

## Awareness and Evaluation of Role of Periodontal Structures in Relation to Perimplant Health among Dental Professionals- A Questionnaire Study

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### Abstract

**Introduction:** A basic awareness of the peri implant health is expected in the Dentists as the implants are being commonly placed. Hence in the present study we evaluated the role of the periodontal structures in relation to the peri implant health among the dentists.

**Material and Methods:** A prospective, web-based, cross-sectional study was done among 100 dentists by a questionnaire using Google forms. The awareness was assessed about the periodontal structures for the periimplant health. Appropriate statistical tools were used to calculate the significance.

**Results:** Almost half of the participants were interns. Nearly 92% had moderate knowledge about peri-implant diseases. Good knowledge was seen among the specialists. With the experience the greater knowledge and awarenss was seen.

**Conclusion:** The knowledge of the Dentists for the peri-implantitis diseases was moderate. Experienced dentists' have a higher awareness of the periodontal structures on the peri-implant health.

**Keywords:** Periodontal structures, Peri-Implant health, Knowledge.

### Introduction

The quality of life of patients has improved with the advent of the implants. (1) The knowledge of the dentist plays a huge role in the success of the implants. (2) There are many factors that might influence the implant outcome like the health of the patient, site of the implant, implant properties, periodontal status of the patient. Along with these the success is influenced by the treatment planning, selection of the cases, maintenance.(3-5)

Peri-implant health is seldom seen as one of the main factors that may influence the implant success. The periodontal status is very important. The peri-implant mucositis is one of the most common reasons for the implant failure. As the prosthetic tooth replacement is increasingly opted by dentists. (6)

Lack of knowledge of peri-implant diseases may lead to implant failure as the treatment

planning and the case selection play a main role. Hence in the present study we aim to evaluate the role of the periodontal structures in relation to the peri implant health among the dentists.

### Material and Methods

A prospective, web-based, cross-sectional study was done among 246 dentists by a questionnaire using Google forms. The awareness was assessed about the periodontal structures for the periimplant health. Appropriate statistical tools were used to calculate the significance. The study was conducted at six dental colleges at our region. The general dentists practicing in the clinic, the interns, post graduates were considered. A total of the 246 were considered for the study. The ethical approval was taken from the institutional ethics committee. A self-administered close-ended questionnaire including demographic data and a group of questions to assess the level of knowledge of periodontal structures in relation to the peri implant health. Data was Analyzed using frequencies and percentages. Chi-square test was used to compare the association of variables.  $P > 0.05$  considered significant.

### Results

Majority of the study participants were women. The most common age group was between 20-40 years. Majority participants in the present study were interns, followed by general dentists and specialists. (Table 1). Moderate knowledge regarding the periodontal structures in relation to the peri implant health was noted in 92% of the participants. (Table: 2). We also noted that in those with the poor knowledge, the P value was significant; (0.001) that there is a relationship between position and general knowledge of periodontal structures in relation to the peri implant health. (Table 3) There was a significant relation seen between the experience and the objective of the study. (Table 4)

Table 1: Demographic of the dentists.

	Frequency	Percent
Clinicians	75	30
House Officers	109	45
Specialists	41	16
Consultants	21	9
Total	246	100.0

Table 2: Knowledge about periodontal structures for the periimplant health.

	Frequency	Percent
Poor	14	4
Moderate	220	92
Good	13	4
Total	246	100.0

Table 3: Comparison between the Positions and Knowledge of periodontal structures in relation to the peri implant health.

			Occupation				Total
			Dental practitioner	House Officer	Specilist	Consul tant	
Knowledge of periodontal	Poor	Count	7	5	1	1	14
		%	42.10%	47.40%	5.30%	5.30%	100%

structures in relation to the peri implant health	Mode rate	Count	33	52	27	9	220
		%	26.70%	43.30%	23.30%	6.70%	100%
	Good	Count	6	5	1	1	13
		%	42.10%	47.40%	5.30%	5.30%	100.0%
Total		%	30.10%	44.70%	16.30%	8.90%	100%

**Level of significance 0.001**

Table 4: Cross-tab for Experience and knowledge of periodontal structures in relation to the peri implant health.

			Experience			Total
			<5	5-10	>10	
knowledge of periodontal structures in relation to the peri implant health.	Poor	Count	47	15	14	76
		%	63.20%	18.40%	18.40%	100.0%
	Moderate	Count	64	20	36	120
		%	53.3%	16.7%	30.0%	100.0%
	Good	Count	28	4	18	50
		%	56.0%	8.0%	36.0%	100.0%
Total		Count	140	38	68	246
		%	56.9%	15.4%	27.6%	100.0%

## Discussion

Regardless of the high success of implants, the increasing rate of peri-implantitis disease has been described. (7) Therefore it can be established that general practitioners have to increase their knowledge on prevention, diagnosis, and treatment of those diseases. Hence, continued education programs are essential for practice. In a 2002 study by Heubener in the United States, the pattern of using implant education in dentists of Creight University over a period of 10 years (1988 - 1997) was evaluated, results showed that those who passed the implant training in laboratories and workshops had a greater knowledge about implants, did additional implant therapy in their offices and also spent more time on implant education than those who did not pass such courses. These observations show that, workshops can may improve the practical knowledge. (8) Most et al. (2013) considered the impact of a dental implant training program to enhance knowledge of dental students; the observations showed that scores of basic implant information and implant design in the 3-year group were higher than in the 3-day group which is in unison with the present study. Poorsamimi et al. (9) studied general dentists' knowledge and practice about dental implants, and stated that there was no significant correlation between demographics, experience, job, history, and dentists' knowledge; nevertheless, there was a significant correlation between dentists' knowledge and their practice. This study reported that, despite adding implant training courses to the student curricula, there was significant difference between younger and older dentists. This can be interpreted as dental schools and implant re-training courses were not a great success in the field of implants which agrees with the results of Highlight et al (10) 2011 who assessed the knowledge of dentists after implant re-training workshops and concluded that general practitioners' and specialists' knowledge was very far from the ideal. It is essential that the dental student curriculum be planned and implant re-training courses be modified

accordingly. (11) According to their study, there was significant relationship between age, job, experience, and dentists' knowledge about peri-implant inflammatory diseases. In the field of knowledge 92% of dentists had moderate knowledge. Greater knowledge of periodontal structures in relation to the peri implant health requires higher levels of education in this field.

## Conclusion

Implants are deliberated a useful treatment for replacement of lost teeth. While the success and longitivity of implants are good, the prevalence of peri-implantitis high as well. The rate of dentist's knowledge of periodontal structures in relation to the peri implant health was moderate. Dentist's role has an impact on the knowledge of periodontal structures in relation to the periimplant health, thus continuous training sessions and workshops regardingperi-implant diseases are suggested for their improvement.

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