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Review of the Level of Awareness' Towards Occupational Injury among Orthodontics Staff at Selected Dental Clinics, Saudi Arabia

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Abstract: ***Background: Notwithstanding the importance on patient protection in dental clinics, the minority organizations have assessed the level to which safety is an intentional precedence or their ethnicity supports patient safety. In response to the Institute of Dental Medical report and to an organizational enthusiasm to patient safety, the current research was utilized an efficient measurement of safety measures was applied. Objective: To assess the level of awareness' towards occupational injury among Orthodontics Staff at selected dental clinics, Saudi Arabia. Method: A cross-sectional survey was conducted at five dental clinics, Saudi Arabia. A32items self-administered questionnaire was provided to 350 Orthodontics Staff in the research setting based on their area of their specialties to assess the level of awareness' towards occupational injury among Orthodontics Staff at the selected dental clinics, Saudi Arabia. Results: This study finding showed that awareness towards Occupational Injury among some Orthodontics Staff at dental clinics was variable. The majority (87.7%) of the Orthodontics Staff had a high level of awareness towards Occupational Injury in relation to for decontamination of devices (with only contact with skin) washing with usual detergent is enough". On the other hand (70.5%) of the Orthodontics Staff had a lowest level of awareness towards Occupational Injury in relation to Universal precautions are applied to patients with HIV and viral hepatitis only"". Although, concerning the Intermittent Level of Awareness the highest level was awareness towards Occupational Injury in relation to "" Universal precautions are applied to patients with HIV and viral hepatitis only"" "(17. 0%).While, regarding the Low Level of Awareness towards Occupational in the item of Used needles can be recapped after giving an injection"" "was showed higher rate (13.77%). Conclusions: The current study results revealed that there were high levels of awareness among the Orthodontics Staff towards occupational injury within the study setting.***

Keywords: Safety Measures; Awareness; &Orthodontics Staff

1. Introduction

Increasingly, healthcare organizations are maintaining its awareness toward the implication of transforming organizational culture to improve patient safety. Emergent interest in safety culture has been accompanied by the need for assessment tools focused on the cultural aspects of patient safety development efforts. Safety culture assessment could be utilized as a tool for improving patient safety. It could also describe the characteristics of culture appraisal tools presently available and discusses their current and potential uses, including brief examples from healthcare organizations that have undertaken such assessments. (Kuo .et al., 2006).

The scope of practice in occupational and environmental health nursing has greatly lengthened with increased emphasis on health promotion and health protection services. Many factors have influenced the evolution of occupational health practice. Among them are the changing population and workforce, the introduction of new chemicals and work processes into the work environment, increased work demands, technological advances and regulatory mandates, increased focus on illness/injury prevention, and a rise in health care costs and workers' compensation claims. (Odd Cathrine, et al., (2007).

According to Sorrs.et al., (2013), appropriate reporting of occupational exposures to an employee health service is required to ensure appropriate counseling, facilitate prophylaxis or early treatment, and establish legal prerequisites for workers' compensation. Failure to report exposures precludes interventions that could benefit the injured party, placing health care workers at unnecessary risk. Information is limited regarding the prevalence of needle stick injuries, the circumstances surrounding them, and the barriers to reporting them. We conducted this study to investigate the prevalence and context of needle stick injuries and behavior associated with the reporting of injuries among many surgeons in training.

Hazards 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.9 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. (Rapiti, et al., 2005).

Orthodontics Staffs hould have a high level of awareness about occupational injury enhance consciousness education has not been prominent among health care workers, particularly in developing countries. To the greatest of our understanding, the attentiveness of Orthodontics Staff in relation to knowledge and awareness about policies of safety measures within the work setting. Consequently, conducted this study to assess the level of awareness' towards

occupational injury among Orthodontics Staffat the dental clinics, Saudi Arabia.

2. Participants and Methods

This study was conducted in March, 2014 among Orthodontics Staffat the dental clinics, Saudi Arabia. The study was granted ethical approval by the clinics ethical committee.

The participants were selected from the selected dental 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.

The research 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. A32-item self-administered structured questionnaire about awareness' towards occupational injury among the selected restorative staff, who advised de novo and tested. It included a full range of response options, designed to identify the practitioner's level of to assess their level awareness' towards occupational injury among Orthodontics Staff within 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 awareness' towards occupational injury among medical staff. This part also assessed awareness' towards occupational injury. It took approximately 15 minutes to complete each appraisal.

