



## Difficulty Ratings by Undergraduates for Different Levels of Oral Surgery

Kalyani. P\*, Dr. S. Kathiravan

BDS I, Faculty of dentistry, Department of Oral and Maxillofacial Surgery, Saveetha Dental College and Hospitals, Saveetha University, Chennai, India.

\*Corresponding author's E-mail: [kals9702@gmail.com](mailto:kals9702@gmail.com)

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### ABSTRACT

The aim of this study is to quantify the overall difficulty and the difficulty of each of the procedures involved in Oral surgery. Oral surgery is unique among the branches of dentistry, as it serves as a bridge between medicine and dentistry. The field of oral surgery is centred around treating conditions like third molar extractions, cyst enucleation, extraction, alveoloplasty, etc., which require skill and expertise. The data collected through this study will help budding dentists to focus more on the procedures that are difficult to master. This study is going to be a questionnaire based study. Using a scale of 1 to 4, the third year & final year students and the interns will be asked to rate the degree of difficulty of each of the procedures in oral surgery. The results of this study will help to bring about modifications in the teaching methods too, so as to eliminate the difficulties.

**Keywords:** Oral surgery, alveoloplasty, enucleation.

### INTRODUCTION

The practice of dentistry is demanding and stressful. The field of oral surgery in particular forms the core of dentistry. In particular, extraction is one of the commonly dealt procedures by the undergraduates. The success of a surgery largely depends upon two factors namely, the Clinician's skill and patient management.

With changing perspectives and people becoming more knowledgeable, managing patients proves to be challenging too. Hence this study also focuses on the aspect of patient management. For instance, the levels in the oral surgery also included details like obtaining the case history, making the patients understand the post operative instructions, etc, for which difficulty ratings were obtained.

Very few studies have been conducted so far to assess the difficulties in oral surgery in the undergraduate level. High levels of difficulty can be considered as an indicator that more training, exposure to more number of patients, and the knack to tackle situations need to be developed.

The purpose of this study is to quantify the degree of difficulty involved in the performance of various oral surgery procedures. It aims to elucidate the specific difficulties that are likely to be encountered by breaking down each surgical procedure into its key elements. This will provide a guide for surgeons who are learning these operations so they can choose appropriately which

procedures to perform first and anticipate and prepare for the difficulties they are likely to encounter.<sup>(1)</sup>

### MATERIALS AND METHODS

This study was a questionnaire-based study. A total of 100 students were included in the study. All of them were 3rd year students, final year students and interns of a city-based dental college. The questionnaire basically consisted of 14 questions with the 9th question having 4 subdivisions. All the questions were arranged in a stepwise order of the various procedures in extraction. The students difficulty was assessed using a scale ranging from 1 to 4 where:

- 1- Most difficult
- 2- Difficult
- 3- Normal
- 4- Easy

The students were asked to fill the questionnaire without revealing their names.

The data were collected and statistical analysis was made to find the results.

The questionnaire distributed to the students has been attached herewith.



**Saveetha Dental College and Hospitals**

Research week 2015-2020

**TO ASSES THE DEGREE OF DIFFICULTY FOR VARIOUS ORAL SURGERY PROCEDURES AMONG UNDERGRADUATE STUDENTS**

You are kindly requested to fill the following questionnaire regarding the difficulty ratings for various procedures in oral surgery .  
The difficulty scale is as follows:  
1- Most difficult ; 2- Difficult ; 3- Normal ; 4- Easy

