

KAP Survey Regarding the Basics of Orthodontics among Dental Students

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ABSTRACT

Introduction: Orthodontics is a dental speciality that focuses on the diagnosis, prevention, and treatment of crooked teeth and jaws, as well as incorrect bite patterns. It comprises the use of braces and other tools to gradually shift the teeth and jaws.

Materials and Methods: A survey-based questionnaire was used to test dental students' knowledge of the fundamentals of orthodontics. The Google Forms tool was used to collect a total of ten questions. This survey saw a total of 250 people take part. The data was analysed using SPSS.

Results: The data was analysed and the results were gathered. The majority of the participants were males who were pursuing their undergraduate degrees.

Conclusion: According to the findings, the majority of 4th year students and interns were familiar with the fundamentals of orthodontics among dentistry students.

Keywords: Awareness, Dental students, Knowledge, Orthodontics, innovative survey

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INTRODUCTION

Orthodontics is a dental speciality that focuses on correcting malocclusions. According to the American Association of Orthodontics, about half of the population has malocclusions. Many people have teeth that are crowded or crooked. The teeth will be straightened or moved into a better place with orthodontic therapy [1,2]. This can improve the appearance of the teeth and the way they bite together, as well as make them easier to clean [3]. Malocclusion of the teeth is when your teeth are misaligned [4]. This can lead to oral health complications if left untreated [5]. Treatment can improve the appearance of the teeth, but it can also improve the appearance of the teeth, but it can also improve chewing and speech performance and, in some situations, help preserve teeth from damage or decay [6,7]. The orthodontist uses a variety of medical dental equipment, like as headgear, plates, and braces, to achieve these aims [8].

Orthodontic treatment, like any other medical treatment, comes with its own set of complications [9]. To ensure that

each patient receives a net profit from care, the clinician must consider how these risks apply to them from an ethical perspective [10]. Failure to adequately define and handle the risks associated with orthodontic care can result in both patient dissatisfaction and legal action [11]. Periodontal disease, pain, root resorption, temporomandibular disorder, caries, speech disorders, and enamel damage are all complications of orthodontic treatment [12]. Since no two patients or orthodontic procedures are ever alike in any way, determining whether care can result in a net profit must be done on a case-by-case basis [13,14]. The study's aim is to assess dentistry students' understanding, awareness, and perceptions of orthodontic therapy.

MATERIALS AND METHODS

During this study, a convenient sample size of 250 consecutive respondents was used. A cross-sectional online observational study with dichotomous response and multiple choice questions was conducted using Google forms. The Institutional Ethical Committee gave its moral approval to the project. The questionnaire covers nine questions about dental students' knowledge, awareness, and perceptions about orthodontic therapy.

Statistical analysis

The data was gathered and entered into an excel spreadsheet, which was then fed into the SPSS software for statistical analysis. A descriptive analysis was performed, and the *Chi-square* test was used to determine data correlation.

RESULTS AND DISCUSSION

The data was analysed and the results were obtained. The survey form was completed by 250 students in total. The majority of the participants were males who were pursuing their undergraduate degrees. The majority of 4th year students and interns were more knowledgeable about orthodontics than others, followed by 1st, 2nd, and 3rd year students and interns. The difference, however, is statistically significant. (*Chi-square* value-10.105, *p* value-0.120 (>0.05) hence significant) (Figure1).

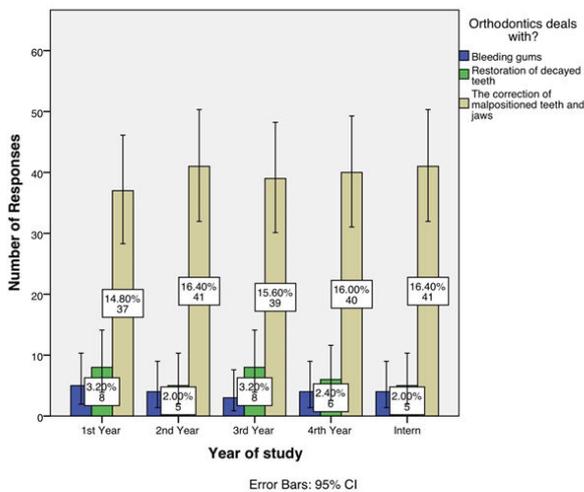


Figure 1: A bar graph depicting the relationship between the participants' year of study and their awareness of orthodontics. The X-axis represents the study year, and the Y-axis shows the number of participants, with beige representing the correction of malposition teeth and jaws, green representing the restoration of decaying teeth, and blue representing bleeding gums. The majority of 4th year students and interns were more knowledgeable about orthodontics than others, followed by 1st, 2nd, and 3rd year students and interns. The difference, however, is statistically significant. (*Chi-square* value-10.105, *p* value-0.120 (>0.05) hence significant).

