

# Awareness Regarding Specialities in Dentistry among Medical Interns and Postgraduates

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## ABSTRACT

**Introduction:** Understanding the knowledge gaps in dental specialities among medical professionals is essential for fostering interdisciplinary collaboration and improving overall patient care. This study aimed to identify areas of deficiency, and propose recommendations to bridge the gap in knowledge.

**Objective:** To assess the awareness of specialities of dentistry among medical interns and postgraduate (PG) residents.

**Materials and Method:** An analytical cross-sectional study was carried out after ethical clearance, from 2023 April to 2023 May among 234 respondents, including 91 interns and 143 PG residents of Kathmandu Medical College. Data obtained were analysed using the SPSS v.20.

**Result:** The study reflected 201 (86.11%) of the respondents (N = 234), were unaware about the different specialities of dentistry and 209 (89.44%) of the sample referred their patients to the general dentist without knowing the specialities. The correct response rate for interns and PGs were 48 (53.33%) and 115 (80.75%) respectively. About 63 (69.23%) of the interns (n1 = 91) incorrectly identified orthodontics as a specialty for treating fractures of the jaw. In contrast, 118 (82.51%) of the postgraduate residents (n2 = 143) recommended referring cases of mandibular fracture to the Oral and Maxillofacial Surgeon

**Conclusion:** A large number of participating interns were not aware of the differences among the branches in Dentistry, specifically between orthodontics, oral and maxillofacial surgery, public health (community) dentistry, and paediatric dentistry. Many medical doctors have misbelieve that all of their dental related issues can be solved by the general dental practitioners.

**Keywords:** Awareness; dentistry; intern; medical; postgraduate; speciality.

## INTRODUCTION

Medical doctors are the most suitable cadres of health care system who can contribute substantially and promote oral health.<sup>1,2</sup> Due to the lack of awareness or unavailability of the dental services in their vicinity, many rural patients report to the

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medical professionals for their dental and oral problems.<sup>3</sup> Therefore, medical doctors need to be updated with various specialities of dentistry so that they can correctly refer the patients to concerned dental specialities.<sup>4</sup> Dentistry is an integral part of the syllabus of the medical training. There has been an explosion of knowledge all around which has led to emergence of many specialisations and super specialisations in all branches of study, and dentistry is no exception to this.<sup>5</sup> Different studies have shown that medical doctors are unaware of dental specialities.<sup>6</sup> Due to insufficient time or lack of confidence, medical doctors face difficulty in providing basic treatment options for dental patients. Considering these facts, this study intended to assess the awareness of dental problems and conditions and its related dental speciality that is concerned with treating them, among the medical trainees: the interns and postgraduate (PG) residents of Kathmandu Medical College (KMC) at Kathmandu and Bhaktapur, Nepal.

## MATERIALS AND METHOD

An analytical, cross-sectional questionnaire-based study was conducted after obtaining ethical clearance from Institutional Review Committee (IRC) of KMC (Ref. 10022023/05). Informed written consents were obtained from all the participants prior to the start of the study. The questionnaires were distributed among all the participants who participated in the study.<sup>3,6</sup> The data collection was carried out from 2023 April to 2023 May by the department of Conservative Dentistry and Endodontics of KMC. A total 234 individuals were included in the study. Out of which 91 were medical intern doctors and 143 were medical PG resident doctors. Census method was employed to include the entire medical trainees (interns and PG residents) studying at KMC. All the responses from the respondent were collected and the results were tabulated using Microsoft Excel Sheet 2010. The data obtained were analysed using the IBM SPSS Statistics for Windows, version 20 (IBM Corp., Armonk, N.Y., USA). Descriptive statistics: frequency, percent, mean, and standard deviation were calculated. The association between dependent and independent categorical variables was calculated using Chi-square test. The statistical

significance level for all tests was set up to 5% at 95% confidence.

## RESULT

The distribution of the participants according to the gender and qualification is presented in (Table 1). Out of the total sample, 91 (38.88%) were interns and 143 (61.12%) were postgraduate residents. When asked about awareness of different specialities of dentistry, 201 (86.11%) of the sample replied that they were not aware about the different specialities of dentistry and 209 (89.44%) of the sample refer their patients to the general dentist without knowing the speciality. Interns provided correct responses at a rate of 48 (53.33%), while postgraduates responded correctly at a rate of 115 (80.75%). Maximum confusion was noted among the interns and PGs about the procedures performed under Orthodontics, Maxillofacial surgery, Paediatric dentistry, and Public Health (Community) Dentistry. About 63 (69.23%) of the interns marked Orthodontics as a speciality dealing with fractures of the jaw, whereas 118 (82.51%) of the PGs advised referral of the fractured mandible to Oral and maxillofacial surgery. Nearly 27(30%) of the interns replied that Orthodontics is the speciality concerned with irregular and crooked teeth whereas 25 (17.48%) PGs were unaware about Orthodontics speciality (Table 2). About 59 (65%) of the interns had confusion about public health (community) dentistry speciality, whereas 68 (75%) of them had confusion about Conservative and Endodontics speciality. Nearly 36 (25%) of the PGs had confusion about the speciality of Public Health (Community) Dentistry and 46 (32%) had confusion about the Conservative dentistry (Table 3). About 36 (40%) of the interns had confusion about Periodontics as a speciality, whereas 80 (87.91%) of the interns had confusion about Paediatric dentistry as a speciality. Similarly, about 20 (14%) of the PGs had confusion about Periodontics as a speciality, whereas 26 (18%) of the PGs had confusion about Paediatric dentistry as a speciality (Table 4). The study found statistically significant confusion among medical trainees regarding six dental specialities, particularly in orthodontics, Public Health Dentistry, and Periodontics (Table 5).