**YEAR OF STUDY:**

**EXTRACTION**

1. Taking the case history of the patient.

1  
 2  
 3  
 4

2. Finding out the patient's chief complaint

1  
 2  
 3  
 4

3. Examining the medical fitness of the patient

1  
 2  
 3  
 4

4. Taking an X-Ray

1  
 2  
 3  
 4

5. Formulating a treatment plan

1  
 2  
 3  
 4

6. Obtaining the patient's consent

1  
 2  
 3  
 4

7. Patient's past extraction history

1  
 2  
 3  
 4

8. Decision making in patients with periodontal inflammation

1  
 2  
 3  
 4

9a. Administering a local anaesthesia  
Maxillary infiltration

1  
 2  
 3  
 4

9b. Infraorbital nerve block

1  
 2  
 3  
 4

9c. Posterior superior alveolar nerve block

1  
 2  
 3  
 4

9d. Mandibular inferior alveolar nerve block

1  
 2  
 3  
 4

10. Checking for numbness

1  
 2  
 3  
 4

11. Flap elevation

1  
 2  
 3  
 4

12. Luxation of tooth with elevator

1  
 2  
 3  
 4

13. Making the patient understand the post operative instructions

1  
 2  
 3  
 4

10. Checking for numbness

1  
 2  
 3  
 4

11. Flap elevation

1  
 2  
 3  
 4

12. Luxation of tooth with elevator

1  
 2  
 3  
 4

13. Making the patient understand the post operative instructions

1  
 2  
 3  
 4

14. Prescribing medications

1  
 2  
 3  
 4

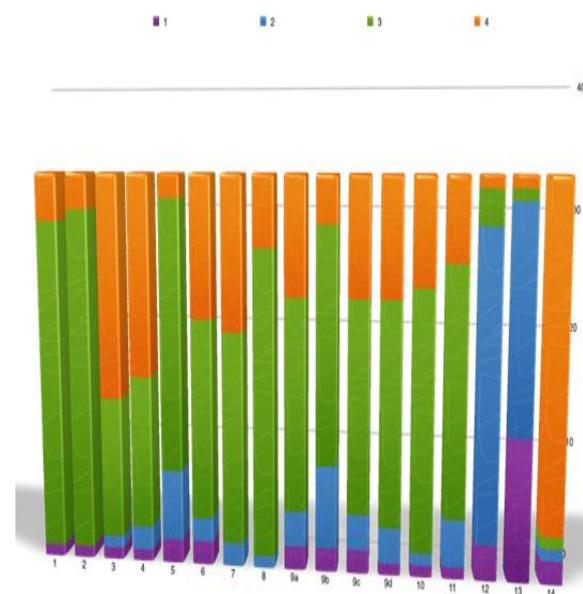
😊 Thank you 😊

**Statistical Analysis**

**Table 1: Third years**

Options/ Questions	1(%)	2(%)	3(%)	4(%)
1	1(3.03)	0(0)	28(84.8)	4(12.1)
2	1(3.03)	0(0)	29(87.9)	3(9.1)
3	1(3.03)	1(3.03)	12(36.4)	19(57.6)
4	1(3.03)	2(6.1)	13(39.4)	1(3.03)
5	2(6.1)	6(18.2)	23(69.7)	2(6.1)
6	2(6.1)	2(6.1)	17(51.5)	12(36.4)
7	0(0)	2(6.1)	18(54.5)	13(39.4)
8	0(0)	1(3.03)	26(78.8)	6(18.2)
9a	2(6.1)	3(9.1)	18(54.5)	10(30.3)
9b	2(6.1)	7(21.2)	20(60.6)	4(12.1)
9c	2(6.1)	3(9.1)	18(54.5)	10(30.3)
9d	1(3.03)	3(9.1)	19(57.6)	10(30.3)
10	1(3.03)	1(3.03)	22(66.7)	9(27.3)
11	1(3.03)	4(12.1)	21(63.6)	7(21.2)

12	3(9.1)	26(78.8)	3(9.1)	1(3.03)
13	12(36.4)	19(57.6)	1(3.03)	1(3.03)
14	2(6.1)	1(3.03)	1(3.03)	29(87.9)



**Fig. 1**

**Table 2: Final years**

Options/ Questions	1(%)	2(%)	3(%)	4(%)
1	0(0)	5(15.2)	7(21.2)	21(63.6)
2	0(0)	0(0)	9(27.3)	24(72.7)
3	0(0)	2(6.1)	14(42.4)	17(51.5)
4	0(0)	2(6.1)	5(15.2)	26(78.8)
5	0(0)	2(6.1)	17(51.5)	14(42.4)
6	0(0)	2(6.1)	16(48.5)	15(45.5)
7	0(0)	2(6.1)	11(33.3)	20(60.6)
8	0(0)	14(42.4)	7(21.2)	12(36.4)
9a	0(0)	4(12.1)	14(42.4)	15(45.5)
9b	0(0)	2(6.1)	22(66.7)	9(27.3)
9c	0(0)	5(15.2)	9(27.3)	19(57.6)
9d	0(0)	3(9.1)	10(30.3)	20(60.6)
10	1(3.03)	1(3.03)	21(63.6)	10(30.3)
11	1(3.03)	4(12.1)	4(12.1)	24(72.7)
12	0(0)	5(15.2)	14(42.4)	14(42.4)
13	1(3.03)	11(33.3)	8(24.2)	13(39.4)
14	1(3.03)	0(0)	4(12.1)	28(84.8)

