

## ORIGINAL ARTICLE

# KNOWLEDGE OF PATIENTS REGARDING USE OF DENTAL IMPLANTS AS A TOOL FOR REPLACEMENT OF MISSING TEETH ATTENDING MEDICAL COLLEGE IN BILASPUR, INDIA

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### ABSTRACT:

**Aim and objective:** The aim of this study was to evaluate the level of patient knowledge about the use of dental implants as a tool for replacement of missing teeth among a selected sample of patients attending department of dentistry in Chhattisgarh Institute of Medical Sciences (CIMS), Bilaspur, India. **Materials and Methods:** A total of 150 patients were selected from among those attending CIMS, Bilaspur, India. Patients' knowledge regarding dental implants were evaluated through a questionnaire. **Results:** The results of this study indicate that 60% of the subjects knew about dental implants as a method of replacing missing teeth. Among these patients, dentists were the main source of information about dental implants. **Conclusion:** The survey concluded that an acceptable number of patients had heard of dental implants as a treatment option for replacing missing teeth, with dentists being the main source of information.

Keywords: Dental Implants, Missing tooth, Patient Knowledge.

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## INTRODUCTION

Smile is a window into one's personality. Teeth play a significant part in the maintenance of a healthy personality and an affirmative self-image.<sup>1</sup> Tooth loss is psychologically a very traumatizing and upsetting experience, and is considered to be a serious event in the life of a person, requiring significant psychological readjustment.<sup>2, 3</sup> Patients may suffer real or perceived detrimental effects following the loss of one or more teeth which substantially reduce the quality of life affecting the patient emotionally, socially, physically and psychologically.<sup>4,5</sup> Dental implants were originally used for the treatment of edentulous patients and are associated with improved denture retention, stability, functional

efficiency, and quality of life.<sup>6</sup> Although replacements of lost teeth with dental implants are considered as a positive experience by patients, but patient's awareness of evidence-based treatments is dispersed and the data that is given by media doesn't reflect evidence-based information.<sup>7</sup> A recent study shows that in public media such as journals and television, some negative reports were given about dental implant.<sup>8</sup> In a professional society it is necessary that information given that is given is true. Awareness of patients about dental implants can help with evaluation of their expectations and those which can be obtained in reality and it can also prevent from a negative image of patient from dentist that is due to communication gap and user's disapproval.<sup>9-11</sup> Many investigations have been done

about patient's knowledge of dental implants. Knowledge of dental implant treatment varies among several studies in different countries. In some countries media can play a major role in public dental education and contribute to an increased level of awareness about dental implants. Considering this fact that such study hasn't been done in Bilaspur yet, thus, the aim of this study was to evaluate the level of patient knowledge about dental implants among a selected sample of patients attending CIMS in Bilaspur, Chhattisgarh, India.

## METHODOLOGY

This cross sectional survey was carried out on a sample of 150 patients seen at the Out Patient Department of department of dentistry, CIMS, Bilaspur, Chhattisgarh, India. A standard questionnaire with 10 open as well as multiple choice questions was delivered to patients. The questionnaire was adapted from a previous study

performed by Rustemeyer et. al.<sup>12</sup> The questionnaire comprised some questions to assess the following aspects:

1. Level of information about dental implants as an option in replacing missing teeth.
2. Level of acceptance of dental implants as a treatment option compared to other conventional treatment modalities.
3. Source of information about dental implants.

Three faculties approved the validity of questionnaire and the reliability of questionnaire determined via Cronbach's alpha. It is proved that this questionnaire has the ability to measure awareness of patient about dental implants. Questions, which were answered by more than 70 %, were enrolled in this study. Descriptive statistics were generated to summarize the responses we used T-test and Chi-square test to analyze data.

