

# Appraisal of the Awareness' Towards Work-related Injury among Endodontic Staff at King Dental College - King Khalid University, Abha-Saudi Arabia

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**Abstract:** *Background:* Notwithstanding the highlighting on safety measures in health care setting, the minority of organizations have evaluated the extent to which safety is a deliberate precedence and culture supports patient safety. In reply to the Institute of Medicine's report and to an organizational commitment to patient protection was conducted an efficient assessment of safety standards. *Objective:* To appraise the level of awareness' towards work-related injury among endodontic staff at Dental Clinics, King Khalid University, Saudi Arabia. *Method:* A cross-sectional survey was conducted at dental Clinics, King Khalid University, Saudi Arabia. A 32 items self-administered questionnaire was provided to 150 endodontic staff in the research setting based on To assess the level of awareness' towards work-related injury among endodontic staff at Dental Clinics, King Khalid University, Saudi Arabia. *Results:* This study showed that awareness towards the aspects of work related injury among some dental staff working at the dental clinics of the selected setting was variable. The majority (90.44%) of the dental staff had a high level of awareness towards "HCWs with non intact skin should not be involved in direct patient care until the condition resolves". Followed by (91.33%) at the item of "Isolation is necessary for patients with blood-borne infections". On the other hand (2.66%) of the dental staff had a low level of awareness towards work-related injury was in item "HCWs with non intact skin should not be involved in direct patient care until the condition resolves". followed by the item of (Used needles can be recapped after giving an injection). *Conclusions:* The current study results revealed that there were high levels of work related injury within the study setting.

**Keywords:** Work –Related Injury; Awareness; & Endodontic

## 1. Introduction

Increasingly, healthcare setting are becoming attentive of the implication of transforming organizational culture in order to develop the standardized patient safety. Developing attention on safety culture has been associated by the need for assessment tools paying attention on the cultural elements of enduring safety expansion efforts. Work related safety culture assessment could be applied as a tool for enhancing patient safety. This could also illustrate the characteristics of culture appraisal tools currently existing and discusses their existing and potential utilization, including brief applications that have undertaken as assessments. (Jawaid, Iqbal & Shahbaz, 2009).

The safety measures include explicit recommendations for use of personnel protective equipments when contact with blood and body secretions containing blood is anticipated. (Al-Saigul, Fontaine, Haddad, 2002). Health care staff is at risk of acquiring infection through professional exposure to infectious diseases. Whole precautions were primarily developed in 1987 by the Centers for Disease Control and Prevention in the United States and in 1989 by the Bureau of Communicable Disease Epidemiology in Canada. The minority studies have reported on surgeons' adherence towards universal precautions and reported be deficient in of adequate practices in relation to compliance towards the personnel protective equipments. (Ruben FL, Norden CW, Rockwell K, Hruska, 2008) .

According to Wilczyn, et al., (2005), write to to particular health hazards are predictable to manipulate explicit risk for all the health care providers. All the health care personnel in particular the dental staff who are working in surgical units and Operation Theater are more required to have a cause of a better understanding in adherence with PPE usage which is noteworthy as it provides an assessment of the efficacy of accessible preventative strategies. This could then assist to recognize the precautionary variables which are likely to improve the compliance and decrease the risk of infection transmission. Then, it is possible to integrate these anticipatory approaches into the strategies of health care surroundings.

Sorra , (2013), mentioned that .policies of safety measures of work related universal precaution is the only approach so that all these infections could be prevented. Inadequate experience of surgeons in performing invasive procedures, they are at particular risk of exposure to blood-borne pathogens (Chopra, et al., 2008). Surgeons' should have reasonable knowledge and performance in relation to adherence to personnel protective equipments. Moreover, Elliott et al. (2005), reported that dedicated training must be conducted before a surgeons caring for any patient procedure particularly the ones concerning sharp devices. Physicians' compliance towards the personnel protective equipments has been reported to be with little level.

Colodner , et al .,2003 & Taneja, (2010) , reported that , risks caused by non adherence to universal precautions by the health care providers, statistics reported by the Central

Register of Occupational Diseases in Poland indicates that among 314 new cases of occupational diseases in HCWs in 2005, HBV and HCV represented 42.6% of all cases.<sup>9</sup> Despite the substantial reduction in HBV infection since vaccination was introduced in 1989, the incidence of HCV hepatitis in Poland is still on the increase in this occupational group.

