

Endodontic Staff Feedback towards Safety Procedures at Selected Dental Clinics, Saudi Arabia

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Abstract: Background: Safety Procedures are designed to help dental professionals advocate for good dental health especially to maintain the root canal safety which concern the main role for dental endodontic. Furthermore adherence to safety procedures will assist the dental endodontic to understand the advancements in modern dentistry that make endodontic treatment predictable, effective and successful. Objective: The current research study was utilized to assess the perception of endodontic staff towards Safety Procedures at selected dental clinics, Saudi Arabia. Method: A cross-sectional survey was conducted at selected dental clinics, Saudi Arabia. Self-administered questionnaire was provided to 100 Endodontic staff in the research setting based on their area of their perspectives to assess the perception of endodontic staff towards Safety Procedures at selected dental clinics, Saudi Arabia. Results: The current research finding showed that perception towards safety procedures among some Endodontic staff at selected dental clinics. The majority (88.0%) of the Endodontic staff had a high level of perception towards safety procedures in relation to for Entire precautions are applied to Infectious Patients ". On the other hand (60.0%) of the Endodontic staff had a lowest level of perception towards safety procedures in relation to Decontamination of devices with only contact with skin washing with usual detergent is enough. While, concerning the Intermittent Level of Perception the highest level was perception towards safety procedures in relation to Universal precautions are not necessary in situations that might lead to contact with saliva as well as in the item of Blood spills should be cleaned up promptly with sodium hypochlorite (18.18%). 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 perception towards safety procedures was in the aspect of Universal precautions are applied to patients with HIV and viral hepatitis only". While the lowest level in such item (9.9%) was in the aspect of Needles can be recapped after giving an injection as well as in the item of Endodontic Staff with non intact skin should not be involved in direct patient care until the condition resolves. Conclusions: The current study results revealed that there were high levels of Perception among the Endodontic staff towards policies of safety measures within the study setting. The current research study was utilized to assess the perception of endodontic staff towards Safety Procedures at selected dental clinics, Saudi Arabia. The majority (88.0%) of the Endodontic staff had a high level of perception towards safety procedures in relation to for Entire precautions are applied to Infectious Patients ".

Keywords: Safety Procedures; Endodontic Staff & Perspectives

1. Introduction

According to Cathrine, et al., (2007) , endodontic procedures on the most delicate structures in confined spaces require a maximum of precision and tactility on the part of the operator. Safety will always have to come first — safety for the patient as well as safety for the dentist. Morita and its portfolio of endodontic solutions meet these requirements at the highest level, setting benchmarks for treatment perfection. The individual systems seamlessly integrate into the modern clinical workflow, from the initial clinical examination to complex chair side procedures and regular recall appointments.

Sullmaby, (2015), mentioned that, Morita's Soaric treatment unit allows an ideal combination of diagnostic and therapeutic procedures. The high-quality dental chair with its award-winning design supports the endodontic treatment sequences with its integrated functions and modular extensions, such as the apex locator, the monitor, or microscopes by different manufacturers. The unit provides generous storage space and allows intuitive hand movements. Its ergonomic design offers protection for the dentist's muscles. For example, the hoses in the operator's element include a strain relief that minimizes muscle stress when using the instruments. Geriatric patients with reduced mobility will benefit from swiveling armrests and a fold-

away footrest that facilitates access to the patient chair. The patient, the dentist and the dental team enjoy uncompromising comfort and functionality and optimum conditions for a harmonious workflow and excellent treatment results.

Dentists are independent contractors or employed directly by local primary care trusts (PCTs).they may provide care to both NHS and private patients. Compared to general practitioners they have a higher proportion of private practice. The National Reporting and Learning Service (NRLS) has produced a range of patient safety resources relating to dental services, including, Specific information about patient safety culture for primary care settings .Alerts and guidance about patient treatment and procedures, such as information on treating dental patients who are taking oral anticoagulants.

The dental personnel is obliged to wash their hands before and after coming in contact with the patient (or the instruments used) independently of wearing gloves or not during the operation. Hand washing must be performed meticulously so that every hand surface is adequately cleaned. Special attention must be paid to hand surfaces usually neglected when washed. (Rapiti, et al., 2005).

Redd, Baumbach, Kohn, et al. (2007) , stated that sterilizing examination gloves is also not allowed as manufacturally there is no guarantee of the protection of their integrity. Disinfection fluids, essential oils, acrylic monomers, various dental materials and instruments, several skin soaps and lotions may distort the cohesion of the glove material. In patients with confirmed HIV or HBV and HCV infection, it is recommended that double gloves are used for the protection of the surgeon. If during any dental work it is necessary to use an extra device or material, gloves should be covered with an extra pair of nylon gloves so that contamination of those surfaces is prevented.. To the greatest of our understanding, the attentiveness of Endodontic staff in relation to knowledge and Preception about policies of safety measures within the work setting. Consequently, conducted this study to assess the perception of endodontic staff towards Safety Procedures at selected dental clinics, Saudi Arabia.

