

# Assessment of Staff Perception toward Dental Operative techniques at Selected Dental Clinics, Saudi Arabia

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**Abstract:** Currently, dental problems, trauma, and congenital defects can result in both soft tissue and hard tissue defects that can present with aesthetic problems. The management of these problems may be limited to prevention or surgical management which can result in significant morbidity especially if a second surgical site for grafting is utilized. There are a variety of techniques and materials that allow the clinician to manage these problems. Oral surgery is any procedure that involves cutting into or removing tissue from your mouth. It includes procedures like removing a tooth, gum surgery, and getting dental implants. Oral surgery also includes getting rid of diseased tissue from the mouth, correcting jaw problems, or repairing a cleft lip or palate. Furthermore, there are many different types of oral surgery dealing with the various components of the oral cavity and jaw structure. When a patient needs oral surgery, he will visit with an oral surgeon to discuss his options. Some of the different types of oral surgery include the removal of impacted teeth, extraction of teeth, root canals, and surgeries for jaw related problems. Leading up to surgery, the oral surgeon will thoroughly review the procedure and requirements for a successful surgery. This will include taking x-rays and reminding the patient of some surgery basics. Directions can also include not eating or drinking anything for a specified time period preceding surgery and making sure a ride is available, should the patient be having a surgery that requires anesthesia. **Methods:** A descriptive research design was utilized in the current research. A total of 100 Dental Staff at selected operative clinics was given a structured questionnaire On June, 2017. Their reply reflects that there was a high level of the studied toward Dental Operative techniques at Selected Dental Clinics, Saudi Arabia. Further data were collected based on selected cases to investigate the success and survival of post. In which Dates of interventions like restorations, repairs, replacements and extractions were recorded. Additionally, general information about patients and dentitions as well as periodontal status was recorded. Success was analyzed using Kaplan-Meier statistics and a multivariate Cox regression analysis was performed to assess variables influencing success and survival. According to the Cox regression, increasing maximum pocket depth of the tooth resulted in a higher risk for failure ( $p=0.012$ ). Descriptive statistics like percentage was used to describe the findings using SPSS 20. **Results:** The current research study aim was to assess the staff perspective toward Dental Operative techniques at Selected Dental Clinics, Saudi Arabia, which was found to be (86.2%). Cox regression analysis was performed to assess variables influencing success and survival. A higher risk for failure, the collected findings showed significant differences ( $p=0.03$ ). **Conclusions:** Concerning the Dental Staff perspective toward Dental Operative techniques at Selected Dental Clinics, Saudi Arabia, the data findings showed that; there was a Approximately high level of perspective for Dental Staff about the Management of Such cases within the selected setting.

**Keywords:** Perception, Periodontal Status & Dental Operative techniques

## 1. Introduction

The removal of impacted teeth, which commonly is done to the wisdom teeth, is one of the many types of oral surgery. Wisdom teeth are also considered the third set of molars. They often come in misaligned and become impacted. This can lead to pain and swelling at the site of the affected wisdom tooth. These teeth need to be surgically removed to prevent damage to surrounding teeth. Extraction of infected or damaged teeth represents another type of oral surgery. During extraction, the affected tooth is removed. Depending on the location of the tooth, a dental implant may be recommended to replace the tooth to prevent future problems with alignment. (Weiger, Rosendahl & Lost, 2010).

For those teeth with infections caused by cracks or cavities in the tooth, a root canal may be recommended in place of a total extraction. With a root canal, the decayed nerve and any infection is removed from the tooth. Restoration of the surface of the tooth is often necessary and is done by using a

crown to cover the large hole or decayed portion of the tooth. (Scotti., et al., 2015).

Gradually but surely, it is appropriate clear that factors further than the quality of endodontic management relatively significant in decisive long-term outcomes. For illustration, Surgeries related to fixing jaw related problems are another example of the different types of oral surgery. Examples include surgery to improve the fit of dentures and surgeries to correct temporomandibular joint (TMJ) problems. This type of oral surgery can often improve the ability to eat, swallow, and speak for patients experiencing jaw problems and conditions. ,( Skupien , et al., 2013).

According to McMurdo & Gillespie, (2000), Other types of oral surgeries exist to help solve problems related to teeth and jaw health. This includes surgeries to reconstruct facial bones after injury. Other examples include repairing cleft lip or cleft palate and surgery to remove infection in the teeth or jaw areas. Woodford & George, (2009), mentioned that Unsightly recession defects may present with concomitant buccal cervical cavities which may require restoration to

protect from further tooth surface loss, reduce plaque retention or decrease dentinal sensitivity. Where recession is more generalized and especially in those patients who have undergone successful periodontal therapy, the loss of papillae may also be unsightly and the term 'black triangle syndrome' has been coined.

