Original Article

Evaluation Of Implant Placed And Tooth Restored In Postgraduates: An Original Research

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Abstract

Objective: To evaluate the level of understanding among the post graduates regarding the dental implants placed and tooth restored.
Methodology: A cross-sectional questionnaire survey will be conducted online to assess the knowledge, attitude, and practise of dental implants among dental postgraduates and practitioners in the vikarabad district. The survey will consist of 20 selected questions. We will be examining the aspect of the results. The survey will be distributed to dental postgraduates and practitioners, and their responses will be collected along with the validation of the questionnaire. The cross-sectional study utilised an appropriate sampling strategy, which was based on the responses received from the survey. The outcomes will be determined based on the knowledge, attitude, and practise of dental implants.
The survey procedure involves asking dental health professionals a series of questions through an online platform. The purpose of the study will be clearly explained to participants. The questions will be a combination of open-ended and closed-ended types.
Results: The findings were derived through statistical analysis, which revealed that the knowledge was prevalent among postgraduate students and dental professionals. Moreover, the study identified variations among the subjects based on factors such as age, gender, years of experience, practise type, implant training, and specialisation. Variability was observed in both the attitude and practise towards implants, as well as the level of evidence-based knowledge pertaining to them.
Conclusion: We are currently in an era where dentistry is heavily reliant on evidence-based practises. There is a significant disparity between the widespread use of dental implants and the amount of research that backs their effectiveness. This research aims to reduce the difference. evolved. The study will be conducted in an area where dentistry is prevalent, with two major teaching dental hospitals and a large number of dentists. This will provide us with a comprehensive and realistic understanding of the current state of knowledge and practise regarding dental implants.

INTRODUCTION

Dental implantology is a rapidly growing specialisation within the field of dentistry. [1] Dental implants have a rich history spanning several centuries, dating back to early civilizations over 2,000 years ago in South and North America, as well as regions of the Middle East, Asia, and Mediterranean. In the past fifty years, dentistry has made significant advancements. Dental implants provide a reliable solution for replacing missing teeth with durable, comfortable, and aesthetically pleasing artificial replacements that closely resemble natural teeth [3]. Although there is a significant amount of evidence supporting the survival and success of dental implants [4], and an increasing amount of evidence on the benefits perceived by patients [5,6], there is a lack of accessible information regarding the perceptions of dental implant providers [7]. The knowledge and attitudes of dentists

regarding a particular treatment technique can significantly influence their decision-making process. This, in turn, can shape the way oral healthcare is provided and received. (8, 9, 10, 11)

The main objective of this study was to evaluate and contrast the knowledge, attitude, and practise of dental implant procedures among postgraduate students (PGs) [12,13]. The study aimed to evaluate the impact of dentists' factors such as years of experience, implant training, and specialisation on institution-based practitioners (IBPs), general dental practitioners (GDPs), and institution-based non-practitioners (IBNPs). This was based on previous studies [14, 15, 16].

By evaluating the attitudes and practices towards dental implants, dental care professionals can determine the need for implementation in their practice. This study will provide valuable insights into the current knowledge level of dental postgraduate students and practitioners regarding dental implants. With this information, educational programs can be developed to improve their understanding of this treatment option, ultimately leading to better patient outcomes and satisfaction. It is essential that dental professionals stay up-to-date with advancements in implant dentistry to provide the best possible care for their patients.

BACKGROUND AND JUSTIFICATION

The results of this study will aid dental practitioners in assessing the requirement to adopt a practise and attitude towards dental implants and their evidence-based understanding regarding the same.

1.2 Objective

1. To evaluate dental practitioners and postgraduate students' understanding of dental implants.
2. To evaluate dental practitioners and postgraduate students' opinions on dental implants.
3. To examine how dental professionals and postgraduate students use dental implants.

2.1 Sample Selection

The sample size was determined using a single proportion formula is

$$n = \frac{Z_\alpha^2 \left[p(1-p) \right]}{d^2}$$

where Z_α is 1.96 i.e., Z variate of alpha error (for 95% confidence level), and P stands for the prevalence, assuming the present knowledge level to be 50%, d is the Desired level of absolute precision.The sample size was calculated to be 384 for a finite population of 10,000–1,000,000.

