

Knowledge, Attitude and Practice Perception of Dental Implants as a Treatment Option among Dental Practitioners in Odisha, Based on Experience: A Pilot Study

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ABSTRACT

Background: Patient-based studies have been done from time to time to gather the patient's input for the implant as a treatment modality. Dental Practitioner's perspective of the implant as a treatment option depends on the individual's knowledge, attitude and practice quotient. This study was done to find out the popularity of dental implants as a treatment choice offered by practitioners in Odisha.

Materials and Methods: A questionnaire survey based on knowledge, attitude and practice was formulated. This was distributed among 300 practitioners in Odisha in different experience categories. Their responses were analyzed to find out the popularity of dental implants among them as practitioners and patient's attitude towards this.

Conclusion: A positive correlation between knowledge-practice and attitude-practice was observed. There are various factors that influence the popularity of implants as a treatment choice.

Keywords: Awareness, Dental Implants, Patients, Treatment.

INTRODUCTION

Odisha is located on the eastern part of India. It is formed of 30 districts now with the Bay of Bengal on its east coast. According to the Census 2011, the total population of Odisha is 41,947,358 approximately. The number of registered dentists, according to the Dental Council of India Registration Office, is about 2000. The ratio is around one dentist for 25000 people population.

Dental implants are among best treatment option available for replacing natural teeth in partially or wholly edentulous jaws due to its efficiency in providing support to restorations.¹ There is a worldwide rise in the dental implants inserted in edentulous areas every year. Though it is costly, the

good success rate makes it the first choice for treatment. This trend is also observed in India, but there is still not much difference found in regions other than tonified areas.^{2,3,4} According to Zimmer et al., the awareness among the patients about implants is high, even though they did not want implants on them.⁴

This study was planned to enquire about the status of dental implants as a treatment of choice for replacing missing teeth among practitioners in Odisha. A KAP study was conducted to assess the nature of the relationship between Knowledge vis-à-vis Practice; Attitude vis-à-vis Practice of dental practitioners and hence deduce from the above, the

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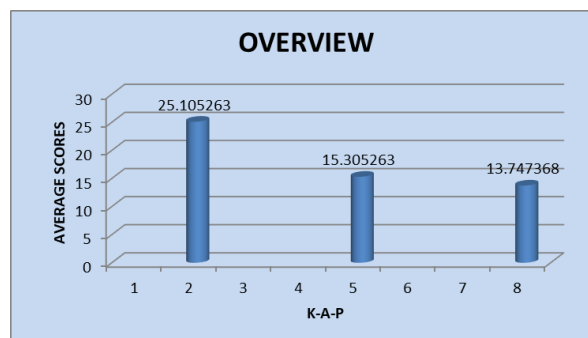
approach of dentists towards treating edentulism and prospects of dental implant as a treatment of choice.

MATERIALS AND METHOD

A questionnaire was formulated in simple English language that contained questions on knowledge, attitude and practice basis. There were 11 Knowledge related questions, 10 Attitude associated questions and 9 Practice pertaining questions. The first part of the questionnaire consisted of the general demographic data. Permission was obtained from authorities of the dental colleges in Bhubaneswar, Odisha. Second-hand data was collected from the DCI registration office regarding the total number of dentists registered under them. Stratified random sampling method for sample selection was used. Inductive statistics in the form of sampling technique has been used to generalize the information collected from the representative sample to the entire population. Data was collected from 300 practitioners through this questionnaire. The responses were arranged in an excel sheet. The responses were categorized as per group slabs, according to years of experience. The practitioners with 0-5 years of experience were placed in Slab, 6-10 years in Slab 2, 11-15 years in Slab 3 and more than that in Slab 4. Evaluation of the data was done using IBM SPSS 20 software. Arithmetic Mean and Karl Pearson's Correlation-Coefficient Analysis were employed. Student's T-test was used. Data were compared in tabular and graphical form. Evaluation on the basis of a pre-determined scoring pattern assigned to the question was done. A limited sample size of 300 practitioners was considered for a short time period, though the study can be extended to the whole dental clinician population for a longer time window to study the exact pattern. A 95% confidence level was taken and 9% Margin of error was considered and there was non-response of 15 respondents.

RESULTS

The graph I show the overview of the average of KAP scores where the first bar on the left is the Knowledge score, the middle bar is the Attitude and the third bar is the Practice score. This shows that the average Knowledge scores are higher than average Attitude and Practice scores.



Graph I: Average KAP Scores.

Table I shows the average K, A, P scores in different experience Slabs. The average Knowledge scores in all the slabs are more significant than Attitude and Practice scores. The average Attitude scores are on the higher side in Slab 1, 2, 3, but it is slightly on the lower side in Slab 4.

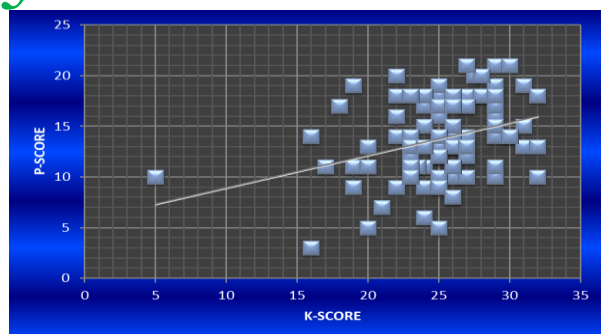
Table I: KAP scores according to experience.

	AVERAGE K- SCORE	AVERAGE A- SCORE	AVERAGE P- SCORE
SLAB 1	24.90741	15.03704	12.22222
SLAB 2	29.98214	15.57143	13.53571
SLAB 3	24.9375	15.65625	14.75
SLAB 4	26.875	13.875	15.625
OVERALL	25.1	15.3	13.74737

Table II: Pearson correlation between Knowledge and Practice.

