hepatitis B virus (HBV), hepatitis C virus (HCV), and Herpes viruses. Sardar *et.al.* mentioned in their study that 6–8 lakh needle stick accidents had been observed yearly in Khamman. In their study, additionally, they predicted that the hazard of HIV contamination is about 0.3%, Hepatitis B is 30%, and Hepatitis C is 3%.^[4] During the past 25 years, it is been observed that there is a fall in the number of these injuries through way of means of the usage of contamination manipulate measures, vaccine brought about immunity, higher prevention, and alertness of a sequence of recommendations.^[5] Worldwide, about 40% of HBV and HCV infections and 2.5% of HIV infections in health-care employees are attributable to occupational sharp devices exposure.^[6] The scientific guidelines for thinking about any affected person for having an effective serology need to be proved. According to the World Health Organization, Africa and the Eastern Mediterraeaan could have approximately 53.2 million HCV seropositive people as compared to with

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116.5 million within the relaxation of the world.^[7] In Middle East – an North Africa vicinity, the virus, the viraemic occurrence of hepatitis C, was estimated to be 0.2% (Iran) and 6.3% (Egypt).^[8] This brings social modifications that might have an powerful effect at the local public fitness because the superiority of HIV, HCV, and HBV infections within the sub-Saharan vicinity is increasing. Those immigrants, from endemic countries, cumulate chance elements for numerous vial-infections.^[9] This study was designed to help dental interns learn about blood hazard exposure injuries and to evaluate their understanding of the topic.

Aims and Objectives

The aim of the study was to compare the information and mind-set of dental interns in the direction of OBEA.

MATERIALS AND METHODS

The evaluation protocol was permitted by means of the Institutional Ethical Committee of college. The study was conducted on dental interns who are studying at the VSPM Dental College and Research Centre in Nagpur.

Study Design

A cross-sectional study was designed. A confirmed questionnaire become allotted amongst Interns of VSPM Dental College and Research Centre, Nagpur

Study Population

A overall of 86 interns out of 90 interns participated. There had been 14 male interns and 72 lady interns.

Study Procedure

A confirmed questionnaire with overall 18 close-ended questions was given to the interns through Google forms. All the interns inclined to take part had been included in the study.

RESULTS

The present study was carried out among the dental interns of VSPM Dental College and Research Centre. About 98.8% (85) interns recorded their patient’s systemic history before the dental treatment while 1.2% (1) interns did not [Figure 1].

About 83.7% (72) interns consulted their patient’s physician, if their patient had a systemic disease while 16.3 % (14) interns did not consult [Figure 2].

About 94.2% (81) interns always wore a protective mask during dental procedure while 5.8% (5) interns sometimes wore a protective mask [Figure 3].

About 57% (49) interns sometimes used an eyewear during dental procedure, 29.1% (25) interns always used an eyewear while 14% (12) interns never wore an eyeglass [Figure 4].

About 98.8% (85) interns wore gloves while 1.2% (1) interns did not [Figure 5].

About 60.5% (52) interns always washed their hands before examining a patient while 39.5% (34) interns sometimes washed their hands [Figure 6].

About 97.7% (84) interns always recapped the needle after using anesthetic syringe, 1.2% (1) intern sometimes recapped it while 1.2% (1) interns never did it [Figure 7].

About 81.4% (70) interns threw away the sharp instrument in a container, 16.3% (14) interns did not throw away the sharp instrument, and 2.3% (2) interns did it sometimes [Figure 8].

About 88.4% (76) interns knew what OBEA is while 11.6% (10) interns did not [Figure 9].

About 75.6% (65) interns did not get any special education to deal with OBEA while 24.4% (21) interns got special education [Figure 10].

About 69.8% (60) interns did not know emergency measures in case of OBEA while 30.2% (26) interns knew about them [Figure 11].

About 91.9% (79) interns thought that it is necessary to report the OBEA within 24 h while 8.1% (7) interns thought that it is necessary to report the OBEA within 48 h [Figure 12].

About 79.1% (68) interns thought that a simple sting exposes them to an infection by HIV, 17.4% (15) interns thought that a simple sting exposes you to an infection by HBV, 2.3% (2) interns thought that a simple sting exposes them to an infection by HCV and 1.2% (1) intern thought that a simple sting exposes him/her to an infection by syphilis [Figure 13].

About 61.6% (53) interns knew about chemoprophylaxis antiretroviral therapy while 38.4% (33) interns did not [Figure 14].

