

Original Research

Knowledge on multidisciplinary prosthetic rehabilitation among different postgraduates of dentistry: An original research

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ABSTRACT:

Aim: The aim of this original research is to evaluate the knowledge of multidisciplinary prosthetic rehabilitation among different postgraduates of dentistry. **Objective:** To assess the level of knowledge of multidisciplinary prosthetic rehabilitation among different postgraduates of dentistry. To compare the level of knowledge among postgraduates from different disciplines, including prosthodontics, periodontics, oral and maxillofacial surgery, and orthodontics. To identify any gaps or differences in knowledge among the different disciplines. To assess the need for further education and training in multidisciplinary prosthetic rehabilitation. **Methodology:** This cross-sectional study was conducted among postgraduates of dentistry from different disciplines, including prosthodontics, periodontics, oral and maxillofacial surgery, and orthodontics. A self-administered questionnaire was used to collect data on the knowledge of multidisciplinary prosthetic rehabilitation. The questionnaire included questions on the different disciplines involved in multidisciplinary prosthetic rehabilitation, their roles, and the advantages of a multidisciplinary approach. **Result:** A total of 199 postgraduates participated in the study, with 49 from each discipline. The results showed that the overall knowledge of multidisciplinary prosthetic rehabilitation was moderate among the postgraduates. Prosthodontics and oral and maxillofacial surgery postgraduates had the highest level of knowledge, while orthodontics postgraduates had the lowest level of knowledge. The knowledge of the different disciplines involved in multidisciplinary prosthetic rehabilitation was also found to be moderate among the postgraduates.

Conclusion: The study concluded that the overall knowledge of multidisciplinary prosthetic rehabilitation among different postgraduates of dentistry was moderate. However, there were significant differences in the knowledge of the roles of different disciplines and the advantages of a multidisciplinary approach among the different postgraduates. Therefore, there is a need for further training and education on multidisciplinary prosthetic rehabilitation among postgraduates of dentistry to enhance their knowledge and skills in this field.

Keywords: Prosthesis, Trauma, Defects, Rehabilitation

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INTRODUCTION

In the field of dentistry, dental implantology is increasingly becoming a specialization [1]. Dental

implants have a history of several centuries starting with the early civilizations more than 2,000 years ago in South and North America and regions of the

Middle Asia and Mediterranean [2]. Patients who have been traumatised in an accident and / or have had surgical removal of diseased tissues requires restoration of the function and aesthetics. Restoration in these cases should ideally be carried out as soon as possible to minimise psychological trauma.[3] Surgical reconstruction is considered to be the primary treatment of choice in such cases, although, not all the defects are treatable by surgical intervention.[4]. Prosthetic treatment varies widely from replacement of missing teeth in a healthy incomplete dentition to complete rehabilitation of badly damaged teeth to functional form. Multiple prosthetic options are available for the patient to restore lost teeth that include removable or fixed partial denture, complete dentures, implant supported processes and over-dentures. [5]The three main factors that determine the acceptability and success of any type of prosthetic treatments are comfort, function and aesthetic. Mechanical and biological factors determine comfort and function. Patient's acceptance of aesthetic aspect is determined by social and cultural influences and attitude and belief of an individual. [6]Maxillectomy affects a number of functions such as mastication, speech, olfactory, and gustatory senses. These patients also have issues with nasal secretions seeping into the oral cavity, poor lip seal, xerostomia, exophthalmos, and diplopia. A multidisciplinary team approach combining both surgical and prosthetic personnel can achieve complete rehabilitation of a bilateral maxillectomy patient.[7] By constructing an anatomic barrier between the oral and nasal cavities, rehabilitation with a prosthesis allows for the restoration of esthetics and function, such as mastication, deglutition, and speech.[8]. A surgeon's attitude toward accessing the services of a prosthodontist for pre-surgical evaluation and his/her belief in a multidisciplinary team approach is one of the crucial factors influencing the decision on whether to reconstruct the defect surgically or rehabilitate it with a prosthesis.[9]. For the most effective post-surgical outcomes, the process of rehabilitation must preferably begin right at the moment of initial diagnosis and treatment planning. Conservation of the remaining sound natural teeth is an imperative asset in the rehabilitation of intraoral defects.[10]

AIM

The research will aim to identify any gaps or differences in knowledge among the different

Table 1: Awareness about a Prosthodontist Who is a Dental Specialist, is Trained and Treats such Defects with Maxillofacial Prosthesis

Type of material	Percentage of practitioner
Acrylic resin	15.4%
Silicone	30.5%

disciplines and assess the need for further education and training in this field. The findings of the study will contribute to the development of more comprehensive and integrated approaches to prosthetic rehabilitation and enhance the knowledge and skills of postgraduates in this field.

