



**ORIGINAL RESEARCH PAPER**

**Surgery**

**AWARENESS, KNOWLEDGE, AND ATTITUDE OF YOUNG PATIENTS TOWARDS DENTAL IMPLANTS: A QUESTIONNAIRE STUDY**

**KEY WORDS:** Dental implants, Knowledge, Attitude, Patients

**Dr Mohammed Muneeb Mubashir**

MDS (Oral & Maxillofacial Surgery) Ex Junior resident PGIMER Chandigarh, India

**Dr Rimsha Ahmed\***

Senior lecturer Department of prosthodontics Mithila minority Dental college Darbhanga Bihar \*Corresponding Author

**ABSTRACT**

**Objective:** The present study was undertaken to access the level of knowledge and attitude of patients towards dental implants as a treatment modality for replacement of missing teeth.

**MATERIALS AND METHODS:** A total of 309 edentulous and partially edentulous patients, aged 18–60 years, were included in the study. A close-ended objective type questionnaire consisting of 20 questions was designed. Level of information and subjective and objective need for information about dental implants were objectively assessed. The data were analyzed using the SPSS version 15.0.

**RESULTS:** The majority of participants knew about dental implants and had the desire to know more about it; they also showed that they would choose dental implant treatment.

**CONCLUSION:** Excellent knowledge, awareness, and attitude was recorded in young patients

**Introduction**

Loss of natural teeth is a debilitating and irreversible condition and is generally described as “final marker of disease burden for oral health,” leading to functional, cosmetic and psychological morbidities.<sup>1</sup> For some patients, oral health care consist solely of maintenance of teeth and gums, whereas for others, it also include impact on aesthetics, self-esteem and interaction with others.<sup>2</sup>

When it comes to rehabilitation of edentulous spaces, a lot of treatment modalities are available now a days. The means of replacing tooth structure has undergone a revolutionary change from traditional ivory dentures to present day implants. Since past two decades dental implants have revolutionised dentistry. Implants became a solution for wholly or partially edentulous patients to restore their appearance, health, and functioning including speech, as losing teeth has the psychological and functional effect on person's life.

Due to its high success rates and predictability, its clinical implication is increasing rapidly.

Implant treatment is an increasingly popular treatment option with a high success rate.<sup>3</sup> Recently, it has become the focus of the patients interest and hence for dentist, it is vital to assess their level of knowledge regarding dental implants.

So, the objective of this study was to assess knowledge regarding dental implants in the young patients visiting various dental clinics in Jammu city.

**MATERIALS AND METHOD:**

**Subjects**

This cross-sectional observational study performed on 309 patients. A consent form was obtained from each participant in this study.

**Patient's Questionnaire**

A standard questionnaire of 20 questions was made. The questions are divided into four parts.

Part 1 included: 3 questions regarding demographic data which involved age, gender, and marital status.

Part 2 included: 6 questions to investigate the level of knowledge about dental implants, involving different ways of replacing missing teeth, information about dental implants, source of information, duration of dental implants, possible disadvantages of implants.

Part 3 included: 4 questions to assess the attitude towards dental

implants which included the interest in knowing about the dental implants, the source of information, importance of functional outcome of implants, amounts that can be paid over implants, and importance of dentist in treating implants.

Part 4 included: 7 questions about awareness of patients regarding dental implants, which included oral hygiene for implant-tooth with implant teeth, need for dentist to provide implants, up-to-date dental implants used by their dentist, effect of implant treatment compared to others, advantages of permanent versus removable dentures, the part of the jaw in which the teeth is anchored.

**Data Analysis**

All statistical calculations were done using computer program IBM SPSS (Statistical Package for the Social Science; IBM Corp, Armonk, NY, USA). P values less than 0.05 was considered statistically significant. Data was statistically described in terms of mean  $\pm$  standard deviation ( $\pm$  SD), or frequencies (number of cases) and percentages when appropriate. Comparison between the study groups was done using Chi-square ( $\chi^2$ ) test. Exact test was used instead when the expected frequency is less than 5.

**Results**

This study included 309 participants; 57.9% were males (179), 42.07% were females (130). (Table 1).

