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Assessment of the Level of Attentiveness' Towards Occupational Injury among Prothodontic Staff at Selected Dental Clinics, Saudi Arabia

Dr. Roqia Mahmood Abdoh[1], Dr. Faten Abdullah Alnasser[2]

[1]Ministry of Health, King Fahad Hospital, Specialized Dental Center, Saudi Arabia

[2]Dental Prothodontic, Ministry of Health, East Riyadh, Specialized Dental Center, Saudi Arabia

Abstract: ***Background: Notwithstanding, the distinction on occupational injury in dental clinics, the minority dental clinics have assessed the level to which safety is a deliberate preference or their ethnicity chains patient safety. In reply to the Institute of Dental Medical report and to an organizational enthusiasm to patient safety, the current research was utilized an efficient measurement of occupational safety was utilized. One component of the programme was to help health staff adopt and comply with internationally accepted standards of infection prevention practices. At the same time, the Ministry of health in Saudi Arabia developed an infection prevention guideline for dental staff , which provided infection prevention standards, and details about appropriate infection prevention practices in health facilities and mobile outreach services. However, there was no clear implementation plan. Objective: To assess the level of attentiveness' towards occupational injury among Prothodontic staff at the selected dental clinics, Saudi Arabia. Method: A cross-sectional survey was conducted at five dental clinics, Saudi Arabia. A self-administered questionnaire was provided to 122 Prothodontic staff in the research setting based on their area of their specialties to assess the level of Attentiveness' towards occupational injury among Prothodontic staff at the selected dental clinics, Saudi Arabia. Results: This study finding showed that attentiveness towards Elements of Occupational Injury among some prothodontic staff at selected dental clinics. The majority (86.88%) of the prothodontic staff had a high level of attentiveness towards Elements of Occupational Injury in relation to Blood spills should be cleaned up promptly with sodium hypochlorite. On the other hand (61.47%) of the prothodontic staff had a lowest level of attentiveness towards Elements of Occupational Injury in relation to Prevention—not to recap needles. While, concerning the Intermittent Level of Attentiveness the highest level was attentiveness towards Elements of Occupational Injury in relation to Prevention—not to recap needles (26.22%).While, regarding the Low Level was in the item of Universal precautions are not necessary in situations that might lead to contact with saliva. Although, the highest percentage concerning the low level of attentiveness towards Elements of Occupational Injury was in the aspect of Universal precautions are applied to patients with HIV and viral hepatitis only". While the lowest level in such item (9.83%) was in the aspect of Needles can be recapped after giving an injection as well as in the item of prothodontic Staff with Universal precautions are not necessary in situations that might lead to contact with saliva" Conclusions: The current study results revealed that there were high levels of attentiveness among the prothodontic staff towards occupational injury within the study setting.***

Keywords: Occupational Injury; Attentiveness; & Prothodontic staff

1. Introduction

The main perspective of infection control protocols, especially dentists should continue to utilize personal protective procedures and suitable sterilization or other high-level disinfection techniques. Aside from biological hazards, dentists continue to suffer a high prevalence of musculoskeletal disorders (MSD), especially of the back, neck and shoulders. To entirely recognize the nature of these problems, further studies are needed to identify causative factors and other correlates of MSD. Ongoing education and investigation of appropriate interventions to help reduce the prevalence of MSD and contact dermatitis are also needed. Therefore important that dentists remain constantly informed regarding up-to-date measures on how to deal with newer technologies and dental materials.. (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 a large number of 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).

Prothodontic staff should have a high level of Attentiveness 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 Prothodontic staff in relation to knowledge and Attentiveness about policies of safety measures within the work setting. Consequently, conducted this study to assess the level of attentiveness' towards occupational injury among Prothodontic staff at the dental clinics, Saudi Arabia.

2. Participants and Methods

This study was conducted to assess the level of attentiveness of 122 Prothodontic staff at the selected 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. Self-administered structured questionnaire about Attentiveness' towards occupational injury among the selected Prothodontic staff, which 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 Attentiveness' towards occupational injury among Prothodontic 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 attentiveness' towards occupational injury among medical staff. This part also assessed Attentiveness' towards occupational injury. It took approximately 15 minutes to complete each appraisal.

The level of Attentiveness' towards occupational injury among Prothodontic staff among Prothodontic 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 differences.

3. Results

Level of Attentiveness' Towards Occupational Injury among Prothodontic staff at the selected clinics

Elements of Occupational Injury	*High Level of Attentiveness*		*Intermittent Level of Attentiveness*		*Low Level of Attentiveness*	
	No	%	No	%	No	%
Sharp instrument management	87	71.31%	23	18.85%	10	8.19%
Procedure of cleaning instruments	82	67.21%	18	14.75%	22	18.03%
Used needles can be recapped after giving an injection"	90	72.77%	21	17.21%	9	7.37%
Prevention—not to recap needles	75	61.47%	32	26.22%	15	12.29%
Universal precautions are not necessary in situations that might lead to contact with saliva"	92	75.40%	12	9.83%	18	9.83%
Dental staff with non intact skin should not be involved in direct patient care until the condition resolves "	87	71.31%	22	18.03%	13	10.65%
Blood spills should be cleaned up promptly with sodium hypochlorite	106	86.88%	14	11.47%	2	1.63%

