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Assessment of Knowledge of Anterior Dental Esthetics amongst Dental Practitioners

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ABSTRACT

The objectives of this study were firstly to assess the effect of the current curriculum on knowledge of anterior dental esthetics in dental graduates. Secondly to compare the influence of clinical experience on existing knowledge of anterior dental esthetics. A cross sectional study was carried out amongst the BDS interns, general dentists and specialists (Prosthodontics, Maxillofacial Surgery, Operative Dentistry, Periodontics, Orthodontics) of six dental colleges of Lucknow and Barabanki district during June 2020 using convenient sampling. A data of total two hundred and eighty four (n=284) study subjects was collected. The demographic details were descriptive of practitioners' age, gender, category and year of graduation. The questionnaire composed of 30 survey questions to know their knowledge about gingival2 and dental3 esthetics. Data were analyzed on SPSS version 20.0. Chi square test was used to find any association amongst various variables. p value was considered statistically significant, if ≤ 0.05 . The results showed only 141 (49.6%) out of 284 dentists had satisfactory knowledge about gingival esthetics. 261 (91.9%) out of 284 dentists had satisfactory knowledge about anterior dental aesthetics. Satisfactory knowledge about gingival aesthetics was higher in prostho/restorative/perio specialty (76.1%) as compared to other categories, showing statistical significance (p <0.001). Dentists with >10 years' experience had satisfactory knowledge (73.1%) about gingival esthetics than those with> 10 years' experience (p=0.008). Dentists with >10 years of experience had satisfactory knowledge of anterior dental esthetics, but continuing dental education can improve the professional excellence.

Keywords: esthetics, dental; continuing dental education; over bite; knowledge; gingiva

INTRODUCTION

Increased awareness of general population about their appearances claims more esthetic results from dentists.¹ Dentistry is taught as a subject that revolves around the art and science of esthetics and function of the masticatory apparatus and its surrounding structures. Thus esthetic forms one of the basis of surgical, restorative and corrective procedures. Although dental schools are trying to cope with this changing paradigm, by incorporating esthetics within

the dentistry syllabus, still many practicing dentists are depending upon the programs of continuing dental education to master the subject.¹

Anterior dental esthetics can be subdivided descriptively into facial, dental and gingival Facial esthetics² comprises of components. integration of facial features and dental restorations, and their harmony with existing skeletal and soft

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tissue features to either enhance desirable qualities or distract attention from undesirable abnormalities. Gingival esthetics means the shape, texture and tooth to tooth transition and color of gingiva. It is dependent underlying factors like anatomy of upon dentogingival complex, periodontal biotype, distance of contact point with bone crestal level, tooth morphology and gingival biform.³ Dental esthetics⁴ refers to shape, size, color, position of teeth and their inter and intra arch relationships. Although considerable overlapping of there is these components.

Relation of extra oral structures with intra oral components and the relation of intra oral components with each other may affect the consequence of any dental service. So appropriate knowledge and its correct application is mandatory for any quality dental treatment.

The objectives of this study were firstly to assess the effect of the current curriculum on knowledge of anterior dental esthetics in dental graduates. Secondly to compare the influence of clinical experience on existing knowledge of anterior dental esthetics.

Methodology

Approval was taken from institutional review board committee prior to the initiation of the study. It was a sectional observational study. Sampling cross technique was convenient sampling. A questionnaire was hand distributed amongst the house surgeons, general dentists and specialists (Prosthodontics, Surgery. Operative Maillofacial Dentistry, Periodontics, Orthodontics) of six dental colleges of Lucknow and Barabanki district during June 2020. The forms were distributed amongst 320 subjects. The acceptance of form was considered as the consent to participate in the study. A data of total two hundred and eighty four (n=284) of subjects were collected from the target population. The demo- graphic details were descriptive of practitioners' age, gender, category (house surgeon, general practitioner, specialist) and year of graduation. The questionnaire was formulated on basic knowledge of anterior dental esthetics taught in undergraduate dental curriculum. It included questions about shape, shade, size of teeth, golden proportion, dentogenic concept (age, sex, personality), facial and esthetics midline, facial symmetry, incisors display, overjet, overbite, smile

line, role of anterior guidance and effects on phonetics. The knowledge about gingival esthetics was assessed through questions about gingival esthetic line, periodontal biotype, biological width, effect of subgingival crown margins and distance of osseous crest with contact points of teeth 4. The maximum marks were 30. Those respondents who got 60% marks were considered to have satisfactory knowledge about anterior dental esthetics. The answers were assessed according to the key known to researchers only.