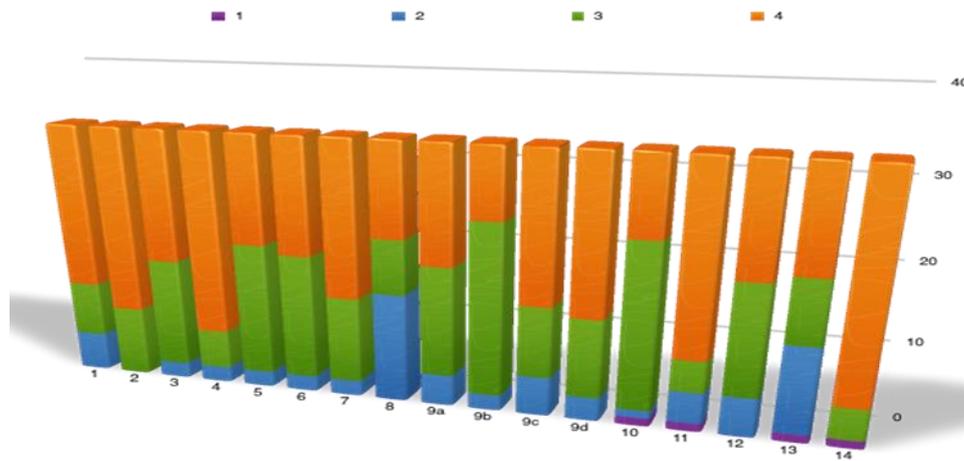


Fig. 2:

Table 3: Interns

	1	2	3	4
1	1(3.03)	5(15.2)	24(72.7)	3(9.1)
2	0(0)	2(6.1)	24(72.7)	7(21.2)
3	0(0)	0(0)	19(57.6)	14(42.4)
4	1(3.03)	11(33.3)	7(21.2)	14(42.4)
5	0(0)	4(12.1)	26(78.8)	3(9.1)
6	0(0)	4(12.1)	25(75.8)	4(12.1)
7	12(36.4)	1(3.03)	8(24.2)	12(36.4)
8	0(0)	4(12.1)	26(78.8)	3(9.1)
9a	0(0)	1(3.03)	24(72.7)	8(24.2)
9b	2(6.1)	17(51.5)	12(36.4)	2(6.1)
9c	12(36.4)	4(12.1)	10(30.3)	7(21.2)
9d	0(0)	0(0)	15(45.5)	18(54.5)
10	0(0)	0(0)	25(75.8)	8(24.2)
11	1(3.03)	1(3.03)	24(72.7)	7(21.2)
12	11(33.3)	12(36.4)	8(24.2)	2(6.1)
13	0(0)	19(57.6)	13(39.4)	1(3.03)
14	0(0)	1(3.03)	3(9.1)	29(87.9)