2.2 inclusion criteria

The inclusion criteria for this study are limited to dental professionals.

2.3: Measurement.

The questionnaire is organised in a way that allows for the examination of respondents' socio-demographic characteristics, dental service specifics, and their self-assessment of service quality. The self-assessment of service quality will involve grading the items using a five-point Likert Scale [10].

During a specific time frame, participants will be requested to fill out a questionnaire. The survey will begin with a section for demographic information.

The potential sources of bias have been eliminated.

All demographic details and questionnaire responses will be recorded using electronic forms and stored in an Excel spreadsheet as quantitative variables.

2.4: Statistical methods

The analysis was conducted using SPSS version 25 statistical software.

The demographic information and survey responses will be recorded using descriptive statistics and frequency distribution.

Age, gender, and socioeconomic status are examined in relation to patients' perceptions of dentist selection using person's correlation and chi-square analysis.

RESULTS

The study involved 450 participants, comprising 276 postgraduates and 176 practitioners. After three rounds of follow-up, 416 completed questionnaires were returned, yielding a response rate of 92.4%.The study revealed that the highest level of awareness regarding implants was observed among postgraduate participants, while IBPs, GDPs, and IBNPs followed in a descending order. A notable disparity was observed in the respondents' attitudes. The majority of the implant-based practitioners (IBPs) exhibited a markedly favourable disposition towards implant dentistry, while the general dental practitioners (GDPs) evinced a significantly unfavourable attitude towards the same as shown in table 1.The duration of professional experience has been observed to exert a noteworthy impact on the proficiency and implementation of implant dentistry. The study findings indicate that individuals with less than five years of experience exhibited the highest level of knowledge and a notably positive attitude towards implant dentistry. Conversely, those with over 15 years of experience demonstrated a majority of good knowledge, but only a small proportion (6%) exhibited a positive attitude. Participants with 5-15 years of experience displayed the lowest levels of knowledge and the least positive attitude towards implant dentistry.The presence or absence of implant training among participants was found to have a statistically significant impact on their practise of implant dentistry. Individuals who underwent implant training exhibited a favourable disposition and a greater degree of practical experience in comparison to those who did not receive such training.The age demographic of the subjects exhibited a noteworthy impact on their comprehension of implant dentistry. The age group of 20-30 years among dentists exhibited the highest level of knowledge, followed by the age group of 30-40 years, while the age group of 40 years and above demonstrated the lowest level of knowledge.The area of postgraduate specialisation had a noteworthy impact on both the understanding and implementation of implant dentistry. Prosthodontists possess the highest level of expertise in implant dentistry, followed closely by practitioners in the fields of oral and maxillofacial surgery and periodontics. Upon examination of the differences in practise, it was observed that periodontists had a significantly larger practise compared to those in prosthodontics and oral surgery.

Table

Pg/practitioner	**n**	**Knowledge**			**Attitude**			**Practice**		
		Good	**Average**	**Poor**	**Positive**	**Average**	**Negative**	**High**	**Moderate**	**Nil**
PGS	253	91	132	30	139	92	22	13	214	26
IDP	108	22	59	27	65	35	8	11	82	15
GDP	39	4	20	15	22	12	5	2	35	2
IBNP	16	2	9	5	3	12	1	0	15	1
TOTAL	416	119	220	77	229	151	36	26	346	44
CHI SQUARE, P value		31.8, <0.001			12.8, <0.05			7.9,0.24		

DISCUSSION

The lack of natural teeth is a health issue that not only affects a person's ability to function properly, but also has a significant impact on their appearance and mental health.[5] For centuries, people have tried to replace missing teeth with prostheses that mimic the function and appearance of natural teeth. Dentures and fixed bridges are the solutions used to achieve this. Nevertheless, dentures and fixed bridges have some inherent issues, such as compromising adjacent healthy teeth and accumulating food debris and plaque. Dental implants provide comprehensive solutions to the problems associated with missing teeth, which is a fortunate development.[7] Dental implant therapy has become a highly reliable treatment for edentulism. In recent times, it has become a suitable component of both general and specialised dental care.[8]The results of the study indicate that postgraduates possess the highest level of knowledge in the field of implant dentistry. As implantology has become a part of the postgraduate curriculum, students are now well-versed with it in theory. However, there is currently no literature available to support this claim, indicating that further research in this area is necessary. Postgraduates

