

ORIGINAL ARTICLE



Perception and awareness of oral and maxillofacial surgery speciality among medical postgraduate trainees

Muhammad Sulaiman, Tahir Saeed, Muslim Khan, Waleed Ali, Syeda Masooma and Farrukh Jehan

Department of Oral and Maxillofacial Surgery, Khyber College of Dentistry, Peshawar, Pakistan

ABSTRACT

Objective: To assess the perception and awareness of the Oral and Maxillofacial Surgery (OMFS) specialty among medical postgraduate trainees.

Material and methods: This survey was conducted at Qazi Hussain Medical Complex, Nowshera, employing non-probability sampling technique. A questionnaire on OMFS perception and awareness was manually distributed to 188 participants. Participants meeting inclusion criteria were second-year or senior trainees of the FCPS program, Pakistani nationals, and engaged in medical or allied field training. Exclusions comprised surgery and allied trainees, individuals treated by maxillofacial surgeons, and those with a maxillofacial surgeon first-degree relative. The questionnaire featured scenarios related to oral and maxillofacial surgery, assessing participants' perceptions of appropriate specialties for various clinical situations. Data analysis, included mean age computation, gender and awareness level distribution analysis, and chi-square tests for gender-awareness association.

Results: The mean age was 30.79 ± 3.54 years. Males ($n=120$, 63.83%) were more than females ($n=68$, 36.17%). While 47.87% identified oral and maxillofacial surgery for temporomandibular joint issues, 51.60% recognized it for cleft lip and palate repairs. Similarly, 44.68% considered OMFS for facial space infections, 44.15% for jaw deformities, and 44.68% for wisdom tooth extraction. Gender disparities were evident in TMJ problem management ($p=0.019$).

Conclusion: Medical postgraduates lack awareness of the diverse services offered by OMFS, emphasizing the need to enhance public perception, raise awareness, and improve healthcare accessibility and efficiency.

KEYWORDS

Maxillofacial surgery;
Awareness; Post Graduate;
Trainees; Residents

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Introduction

Oral and maxillofacial surgery (OMFS) is characterized by its intersection with multiple surgical specialties and its role as a connecting link between dentistry and medicine [1]. This specialized field covers a wide range of areas, such as dentofacial deformities, facial trauma, maxillofacial pathology, disorders of temporomandibular joint, diseases of salivary gland, oral squamous cell carcinoma, distraction histogenesis, dental implants, and the cleft lip and palate management [2].

Oral and maxillofacial surgeons surpass the notion of solely addressing teeth and their immediate vicinity [3]. They provide treatments that improve quality of life by enhancing appearance, function, and aesthetics, and also have a pivotal role in critical life-saving procedures [4].

It is essential for our medical and dental colleagues to possess a fundamental understanding of the oral and maxillofacial surgery (OMFS) specialty [5]. This knowledge empowers them to make well-informed decisions when it comes to overseeing patient care and treatment [6]. By having a grasp of the intricacies of OMFS, these professionals can accurately assess patients' needs and collaborate effectively with oral and maxillofacial surgeons to devise comprehensive and appropriate management plans. Moreover, the advantages of familiarity with OMFS extend beyond the medical and dental community.

The general public stands to gain from being informed about the scope and capabilities of oral and maxillofacial surgery [7]. When individuals are aware of the various services and interventions that OMFS can provide, they are better equipped to advocate for their own health and well-being. In situations where their oral and facial health requires specialized attention, individuals can request the appropriate referrals to oral and maxillofacial surgeons [8]. This understanding empowers patients to actively participate in their healthcare decisions and seek out the most suitable experts for their specific needs, ultimately leading to more effective and tailored treatment outcomes.

The objective of this study is to determine the perception and awareness of Oral and Maxillofacial Surgery speciality among medical postgraduate trainees.

Material and Methods

The study was conducted among medicine and allied postgraduate trainees at Qazi Hussain Medical Complex, Nowshera, from January 2023 to May 2023. Non-probability sampling technique was employed to select the participants. Ethical approval was obtained from the hospital committee to ensure the ethical standards of the study. Prior to their

participation, all participants were provided with detailed written explanations regarding the aim and potential benefits of the study. Informed consent forms were signed by each participant, emphasizing the maintenance of their confidentiality throughout the study. The questionnaire, containing questions related to the perception and awareness of oral and maxillofacial surgery specialty, was manually distributed by the primary author (TS).

The sample size for this study was calculated to be 188 using the WHO calculator. The calculations were based on an absolute precision of 5%, a confidence interval of 95%, and a frequency of 60.4% for awareness about Oral Maxillofacial Surgery obtained from a previous study [9].

