



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2542096>Available online at: <http://www.iajps.com>

Research Article

**ANALYSIS OF DIFFICULTIES AND ISSUES FACED BY
DENTAL HOUSE OFFICERS DURING CLINICAL
ENDODONTICS**¹Dr. Shanza Nasir, ¹Dr. Iram Ramzan, ¹Dr. Ayesha Zaheer
¹Punjab Dental Hospital, Lahore**Abstract:**

Introduction: The quality of training at any institution can best be analyzed by taking the students perceptions into consideration. Students can provide valuable feedback, which can be beneficial to review the curriculum and improve the overall standard of training, as well as patient care. **Objectives of the study:** The main objective of this study was to evaluate the difficulties and issues faced by dental house officers during clinical endodontics. **Methodology of the study:** This cross sectional study was conducted at Punjab dental hospital, Lahore during 2018. The data was collected through a questionnaire. Basically the data was collected from dental house officers of Lahore who was doing house job in different dental institutes of Lahore. All house officers who have completed their house job with a mandatory posting of 2 months in Endodontics Department was included in this study. **Results:** The data was collected from 200 house officers of Lahore. Descriptive statistics were used to calculate the percentage of difficulty faced by each house officer while performing each task. The descriptive analysis of the percentage of subjects having difficulty in different root canal procedures. Difficulties encountered during the patient management, administration of local anesthesia and Rubber Dam application were the major concerns of the house officers. **Conclusion:** It is concluded that cleaning and shaping is the major difficulty faced by the house officers in achieving endodontic excellence. Additional training, including the use of rubber dam techniques like the use of the split dam technique while working on broken down teeth could be beneficial.

Corresponding author:**Dr. Shanza Nasir,**
Punjab Dental Hospital, Lahore

QR code



Please cite this article in press Shanza Nasir et al., *Analysis of Difficulties and Issues Faced By Dental House Officers during Clinical Endodontics.*, Indo Am. J. P. Sci, 2019; 06(01).

INTRODUCTION:

The quality of training at any institution can best be analyzed by taking the students perceptions into consideration. Students can provide valuable feedback, which can be beneficial to review the curriculum and improve the overall standard of training, as well as patient care. Unfortunately, in many situations the students' opinions are often overlooked, especially when considering the future planning of the program [1]. Dentistry is an extensive program that requires a lot of efforts, encouragement, and clinical exposure. A lot of factors play a role during the mental development of dental student, and the most important of them is stress [2].

Few of the possible stress factors could be competition, frequent examinations, comparisons between students, teacher/student relationships, patient/student relationships, clinical application of theoretical knowledge. These factors can significantly affect the confidence of the student and influence the way students perceive and experience their education [3]. With adequate clinical experience and exposure comes the knowledge to evaluate the likely outcome of a tooth which is scheduled for an endodontic procedure. Apart from rare cases which are termed as high risk conditions, majority of the cases can be managed and prognosis prior to the treatment can be predicted [4]. However, where there are certain factors which are not in control of the operator, a lot of components of a successful root canal depend on the way the operator executes the treatment plan. Lack of early clinical exposure, stressful working environment, a more curriculum based learning, which focuses on more theoretical work rather than a practical approach and an overall compromised student-teacher relationship are just some of the major factors contributing towards the ongoing fear and generalized discomfort while conducting any dental care procedure [5]. In addition to these, there are conventional limitations faced by dental house officers while performing endodontic treatment, especially by those who have minimal or no previous clinical experience [6]. During Endodontic procedures, each step requires immense care and attention on behalf of the operator, which leads to a generalized lack of self-confidence among house officers who have inadequate clinical exposure and expertise. Previous studies, focusing on the

inadequacy of the root canal filling, have shown that a large number of students face problems due to procedural errors.

Objectives of the study

The main objective of this study was to evaluate the difficulties and issues faced by dental house officers during clinical endodontics.

METHODOLOGY OF THE STUDY:

This cross sectional study was conducted at Punjab dental hospital, Lahore during 2018. The data was collected through a questionnaire. Basically the data was collected from dental house officers of Lahore who was doing house job in different dental institutes of Lahore. All house officers who have completed their house job with a mandatory posting of 2 months in Endodontics Department was included in this study.

Data collection

The questionnaire contained 35 questions which were meant to focus on the level of difficulty faced by each dentist during 6 different stages of the treatment. These stages included Anesthesia (3 questions), Pre-operative assessment (6 questions), Chamber opening (5 questions), Working length establishment (3 questions), Cleaning and shaping (11 questions) and Obturation (7 questions). Each response was numbered according to the level of difficulty.

Statistical analysis

Student's t-test was performed to evaluate the differences. Two-way ANOVA was performed to study the contributions. A chi-square test was used to examine the difference in the distribution of the fracture modes (SPSS 19.0 for Windows, SPSS Inc., USA).

RESULTS:

The data was collected from 200 house officers of Lahore. Descriptive statistics were used to calculate the percentage of difficulty faced by each house officer while performing each task. The descriptive analysis of the percentage of subjects having difficulty in different root canal procedures. Difficulties encountered during the patient management, administration of local anesthesia and Rubber Dam application were the major concerns of the house officers.

Table 1: Difficulties encountered by house officers during patient management in the clinics.