**Table1: Distribution of the study participants according to the gender and qualification, n (%).**

Qualification	Gender, n (%)		Total
	Male	Female	
Intern	55 (60.43)	36 (39.56)	n1= 91
PGs	61 (42.65)	82 (57.34)	n2 = 143
<b>Total</b>	<b>116 (49.57)</b>	<b>118 (50.42)</b>	<b>N = 234</b>

**Table 2: Response of interns and postgraduates regarding the awareness of dental specialities, n (%).**

Qualification	Confusion about Orthodontics	No confusion about Orthodontics	Confusion about Oral and Maxillofacial Surgery	No confusion about Oral and Maxillofacial Surgery	Remarks
Interns	63 (69.23)	27 (29.67)	77 (84.61)	13 (14.28)	n1 = 91
PGs	25 (17.48)	118 (82.51)	25 (17.48)	118 (82.51)	n2 = 143

**Table 3: Response of Interns and PGs in the awareness of dental specialities, n (%).**

Qualification	Confusion about Public Health (Community) Dentistry	No confusion about Public Health (community) Dentistry	Confusion about Conservative Dentistry and Endodontics	No confusion about Conservative Dentistry and Endodontics	Remarks
Interns	59 (64.83)	32 (35.16)	68 (74.72)	20 (21.97)	n1= 91
PGs	36 (25.17)	107 (74.82)	46 (32.16)	97 (67.83)	n2 = 143

**Table 4: Response of Interns and PGs in the awareness of dental specialities, n (%).**

Qualification	Confusion about Periodontics n%	No Confusion about Periodontics n%	Confusion about Paediatric Dentistry n%	No confusion about Paediatric Dentistry n%	Remarks
Interns	36 (39.56)	55 (60.44)	80 (87.91)	64 (70.32)	n1= 91
PGs	20 (13.98)	123 (86.02)	26 (18.18)	117 (81.81)	n2 = 143

**Table 5: Association between different dentistry specialities with medical trainees.**

Dentistry Speciality		Medical Trainees		Chi-square value	df	P value
		Interns n (%)	PGs n (%)			
Confusion about orthodontics	Yes	63 (69.23)	25 (17.48)	12.12	1	0.042
	No	27 (29.67)	118 (82.51)			
Confusion about oral and maxillofacial surgery	Yes	77 (84.61)	25 (17.48)	5.26	1	0.235
	No	13 (14.28)	118 (82.51)			
Confusion about public health dentistry	Yes	59 (64.83)	36 (25.17)	12.12	1	0.042
	No	32 (35.16)	107 (74.82)			
Confusion about conservative and endodontic	Yes	68 (74.72)	46 (32.16)	5.26	1	0.235
	No	20 (21.97)	97 (67.83)			
Confusion about periodontics	Yes	36 (39.56)	20 (13.98)	7.89	1	0.002
	No	85 (93.40)	120 (83.91)			
Confusion about paediatric dentistry	Yes	80 (87.91)	26 (18.18)	5.26	1	0.235
	No	64 (70.32)	26 (18.18)			

P value <0.05 was considered as statistically significant.

## DISCUSSION

Most of the time dental diseases are overlooked and considered as less important by medical doctors because there is a common misbelief that dental problems do not lead to significant risk or threat to life.<sup>5</sup> It is a well-known fact that medical doctors are the first to interact with patients and they play a vital role in disseminating health promotion and spread prevention measures in the community. A strong understanding of various dental diseases and conditions by medical doctors can significantly contribute to increasing dental awareness in the community. Although the medical curriculum includes the subject of dentistry and students are exposed to different departments within dentistry, the present study indicates that only a few interns were able to correctly answer questions about dental specialities, particularly orthodontics, oral and maxillofacial surgery, and community dental health. Their failure to correctly match procedures performed under dental specialities highlights this issue. This might be because of the limited exposure