About 97.7% (84) interns thought that it is necessary to undergo a serological monitoring after an OBEA while 2.3% (2) interns thought that it is not [Figure 15].

About 96.5% (83) interns felt the need for additional education in terms of OBEA while 3.5% (3) interns felt no such need [Figure 16].

About 89.5% (77) interns did not have a history of an OBEA while 10.5% (9) interns had a history of an OBEA out of which 63.6% (6) interns had a history of an OBEA once while 36.4% (3) had it twice [Figures 17 and 18].

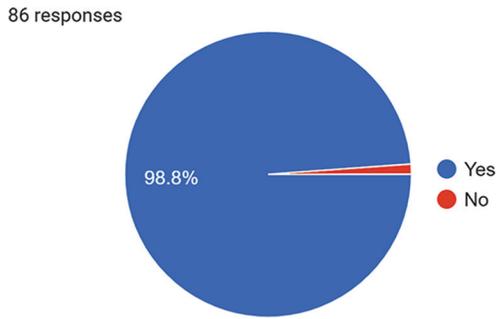


Figure 1: Do you record your patient's systemic history before the dental treatment?

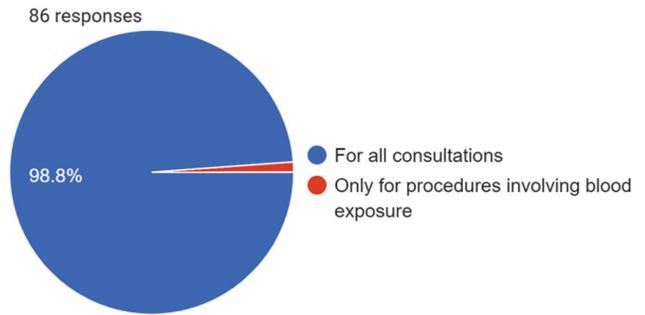


Figure 5: Do you wear gloves?

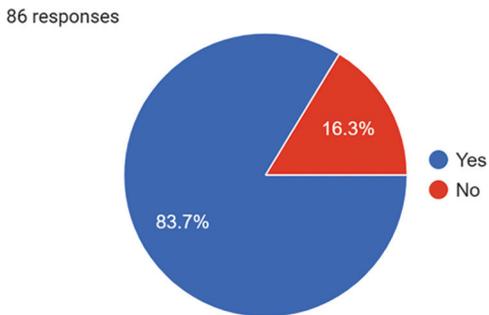


Figure 2: If your patient has a systemic disease, do you consult his/her physician?

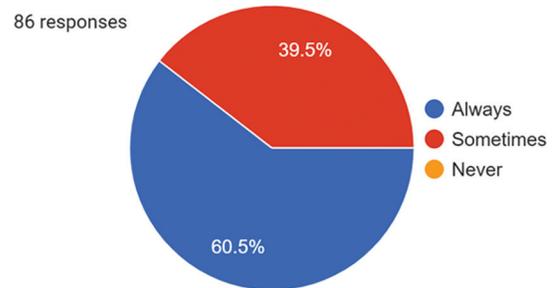


Figure 6: Do you wash your hands before examining a patient?

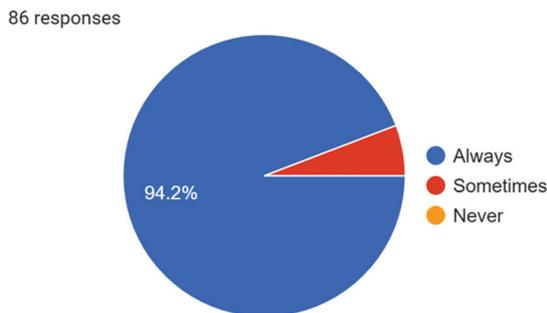


Figure 3: Do you wear a protective mask during dental procedure?

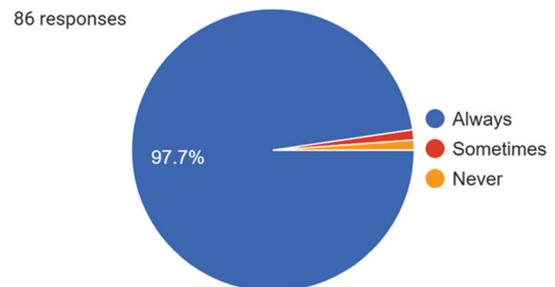


Figure 7: After using anesthetic syringe, do you recap the needle?