Policies of work related injury enhance consciousness education has not been prominent among health care workers especially the category of surgeons, particularly in developing countries. To the greatest of our understanding, the attentiveness of dental staff in relation to knowledge and awareness about policies work related injury. Consequently, conducted this study to assess their level of awareness of dental staff toward work related injury at the King Khalid University-Saudi Arabia.

## 2. Participants and Methods

This study was conducted in November, 2015 at the dental clinics of King Khalid University, Abha. The study was granted ethical approval by the dental clinics of King Khalid University ethical Committee. King Khalid University is the major teaching hospital, with approximately 450 beds. It provides services in community including all general and specific services. The number of sample size was 150 dental staff was recruited for the study. The participants were selected from the clinics. After signing an informed written consent form, the questionnaire was given to each participant. Before administration of the questionnaire, the purpose of the study was explained to each respondent and confidentiality of the information guaranteed. 0

The current r study was carried out by one of the authors who were appropriately trained in administering the informed consent and the self-report questionnaire to the participants. In this cross-sectional study, a structured questionnaire prepared by the authors, was administered to the participants. A 28-item self-administered structured

questionnaire about knowledge and awareness work related injury was devised de novo and tested. It included a full range of response options, designed to identify the practitioner's level of to assess their level of attentiveness towards policies among dental staff in the selected setting. Prior to distribution of the questionnaire, a pilot study was done on a selective group of health care workers who were asked to fill out the questionnaire and return it back with their remarks and criticism. Minor changes were then made to the final tool.

The preliminary part of the questionnaire consisted of demographic information such as occupation, age, gender, and the marital status. The second part of the questionnaire comprised of questions regarding their level of attentiveness towards universal precautions. This part also assessed the level of awareness of the dental staff toward work related injury within the study setting. It took approximately 15 minutes to complete each appraisal.

The level of awareness of the dental staff toward work related injury within the study setting by examining questions about: use of protective equipments' such as gloves and gown, mask and protective goggles. A score of "1" was assigned for a correct answer and "0" for an incorrect answer. A health care worker who obtained a total score of "5" was considered "very attentive;" "4 or 3" "somewhat attentive;" and "1 or 0" "not attentive."The data were coded and analyzed by SPSS<sup>®</sup> for Windows<sup>®</sup> ver. 12.0. Strict confidentiality was maintained. All the data were stored in computers at a secured location, with access provided only to the researchers involved in the study. The  $\chi^2$  test was used to test association between categorical variables. A p value <0.05 (two-tailed) was considered statistically significant differences.

## 3. Results

### Level of Awareness' towards Work-Related Injury among Dental staff at Dental Clinics of Selected Setting

Items of Occupational Injury	Very Knowledgeable		Somewhat knowledgeable		Not Knowledgeable	
	No	%	No	%	No	%
Universal precautions are applied to patients with HIV and viral hepatitis only"	136	90.6	5	3.4	9	6.0
"Isolation is necessary for patients with blood-borne infections"	137	91.33	3	2.0	10	7.77
Used needles can be recapped after giving an injection"	136	90.6	10	6.66	4	2.66
For decontamination of devices (with only contact with skin) washing with usual detergent is enough"	133	88.44	10	6.66	7	4.66
Universal precautions are not necessary in situations that might lead to contact with saliva"	129	86.0	11	7.33	10	6.66
"HCWs with non intact skin should not be involved in direct patient care until the condition resolves "	142	94.44	4	2.66	4	2.66
Blood spills should be cleaned up promptly with sodium hypochlorite"	135	90.0	10	6.66	5	3.4

This study showed that awareness towards the aspects of work related injury among some dental staff working at the dental clinics of the selected setting was variable. The majority (90.44%) of the dental staff had a high level of awareness towards "HCWs with non intact skin should not

be involved in direct patient care until the condition resolves". Followed by (91.33%) at the item of "Isolation is necessary for patients with blood-borne infections" On the other hand (2.66%) of the dental staff had a low level of awareness towards work-related injury was in item "HCWs

with non intact skin should not be involved in direct patient care until the condition resolves ".followed by the item of (Used needles can be recapped after giving an injection)