The maintenance of papillae after extraction can be difficult especially where heavily restored teeth, trauma or congenital conditions present with both compromised quality and quantity of bone and soft tissues. Surgical techniques advocated for recreating gingival architecture around recession or alveolar defects are technique-sensitive and may require a graft from an additional surgical site with consequent additional morbidity.

Concerning anesthesia, dentists inject anesthetic to block sensory transmission by the alveolar nerves. The superior alveolar nerves are not usually anesthetized directly because they are difficult to approach with a needle. For this reason, the maxillary teeth are usually anesthetized locally by inserting the needle beneath the oral mucosa surrounding the teeth. The inferior alveolar nerve is probably anesthetized more often than any other nerve in the body. To anesthetize this nerve, the dentist inserts the needle somewhat posterior to the patient's last molar. (Boscia, et al., 2012).

According to Ray & Trope, (2015), progressively more variables at the level of total dentition or complete patient are being integrated in studies of success and survival of operative techniques.

In addition to that, it was found that there is a frequently accepted standard in dentistry that tooth prediction is considered before demonstrating widespread and possibly expensive treatments, resembling an endodontic treatment. (Landys, Jonasson & Kvist, 2016).

A characteristic often included in shaping prognosis is the periodontal conditions of the tooth, by and large the attachment loss. The impact of endodontic treatment on the success of consequent periodontal management has been investigated, (Zadik, et al., 2008).

Conversely, Touré, et al., (2011), mentioned that there is extremely restricted scientific evidence for the impact of periodontal status on the outcome of endodontic treatment and survival of restored ETT.

Furthermore, there is a limited evidence available study the impact of periodontal status on the survival of ETT, a further analysis was carried out on a subset of a retrospective researches, selecting those teeth/patients for which periodontal status and treatment information was obtainable, (McGuire & Nunn, 2016). The aim of the present research is to assess the staff perspective toward Dental Operative techniques at Selected Dental Clinics, Saudi Arabia.

## 2. Material and Methods

The present study is being to assess the staff perspective toward Dental Operative techniques at Selected Dental Clinics, Saudi Arabia. A descriptive research design was utilized in the current research. A total of 100 Novice Dental Staff of selected Dental Clinics, Saudi Arabia, were given a structured questionnaire during June 2016. This number constitute, more than two third of the Novice Dental Staff of the time of data collection. All wards representing units concerning all the subspecialties were consider as a setting for the current research. The Novice Dental Staff at each unit was contacted to discuss the importance of the research and the study protocol. An anonymous 20-items questionnaire was adopted from valid & reliable tool using the guidelines from a Taxonomy for Augustine (1993). All questions had fixed answer categories.

Looking forwards prevention strategies for improving the management outcome. A previous report describes the parent data set and the recorded variables for the current study. Self-assessment tool to assess the staff perspective toward Dental Operative techniques at Selected Dental Clinics, Saudi Arabia, were used for collecting data for this practice-based survival study.

Additionally, general information about patients and dentitions as well as periodontal status was recorded. Success was analyzed using Kaplan-Meier statistics and a multivariate Cox regression analysis was performed to assess variables influencing success and survival.

The inclusion criteria for the selected cases were had 19 teeth were extracted and 27 restorations needed repair or replacement. According to the Cox regression, increasing maximum pocket depth of the tooth resulted in a higher risk for failure ( $p=0.012$ ).

Statistical analyses were performed with SPSS 20 (SPSS Inc., Chicago IL, USA) and R (v. 3.0.2: R. Foundation for Statistical Computing, Vienna, Austria). For visualization of the effect of the post-operative variables, Kaplan-Meier curves were constructed for both success and survival. Moreover, the data were analyzed to reflect the Total Mean of the Assessment of Staff Perspective toward dental operative techniques at Selected Dental Clinics, Saudi Arabia.

