

**Assessment of comprehension and perception on dental implants among the dental fraternity – a cross sectional questionnaire based survey.**<sup>1</sup>Jahnavi Sai Sri, <sup>2</sup>Ashiq Ajit, <sup>3</sup>Jessica Carol Correya, <sup>4</sup>N Ravikumar, <sup>5</sup>Savitha P N**Corresponding Author:** Jahnavi Sai Sri.**Citation of this Article:** Jahnavi Sai Sri, Ashiq Ajit, Jessica Carol Correya, N Ravikumar, Savitha P N, “Assessment of comprehension and perception on dental implants among the dental fraternity – a cross sectional questionnaire based survey”, IJDSIR- January - 2024, Volume –7, Issue - 1, P. No.156 – 160.**Copyright:** © 2024, Jahnavi Sai Sri, et al. This is an open access journal and article distributed under the terms of the creative common’s attribution non-commercial License. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given, and the new creations are licensed under the identical terms.**Type of Publication:** Review Article**Conflicts of Interest:** Nil**Abstract****Background:** The main objective of this study was to assess the basic knowledge and attitude of dental professionals, postgraduate students, and interns regarding dental implants.**Methods:** An online survey using a cross-sectional questionnaire was carried out. A total of 15 basic questions, which were divided equally into knowledge, attitude and practice based questions were circulated among the Interns, Post Graduates and Practitioners.**Results:** The survey showed that post graduates had the best knowledge for implant dentistry and interns possessed the least knowledge.**Conclusion:** To fully equip future dental practioners with the requisite knowledge and skills, it is imperative to augment the dental curriculum with a more robust and comprehensive coverage of implant dentistry. This study emphasizes the importance of continuous education in implant dentistry for all dental professionals, to ensure that patients receive optimal treatment and care.**Keywords:** Implant Dentistry, Cross-Sectional Survey.**Introduction**

With the growing success of dental implants, it has gained popularity option for replacement of missing teeth.<sup>1</sup> They are the nearest equivalent replacement to the natural tooth, and are therefore a useful addition in the management of patients who have missing teeth because of disease, trauma or developmental anomalies.

There are numerous articles regarding awareness about dental implants among the general public but few articles were found to assess the awareness in the dental profession.<sup>2-5</sup> Many surveys have shown that the primary source of patient information on dental implants are dentists.<sup>6,7</sup>

Awareness about dental implants is increasing among general public and greater number of people are seeking information about it. So, the objective of this study was to assess the basic knowledge and attitude of dental professionals, postgraduate students, and interns regarding dental implants.

## Methodology

An online survey using a cross-sectional questionnaire was carried out among various dental colleges in Bengaluru, Karnataka. A total of 15 basic questions, which ever divided equally into knowledge, attitude and practice based questions were circulated among the Interns, Post Graduates and Practitioners.

The sample size was obtained using single proportion formula,  $n = \frac{Z^2 P (1-P)}{d^2}$  Where n is the sample size, Z is the statistic corresponding to level of confidence, P is expected prevalence (that can be obtained from same studies or a pilot study conducted by the researchers),

Table 1: Questionnaire to assess the basic knowledge and attitude of dental professionals, postgraduate students, and interns regarding dental implants.

A. Knowledge Based Questions	
1.	What is a Dental Implant?
2.	Which is the most commonly used material for implants?
3.	What is the minimum distance between two implants when placed adjacent to each other?
4.	What is the safe distance of dental implant from natural tooth?
5.	What is Osseo-integration?
B. Attitude Based Questions	
1.	Will the patient's financial status affect your treatment of choice?
2.	Do you feel there is a need for standardization of implant system?
3.	Do you feel implant supported prosthesis has a better chewing efficacy than conventional prosthesis?
4.	Do you feel implant supported prosthesis has a better aesthetics than conventional prosthesis?
5.	Does higher medico-legal risk act as a hindrance to practice implant dentistry?
C. Practise Based Questions	
1.	Have you ever placed any dental implants ?
2.	How did you learn implant dentistry ?
3.	Which approach do you use for implant placement ?
4.	Do you think OPG is sufficient to place on implant ?
5.	Is it necessary to update your knowledge regarding the Implant Systems/Techniques/Materials ?

and d is precision (corresponding to effect size) 8 and it was determined that the minimum sample size as 318. Consent was taken from the dental colleges and each participant. A pre-used questionnaire was taken from an article, a pilot study was carried out and minor modification was made in the questionnaire.<sup>9</sup>

The questionnaire consisted of 15 questions and each category had 5 questions each mentioned in Table 1. The answers were collected from a total of 384 individuals and it was further statistically analyzed to obtain the results.