## RESULTS:

**Table 1:** Patient questionnaire to evaluate knowledge regarding implants

Questions	Answer	Males	Females	P value
Have you ever heard anything about dental implants?	Yes	28.0%	32.0%	0.424
	No	21.3%	18.7%	
What were your first sources of information about implants?	Newspaper	3.3%	-	0.073
	Television	8.7%	10.0%	
	Dentist	18.0%	24.0%	
	Friends	19.3%	14.7%	
	Patients	-	2.0%	
What do you anticipate as oral hygiene for the care of implants compared with natural teeth?	More	16.7%	16.7%	0.276
	Similar	14.7%	10.7%	
	Less	1.3%	4.7%	
	No idea	16.7%	18.7%	
What do you estimate as the functional life of an implant (years)?	<10	2.7%	3.3%	0.457
	10-20	6.0%	6.0%	
	21-25	2.0%	2.7%	
	>25	2.7%	4.0%	
	No idea	36.0%	34.7%	
Up to which amount are you prepared to pay as an additional payment for implant?	<400	28.0%	37.0%	0.334
	<800	-	7.3%	
	<1000	3.3%	9.3%	
	Covered by insurance	18.0%	3.3%	
How important for you is the functional outcome of implant supported prosthesis?	Not very important	5.3%	3.3%	0.356
	Important	10.0%	12.0%	
	Very important	28.0%	32.7%	
	No idea	6.0%	2.7%	
Have you heard about experience with implants from your friends?	Yes	16.7%	24.7%	0.064
	No	32.7%	26.0%	
When yes, how successful was the implant?	Successful	3.3%	4.7%	0.456
	Partially	4.0%	6.0%	
	Not successful	9.3%	14.0%	
Have you ever heard about effects of dental implant on systematic health?	Yes	4.7%	9.3%	0.114
	No	44.7%	41.3%	
How are the effects of implant treatments in comparison with common prostheses treatments?	More	23.3%	19.3%	0.096
	Similar	2.7%	4.7%	
	Less	-	3.3%	
	No idea	23.3%	23.3%	

Of the 150 persons approached, 74 male and 76 female answered the questionnaire.

The average of age in male patients was  $35.52 \pm 12.20$  and for female patients  $35.06 \pm 10.24$ . There was no significant difference in average of age within two genders ( $p=0.802$ ). Only two of patients had a background of implant use before. The response of patients to questionnaire is listed in the Table 1. The most common (42%) first source of information on the subject of implants was the dentist. Friends and media were relatively seldom the first source. Concerning oral hygiene in the care of implant 33.4% of the patients questioned expected an implant to require more care than natural teeth, 25.4% of the patients estimated the care to be similar. There is no significant difference between males and females ( $P=0.276$ ). With regard to the durability of implants, 12% of the patients expected them to last between 10 and 20 years. 44.4% of the patients had experiences by themselves/relatives and outcome of implant therapy was successful in 8% patients of who had positive experience. 86% of the patients believed that dental implants have no effect on systemic health.

## DISCUSSION

Tooth loss either can be due to oral disorders such as caries, gingival and osseous disease or other reasons like accidents and iatrogenic procedures, and it can affect on apparent status of persons, more important than that, it affects their confidence. Using preservative treatments such as implants are received and its success rate is reported 94%.<sup>13</sup> The present survey gives information about patient's knowledge and their need for more information related to dental implants as an option in replacing missing teeth, in a selected sample of patients attending Out Patient Department, department of dentistry CIMS. A study showed that majority patients believed usage of dental implants increased the quality of life.<sup>14</sup> Zimmer et al<sup>9</sup> found through a survey in the USA that only 17% of 120 participants obtained information about implants first from dentists, media and friends. Another study in Netherlands showed 52% of patients received their information from written public press or from relatives.<sup>15</sup> In our study 34% of patients received initial information from friends and 18.7% of them received from radio and TV. A study in Japan was reported just 20% of patients received their

information about dental implants from their family dentists.<sup>16</sup> In our study in 42% of patients gave dentists as first source for their knowledge. Tapper et al<sup>8</sup> reported 4% of patients believed that using of implants need less care, 46% more care and 44% equal to natural dentition. In our study 33% of patients believed that dental implant need more care, 25.3% of them equal care to natural tooth and 5% believed implants need less care and hygiene than natural tooth. Tapper et al<sup>8</sup> also showed 54% of patient believed expected mean durability of implant is 10-20 years. In this study 6% of the patients believed durability of less than 10 years and only 12% of the patients believed 10-20 years for durability but most of patient had no idea, this means patients had insufficient information about dental implants. The cost of implant is a major argument against implant therapy. The results of this study indicate that many patients believed that dental implants need care and hygiene equal even more than natural teeth. Most of them had no idea about durability of dental implants. The high costs of the implant indicated that there was a need for dental insurance to cover this option of treatment for better and more acceptance of implant amongst the people. As this survey was conducted in a limited group of people, further studies need to be conducted amongst the people to access the level of awareness about dental implants amongst larger strata of people.

## CONCLUSION

The results of this study indicate that patient knowledge of dental implant treatment were moderate. Dentists were the most common source of information for patients, thus indicating the importance of clinicians in spreading awareness among common people. Dentists should be actively involved in informing and counseling potential dental implant patients.

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