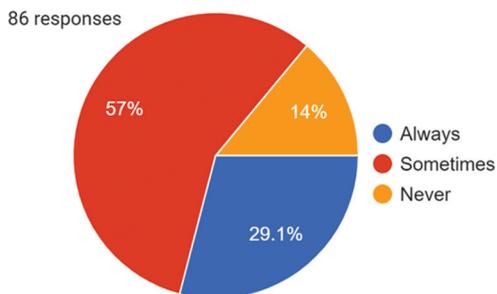


Figure 4: Do you use an eyewear during dental procedure?

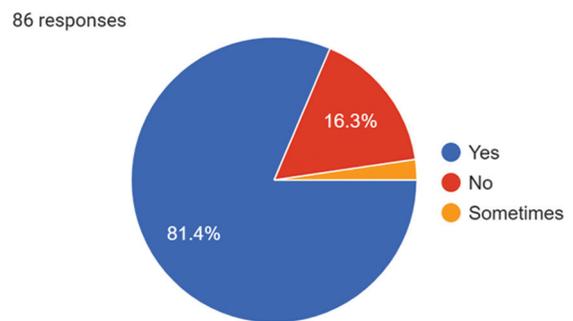


Figure 8: Do you throw away the sharp instruments in a container?

DISCUSSION

Health-care experts are continuously at a hazard for OBEA. The preservation of private fitness desires to be continuously emphasized that the experts apprehend the feasible possible fitness implications in their jobs and discover ways to decrease them.^[10]

Almost 99% interns recorded their patient's systemic records earlier than dental care in our examination. This is comparable to the study carried out through Hbibi *et al.*^[6] in which majority of the individuals understood the significance of systemic records taking.

In a study conducted by Sardar *et al.*, it was found that 73.6% students had taken the written consent for their patients if

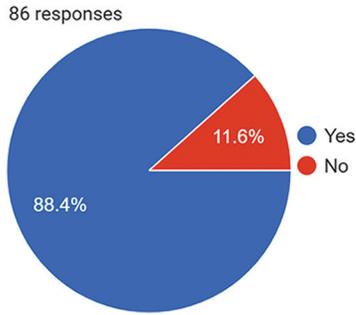


Figure 9: Do you know what is OBEA is?

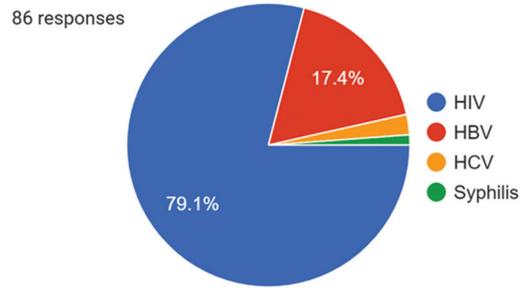


Figure 13: In your opinion, a simple sting exposes you to an infection by

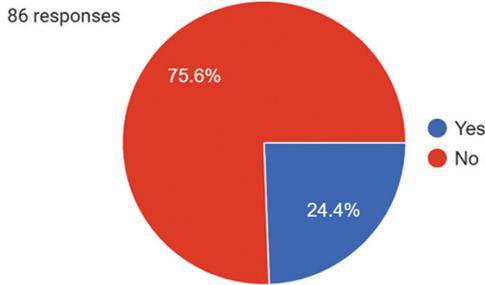


Figure 10: Did you get any special education to deal with OBEA?

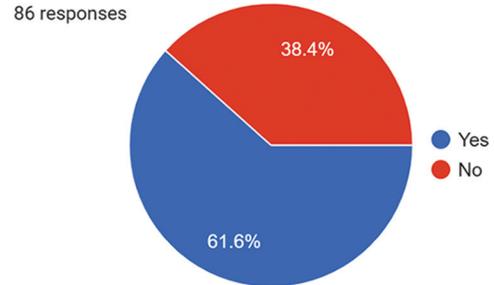


Figure 14: Do you know chemoprophylaxis antiretroviral therapy?

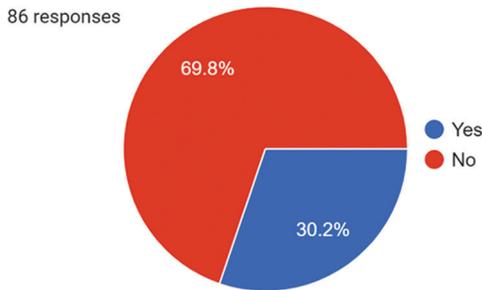


Figure 11: Do you know any emergency measures in case of OBEA ?