The majority of 4th year students and interns were more knowledgeable about the primary radiograph required for orthodontic treatment than the others, followed by 1st, 3rd, and 4th year students and interns. The difference, however, is statistically significant. (*Chi-square* value-7.193, *p* value-0.584 (>0.05) hence significant) (Figure 2).

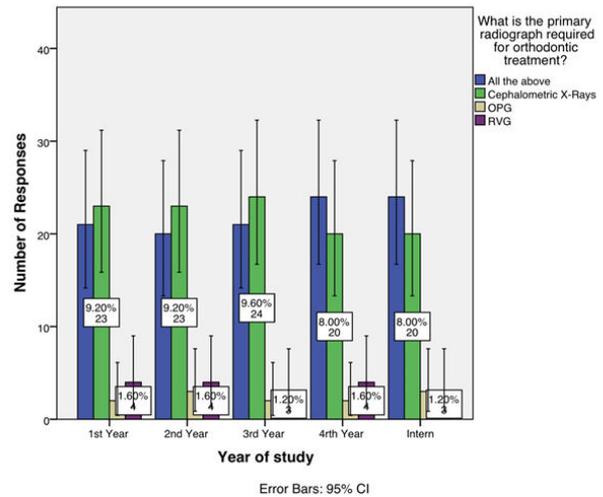


Figure 2: The bar graph depicts the relationship between the participant's year of study and their awareness of the primary radiograph required for orthodontic treatment. The X-axis represents the research year, and the Y-axis shows the number of participants, with purple indicating RVG, beige indicating OPG, green indicating cephalometric X-rays, and blue indicating all of the above. The majority of 4th year students and interns, followed by 1st, 2nd, and 3rd year students and interns, were more aware of the primary radiograph required for orthodontic treatment than others. The difference, however, is statistically significant. (*Chi-square* value-7.193, *p* value-0.584 (>0.05) hence significant)

Children and adolescents have been the subjects of the vast majority of studies on the need for orthodontic treatment [15-16]. Children self-perceived a greater treatment need than was professionally assessed on aesthetic grounds in questionnaire-based investigations [17]. However, the demand for orthodontic treatment in children is difficult to predict, and it will fluctuate dramatically as they become older [18-19]. Furthermore, an older adult's self-perception of treatment needs may differ from the treatment needs assessed by orthodontic experts [20]. Adults, according to many authors, consistently underestimate the ultimate treatment required in terms of dental health [21]. Participants believed that orthodontic treatment would not improve their mastication, speaking, or job chances [22-23]. Patients and parents expected orthodontic treatment to improve mastication, speech, and future occupational success, according to Shaw et al. [24].

The current study has significant limitations, such as the limited sample size of the study population (only 200 individuals). We could raise awareness and educate people about the fundamentals of orthodontics. Our team has a wealth of research and knowledge that has resulted in high-quality publications (Table 1) [25-45].

Table 1: The differences between the P value of 1st, 2nd, and 3rd year students and interns.

QUESTIONS	CHOICES	Responses					P-VALUE
		1 st year	2 nd year	3 rd year	4 th year	Interns	
	Cephalometric X-rays	23	23	24	20	20	
	RVG	4	4	3	4	3	
	OPG	2	3	2	2	3	
Primary radiograph	All the above	21	20	21	24	24	0.106
	Copper NiTi	3	5	4	2	4	
	NiTi	6	6	7	7	6	
	Stainless steel	6	3	3	3	2	
Type of material	All the above	35	36	36	38	38	0.025
	Zinc phosphate	42	41	44	44	43	
	Eugenol	4	4	3	4	4	
Cement	Zinc Oxide	4	5	3	2	3	0.067
	Yes	40	36	34	36	37	
	No	8	12	14	11	11	
Medication	Maybe	2	2	2	3	2	0.032
	Yes	43	40	41	44	42	
Oral prophylaxis	No	6	9	7	4	6	
	Maybe	1	1	2	2	2	0.012
	Mastication	38	36	35	37	37	
	Quality of life	5	6	8	6	6	
	Self esteem	2	2	2	4	3	
Malocclusion	Speech	5	6	5	3	4	0.024
	Yes	35	37	35	36	36	
	No	8	6	7	5	6	
Habits	Maybe	7	7	8	9	8	0.005
	1-5 months	5	6	6	4	3	
	>3 years	5	6	3	4	4	
	6- 36 months	37	35	37	39	40	
Duration of treatment	<1 month	3	3	4	3	3	0.011
	5-7 years	5	6	5	4	5	
	8-10 years	38	36	35	37	38	
Age of treatment	10-12 years	5	6	5	4	5	
	13-14 years	5	4	5	4	5	0.058

CONCLUSION

The present study thus concluded that the dental students who were studying 4th year and interns were aware of the basics of orthodontics. In that way the current study believed that this work would cause awareness about the basics of orthodontics.

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CONFLICT OF INTEREST

There was no potential conflict of interest.

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