may possess knowledge about implant placement, but their practical skills and competency in this area may not be aligned with their theoretical knowledge. In order to apply their knowledge effectively, it is recommended that additional training courses be initiated and postgraduates be required to attend them.This study found that IBP had a very positive attitude towards dental implants and that most of their dental practitioners regularly perform implant procedures. This is likely due to the high demand for these procedures from patients, and the fact that cost is not a major concern for the institution. However, general dental practitioners (GDPs) held a negative attitude towards dental implantology. This observation aligns with a study conducted by Akeredolu et al. in 2007, where they discovered that inadequate training courses and patients' economic status resulted in suboptimal implant outcomes and a pessimistic attitude towards implants among GDPs.[8] The present study demonstrated that these two factors are of minimal concern. Therefore, there is a need for GDPs to have motivation and a shift in attitude towards the progress in dentistry. To reduce the difference in practise between IBPs and non-practitioners, it is recommended to provide non-practitioners with more knowledge and practical experience through implant education programmes, hands-on training, and various courses. This will help to increase their confidence and bridge the gap in practise.This study suggests that the dentist's level of experience, implant training, and postgraduate specialisation are significant factors that impact their knowledge, attitude, and practise of dental implants. The study clearly indicates that individuals with less than five years of experience possess the highest level of knowledge, exhibit the most positive attitude, and have the most practical experience with implants. The difference in years of experience aligns with a study conducted by Eckert et al. in 2012[9]. The study found that younger prosthodontists showed a stronger inclination towards performing surgical implant placements. It is evident that individuals who have been practising dentistry for an extended period still favour traditional techniques as the preferred option for replacing missing teeth. Therefore, in order to minimise this variability, dentists who have many years of experience should expand their knowledge and stay up-to-date with the latest advancements in our field. Implant training has been observed to be a valuable factor in enhancing knowledge, fostering a positive attitude, and improving implant practise. Individuals who have undergone implant training possess an advantage over those who have not in terms of their knowledge, attitude, and outcomes. This aligns with a study carried out by Lang-Hua et al. in 2013.[3] Maalhagh-Fard et al. conducted a study in 2002 [10] that yielded similar results. The study found that graduates who had completed the elective programme in implant dentistry had a stronger positive correlation with offering and restoring implants. According to the study, the majority of IBPs demonstrated sufficient competence in implant placement and did not require additional training. However, postgraduates reported feeling less competent in this area, despite having a greater understanding of the subject matter, and expressed a need for training in implant placement. The variation observed may be attributed to the limited exposure of postgraduates to implant practise. Therefore, it is recommended that implant practise be incorporated into the curriculum. This study also indicates that postgraduate specialisation has an impact on implant knowledge, attitude, and practise. Prosthodontists specialise in the prosthetic rehabilitation of partial and complete edentulism, which involves diagnosis and treatment planning. As a result, they possess extensive knowledge, expertise, and experience in implant procedures. In 2012, Eckert et al. conducted a study which revealed that the majority of prosthodontists incorporated implant supported prostheses into their practise. Oral surgeons and periodontists are closely involved in implementing a prosthodontist's plan for dental implants, as they are the pioneers in this field. There has always been controversy surrounding which specialisation the study of implants belongs to. It is considered a multidisciplinary approach. Therefore, it is important to make efforts at the institutional level to expand knowledge, attitude, and practise of implants to other areas.

CONCLUSION

Currently, we are in an era where dentistry is heavily reliant on evidence-based practises. There is a significant disparity between the widespread use of dental implants and the available evidence supporting their efficacy. This study aims to bridge the gap. This study provides a comprehensive and accurate representation of the current state of knowledge and practise regarding dental implants in our profession. It was conducted in an area where dentistry is prevalent, with two large teaching dental hospitals and a significant number of dentists. In conclusion, while implant dentistry shows promise as an emerging field, there are still areas that require attention from professionals in order for it to be fully integrated into our profession. This will ultimately lead to improved healthcare services for the general public.

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