#### 4. Discussion

The entire the selected health care workers fully completed the questionnaire, giving a response rate of 100%. This study showed that awareness towards the aspects of work related injury among some dental staff working at the dental clinics of the selected setting was variable. The majority (90.44%) of the dental staff had a high level of awareness towards "HCWs with non intact skin should not be involved in direct patient care until the condition resolves". Followed by (91.33%) at the item of "Isolation is necessary for patients with blood-borne infections" .On the other hand (2.66%) of the dental staff had a low level of awareness towards work-related injury was in item "HCWs with non intact skin should not be involved in direct patient care until the condition resolves ".followed by the item of (Used needles can be recapped after giving an injection)

This study showed that attentive towards policies work related injury among dental staff working at the dental clinics at the selected setting, was variable. The majority (90.44%) The majority (90.44%) of the dental staff had a high level of awareness towards "HCWs with non intact skin should not be involved in direct patient care until the condition resolves". Followed by (91.33%) at the item of "Isolation is necessary for patients with blood-borne infections". The adequate knowledge of universal precautions among medical doctors may reflect the fact that universal precautions have been incorporated in the medical student curriculum at the Dental clinics of King Khalid University, and in on-the-job training protocols at the dental clinics of the selected setting. The low awareness and understanding of universal precautions among porters may be attributed to the absence of this information during introductory training courses and orientation program. Furthermore, the deficient knowledge base among some of the health care workers may be due to a lack of investment in staff training or to limited understanding of dental staff.

It is very important that health care workers have good understanding about the risk of blood-borne pathogens at work place and about the preventive measures for reducing risk. In this study, the majorities of the respondents were very knowledgeable of the harmful effects of bloodborne pathogens and identified HIV as a potential harm followed by hepatitis and bacterial infections. In this study, health care workers employed in the health sector for longer periods were more aware of universal precautions compared with those who served for shorter periods. Training and education have been found to be of paramount importance to developing awareness among health care workers, as well as improving adherence to high-quality clinical practice.<sup>29,30</sup> The greater awareness of the policies of work related injury among health care workers employed for a longer period at the dental clinics of the selected setting may reflect their participation in a greater number of training and educational sessions on universal precautions which not only encouraged

safer work practices but also improved concordance with policies and procedures work related injury .

Protective barriers reduce the risk of exposure of the health care worker's skin or mucous membranes to potentially infectious materials. Protective barriers reduce the risk of exposure to blood and other body fluids to which universal precautions apply. Examples of protective barriers include gloves, gowns, masks, and protective eyewear. Just over one half of the respondents indicated that they were provided with protective equipment most times. Furthermore, more nurses were provided with protective equipment than medical technologists and medical doctors. Interestingly, more respondents who were aware of universal precautions reported being provided with protective equipment more often than those who were somewhat or not aware. This study results congruent with the research data carried out by Kuo , et al ., (2010),who reported that less than two-thirds of health care workers claimed that they always used personal protective equipment such as aprons, gowns and gloves, during surgeries and while conducting deliveries. According to Jawaid, et al, among medical doctors working in a tertiary care hospital in Pakistan, compliance for hand washing was 86%, for wearing gloves was 79%, masks 46%, eye goggles 25% and for using gowns/plastic aprons was 45%.<sup>35</sup> However, there is sometimes a high rate of non-compliance among health care workers and this may be due to a lack of understanding among health care workers of how to properly use protective barriers.<sup>23</sup> Furthermore, non-compliance among medical doctors and nurses are associated with insufficient knowledge, workload, forgetfulness, workplace safety and the insight that colleagues also failed to track.

The current research data revealed that that there was high level of attentiveness towards policies work related injury within the study setting. These findings suggest that training of health care workers to maintain and enhance their knowledge about bloodborne pathogens and universal precautions could improve their use of universal precautions. Regular training should include the universal precautions, initial biohazard handling, safety policies, safety activities, safety equipment and materials, continuing monitoring and prospective spotlight of medical personnel. This study results is consistent with the study results carried out by Rapiti, et al., (2005), who studied the dental staff adherence toward job related injury.

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