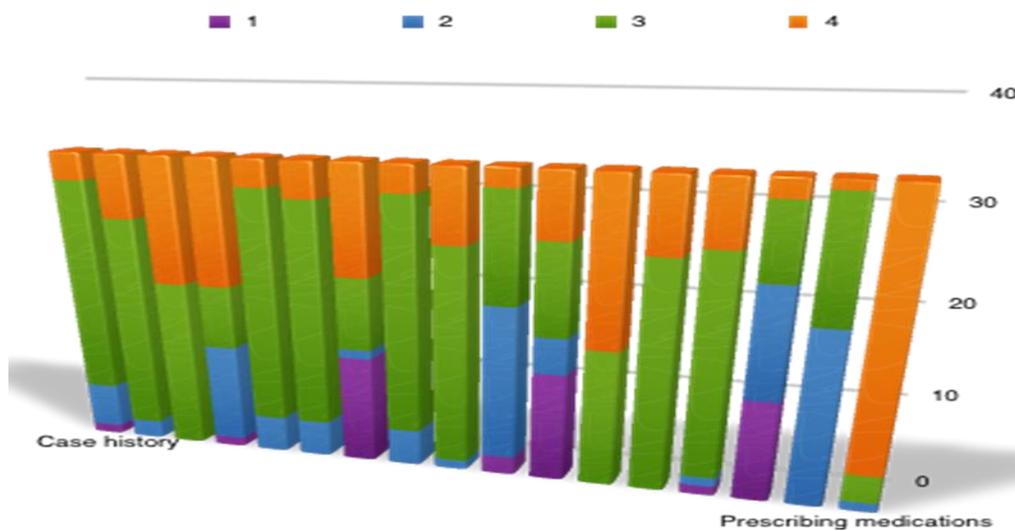


Fig. 3:

## RESULTS

On the overall difficulty score, making the patient understand the post-operative instructions was scored the toughest among all students and the step graded as the easiest is prescribing medications. Others than these, grades of difficulty for individual steps was found to vary among the different batches. However, a progressive drop in difficulty levels was observed as students proceeded towards internship.

## DISCUSSION

### Third years

36.4% students graded making the patients understand the post-operative instruction as “very difficult” while 87.9% students selected prescribing medications as the “easiest” among all the procedures. Patients past extraction history and decision making in patients with periodontal inflammation had 0% of students rating it as “very difficult”. 78.8% students felt the step luxation of tooth with elevator to be “difficult”. Other than these, the remaining procedures were almost rated as “normal” by majority of the students.

### Final years

84.8% students chose prescribing medications to be “easy” and 78.8% students rated taking an X-Ray to be “easy”. Surprisingly, for most procedures 0% students revealed the level “very difficult”. Also, under the rating “difficult”, the highest percentage was 48.4% for decision making in patients with periodontal inflammation. Other than these, all other procedures were rated mainly as “normal”. A significant reduction in the difficulty is observed in comparison with the third year students.

### Interns

Among interns, the easiest step is again prescribing medications with 87.9% of students in this category. Taking the person’s past extraction history and administering a posterior superior alveolar nerve block were rated “very difficult” by 36.4% students each. The second highest percentage in “very difficult” is 33.3% for flap elevation. 57.6% students rated making the patient understand the post-operative instructions as “difficult”. Parts from these, all other procedures were rated either as “normal” or as “easy”.

According to a study conducted by Mahmoud-Al Dajani, the undergraduate students of Saudi Arabia revealed the highest level of confidence in giving local anaesthesia (96.9%), understanding extraction indications (93.8%), and performing simple extractions (90.6) and the lowest level of confidence was perceived while taking a biopsy of

an intra-oral lesion (46.9%) or a lesion on the skin (37.5%).<sup>2</sup>

About 56.3% revealed that their first extraction procedure was difficult. No one rated the first extraction procedure “very difficult”.

Compared to their counterpart in the fourth-year, fifth-year students displayed significantly higher confidence in the following: understanding extraction indications (P=0.012); administering an topical anaesthetics injection to your patient (P=0.005); using elevators to luxate teeth (P=0.040) and in using forceps to extract teeth (P=0.031).<sup>2</sup> According to T. Renton et al., for an experienced operator simple dental factors may no longer pose a surgical challenge but the presence of adverse patient factors as well as radiological (dental) factors determine the risk of surgical difficulty.<sup>4</sup>

David Henzi et al., has produced his findings about the perspectives of North American dental students in clinical learning. According to his findings, the most frequently described positive experience was the opportunity to work with patients. The patient interaction helped dental students increase their confidence when performing new skills.<sup>3</sup>

## CONCLUSION

Students master the procedures and the skill required for each procedure only by treating large number of patients as years proceed. A similar example is the result of my study, revealing the greater ease of interns in performing certain procedures when compared to the third year students. But all the three years of students find one step challenging in common- making the patients understand the post-operative instructions. This can be eliminated only by increased interaction with patients. Hence, dental schools should aim at bringing patient interaction an important part of their curriculum.

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