2. Participants and Methods

This study was conducted to assess the level of perception of endodontic staff in relation to safety procedures at 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. A self-administered structured questionnaire about assessment of

the level of perception of endodontic staff in relation to safety procedures at the dental clinics, Saudi Arabia.

Incorporated a full range of response options, designed to identify the practitioner's level of to evaluate their level of perception of endodontic staff in relation to safety procedures at the dental clinics, 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.

Groundwork 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 assesses the level of perception of endodontic staff in relation to safety procedures at the dental clinics, Saudi Arabia.

In the course of 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 χ^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 Perception of Endodontic Staff in relation to Safety Procedures at the Selected Dental clinics, Saudi Arabia

Items of Safety Procedures	High Level of Perception		Intermittent Level of Perception		Low Level of Perception	
	No	%	No	%	No	%
Entire precautions are applied to Infectious Patients	88	88%	12	11.09%	10	9.09 %
Segregation is necessary for patients with blood-borne infections	75	68.18%	15	13.63%	20	18.18%
Needles can be recapped after giving an injection	89	81.09%	11	10.0%	10.0	9.09 %
Decontamination of devices with only contact with skin washing with usual detergent is enough	66	60.0%	14	12.72%	30	27.27%
Universal precautions are not necessary in situations that might lead to contact with saliva"	79	71.81%	20	18.18%	11	10.0%
Endodontic Staff with non intact skin should not be involved in direct patient care until the condition resolves	86	78.18%	14	12.72%	10	9.09 %
Blood spills should be cleaned up promptly with sodium hypochlorite	74	67.27%	20	18.18%	16	14.54%

Table (1): Showed that perception towards safety procedures among some Endodontic staff at selected dental clinics. The majority (88.0%) of the Endodontic staff had a high level of perception towards safety procedures in relation to for Entire precautions are applied to Infectious Patients ".On the other hand (60.0%) of the Endodontic staff had a lowest level of perception towards safety procedures in relation to Decontamination of devices with only contact with skin

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This study finding showed that perception towards safety procedures among some Endodontic staff at selected dental clinics. The majority (88.0%) of the Endodontic staff had a high level of perception towards safety procedures in relation to for Entire precautions are applied to Infectious Patients ".On the other hand (60.0%) of the Endodontic staff had a lowest level of perception towards safety procedures in relation to Decontamination of devices with only contact with skin washing with usual detergent is enough. While, concerning the Intermittent Level of Perception the highest level was perception towards safety procedures in relation to Universal precautions are not necessary in situations that might lead to contact with saliva as well as in the item of Blood spills should be cleaned up promptly with sodium hypochlorite (18.18%).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 perception towards safety procedures was in the aspect of Universal precautions are applied to patients with HIV and viral hepatitis only". While the lowest level in such item (9.9%) was in the aspect of Needles can be recapped after giving an injection as well as in the item of Endodontic Staff with non intact skin should not be involved in direct patient care until the condition resolves

4. Discussion

The level perception towards safety procedures among some Endodontic staff at selected dental clinics. The majority (88.0%) of the Endodontic staff had a high level of perception towards safety procedures in relation to for Entire precautions are applied to Infectious Patients ".On the other hand (60.0%) of the Endodontic staff had a lowest level of perception towards safety procedures in relation to Decontamination of devices with only contact with skin washing with usual detergent is enough. While, concerning the Intermittent Level of Perception the highest level was perception towards safety procedures in relation to Universal precautions are not necessary in situations that might lead to contact with saliva as well as in the item of Blood spills should be cleaned up promptly with sodium hypochlorite (18.18%).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 perception towards safety procedures was in the aspect of Universal precautions are applied to patients with HIV and viral hepatitis only". While the lowest level in such item (9.9%) was in the aspect of Needles can be recapped after giving an injection as well as in the item of Endodontic Staff with non intact skin should

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This research study consistent with the results carried out 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.

Pertaining to the Intermittent Level of Preception the highest level was perception towards safety procedures in relation to concerning the Intermittent Level of Preception the highest level was perception towards safety procedures in relation to "Isolation is necessary for patients with blood-borne infections" "(8.5%).While, regarding the Low Level of Preception 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 Preception 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 Preception 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.

The current study findings showed that there was high level of Preception' towards Policies of Safety Measures among Endodontic 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 current research finding showed that perception towards safety procedures among some Endodontic staff at selected dental clinics. The majority of the Endodontic staff had a high level of perception towards safety procedures in relation to for Entire precautions are applied to Infectious Patients ".On the other hand of the Endodontic staff had a lowest level of perception towards safety procedures in relation to Decontamination of devices with only contact with skin washing with usual detergent is enough. While, concerning the Intermittent Level of Perception the highest level was perception towards safety procedures in relation to Universal precautions are not necessary in situations that might lead to contact with saliva as well as in the item of Blood spills should be cleaned up promptly with sodium hypochlorite. 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 perception towards safety procedures was in the aspect of Universal precautions are applied to patients with HIV and viral hepatitis only". While the lowest level in such item was in the aspect of Needles can be recapped after giving an injection as well as in the item of Endodontic Staff with non intact skin should not be involved in direct patient care until the condition resolves

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