**Table 1. The total number of participants.**

Total number of participants	MALES	FEMALES
309	179	130

The participants were the youth with age range (mean  $\pm$ SD) 19-36 years (25.8  $\pm$  3.389). Most of the individuals were single with a percent of 61.2% (189), followed by lesser percentage of married individuals 38.18% (118), whereas only 0.64% (2) were divorced.

**Category Percentage**

Single 61.2%  
 Married 38.18%  
 Divorced 0.64%

**The second part** of the questionnaire included six questions to investigate the level of knowledge about dental implants.

Question 1 in this part investigates the degree of knowledge about different ways of replacing missing teeth; only 10.3% (32 subjects) were well informed, 73.14% (226 subjects) were moderately informed while 16.5% (51 subjects) were not informed at all

**Degree of knowledge about replacing the missing tooth**

Well Informed 10.3%  
 Moderately Informed 73.14%  
 Not Informed 16.5%

Question 2 was if participants heard about dental implants; a very high percent of participants 90.6% had heard about dental implants whereas 9.4% only did not hear about it.

**Degree of knowledge about dental implants Percentage**

Have Knowledge 90.60%  
 No Knowledge 9.40%

In question 3, the participants who heard about dental implants mentioned their source; most of them heard from the dentists 54.1%, while less percent heard from their friends 30.1%. 6.9% heard from newspapers and 8.9% heard from another source.

**Source of information about dental implants**

Dentists 54.10%  
 Friends 30.10%  
 Newspaper 6.90%  
 Other Source 8.90%

In question 4, 33% thought that implant last for up to 10 years, whereas 24.14% and 23.65% thought that implants last for five years and up to 20 years respectively. 19.21% thought that implant last for a lifetime.

In question 5, many of responders thought that implant supported denture disadvantage was of high cost (45.8%), while 29.1% thought that long treatment time was the disadvantage and 25.1% thought that its disadvantage was the need for surgery.

**Disadvantages of implants according to patients**

High Cost 45.80%  
 Long time treatment 29.10%  
 Need for surgery 25.10%

In question 6, we asked about estimation of participants as a functional life of an implant; the options were 10 years, 10-15 years 21-25 years and 25 years. The percentages of answers were 48.8%, 25.3%, 36.2% and 39.5% respectively.

**Part 3** of the questionnaire included five questions to evaluate attitude toward dental implants of the responders.

The first question investigated the desire of participants to know more about implants; a high percent (87.7%) of participants desired to know more about dental implants whereas 12.3% did not want that.

**Desire to know about the implants by the patients**

YES 87.70%  
 NO 12.30%

In question 2, most of the participants (77.3%) preferred to know more about implants from the dentist, 6.9% preferred newspaper whereas 4.4 preferred friends to be the source of information, while 11.4 preferred other sources.

Regarding question 3, the highest percent (40.9%) of participants thought that the functional outcome of the implant was important, while 32.5% thought it was very important whereas lowest percentages 16.3% and 10.3% were recorded for answers not very important and had no idea respectively.

Regarding question 4, 45.3% thought that dental implant placement needs a specialist while lower percent 37.4% thought that the dentist who performs dental implant was more qualified than others who did not perform the process; the least percent 17.3% did not know about this matter

**Part 4** of the questionnaire was designed to investigate awareness of participants about dental implants, and it included seven

questions.

In question 1, most of the participants 66% thought that oral hygiene for caring of the implant is more than that of normal teeth, while 7.4% thought that both need similar oral hygiene. 11.8% thought that oral hygiene was less in case of the caring implant and 14.8% had no idea.

**Importance of oral hygiene Percentage**

More to implants than normal teeth 66%  
 Less to implants than normal teeth 11.80%  
 Both implant and normal teeth 7.40%  
 No idea 14.80%

Regarding question 2, 77.3% of participants would like to use the implant for missing teeth while 22.7% did not prefer that.

In question 3, most of the individuals 63.1% preferred the specialist dentist to perform implants, while 25.1% did not give an answer and 11.8% preferred their dentists to provide the dental implants.