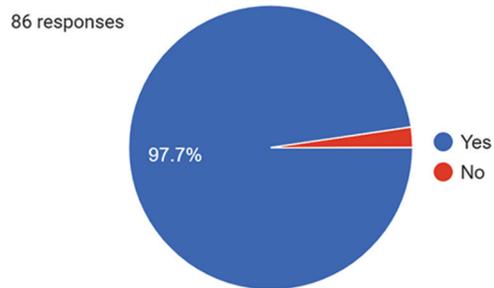


Figure 15: In your opinion, is it necessary to process to a serological monitoring after an OBEA?

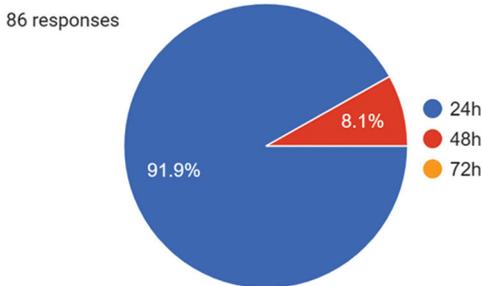


Figure 12: In your opinion, is it necessary to report the OBEA within?

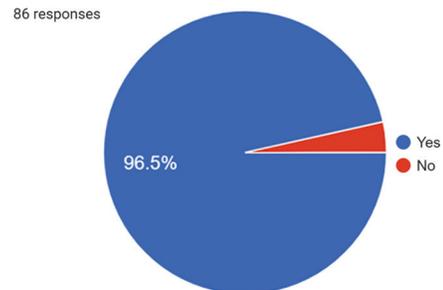


Figure 16: Do you feel the need for additional education in terms of OBEA?

their patient had a systemic disease^[13] whereas in the present study, we found that 83.7% student consulted their patient's physician. This shows that the interns in our study are aware of the fact that some diseases require physician's opinion before starting their dental treatment.

Another study conducted by Samargandy *et al.* found that 95.4% students wore gloves for all dental procedures^[11] whereas in the present study, 98.8% interns wore it.

A study done in Khammam reported that 95.87% students recapped the needle after use^[13] which is similar to the present study wherein 97.7% students did it.

A majority of interns, that is, 81.4% threw away the sharp instruments in a container whereas 16.3% did not throw while 2.3% interns throw it sometimes.

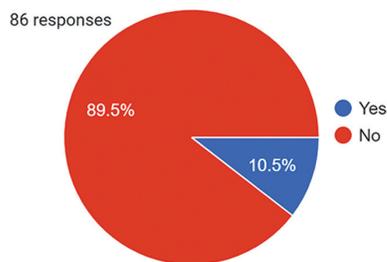


Figure 17: Do you have a history of an OBEA?

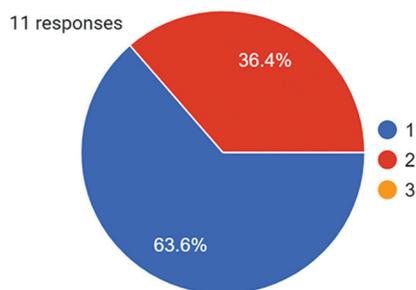


Figure 18: If yes, please specify the number

In the present study, more than 88% interns knew what OBEA is while the rest lacked the knowledge about the same.

In the present study, only 24.4% interns had received special education to deal with OBEA. Furthermore, on asking the participants, about 70% interns were unaware of the emergency measures in case of OBEA and, hence, a significant rate of interns 96.5% felt the need for additional education in terms of OBEA.

A vast majority of the interns 97.7% thought that it is necessary to undergo serological monitoring after OBEA and the rest found it unnecessary, while almost 92% interns had an opinion that the OBEA should be reported within 24 h of exposure.

Furthermore, Hbibi *et al.* found in their study that 42.7% students had an history of an OBEA.^[6] but in the present study, only 10.5% interns had an history of an OBEA. This shows that the interns from our institute are careful while dealing with sharp instruments from patients use.

Dental college students are future health-care people and feature an powerful effect on the general public fitness. Therefore, their fitness and health need to be preserved, and at the same time improve their expertise concerning dangers even during dental procedures.

CONCLUSION

In the present study, dentists' knowledge and attitudes about OBEA are moderately present. There is a need for other educational resources to upgrade the information about OBEA among dental students. More effective education

on preventing and managing OBEA injuries is highly recommended to reduce the prevalence of these injuries. Dental establishments should set up an administration unit nearby to provide appropriate openness to students.

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