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ARE ORAL & MAXILLOFACIAL SURGERY POST GRADUATES CONFIDENT IN PRACTICING THE FULL SCOPE OF THE SPECIALTY: A QUALITATIVE RESEARCH

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ABSTRACT

Aim: Purpose of the present research was to assess the level of confidence of post graduate students of oral and maxillofacial surgery branch; in practicing to their full potential.

Methodology: In this cross-sectional study, all the post graduate students of oral and maxillofacial branch who pursuing their Masters of Dental Surgery in both private or government dental institutions; were included (purposive sampling) in our area. Pre-structured questionnaires (10 questions) were distributed to them, the collected data were entered in Microsoft excel 2010, and variables were analysed using descriptive statistics and Chi-square test with the help of SPSS 25.0.

Results: 60 % of respondents felt that they had more exposure to traumatology (1.12±0.98) as compared to other subspecialties and least in orthognathic surgeries. However, they felt that cosmetic surgery and onco-surgical sub-specialty will have an edge in future practice of OMFS. They felt the need for more training in handling cases of orthognathic surgical procedures (0.98±0.32).

Conclusion: Oral-maxillofacial surgery residency training programs should individually evaluate whether curriculum modifications increase the proficiency levels.

Keywords oral surgery, confidence, training

INTRODUCTION

Oral and maxillofacial surgery (OMFS) is the specialty of dentistry which earlier was only concerned with treating the pathologies related to oral cavity and jaw bone such as the cyst as well as tumor, but due to advancement of knowledge and technological advances; the scope has extended to maxillofacial trauma, cleft lip and palate surgery, head and neck oncology, exocrine gland diseases, and mandibular joint disorders. People

in today's world are more health conscious and are conscious of the various medical specialties, and that they like better to visit the specialists for any quite health-related problems. Besides that the oral and maxillofacial surgeons attend to a large number of primary patients, they also receive referrals from dental and medical professionals and also from emergency services.[1]Oral and maxillofacial surgery is that the only specialty in dentistry which is closely related to other medical departments. The results of a study conducted in England within the Department of Oral and Facial Surgery, Sunderland District General Hospital, showed that the majority medical and dental practitioners had only preliminary knowledge about the specialty of OMFS. Conversely, 79% of the general public had not heard of OMFS, and 74% of the general public did not comprehend the role of OMFSs.[2]The evolution of dental student with rudimentary textbook knowledge of surgery and emerging surgical technical ability to an oral and maxillofacial surgeon (OMS) with detailed knowledge of preoperative groundwork, surgical indications, surgical judgement, operative skill and critical care management is one of the most dramatic and impressive transitions in any professional field.[3] Educating and training oral-maxillofacial surgery residents are often especially challenging thanks to the breadth and depth of the specialty and therefore the significant time spent off-service completing other requirements. Although exposure to the present high volume of cases is assumed to permit for the event of competence, it's going to not always correlate confidently levels (perceived proficiency) and permit a newly graduated surgeon to feel confident to perform a selected operation because the attending surgeon. The expectation of the event of surgical competence and confidence in other surgical specialties, like general surgery, tend to not be procedure-based, but time-based, with the idea that resident exposure over an agreed-upon period of time will result in a competent young surgeon.[4]

Three different levels of practice as referred to Laskin's areas of competence[5] and Messiha et al.'s [6] general and specific competencies with core procedures and extended procedures:

- the expert level corresponds to the basic level covering oral pathology, dento-alveolar surgery, pre-prosthetic surgery, implantology and trauma.
- the competent level covers the expert level with addition of orthognathic and TMJ surgery, salivary gland and reconstructive surgery.
- the familiar level covering the competent and expert levels to which malformation and oncology surgery, craniofacial and cosmetic surgery are added.

All oral surgeons must have expert level knowledge, but only a few will have familiar level knowledge, so it is important to assess their competence skill as well as their inclination to various subspecialties in OMFS, which they intend to practice once they complete their post graduate degree.

AIM OF THE PRESENT STUDY

Purpose of the present research was to assess the level of confidence of post graduate students of oral and maxillofacial surgery branch; in practicing to their full potential.

METHODOLOGY

We designed an anonymous 10-question survey (Table 1) using the model Laskin et al. suggested when considering the scope of oral-maxillofacial surgery.[5] We adapted the comfort, experience and quality of training Likert scales from a survey conducted in general surgery.[7] Responses for residents' perceived level of training was collected using the following Likert-style scales (responses were then converted to numerical form): Preparedness, Level of Proficiency, Comfort, Experience and Quality.

The remaining questions consisted of one general question assessing residents' preparedness to practice the full scope of oral-maxillofacial surgery independently that is required for their future practice. Three additional questions collected demographic information including resident gender, program type and plans after graduation. Three questions inquired about residents' opinions on the scope of oral-maxillofacial surgery and future practice plans. E mail was sent to 46 participants, out of which 35 responses returned and were recorded on an excel spreadsheet and analysed with the help of SPSS 25.0. Descriptive statistical measures (mean, standard deviation) and Chi square test was used to demonstrate the variability in the answers of respondents.