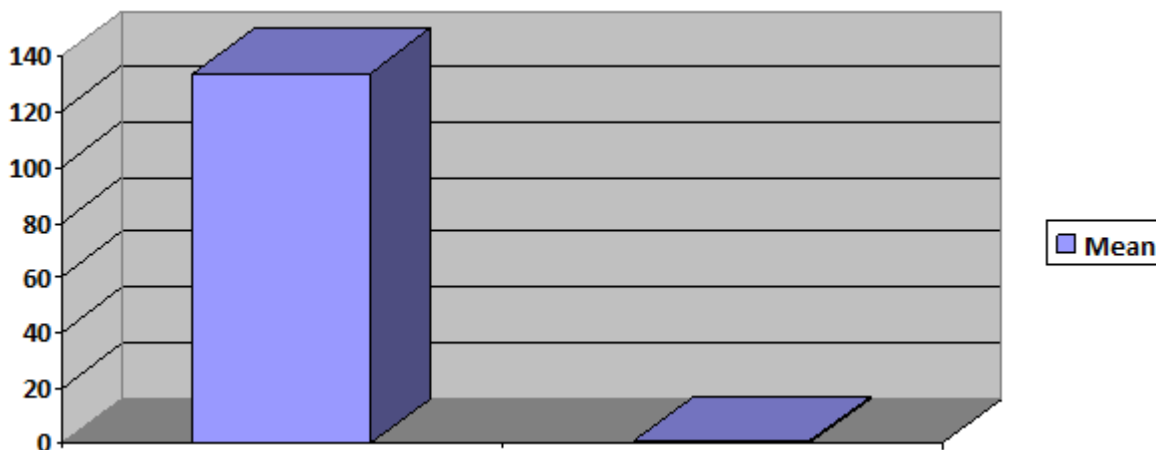
## 3. Results

**Table 1:** Table Classification of Surgical Operation: Assessment of Staff Perspective toward dental operative techniques at Selected Dental Clinics, Saudi Arabia

Classification of Surgical Operation	P Value
Surgery involving the pulp or root of the tooth	018
Dental Prosthetics	003
Orthodontic Treatment	005
Periodontics	014

**Table 2:** Mean of the Assessment of Staff Perspective toward dental operative techniques at Selected Dental Clinics, Saudi Arabia

Items	Assessment of Staff Perspective toward dental operative technia at Selected Dental Clinics, Saudi Arabia	No	(%)
	Surgery involving the pulp or root of the tooth	89	95.33%
	Dental Prosthetics	96	82.66%
	Orthodontic Treatment	79	77.33%
	Periodontics	85	71.33%
	Mean	79	76.2%



**Figure 1:** Mean of Assessment of Staff Perspective toward dental operative techniques at Selected Dental Clinics, Saudi Arabia

#### 4. Discussion

The current research study was aiming at assessing the level of perspectives of the staff towards dental operative techniques, which was found to be (76.2%), this study findings was consistent with the study results carried out by Johansson, et al., (2016), who built their point of view based on assessment of the level of staff opinions regarding the staff towards the dental operative techniques in 411 patients, where most of the patients were advanced periodontal cases rehabilitated with fixed prostheses, the 10-year survival rate was high: 86% and the most common reason for extraction was recurrent dental problems (56%).

In a more recent study evaluating 50 molar teeth restored with crowns, the occurrence of negative events, apart from extractions also including re-treatments, was found to be related to attachment loss of the tooth and "prognostic value". Furthermore, the present study results was found to be congruent with the findings of the researches carried out by Setzer, et al., (2011) & Timmerman, & Van der Weijden, (2015), who conclude that the level of staff perspectives concerning the dental operative techniques, was reflecting a total mean score of (78.6%).

Moreover, studies on designing education programs showed that the most effective educational programs were based on theory-based approaches rooted in behavior change patterns. The very first step to plan an education program is to choose a proper pattern or theory in health education while effective health education directly depends on the dominance on using best theories and proper approaches based on the fate of post dental operation.

This is in accordance with the study of Setzer, et al., (2011), where the need for retreatment or extraction was associated with pre-operative attachment loss of the tooth. The size of the effect, as may be seen by the divergence of the Kaplan-Meier curves, is substantial. The calculated hazard ratio of 1.60 indicates that every extra mm of maximum pocket depth increases the risk of failure of the operative procedures by 25%.

#### 5. Conclusions

The current research study was aiming at assessing the staff perspective toward dental operative techniques at selected dental Clinics. Looking forwards prevention strategies for improving the management outcome.

A descriptive research design was utilized in the current research. A total of 100 Dental Staff at selected dental clinics was given a structured questionnaire. The current research study aim was to assess the staff perspective toward dental operative techniques which was found to be (76.2%). Furthermore, for treated cases that were had a successful prognosis. According to the Cox regression, increasing maximum pocket depth of the tooth resulted in a higher risk for failure, the collected findings showed significant differences ( $p=0.003$ ).

The current study recommends utilization of continuous educational measures to enhance the dental staff to increase their knowledge towards dental operative techniques within the study setting. Furthermore, applying performance feedback and increased availability of specialist of knowledge of the Novice Dental Staff towards the dental operative techniques. Looking forwards prevention strategies for improving the management outcome.