**DISCUSSION**

Nowadays, dental implants are accepted to be the prosthetic treatment of wholly or partially edentulous patients.<sup>4</sup> In this study, knowledge about dental implant treatment between youth in Jammu City was assessed.

In the present study, a high percentage of participants (90.6%) heard about the dental implant, while in another investigation, only 23.24% of urban population heard about dental implants<sup>5</sup>.

In general, Turkish population, it was found that a vast majority of individuals were unaware of the dental implants.<sup>6</sup> The results of this study reflect moderate knowledge of the participants.

Individuals can be provided with information about dental implant by several ways including media, dentists and friends. It was reported from the United States that 77% got their information from the press with little contribution from their dentists<sup>7</sup>. Also, a study in Japan revealed that dentists did not provide more than 20% of the information about dental implants to patients.<sup>8</sup> The opposite was found in our study, where 54.1% of participants get their knowledge from their dentists, while lower percentages of participants 6.9%, 8.9% was found to get their information from newspaper and other sources respectively. Also, most of our participants (77.3%) preferred to get more information from the dentist, and this shows that the dentists have a significant role in awareness of patients as patients trust them.

In a study by Tomruk et al.<sup>6</sup>, they revealed that the source of information of the persons was mainly from a dentist, and some from media, friends, and family. In the current study, 30.1% got information from their friends followed by 6.9% by a newspaper. In a report by Tepper et al.<sup>9,10</sup>, they found that dentist was the source of information of 68% of participants, followed by printed media 23% and finally friends 22%. 87.7% of the individuals in this study wanted to know more about dental implant treatment, and the majority preferred to get information from the dentists.

Also, the majority (63%) of individuals in the current study thought that the dentists used up to date techniques in dental implants this showed the excellent thought of patients and their trust toward their dentists. In a study that was performed on Austrian general public, it was found that their source of information about implant knowledge was their dentist whereas lower percentage got information from media<sup>11</sup>.

The disadvantage of dental implants was the high cost (45.8%) followed by long treatment time (29.1%) and finally the need for surgery 25.1% in the point of view of our participants. Tepper et al.<sup>9,10</sup> reported that the high cost was a significant disadvantage of dental implants; this is in agreement with our study. 33% of individuals in this study thought that implant would last for up to 10 years, while the least percent 19.21% believed that implants

would last for the lifetime. Also, a high percent (36.9%) thought that dental implant is functioning for 10-15 years whereas lower percent 18.7% thought that function last for more than 25 years.

In the present study, we found that 66% of participants thought that implants need more oral hygiene than healthy teeth, while only 7.4% thought that caring of implants as the same natural teeth.

It was mentioned that the younger public showed better awareness to dental implant strategy, while the old persons demonstrated less knowledge<sup>12</sup>. However, the present study included only young age individuals, so we cannot compare the results regarding age. It was recommended that dental implants should be placed even if patients are still in good health regardless of the age that is why we included young age participants, although they are young, they may need to use the implant.

The qualified, trained dentist is the one who can practice dental implant treatment, most of the participants (37.4%) in this study thought that, while 45.3% thought that this type of treatment needs the specialist. Also, the majority of our participants preferred the only specialist to perform dental implants; this shows that individuals had awareness about dental implants. More than two-thirds of participants in the present study preferred and chosen to perform implant in case of missing teeth.

**CONCLUSION**

To conclude, fair amount of knowledge and awareness regarding dental implants was found in general population. Most of the participants had heard about dental implants, and they were well informed mainly by their dentists. They wanted to know more about dental implants from their dentists, and they cared about the functioning outcome of the implant. Also, most of them showed that they prefer to choose dental implants. However, more knowledge and awareness should be provided to individuals by their dentist as they have some misconceptions, such as the high cost of dental implants. This reason was the most common disadvantage according to participants. Also, we can conclude that dentists play an essential role in the patient's awareness.