of the students to dentistry and the inability to fully understand the variable role of the different subspecialities of dentistry. A study conducted by Azodo et al. had a similar finding where participants lacked awareness of various specialities of dentistry among medical doctors.<sup>6</sup> Studies have shown that people with irregular or crooked teeth may have low self-esteem which may lead to psychological disorders. Hence, it is important to be more attentive toward early screening and prompt referral of such patients for appropriate treatment.<sup>7</sup> A study conducted by Bajracharya et al.<sup>7</sup> stated that the prevalence of malocclusion among school children of Kathmandu was 40.7%. Although malocclusion is a common finding but majority of medical doctors fails to refer it to orthodontists. Medical interns and postgraduate residents might have friends or family members with orthodontic treatment needs or might be undergoing orthodontic treatment but their perception of orthodontics subject was wrong to a larger extent.<sup>8</sup> In the study by Adegbite et al.<sup>9</sup> on medical trainees, majority of the participants were unknown about the orthodontics

speciality in dentistry and failed to select braces as the appliances used in orthodontics department. In a study done by Mehrotra et al.<sup>10</sup> on undergraduates (UGs) and Postgraduates (MD/MS/MCH), most of the respondents answered correctly that orthodontics is a speciality in dentistry, but looking at the overall scenario, they lacked awareness of other dental specialities. On the contrary, the present study showed that almost 63 (69.23%) of medical interns and 25 (17.48%) of postgraduate residents were unaware and confused about the orthodontics department. The knowledge and awareness of medical practitioners toward oral and maxillofacial surgery was assessed by Ali et al.<sup>11</sup> which concluded that although the majority of the participants were aware of oral and maxillofacial surgery as a speciality in dentistry. Only limited participants had actual knowledge of the various treatment procedures falling under the scope of this speciality. Removal of tooth/ extraction was the only procedure where most of the medical practitioners knew it needed to be referred to an oral and maxillofacial surgeon. Similarly, many medical practitioners believed that facial fractures and facial abscesses fall under the scope of orthopedic and general surgery.<sup>12</sup> In the present study, 77 (84.61%) of the interns and 25 (17.48%) of PGs had confusion about oral and maxillofacial surgery department. These findings suggest that awareness about specialities of dentistry is poor among intern medical doctors. The majority of the studies concluded that there was great confusion about referring a dental patient to their concerned dental speciality.<sup>3</sup> A study conducted by Shah et al.<sup>13</sup> on knowledge, attitude, and awareness of oral and maxillofacial surgery reported that surgical removal of the third molar, oral submucous fibrosis, and implants were the problems where oral surgeons are preferred. For the cases of dental traumatic injuries confined to maxillofacial injuries, plastic surgeons and orthopedic surgeons were the first choice. The Ear, nose, and throat (ENT) surgeons were the first choice for maxillofacial pathology. A survey done by Sharma et al.<sup>14</sup> to check the awareness among medical practitioners in the field of oral and maxillofacial surgery found that about 4.98% of the medical practitioners had never heard about oral and maxillofacial surgery

as a speciality in dentistry and most of the medical practitioners had ever consulted or referred a patient to an oral surgeon. Most surprisingly, about one-fourth of medical practitioners did not even know a single oral and maxillofacial surgeon in their surroundings. Different studies<sup>11-15</sup> showed that there was a huge gap in understanding the scope of oral and maxillofacial surgery among the medical practitioners. In the present study, 36 (39.96%) of the interns and 20 (13.98%) of PGs had confusion about the department of Periodontist. These findings were similar to the study conducted by Srinidhi et al.<sup>16</sup> where majority of the participants were unaware and confused about the field of periodontics. In the present study, both interns 68 (74.72%) and PGs 46 (32.16%) were confused about the department of conservative dentistry and endodontics. These findings were similar to the study done by Oyetola et al.<sup>17</sup> in which approximately one-third of the respondents did not know the speciality of dentistry that treats carious teeth. In a survey conducted by Bokkasam et al.<sup>18</sup> on medical practitioners, only few respondents were aware of oral medicine speciality in dentistry. Furthermore, for the referral of a case with temporomandibular joint (TMJ) and facial pain, the majority of them refer it to general surgeons, neurologists, ENT specialists, orthopaedic surgeons, general physicians, and plastic surgeons. The above-mentioned studies claim that dentistry and its subspecialities are less known by medical personnel. It is very important to upgrade and aware dental specialities among medical fraternity. The limitations of the present study are its small sample size, as the results obtained cannot be generalised to all the medical interns and postgraduate residents of Nepal. Furthermore, Due to limited available literature, only a few comparisons could be made.

## CONCLUSION

Although dentistry has taken tremendous advancement in the field of patient care and treatment protocols, there is a significant gap in awareness among medical interns and doctors, nursing faculties and other health professionals regarding dental diseases and their referral to the appropriate dental departments. The study highlights that

medical intern doctors and postgraduate residents had comparatively low levels of awareness about different specialisations of dentistry. Dental awareness programs among medical doctors should

be carried out to promote and emphasise on the scope of dentistry and its specialities.

**Conflict of interest:** None.



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