Table (1): Showed that attentiveness towards Elements of Occupational Injury among some prothodontic staff at selected dental clinics. The majority (86.88%) of the prothodontic staff had a high level of attentiveness towards Elements of Occupational Injury in relation to Blood spills should be cleaned up promptly with sodium hypochlorite. On the other hand (61.47%) of the prothodontic staff had a lowest level of attentiveness towards Elements of Occupational Injury in relation to Prevention—not to recap needles. While, concerning the Intermittent Level of Attentiveness the highest level was attentiveness towards Elements of Occupational Injury in relation to Prevention—not to recap needles (26.22%).While, regarding the Low Level was in the item of Universal precautions are not

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This study findings showed that attentiveness towards Elements of Occupational Injury among some prothodontic staff at selected dental clinics. The majority (86.88%) of the prothodontic staff had a high level of attentiveness towards Elements of Occupational Injury in relation to Blood spills should be cleaned up promptly with sodium hypochlorite. On the other hand (61.47%) of the prothodontic staff had a lowest level of attentiveness towards Elements of Occupational Injury in relation to Prevention—not to recap needles. While, concerning the Intermittent Level of Attentiveness the highest level was attentiveness towards Elements of Occupational Injury in relation to Prevention—not to recap needles (26.22%).While, regarding the Low Level was in the item of Universal precautions are not necessary in situations that might lead to contact with saliva. Although, the highest percentage concerning the low level of attentiveness towards Elements of Occupational Injury was in the aspect of Universal precautions are applied to patients with HIV and viral hepatitis only". While the lowest level in such item (9.83%) was in the aspect of Needles can be recapped after giving an injection as well as in the item of prothodontic Staff with Universal precautions are not necessary in situations that might lead to contact with saliva"

4. Discussion

This study finding showed that attentiveness towards Elements of Occupational Injury among some prothodontic staff at selected dental clinics. The majority (86.88%) of the prothodontic staff had a high level of attentiveness towards Elements of Occupational Injury in relation to Blood spills should be cleaned up promptly with sodium hypochlorite. On the other hand (61.47%) of the prothodontic staff had a lowest level of attentiveness towards Elements of Occupational Injury in relation to Prevention—not to recap needles. While, concerning the Intermittent Level of Attentiveness the highest level was attentiveness towards Elements of Occupational Injury in relation to Prevention—not to recap needles (26.22%).While, regarding the Low Level was in the item of Universal precautions are not necessary in situations that might lead to contact with saliva. Although, the highest percentage concerning the low level of attentiveness towards Elements of Occupational Injury was in the aspect of Universal precautions are applied to patients with HIV and viral hepatitis only". While the lowest level in such item (9.83%) was in the aspect of Needles can be recapped after giving an injection as well as in the item of prothodontic Staff with Universal precautions are not necessary in situations that might lead to contact with saliva.

The current study findings were congruent with the study reslts carried out by Sofola, Folayan, Denloye & Okeigbemen,(2007), who reported that In this context, some reflections are important. Although the term “occupational accident” suggests an unpredictable or unplanned event, risk factors for occupational exposure are consistently present in the work situation. Therefore, they are both predictable and preventable. The findings of this study indicate that there is an urgent need for dental schools to assess and potentially revise procedures designed to prevent occupational exposure. Updated protocols should reinforce adequate procedures, but also go beyond the conventional teaching of universal procedures for cross-infection control in order to minimize the risk associated with the learning process.

Infection control in oral health care as a discipline has been incorporated into the formal curriculum at a large number of dental schools. Nevertheless, the findings reported here indicate that a theoretical approach may not be sufficient in providing practitioners with the necessary skills for working with patients. Thus, teaching standard precaution measures as an abstract theoretical body of concepts does not achieve the desired impact on individual students, as their unique roles as participants are not taken into consideration. This has implications for dental education. Dental schools might offer opportunities for students to analyze their own experiences in the dental clinic from the perspective of infection control.

Ardenghi et al., suggested a complementary approach to teaching standard precautions that might involve pairs of students working together with patients. In this collaborative working experience, one student could be doing the dental treatment while his or her colleague observes and takes field notes on infection control and prevention measures adopted during the treatment.37 Analysis and discussion could take place in small group meetings afterwards. Experience obtained in dental practice combined with ongoing seminars engages dental students in discussing infection control recommendations of their present and future work. This approach also takes advantage of the opportunity to engage students in self-reflection—discussing and reflecting on their own actions—which could foster a change of behavior. As this analysis would involve the students’ own work, this would be more meaningful than judging the practices of others, as in case-based learning.

Most dental staff in dental clinics effectively decreased the professional exposing risks by practicing preventive strategies. Accurate evaluation and practical preventive strategies are key factors to reduce the professional exposing risks for dental staff. 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.

Current research findings is compatible with the results carried out by *Garner* (2012) who reported that to 79 % 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.

The current study results congruent with the research data carried out by Younai, Murphy & Kotelchuck,(2001), 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.

This study showed that there was high level of Attentiveness' towards occupational injury among Prothodontic 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.

5. Conclusion

The research aims to assess the level of attentiveness' towards occupational injury among Prothodontic staff at the selected dental clinics, Saudi Arabia. The current study results revealed that there were high levels of attentiveness among the prothodontic staff towards occupational injury within the study setting.

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