After collection the data was analyzed on SPSS version 20.0. Chi square test was utilized to assess the association amongst various variables. p value was considered statistically significant, if ≤ 0.05 .

Results

A data of total two hundred and eighty four (n=284) of study subjects was collected from the target population. The respondents scoring 60% marks were con- sidered to have satisfactory knowledge about anterior dental esthetics. Table 1 shows that only 141 (49.6%) out of 284 dentists had satisfactory knowledge about gingival esthetics. However 261 (91.9%)had satisfactory knowledge about only dental aesthetics.

Table 2 shows comparison of knowledge of anterior dental esthetics and gingival esthetics amongst various specialties. p value was considered statistically significant, if ≤ 0.05 . Satisfactory knowledge about gingival aesthetics was higher only in prostho/restorative/ perio specialty as compared to others. Chi square test showed that there was statistically significant association between specialty and knowledge about gingival esthetics. However, there was no statistically significant difference in satisfactory knowledge of only anterior dental esthetics amongst various dental categories.

Table 3 shows the comparison of level of knowledge of gingival esthetics amongst practitioners with diverse clinical experience. Dentists with >10 years of clinical experience had satisfactory knowledge about gingival esthetics. Chi square test showed that there was statistically significant association between clinical experience and knowledge about gingival esthetics.

Table 4 shows the comparison of level of knowledge of anterior dental esthetics amongst practitioners with

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diverse clinical experience. It shows no significant difference when compared to dentists having less than

and equal to or more than 5 years of experience.

Ρage Υ

Knowledge of Gingival esthetics	Knowledg	Knowledge of dental esthetics		
	Ν	%	Ν	%
Unsatisfactory knowledge < 60%	143	50.4%	23	8.1
Satisfactory knowledge 60% and above	141	49.6%	261	91.9
Total	284	100%	284	100%

Table 1: Percentages of Satisfactory and Unsatisfactory Knowledge About Gingival And Dental Esthetics

 Table 2: Level of Knowledge of Anterior Dental Esthetics And Gingival Esthetics Amongst Various

 Categories Of Dentist

Dentist's	Den	tal esthe	tics		Р	Ging	gival estl	netics		Р	Total
categories	kno	wledge			value	knov	vledge			value	
	<6%	, D	≥60°	/ ₀		<6%)	≥60%	6		
	n	%	n	%	_	n	%	n	%	_	
House surgeons	14	8.1%	158	91%	_	94	54.7%	78	45%	_	172 100%
OMFS	1	8.3%	11	91%		4	33.3%	8	66.7%		12 100%
Prosth/Rest	1	2.2%	45	97%	0.36	11	23.9%	35	76%	< 0.001	46 100%
Orthodontist	1	8.3%	11	91.7%		4	33.3%	8	66.7%		12 100%
General dental practitioner	6	14.3%	36	85.7%		30	71.4%	12	28.6%		42 100%
Total	23	8.1%	261	91.9%		143	50.4%	*41	49.6%		284 100%

OMFS= oral and maxillofacial surgeons Prosth/ rest =Prosthdontist/Restorative dentist

Tabla 3. Com	noricon Of Fy	narianca Of Da	ntists And Kn	owladge A hout	Cingival Esthatics
Table 5. Com	iparison Of Ex	perferice Of De	nusis Anu Kn	lowieuge About	Gingival Estileucs

	<60%		≥60%		Total		P-value
	n	%	n	%	n	%	
≤ 1 year	62	60.8%	40	39.2 %	102	100%	0.008
1-5 years	50	44.6%	62	55.4 %	112	100%	
5-10 years	24	54.5%	20	45.5 %	44	100%	
>10years	7	26.9%	19	73.1	26	100%	

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				%			
Total	143	50.4%	141	49.6 %	284	100%	

	<60%	≥60%	Total	P-value
	n %	n %	n %	
≤5 years	188.4%	19691.6%	214 100%	0.736
>5 years	57.1%	6592.9%	70 100%	
Total	238.1%	261 91.9%	284 100%	

Discussion

The study was conducted to assess the knowledge about anterior dental and gingival esthetics amongst general practitioners and specialist in Lucknow and Barabanki district during June 2020. Data showed that there is no significant difference of anterior dental esthetics knowledge amongst house surgeons, general dental practitioners and all specialists. This can be compared to a Spanish study in which the difference in esthetic perception amongst dental students of different years, did not improve significantly throughout their degree years.5