## Results

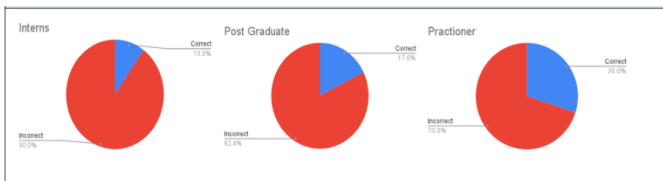
The total number of participants were 384 out of which 26.7 % were interns, 46.5% were post graduates and 26.3 % were dental practioners as mentioned in Table. 2

Table 2: Total number of participants participated the present survey

Interns	103
Post Graduates	180
Dental Practioners	101

On evaluating the answers obtained for the knowledge based questions, The total number of participants who answered all the questions correctly were noted to be 10% among the interns, 17.6% in the postgraduate students and 30 % among the practioners as depicted in Figure. 1

Figure 1: Total percentage of participants answering all the knowledge based questions correctly.



The Postgraduate students answered 77.1% questions correctly followed by the dental practioners (66%) and the interns (60%). Figure [2]

Figure 2: Total percentage of knowledge based questions answered correctly.

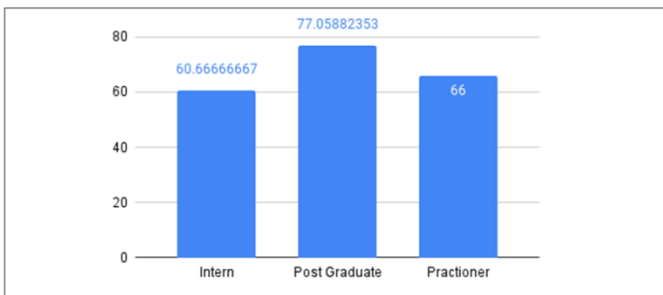


Table 3: Percentage responses to attitude based questions.

Questions	Yes %	No %
Do you think the patient's financial status will affect your treatment of choice?	94.87	5.13
Do you feel there is a need for standardization of implant system?	84.62	15.38
Do you feel implant supported prosthesis has a better chewing efficacy than conventional prosthesis?	96.15	3.85
Do you feel implant supported prosthesis has a better aesthetics than conventional prosthesis?	88.46	10.26
Does higher medico-legal risk act as a hindrance for you to practice implant dentistry?	66.67	33.33

When questioned if the patient's financial status affects the treatment choice majority of 94.87% participants agreed, 84.62% agree that there is a need for standardization of the implant systems in day to day practice. Again a majority of 96.15% of participants agreed that implant prosthesis has better chewing efficacy when compared to the conventional prosthesis and 88.46% agree that they have better aesthetics. 66.67% of participants agree that medico-legal risks act as a hindrance in practicing implant dentistry. (Table. 3)

Among the participants 41.03% have placed at least one or more implants where as 58.97% of them have not surgically placed implants. While 19.23 % of participants agree that OPG is sufficient for placement of implants, 100% agree they need to update your knowledge regarding the Implant systems/Techniques/Materials (Table. 4)

Table 4: Percentage responses to practice based questions.

Questions	Yes %	No %
Have you ever placed any dental implants?	41.03	58.97
Do you think OPG is sufficient to place an implant?	19.23	76.92
Is it necessary to update your knowledge regarding the Implant systems/Techniques/Materi	100	0

Among the participants who practice implant dentistry 83.1% follow the two stage implant placement [Figure.3] and [Figure. 4] depicts the various sources through which the participants gained knowledge about implant dentistry, the highest being the post-graduation

42.3%, followed by seminars and conferences 21.1%, Implant courses 19.7% while 16.9% are self learnt.