The inclusion criteria for participants were as follows: they had to be second-year or senior trainees of the FCPS program, of both genders, Pakistani nationals, and engaged in medical or allied field training. However, trainees of surgery and allied, individuals who had received treatment from a maxillofacial surgeon, and those who had a first-degree relative working as a maxillofacial surgeon were excluded from the study.

The questionnaire used in this study consisted of various questions related to different clinical situations within oral and maxillofacial surgery. For example, participants were asked about the most suitable specialty to treat temporo-mandibular joint disorders such as ankylosis or joint dislocations, with options including plastic surgeon, ENT specialist, orthopedic surgeon, and maxillofacial surgeon. Another question focused on the professionals involved in cleft lip and palate repairs, with options such as plastic surgeon, maxillofacial surgeon, and pediatric surgeon. Participants were also asked about the appropriate referrals for facial space infections like Ludwig's angina or cavernous sinus thrombosis. The questionnaire further explored the specialization needed for aesthetic corrections of jaw deformities, presenting options of maxillofacial surgeon, plastic surgeon, and orthopedic surgeon. Lastly, participants were asked about the specialists typically involved in wisdom tooth extraction, with options including general dentist, maxillofacial surgeon, general surgeon, ENT specialist, maxillofacial surgeon again, and even neurosurgeon. These questions aimed to gauge the participants' perception and awareness of the appropriate specialty within oral and maxillofacial surgery for various clinical scenarios.

The data analysis for this study was performed using SPSS version 23. The age variable was computed as the mean with standard deviation (SD) to measure the central tendency and dispersion of participants' ages. Gender and awareness levels were analyzed using frequency counts and percentages to assess the distribution and proportions within each category. To examine the association between gender and awareness, a chi-square test was conducted, considering a significance level of $p < 0.05$ as the threshold for statistical significance.

Results

The mean age was 30.79 ± 3.54 years with range from 25 to 37 years. Males ($n=120$, 63.83%) were more than females ($n=68$, 36.17%). the most numerous age group was 25-30 years ($n=88$, 46.81%) followed by 31-35 years ($n=83$, 44.15%) and least was '36 years & above' ($n=17$, 9.04%) [Table 1].

Table 1. Gender and age distribution of the participants.

Variable	Characteristic	n(%)
Gender	Female	68 (36.17)
	Male	120 (63.83)
Age group (years)	25-30	88 (46.81)
	31-35	83 (44.15)
	36 & above	17 (9.04)

For the question of who should treat temporomandibular joint (TMJ) problems, 90 respondents (47.87%) identified oral and maxillofacial surgery as the appropriate specialty, while 46 respondents (24.47%) indicated ENT specialists. Orthopaedic surgeons and plastic surgeons were mentioned by 17 (9.04%) and 35 (18.62%) respondents, respectively. Regarding repairing cleft lip and palate (CLP), the majority of respondents (51.60%) recognized oral and maxillofacial surgery as the appropriate specialty, with 97 respondents indicating this choice. Paediatric surgeons were mentioned by 60 respondents (31.91%), followed by 31 respondents (16.49%) identifying plastic surgeons. In the context of treating facial space infections, 84 respondents (44.68%) believed oral and maxillofacial surgery should handle such cases. ENT specialists were mentioned by 60 respondents (31.91%), while 26 respondents (13.83%) identified neurosurgeons and 18 respondents (9.57%) identified general surgeons. Regarding the correction of jaw deformities, 83 respondents (44.15%) identified oral and maxillofacial surgery as the suitable specialty. Plastic surgeons were mentioned by 70 respondents (37.23%), while 29 respondents (15.43%) indicated orthopaedic surgeons and 6 respondents (3.19%) indicated ENT specialists. Finally, when it comes to the ideal specialty for removing wisdom teeth embedded in bone, 104 respondents (55.32%) believed general dentists should perform the procedure, while 84 respondents (44.68%) considered oral and maxillofacial surgery as the appropriate specialty [Table 2].

Table 2. Awareness about maxillofacial surgery among post graduate medical trainees.

Variable	Characteristic	n(%)
Who should treat TMJ problems?	ENT specialist	46 (24.47)
	oral and maxillofacial surgery	90(47.87)
	Orthopaedic surgeon	17 (9.04)
	Plastic surgeon	35 (18.62)
	oral and maxillofacial surgery	97 (51.60)
Who should repair CLP ?	Paediatric surgeon	60 (31.91)
	Plastic surgeon	31 (16.49)
	ENT specialist	60 (31.91)
Who should treat facial space infections	General surgeon	18 (9.57)
	Neurosurgeon	26 (13.83)
	oral and maxillofacial surgery	84 (44.68)
	ENT specialist	6 (3.19)
Who should correct jaw deformities?	oral and maxillofacial surgery	83 (44.15)
	Orthopaedic surgeon	29 (15.43)
	Plastic surgeon	70 (37.23)
who should ideally remove Wisdom tooth embedded in bone	General dentist	104 (55.32)
	oral and maxillofacial surgery	84 (44.68)

For the question of who should treat temporomandibular joint (TMJ) problems, a higher percentage of male trainees (30.83%) identified ENT specialists compared to female trainees (13.24%), with a significant p-value of 0.019. The

awareness of about management of CLP, facial space infection, correction of jaw deformity and wisdom tooth removal was not differed statistically ($p > 0.05$) [Table 3].