There is a statistically significant difference of gingival esthetic knowledge amongst house surgeons, general dental practitioners and specialist. Even amongst specialists, Prostho/restorative/periodontist scored better percentage than orthodontist and oral and maxillofacial surgeons. This might show a deeper gingival esthetic consideration and knowledge application during restorative treatment planning. This result is in accordance to other study6, of esthetic perception amongst laymen, general dentists and orthodontist. Their study6 showed higher anterior dental and gingival esthetic perception percentages of orthodontists. They used a pictorial representation of an esthetic outcome instead of a questionnaire as an assessment tool. This result may reflect the influence of focused education on improvement of clinical assessment and knowledge application. Thus dental education seems to have a distinct influence on the perception of facial esthetics than a layman.7,8 Inclusion of esthetics as a special part of curriculum and its continuous reinforcement through continuing

dental education may result in esthetically pleasing outcome of any dental treatment.

Present study showed the difference in experience did not markedly influence the knowledge about anterior dental esthetics; however the knowledge about the gingival esthetics showed statistically significant difference amongst practitioners having more than 10 years of clinical experience. It was interpreted that previous experience of a clinician confronting any clinical problem along with his knowledge, beliefs and values guide his interpretive activity, which identifies and prioritize the problem. This is in accordance with another study9 done to evaluate difference in clinical reasoning amongst the experienced and inexperienced clinicians. In that study students of different levels were asked to formulate treatment plans for few vignettes and then compared. This proved that diagnostic interpretation of any clinical data involves a more complex thought process affected by knowledge and experience.9 Experienced clinician tend to foresee the complicated problems and diagnose them at an earlier stage. However, inexperienced individuals fail to integrate the complete clinical findings and organize them into a coherent treatment plan.9

The questionnaire used in the present study composed of closed ended questions; however the clinicians' cognitive skills were effected by reproducing the same knowledge through its constant practical application. Ericsson10 has suggested the name of concept of "deliberate practices", for improved clinical reasoning. This concept stresses upon continuous exposure to problems and repetition,

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reflection, and feedback over those clinical situation for better interpretation.

Conclusion

Within limitations of this study, it can be concluded that undergraduate curriculum must be designed and taught with close considerations of the need and demands of the society. Experience with knowledge may aid in deeper interpretation of the forthcoming problems and better judgement skills.

References

- VV. Gordan, AA Hanna, IA Mjör, Esthetic dentistry in North American Dental schools, © J Can Dent Assoc 2004; 70(4): 230-d.
- 2. Ahmad Anterior dental aesthetics: Facial perspective British Dental Journal 2005; 199: 15-21.
- 3. Ahmad Anterior dental aesthetics: Gingival perspective British Dental Journal 2005; 199: 195-02.
- 4. Ahmad Anterior dental aesthetics: Dental perspective British Dental Journal 2005; 199: 135-41.
- 5. Tarnow D, Magner A, Fletcher P. The effect of the distance from the contact point to the crest of bone in the presence or absence of the interproximal dental papilla. J Periodontol 1992; 63: 995-96.

- España P, Tarazona B, Paredes V. Smile esthetics from odontol- ogy students' perspectives. Angle Orthod. 2014; 84(2): 214-24.
- Jornung J, Fardal O. Perceptions of patients' smiles: A compar- ison of patients' and dentists' opinions. J Am Dent Assoc. 2007; 138(12): 1544-53.
- Okoh M, Enabulele J. Influence of clinical experience on oral health attitude and behaviour of dental students attending a Nigerian university. Odontostomatol Trop. 2014; 37(148): 25-31.
- 9. Falkensammer F, Losech A, Krall C, Weiland F, Freudenthaler
- J. The impact of education on the perception of facial profile esthetics and treatment needs. J Aesth Plast Surg 2014; 38: 620-31.
- Khatami S, MacEntee MI, Pratt DD, Collins JB. Clinical Reasoning in Dentistry: A Conceptual Framework for Dental Education. Journal of Dental Education. 2011; 76(9): 1116-28.
- 12. Ericsson KA. Deliberate practice and the acquisition and main- tenance of expert performance in medicine and related domains. Acad Med. 2004; 79(10 Suppl): 70-81.