Figure 3: The percentage of type of implant placement approach among the participants.

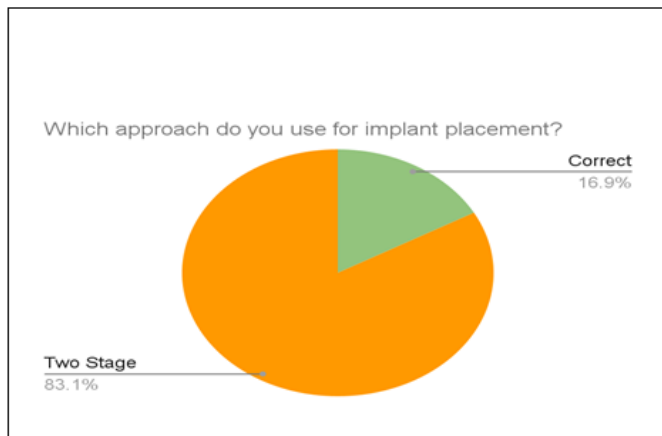
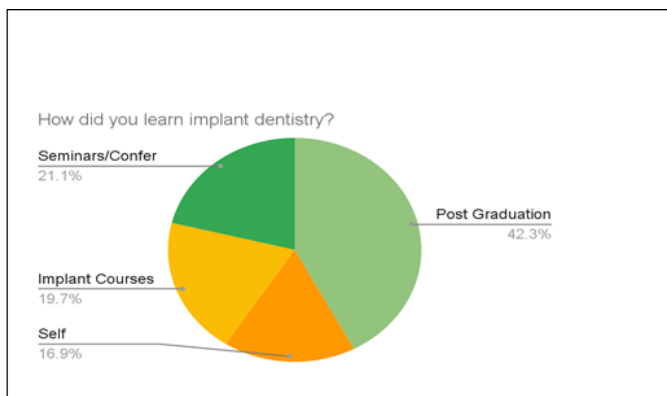


Figure 4: The percentage of different sources of implant dentistry through which the participants learned.



## Discussion

The survey showed that post graduates had the best knowledge for implant dentistry (77.1% of questions answered correctly), this could be owing to the presence of implantology as a part of the post graduate curriculum and the various implant hands on courses that are being conducted. These results are similar to the one obtained in this study.<sup>10</sup>

It also showed that interns possessed the least knowledge on dental implants. Implant dentistry must be given more importance in the under graduate level. Interns should be encouraged to attend implant courses to enhance their knowledge and practise on the subject as

mentioned in the study conducted by Sharma A et al In Nepal.<sup>11</sup>

A total of 98.87% of the respondents said that they think dental implants as a treatment option depends on the financial status of the patient, the responses are similar to the survey conducted by Chaudhary S et al.<sup>9</sup>

Majority (84.62%) of the participants agree that there is a need for standardization of the various implant systems and 100% of the participants agree that the knowledge they have is inadequate and required to update, which are similar type of responses noted a study by Sharma A et al.<sup>12</sup>

To fully equip future dental practioners with the requisite knowledge and skills, it is imperative to augment the dental curriculum with a more robust and comprehensive coverage of implant dentistry enhancing the level of exposure of undergraduate students to implant dentistry would be beneficial for their professional development and contribute to advancing the field of dentistry.

## Conclusion

Implant dentistry is a rapidly growing field that requires a deep understanding of the principles of implantology, biomechanics and surgery. For interns, basic knowledge of implant dentistry should include the indications and contraindications for implants, implant design, surgical techniques, and implant maintenance.

For post-graduates and general practioners, a deeper knowledge of implantology is needed, including implant placement, bone grafting, and restorative procedures and should have a comprehensive understanding of implant dentistry, including implant selection, treatment planning, and restoration, as well as patient management and communication. This study emphasizes the importance of continuous education in implant dentistry

for all dental professionals, to ensure that patients receive optimal treatment and care.

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