Correlations			
		KSCORE	PSCORE
KSCORE	Pearson Correlation	1	.326**
	Sig. (2-tailed)		.001
	N	95	95
PSCORE	Pearson Correlation	.326**	1
	Sig. (2-tailed)	.001	
	N	95	95

** Correlation is significant at the 0.01 level (2-tailed).



Graph II: Graphical representation of Pearson correlation between Knowledge and Practice.

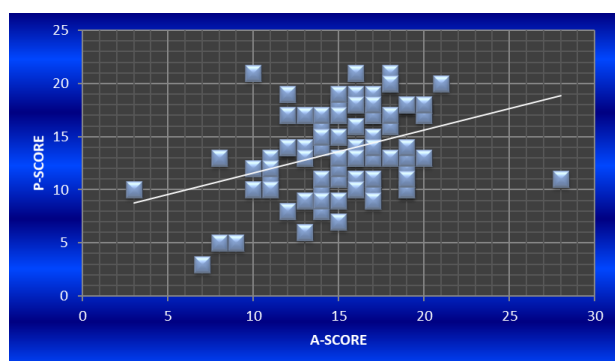
Table II shows the results of the Pearson correlation test between the Knowledge and Practice score.

Graph II shows the correlation between the same. Statistically, a positive relationship between Knowledge and Practice existed, but it was weak.

Table III : Pearson correlation between Attitude and Practice.

Correlations			
		ASCORE	PSCORE
ASCORE	Pearson Correlation	1	.358**
	Sig. (2-tailed)		.000
	N	95	95
PSCORE	Pearson Correlation	.358**	1
	Sig. (2-tailed)	.000	
	N	95	95

** . Correlation is significant at the 0.01 level (2-tailed).



Graph III: Graphical representation of Pearson correlation between Attitude and Practice.

Table III shows the results of the Pearson correlation test between the Practice and Attitude score. **Graph III** shows the correlation between the same. A similar relationship between Attitude and Practice was observed as well.

DISCUSSION

Patient's perspective:

In a similar study conducted by Kronstrom et al. in 2000 among the Sweden population; Mgbeokwere et al. in 2011 in Enugu; Malik A et al. in 2014 in Pakistan, it was found out that the personal knowledge about implants was low among patients.^{5,6,7} There was also a difference in decision making among practitioners regarding prosthodontic treatment at a psychological level which could not be included in the questionnaire.⁵ In the present study, the practitioners were updated knowledge-wise, though the similar attitude was not reflected in practice.

Turkyilmaz in 2010 suggested that implant-supported treatment improves the quality of life of patients rather than in conventional removable partial denture.⁸ In the present study, the clinicians most frequently advice for fixed treatment options including fixed denture prosthesis. More awareness among patients for the implant as a treatment choice is required. This was also found in another study by Saha et al.⁹ In the survey conducted by Pommer et al. in 2011 among the Austrian population, the primary source of information for patients were still dentists.¹⁰ In the study conducted by Satpathy et al. in 2011, the patients were not aware of the use of implants for replacing missing teeth.⁵ In 2013, Surprakash B et al. found that there lack awareness about dental implants as a treatment modality in the sample population in India.¹¹ In a study conducted in the Malaysian community in 2015, patient awareness was found out to be 56%.¹²

There was also a lack of the subjective and objective aspect of information for the implant as a treatment modality among patients in the study conducted by Hosadurga et al. in 2015.¹³ A similar study conducted in Saveetha Dental College in 2016 suggested that there was no clear idea about an implant as a treatment option among patients.¹⁴

Clinician's perspective:

Sheth et al. in 2017 indicated that there was very less difference in perceptions and knowledge regarding implantology, as per the observations from questionnaires distributed in 2013 and 2016 among budding dentists in Ahmedabad city. They

were also open to the idea of introducing implantology as a subject in the BDS curriculum.¹⁵

A knowledge, attitude and practice study was done regarding dental implants among postgraduate students and dental practitioners in Davangere, Karnataka to find out the variations in the same parameters. These variations were found to relate with their age, sex, experience, etc. and there was also variation noted with respect to attitude, practice and their knowledge.¹⁶ A similar study was done among medical and dental practitioners in 2016 by Nagappa et al. which concluded that there was need of improving the experience, attitude and practice perceptions towards implants of professionals to deliver better service to patients.¹⁷

In this study, it was observed that even though the awareness about implants has increased, but it is still not the most preferred treatment option among the patients and also the clinicians. The respondents were practitioners. Their knowledge, attitude and practice approaches were observed and the general temperament of patients regarding implant as a treatment option was studied from the responses. The group with maximum experience has comparatively a higher practice score though their attitude score is the least.

CONCLUSION

Selecting of implants as a choice of treatment is a multi-factorial process. It is not a one-sided phenomenon where the only patient decides. In national-level continuing dental programmers and publications, a dramatic increase in a number of implant cases is observed. But this is not seen in urban regions in Cuttack, Bhubaneswar, etc. and let aside rural areas. It was found from the study that even-though the Knowledge and Attitude of the practitioners is relatively higher than their practice; their choice is not the sole factor influencing the treatment procedure. Besides, studies are required to find out why a particular experience category has a certain tendency towards a treatment modality. This study is also in the process of being extended to all dentists in Odisha and other data are also being collected and analyzed to generate accurate generalized information and to observe the variation in time-lapse also. Further studies without the limitation of region, time and experience barriers of clinicians are required to validate the

pattern observed in this study from the clinician's and patient's perspective.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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