The level of awareness' towards occupational injury among Orthodontics Staff among Orthodontics Staff at the dental clinics, Saudi Arabia. By examining questions. 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 aware;" "4 or 3" "somewhat aware;" and "1 or 0" "not aware." The data were coded and analyzed by SPSS® for Windows® 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 difference

3. Results

Level of Awareness' Towards Occupational Injury among Orthodontics Staff at the selected clinics

Items of Occupational Injury	High Level of Awareness		Intermittent Level of Awareness		Low Level of Awareness	
	No	%	No	%	No	%
Universal precautions are applied to patients with HIV and viral hepatitis only"	210	70.0%	51	17%	39	13.0%
"Isolation is necessary for patients with blood-borne infections"	240	80.0%	27	9.0%	33	11%
Used needles can be recapped after giving an injection"	238	79.33%	24	8%	38	13.77%
For decontamination of devices (with only contact with skin) washing with usual detergent is enough"	254	87.7%	40	13.33%	6	2%
Universal precautions are not necessary in situations that might lead to contact with saliva"	229	76.44%	34	11.33%	40	13.33%
"HCWs with non intact skin should not be involved in direct patient care until the condition resolves "	241	80.33%	40	13.33%	19	6.33%
Blood spills should be cleaned up promptly with sodium hypochlorite"	236	79.66%	34	11.33%	30	10%

This study finding showed that awareness towards Occupational Injury among some Orthodontics Staff at dental clinics was variable. The majority (87.7%) of the Orthodontics Staff had a high level of awareness towards Occupational Injury in relation to for decontamination of devices (with only contact with skin) washing with usual detergent is enough".On the other hand (70.5%) of the Orthodontics Staff had a lowest level of awareness towards Occupational Injury in relation to Universal precautions are applied to patients with HIV and viral hepatitis only"". Although, concerning the Intermittent Level of Awareness the highest level was awareness towards Occupational Injury in relation to "" Universal precautions are applied to patients with HIV and viral hepatitis only"" "(17. 0%).While, regarding the Low Level of Awareness towards Occupational in the item of Used needles can be recapped after giving an injection"" "was showed higher rate (13.77%)

4. Discussion

The level of awareness' towards occupational injury among Orthodontics Staff was showed significantly associated with many variables (Table 1). This study finding showed that awareness towards Occupational Injury among some Orthodontics Staff at dental clinics was variable. The majority (87.7%) of the Orthodontics Staff had a high level of awareness towards Occupational Injury in relation to for decontamination of devices (with only contact with skin) washing with usual detergent is enough". On the other hand (70.5%) of the Orthodontics Staff had a lowest level of awareness towards Occupational Injury in relation to

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Another study reported by *Guo, Shiao, Chuang,(2003),* involving 550 medical students and residents during the 1989–1990 training year likewise reported a high prevalence of needle stick injuries (71%), and a higher frequency of injury (by a factor of 6) among surgical residents than among medical residents. In these two studies, rates of reporting needle stick injuries ranged from 9 to 19%, and a more recent survey of all types of providers from an Iowa medical organization found that 34% had reported their exposure to an employee health service. On the other hand, the study carried by *Regina* (2002), showed that only 49% of surgical residents report such injuries extends previous observations that underreporting may result in a substantial underestimation of the magnitude of the problem.

Concerning the Intermittent Level of Awareness the highest level was awareness towards Occupational Injury in relation to concerning the Intermittent Level of Awareness the highest level was awareness towards Occupational Injury in relation to ""Isolation is necessary for patients with blood-borne infections" "(8.5%).While, regarding the Low Level of Awareness towards Occupational in the item of Universal precautions are applied to patients with HIV and viral hepatitis only" "was showed higher rate (27.5%)
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. This research findings is congruent with the findings of the study carried out by (Rapiti, et al., 2005), who found that he greater awareness of universal precautions among health care workers employed for a longer period 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.

Personnel protective equipments reduce the risk of exposure of the health care provider'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 Pournaras, et al,2004, 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%.35 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.

This study showed that there was high level of awareness' towards occupational injury among Orthodontics Staff within the study setting. These findings suggest that training of dental staff to maintain and enhance their knowledge about occupational safety, blood borne pathogens and universal precautions could improve their use of universal precautions. Regular training should include the universal precautions, initial biohazard handling, safety policies, safety behavior, safety equipments, continuing monitoring and maintain continuous quality improvement concerning the practice of occupational safety.

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