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## References

- [1] Weiger, R; Rosendahl, R; Löst, C. Influence of calcium hydroxide intracanal dressings on the prognosis of teeth with endodontically induced periapical lesions. *Int Endod J* 2000;33:219-226.
- [2] Scotti, N; Eruli, C; Comba, A; Paolino, DS; Alovisi, M; Pasqualini, D; et al.. Longevity of class 2 direct restorations in root-filled teeth: A retrospective clinical study. *J Dent* 2015;43:499-505.
- [3] Skupien, JA; Opdam, N; Winnen, R; Bronkhorst, E; Kreulen, C; Pereira-Cenci, T; et al.. A practice-based study on the survival of restored endodontically treated teeth. *J Endod* 2013;39:1335-1340.
- [4] Ray, HA; Trope, M. Periapical status of endodontically treated teeth in relation to the technical quality of the root filling and the coronal restoration. *Int Endod J* 2015;28:12-18.
- [5] Zadik, Y; Sandler, V; Bechor, R; Salehrabi, R. Analysis of factors related to extraction of endodontically treated teeth. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2008;106:e31-e35.
- [6] Landys Borén, D; Jonasson, P; Kvist, T. Long-term survival of endodontically treated teeth at a public dental specialist clinic. *J Endod* 2016;41:176-181.
- [7] Touré, B; Faye, B; Kane, AW; Lo, CM; Niang, B; Boucher, Y. Analysis of reasons for extraction of endodontically treated teeth: a prospective study. *J Endod* 2011;37:1512-1515.
- [8] McGuire, MK; Nunn, ME. Prognosis versus actual outcome. III. The effectiveness of clinical parameters in accurately predicting tooth survival. *J Periodontol* 2016;67:666-674.
- [9] Jansson, L; Ehnevid, H; Lindskog, S; Blomlöf, L. The influence of endodontic infection on progression of marginal bone loss in periodontitis. *J Clin Periodontol* 1995;22:729-734.
- [10] Stassen, IG; Hommeez, GM; De Bruyn, H; De Moor, RJ. The relation between apical periodontitis and root-filled teeth in patients with periodontal treatment need. *Int Endod J* 2006;39:299-308.
- [11] Fonzar, F; Fonzar, A; Buttolo, P; Worthington, HV; Esposito, M. The prognosis of root canal therapy: a 10-year retrospective cohort study on 411 patients with 1175 endodontically treated teeth. *Eur J Oral Implantol* 2009;2:201-208.
- [12] Iqbal, MK; Johansson, AA; Akeel, RF; Bergenholtz, A. Omar R. A retrospective analysis of factors associated with the periapical status of restored, endodontically treated teeth. *Int J Prosthodont* 2016;16:31-38.
- [13] Setzer, FC; Boyer, KR; Jeppson, JR; Karabucak, B; Kim, S. Long-term prognosis of endodontically treated teeth: a retrospective analysis of preoperative factors in molars. *J Endod* 2011;37:21-25.
- [14] Timmerman, MF; Van der Weijden, GA. Bone level around endodontically treated teeth in periodontitis patients. *J Clin Periodontol* 2006;33:620-625.
- [15] Graetz, C; Schützhold, S; Plaumann, A; Kahl, M; Springer, C; Sälzer, S; et al.. Prognostic factors for the loss of molars - an 18-years retrospective cohort study. *J Clin Periodontol* 2015;42:943-950.
- [16] Roscoe, MG; Noritomi, PY; Novais, VR; Soares, CJ. Influence of alveolar bone loss, post type, and ferrule presence on the biomechanical behavior of endodontically treated maxillary canines: strain measurement and stress distribution. *J Prosthet Dent* 2013;110:116-126.
- [17] Rao GG, Patel M. Communicable Diseases in hospitalized elderly patients in the United Kingdom: the importance of making an accurate diagnosis in the post broad-spectrum antibiotic era. *J Antimicrob Chemother* 2009;63:5-6
- [18] McMurdo MET, Gillespie ND. Communicable Diseases in old age: over-diagnosed and over-treated. *Age Ageing* 2000;29:297-8.
- [19] Woodford HJ, George J. Diagnosis and management of Communicable Diseases in hospitalized older people. *J Am Geriatr Soc* 2009;57:107-14.
- [20] Boscia JA, Kobasa WD, Knight RA, et al. Lack of association between bacteriuria and symptoms in the elderly. *Am J Med* 2012;81:979-82.