Table 3. Comparison of Awareness about maxillofacial surgery among post graduate medical trainees between males and females.

Questions	Characteristic	female, N= 68	male, N=120	p-value*
Who should treat TMJ problems?	ENT specialist	9 (13.24)	37 (30.83)	0.019
	oral and maxillofacial			
	surgery	33 (48.53)	57 (47.50)	
	Orthopaedic surgeon	9 (13.24)	8 (6.67)	
Who should repair CLP?	Plastic surgeon	17 (25.00)	18 (15.00)	0.067
	OMFS	41 (60.29)	56 (46.67)	
	Paediatric surgeon	21 (30.88)	39 (32.50)	
Who should treat facial space infections	Plastic surgeon	6 (8.82)	25 (20.83)	0.058
	ENT specialist	21 (30.88)	39 (32.50)	
	General surgeon	3 (4.41)	15 (12.50)	
Who should correct jaw deformities?	Neurosurgeon	6 (8.82)	20 (16.67)	0.084
	OMFS	38 (55.88)	46 (38.33)	
	ENT specialist	1 (1.47)	5 (4.17)	
	OMFS	37 (54.41)	46 (38.33)	
	Orthopaedic surgeon	6 (8.82)	23 (19.17)	
Who should ideally remove Wisdom tooth embedded in bone	Plastic surgeon	24 (35.29)	46 (38.33)	0.062
	General dentist	31 (45.59)	73 (60.83)	
	OMFS	37 (54.41)	47 (39.17)	

Discussion

The study aimed to assess perception and awareness of oral and maxillofacial surgery. Results indicated that participants reported that with various conditions, such as TMJ problems, CLP repair, facial space infections, jaw deformities, and wisdom tooth removal should be treated by OMFS. Male trainees leaned towards ENT specialists for TMJ issues, while overall awareness showed no significant gender-based differences.

Our findings indicated that a significant portion of medical postgraduates are familiar with the OMFS department's existence. However, the majority of these individuals lacked awareness regarding the extensive range of surgical procedures encompassed by this specialty. These observations align with the investigations conducted previously [9,10].

In 2008, a survey was carried out at the Jawaharlal Institute of Postgraduate Medical and Research Institute located in Pondicherry, India. The analysis of participant responses unveiled a notable trend, indicating that only a minority within the surveyed population possessed a grasp of the targeted medical specialty. Specifically, among the entire cohort of participants, a mere 41% of medical students, 76% of medical practitioners, and 58% of paramedical workers were acquainted with the name associated with this specialized field [11].

Lau SL's findings show that diverse medical conditions discussed with medical postgraduates could belong to various specialties. Oral and maxillofacial surgeons are equipped to handle all these conditions. Allocating tasks to specific specialties isn't definitively right or wrong due to shared responsibilities and cultural influences. The study noted a significant difference in patient referrals within the scope of OMFS. Postgraduates from dental-affiliated medical colleges made more appropriate referrals compared to those from non-affiliated institutions [12].

These findings suggest that the majority of medical postgraduates recognized the involvement of maxillofacial surgeons in addressing facial trauma, yet a significant portion remained unaware of their broader role in treating various other conditions within the head and neck region. similar results were found in previous study [9].

The study's strengths lie in its comprehensive evaluation of oral and maxillofacial surgery awareness among targeted postgraduate trainees, supported by ethical considerations and a calculated sample size. The structured questionnaire, encompassing diverse clinical scenarios, offers valuable insights. However, limitations include potential selection bias due to non- probability sampling, restricted generalizability from a single-center focus, reliance on self- reported data, and

exclusion of certain groups. The cross-sectional design further restricts causal inferences. Despite these limitations, the study yields valuable insights into the awareness levels within oral and maxillofacial surgery among the specified group.

Conclusion

Medical postgraduates show a clear lack of understanding when it comes to grasping the wide range of services provided by OMFS. It's extremely important to focus on improving how the public sees this specialized area and raising awareness about the various treatments it offers. Having a better understanding of the extensive scope of OMFS plays a crucial role in making healthcare services more accessible and efficient, ultimately leading to higher-quality care.

Disclosure statement

No potential conflict of interest was reported by the author.

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