RESULTS

Majority of our participants felt that they were prepared to practice the full scope of oral-maxillofacial surgery independently that is required for your future practice (1.36±1.02). (Table 2) around 60 % of respondents felt that they had more exposure to traumatology (1.12±0.98) as compared to other subspecialties and least in orthognathic surgeries. However, they felt that cosmetic surgery and onco-surgical sub-specialty will have an edge in future practice of OMFS. They felt the need for more training in handling cases of orthognathic surgical procedures (0.98±0.32). Around 66.8% of participants also felt that they received adequate training in their post graduate course (1.89±1.13). However, 54.3% of participants had more than 50 cases of experiences under subspecialty cases. (1.57±1.27) and was statistically significant as well (p=0.0433).(Table 3)

Table 1- Survey questionnaire

S no.	Questions
1	Overall, do you feel prepared to practice the full scope of oral-maxillofacial surgery independently that is required for your future practice? • Yes • No
2	Which subspecialty of OMFS you feel you are better equipped at post graduate level? • A/B/C/D/E
3	Out of these sub-specialities, which according to you is a better career orientation for practicing after completing your post-graduate degree? • A/B/C/D/E
4	Rate the listed areas according to your perceived level of proficiency- • Area of Familiarity (least competent) • Area of Competence • Area of Expertise (extremely competent)
5	Are you confident to perform procedures alone? • Yes • No
6	Is there any subspecialty, which you feel to be more trained as well as competent? • A/B/C/D/E
7	Rate the quality of training you received in each area- • Below my needs • Adequate to my needs

	• Exceeded my needs
8	How much experience do you have performing speciality procedures in OMFS? (no. of cases) • Less than 50 • More than 50
9	Which sub-specialty you have the most experience (based on no. of cases)? • A/B/C/D/E
10	Are you comfortable in handling emergency procedures? • Yes • No

**A-Traumatology, B- Oncology, C-Prosthetic surgery, D- Cosmetic surgery, E-Orthognathic surgery*

Table 2- Responses recorded in the present study (mean ±SD)

Question No.	Response measurement (Mean ±SD)
1	• Yes 1.36±1.02 • No 2.6±1.8
2	• **A-** 1.12±0.98 • **B-**1.34±1.02 • **C-**1.45±1.12 • **D-**1.29±1.01 • **E-**1.88±1.45
3	• **A-**2.19±2.02 • **B-**1.99±1.77 • **C-**1.76±1.12 • **D-** 1.03±0.54 • **E-**1.14±0.78
4	• Area of Familiarity (least competent)- 2.45±1.67 • Area of Competence-1.31±1.01 • Area of Expertise (extremely competent)- 2.13±1.98
5	• Yes 1.196±1.032 • No 1.8±1.19
6	• **A-** 1.14±0.45 • **B-**1.33±0.876 • **C-**1.98±1.55 • **D-**1.03±0.76 • **E-** 0.98±0.32
7	• Below my needs- 2.34±1.78 • Adequate to my needs-1.89±1.13 • Exceeded my needs-3.43±2.13
8	• Less than 50-2.18±1.834 • More than 50-1.57±1.27
9	• **A-**1.12±0.98

	• **B-**1.566±1.03 • **C-**2.11±1.99 • **D-**2.45±2.12 • **E-**3.43±2.78
10	• Yes 1.26±0.89 • No 2.12±1.76

Table 3- Statistical significance of measurements obtained in the present study

Question No.	Chi square value	p value
1	2.45	0.33
2	1.134	1.27
3	1.13	1.17
4	4.61	0.0267
5	1.59	0.674
6	2.91	0.99
7	3.56	0.178
8	3.78	0.069
9	4.89	0.0433
10	1.19	1.67

**p=<0.05 is significant*

DISCUSSION

Oral and maxillofacial surgery is the sub-division of dental/ medical science that manages diversities of pathologic conditions of the jaw, mouth, and face. However, it has confrontation of low levels of awareness amongst the public and other medical/paramedical professionals.[8]

Traumatology, both soft tissue injury and maxillofacial bone fracture, is the subspecialty of maxillofacial surgery more commonly practiced by maxillofacial surgeons in India,[12,13] which is similar with findings from a study conducted by Hofman et al.[14] Open reduction and internal fixation with plates and screws is the choice of method for treatment of maxillofacial fracture, as reported in this study. This fluctuates from a alike study in Nigeria where only 53% of surgeons usually accomplish open reduction with plates and screws which could be due to either better setup for trauma in India, or Indian patients can better afford the cost of miniplates. Although 45.7% of the participants in this study had primary interest in oncology, only 20% were involved and the main challenge to oncological maxillofacial surgery observed in this study is lack of training and backup/support. This is different from the finding of similar study in Nigeria where the challenge facing oncological maxillofacial surgery was late patients' presentation.[15] This difference suggests that Indian patients seek oncological treatment earlier, but the surgeons sometimes lack competency in oncological maxillofacial surgery. Although 40% of the participants practiced in Government Dental colleges, none of them are involved in cleft lip and palate surgery and those who are involved in cleft lip and palate surgery, all practice in private dental colleges. In our study, better training is required in case of orthognathic surgery as compared to other sub-specialities of OMFS, but nonetheless respondents were confident about practising the cases in future.

CONCLUSION

There is a diverse oral surgery specialty in practitioner profile, curriculum and training as well as practice. In conclusion, this study provides insight into graduating chief residents' level of perceived proficiency for each sub-speciality area of OMFS. Based on our results, oral-maxillofacial surgery residency training programs should individually evaluate whether curriculum modificat increase the proficiency levels.

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