**REFERENCES:**

1. Emami E, de Souza RF, Kabawat M, Feine JS. The Impact of Edentulism on Oral and General Health. *Int J Dent*. 2013;2013:498-305
2. Pavel K, Seydlova M, Dostalova T, Zdenek V, Chleborad K, Jana Z, et al. Dental implants and improvement of oral health-related quality of life. *Community Dent Oral Epidemiol*. 2012;40:65-70.
3. Lindh T, Gunne J, Tillberg A, Molin M. A meta-analysis of implants in partial edentulism. *Clin Oral Impl Res* 1998;9:80-90.
4. Al-Johany S, Al Zoman HA, Al Juhaini M, Al Refeai M. Dental patients' awareness and knowledge in using dental implants as an option in replacing missing teeth: A survey in Riyadh, Saudi Arabia. *The Saudi Dental Journal*. 2010; 22: 183-188.
5. Chowdhary R, Mankani N, Chandraker NK. Awareness of dental implants as a treatment choice in urban Indian populations. *The International Journal of Oral and Maxillofacial Implants*. 2010;25: 305-308.
6. Tomruk CO, Özkurt-Kayahan Z, Şençift K. Patients' knowledge and awareness of dental implants in a Turkish subpopulation. *Journal of Advanced Prosthodontics*. 2014; 6: 133-137.
7. Zimmer CM, Zimmer WM, Williams J, Liesene J. Public awareness and acceptance of dental implants. *The International Journal of Oral and Maxillofacial Implants*. 1992; 7: 228-232.
8. Akagawa Y, Rachi Y, Matsumoto T, Tsuru H. Attitudes of removable denture patients toward dental implants. *Journal of Prosthetic Dentistry*. 1988; 60: 362-364.
9. Tepper G, Haas R, Mailath G, Teller C, Zechner W, et al. Representative marketing-oriented study on implants in the Austrian population. I. Level of information, sources of information and need for patient information. *Clinical Oral Implants Research*. 2003; 14: 621-633.
10. Tepper G, Haas R, Mailath G, Teller C, Bernhart T, et al. Representative marketing-oriented study on implants in the Austrian population. II. Implant acceptance, patient-perceived cost and patient satisfaction. *Clinical Oral Implants Research*. 2003; 14: 634-642.
11. Pommer B, Zechner W, Watzak G, Ulm C, Watzek G, et al. Progress and trends in patients' mindset on dental implants. I: level of information, sources of information and need for patient information. *Clinical Oral Implants Research*. 2011; 22: 223-229.
12. Al Hashim H, Saleh F, AlEssa R, Taher Y, Khalifa M, et al. Knowledge and Awareness of Dental Implants: A Survey Done among Saudi General Public. *Donnish Journal of Dentistry and Oral Hygiene*. 2017; 3: 19-26.
13. Woolgrove J, Cumberbatch G, Gelbier S. Understanding dental attendance behaviour *Community Dent Health* 1987;4:215-21.
14. Hamilton ME, Coulby WM. Oral health knowledge and habits of senior elementary school students. *J Public Health Dent* 1991;51:212-9.
15. Deinzer R, Micheelis W, Granrath N, Hoffmann T. More to learn about: Periodontitis-related knowledge and its relationship with periodontal health behaviour. *J Clin Periodontol* 2009;36:756-64.

16. Hosadurga R, Bloor V, Rao A, Prathap S. Knowledge of periodontal disease among group of health care professionals in Yenepoya University, Mangalore. *J Educ Ethics Dent* 2013;3:60-5.
17. Hosadurga R, Bloor V, Kashyap R. Oral health knowledge deficit: A barrier for seeking periodontal therapy? A pilot study. *J Indian Soc Periodontol* 2015;19:556-62.
18. Berge TI. Public awareness, information sources and evaluation of oral implant treatment in Norway. *Clin Oral Implants Res* 2000;11:401-8.
19. Soben P. Health education. In: *Essentials of Preventive and Community Dentistry*. 3rd ed. New Delhi: Arya (Medi) Publication House; 2006. p. 518-31.
20. Philippot P, Lenoir N, D'Hoore W, Bercy P. Improving patients' compliance with the treatment of periodontitis: A controlled study of behavioural intervention. *J Clin Periodontol* 2005;32:653-8.
21. Petti S, Scully C. Oral cancer knowledge and awareness: Primary and secondary effects of an information leaflet. *Oral Oncol* 2007;43:408-15.