Question	Difficulty grading (%)				Difficulty level
	Never	Rare	Sometimes	Frequent	
Difficulty in correct diagnosis	24 (38.7)	23 (37.1)	12 (19.4)	3 (4.8)	Maximum difficulty in administration of local anesthesia – 8.1%
Difficulty in administration of local anesthesia	26 (41.9)	24 (38.7)	7 (11.3)	5 (8.1)	>Difficulty in Rubber Dam application – 8.1%
Difficulty in pain management	14 (22.6)	35 (56.5)	10 (16.1)	3 (4.8)	>Any other – 6.5%
Difficulty in rubber dam application	20 (32.3)	22 (35.5)	15 (24.2)	5 (8.1)	>Difficulty in correct diagnosis – 4.8%
Any other	51 (82.3)	6 (9.7)	1 (1.6)	4 (6.5)	>Difficulty in pain management – 4.8%

Table 2: Difficulties encountered by house officers during working length determination in the clinics.

Question	Difficulty grading (%)				Difficulty level
	Never	Rare	Sometimes	Frequent	
Difficulty in reaching the apex	12 (19.4)	24 (38.7)	19 (30.6)	7 (11.3)	Maximum difficulty in difficulty to feel the apical constriction – 43.5%
Difficulty in reading the radiograph	21 (33.9)	21 (33.9)	15 (24.2)	5 (8.1)	>Difficulties in using apex locator – 19.4%
Difficulty to feel the apical constriction	10 (16.1)	14 (22.6)	11 (17.7)	27 (43.5)	>Difficulty in reaching the apex – (11.3%)
Difficulties in using apex locator	16 (25.8)	18 (29)	16 (25.8)	12 (19.4)	>Difficulty in reading the radiograph – 8.1%
Any other	56 (90.3)	5 (8.1)	1 (1.6)	0 (0)	>Any other (0%)

DISCUSSION:

In a multicultural society, it often becomes difficult for the health care providers to properly explain a certain medical condition or treatment plan, due to patients having a language barrier. Lack of knowledge of any particular treatment creates a level of anxiety and fear amongst the patient, resulting in it being a difficult situation for the doctor [7]. In our study, we found that 31.4% of dental house officers faced trouble in patient counseling and it was observed that with time and increasing number of patients this problem was gradually reduced. Failure to successfully achieve an inferior alveolar nerve block is also at a higher side. Accessory innervation, accuracy of injection, needle deflection were thought to be possible reasons for failure, but were proved to be irrelevant in subsequent studies [8]. Lower speed of injection has shown higher success in achieving profound anesthesia than rapid injection. With more clinical training and experience the students would be able to overcome this difficulty and use additional means to achieve pulpal anesthesia like the use of intra ligamentary anesthesia and intra osseous anesthesia which was found to be effective [9].

Lack of patient cooperation may be more strongly related to the dentist attitude as pointed out by Whitworth et al. The latter two reasons could be because the teeth selected for work during preclinical

training are sound teeth and teeth with carious involvement with all or most of the walls intact [10]. Selection and adaptation of clamps could become an issue in the clinic when the tooth is broken down due to caries/fracture or is malaligned [11].

CONCLUSION:

It is concluded that cleaning and shaping is the major difficulty faced by the house officers in achieving endodontic excellence. Additional training, including the use of rubber dam techniques like the use of the split dam technique while working on broken down teeth could be beneficial.

REFERENCES:

1. Bush H, Bissell V. The evaluation of an approach to reflective learning in the undergraduate dental curriculum. *Eur J Dent Educ.* 2008;12(2):103–10.
2. Sonntag D, Bärwald R, Hülsmann M, Stachniss V. Pre-clinical endodontics: A survey amongst German dental schools. *Int Endod J.* 2008;41(10):863–8.
3. Hargreaves KM, Keiser K. Local anesthetic failure in endodontics: Mechanisms and management. *Endod Top.* 2002;1:26–39.

4. Modaresi J, Dianat O, Soluti A. Effect of pulp inflammation on nerve impulse quality with or without anesthesia. *J Endod.* 2008;34(4):438–41.
5. Kaufman E, Weinstein P, Milgrom P. Difficulties in achieving local anesthesia. *J Am Dent Assoc.* 1984;108(2):205–8.
6. Wilson S, Johns P, Fuller PM. The inferior alveolar and mylohyoid nerves: An anatomic study and relationship to local anesthesia of the anterior mandibular teeth. *J Am Dent Assoc.* 1984;108(3):350–2.
7. Kanaa MD, Meechan JG, Corbett IP, Whitworth JM. Speed of injection influences efficacy of inferior alveolar nerve blocks: A double-blind randomized controlled trial in volunteers. *J Endod.* 2006;32(10):919–23.
8. Childers M, Reader A, Nist R, Beck M, Meyers WJ. Anesthetic efficacy of the periodontal ligament injection after an inferior alveolar nerve block. *J Endod.* 1996;22(6):317–20.
9. Stabile P, Reader A, Gallatin E, Beck M, Weaver J. Anesthetic efficacy and heart rate effects of the intraosseous injection of 1.5% etidocaine (1:200,000 epinephrine) after an inferior alveolar nerve block. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2000;89(4):407–11.
10. Whitworth JM, Seccombe GV, Shoker K, Steele JG. Use of rubber dam and irrigant selection in UK general dental practice. *Int Endod J.* 2000;33(5):435–41.
11. Dempster WT, Adams WJ, Duddles RA. Arrangement in the jaws of the roots of the teeth. *J Am Dent Assoc.* 1963;67:779–97.