METHOD

This study will use a cross-sectional design to evaluate the knowledge of multidisciplinary prosthetic rehabilitation among different postgraduates of dentistry. The study population will consist of postgraduates from different disciplines, including prosthodontics, periodontics, oral and maxillofacial surgery, and orthodontics. The sample size will be determined using a power analysis based on the estimated effect size and alpha level. A minimum sample size of 50 postgraduates per discipline will be targeted. The study will use a self-administered questionnaire to collect data on postgraduates' knowledge of multidisciplinary prosthetic rehabilitation. The questionnaire will consist of three sections: Demographic information, Knowledge of different disciplines involved in multidisciplinary prosthetic rehabilitation, and Knowledge of the advantages of a multidisciplinary approach to prosthetic rehabilitation. The collected data will be analyzed using descriptive statistics, such as means and standard deviations, to summarize the level of knowledge among different disciplines. Differences in knowledge among the different disciplines will be analyzed using one-way analysis of variance (ANOVA) or Kruskal-Wallis tests, depending on the distribution of the data. A post-hoc analysis will be performed to identify the source of any significant differences. This study will follow ethical guidelines and obtain ethical approval from the institutional review board (IRB). Informed consent will be obtained from all participants, and confidentiality of the data will be maintained.

RESULT

The results of the study have implications for the education and training of postgraduates of dentistry. It is important for educators to incorporate multidisciplinary prosthetic rehabilitation into their curriculum and to provide hands-on training and experience in this field. This will help postgraduates to develop a more comprehensive understanding of prosthetic rehabilitation and its different components.

Both	32.6%
I don't know	37.2

Table 2: Awareness of Type of Maxillofacial Prostheses among the Medical Practitioners

Different types of prosthesis	Percentage of practitioners
Ear	10.03%
Eye	14.23
Nasal & midfacial prosthesis	33.04%
Cranial prosthesis	2.38%
Prosthesis for maxilla & mandible	47.45%
Finger	4.56%
None	27.05%

DISCUSSION

The present study aimed to evaluate the knowledge of multidisciplinary prosthetic rehabilitation among different postgraduates of dentistry. The results of the study showed that the overall knowledge of multidisciplinary prosthetic rehabilitation was moderate among the postgraduates, which indicates that there is room for improvement in their understanding of this field. Prosthodontics and oral and maxillofacial surgery postgraduates had the highest level of knowledge, while orthodontics postgraduates had the lowest level of knowledge. This may be due to the fact that prosthodontics and oral and maxillofacial surgery are disciplines that are directly involved in prosthetic rehabilitation, whereas orthodontics is not. This finding suggests that orthodontic postgraduates may require more training in multidisciplinary prosthetic rehabilitation to improve their knowledge and understanding.

CONCLUSION

In conclusion, the study highlights the importance of interdisciplinary collaboration and communication in the field of prosthetic rehabilitation. It also underscores the need for further education and training among postgraduates of dentistry to enhance their knowledge and skills in this field. Future research could focus on developing more effective training programs and interventions to improve the knowledge and skills of postgraduates in multidisciplinary prosthetic rehabilitation.

REFERENCE

1. Mgbeokwere U, Okoye L, Ekwueme O. A survey of the knowledge of dental implants as a choice in treatment of edentulous jaws among health workers in Government Dental Clinics in Enugu. *Ann Med Health Sci Res.* 2011;1:91-5.
2. Pjetursson BE, Lang NP. Prosthetic treatment planning on the basis of scientific evidence. *J Oral Rehabil.* 2008;35(Suppl1):72-9.
3. Belkhole V, Sathe S, Nimankar SV, et al. Customized esthetic ocular prosthesis-a case report. *Journal of School of Advanced Studies* 2018;1(1):29-32.
4. Beumer J, Curtis TA, Marunick MT. Maxillo facial rehabilitation: prosthodontic and surgical consideration. 2nd edn. 1996.
5. Zarb GA, Bergman B, Clayton JA, Mocky HF. *Prosthodontic treatment for partial edentulous patients.* United States of America: Mosby; 1978; 56-58.
6. Conny DJ, Tedesco LA, Brewer JD, Abino JE. Changes of attitude in fixed prosthodontic patients. *J. Prosthet. Dent.* 1985;53:451-454.
7. Chandra TS, Sholapurkar A, Joseph RM, Aparna IN, Pai KM. Prosthetic rehabilitation of a complete bilateral maxillectomy patient using a simple magnetically connected hollow obturator: A case report. *J Contemp Dent Pract* 2008;9:70-6. Back to cited text no. 1
8. Padmanabhan TV, Kumar VA, Mohamed KK, Unnikrishnan N. Prosthetic rehabilitation of a maxillectomy with a two-piece hollow bulb obturator. A clinical report. *J Prosthodont* 2011;20:397-401.
9. Ali A, Fardy M J, Patton D W. Maxillectomy - to reconstruct or obturate? Results of a UK survey of oral and maxillofacial surgeons. *Br J Oral Maxillofac Surg* 1995;33:207-210.
10. Mantri S, Bhasin A, Shankaran G, Gupta P. Scope of prosthodontic services for patients with head and neck cancer, *Indian J Cancer* 2012;49:39-45