



ISSN:0976-3031

Available Online at <http://www.recentscientific.com>

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 8, Issue, 5, pp. 17013-17018, May, 2017

**International Journal of
Recent Scientific
Research**

DOI: 10.24327/IJRSR

Research Article

AWARENESS ABOUT DENTAL IMPLANTS AMONGST DENTAL PRACTITIONERS IN NAVI MUMBAI: A KNOWLEDGE, ATTITUDE AND PRACTICE STUDY

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DOI: <http://dx.doi.org/10.24327/ijrsr.2017.0805.0265>

ARTICLE INFO

Article History:

Received 15th February, 2017
Received in revised form 25th
March, 2017
Accepted 23rd April, 2017
Published online 28th May, 2017

Key Words:

Dental implants; Dentistry; Surveys and
questionnaires; Awareness; Knowledge

ABSTRACT

Objective: To assess the number of Private Dental Practitioners (PDPs) practicing and not practicing dental implantology and to evaluate their knowledge, awareness and practice about implant dentistry. **Methods:** A self-structured questionnaire was distributed to 200 PDPs of Navi Mumbai. The questionnaire covered general basic information and assessed the knowledge, attitude and practice of PDPs regarding implant dentistry. Descriptive analysis was carried out for the responses. **Results:** Out of 200 PDPs 45% were Bachelor of Dental Surgery (BDS) and most of them were not practicing implant dentistry due to lack of skills, while 55% were Master of Dental Surgery (MDS) in various fields and were practicing implant dentistry by themselves. High cost of implant dentistry and fear of surgery was the main hindrance in convincing the patients for dental implants. Most of the PDPs would like to update their knowledge regarding implant dentistry through Continuing Dental Education (CDE) programs. **Conclusion:** Though dental implants have changed the outlook of dentistry in last few decades, the knowledge and practice of dental implants by PDPs in Navi Mumbai is still limited. Various courses and CDE programs can help PDPs to update their knowledge and skill regarding implant dentistry.

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INTRODUCTION

Dental implantology is fast becoming a specialty in the field of dentistry. Within the last few decades, dentistry appears to have recorded its most significant advancement in the field of dental implantology. The purpose of dentistry is to respond to the patients needs and desires i.e. to restore the patients oral health to normal contour, function, comfort, esthetics & speech. With dental implants it becomes much more easier to achieve this goal as compared to traditional dentistry. (Tatum OH., 1988)

Replacement of missing teeth with dental implants is considered as an optimal treatment modality due to its high success rate even with challenging restorative cases. (Moraschin *et al.*, 2015) Dental practitioners play an important role in patient education (Chowdhary *et al.*, 2010) and therefore it is essential for the dental practitioners to have adequate knowledge regarding implant dentistry. Navi Mumbai is a flourished and well-planned city of the state of Maharashtra, India, and there are numerous dental practitioners here. The study was a questionnaire based survey to determine

knowledge, awareness and practice of implant dentistry amongst private dental practitioners (PDPs) of Navi Mumbai.

MATERIALS AND METHODS

Participants

A self-structured questionnaire was distributed to 200 PDPs of Navi Mumbai.

Questionnaire

The questionnaire was divided into three parts. First part enquired about the basic information of PDPs. The second and third part included questions to appreciate their knowledge, attitude and practice regarding implant dentistry. The questionnaire covered topics which assessed PDPs willingness to offer dental implant as a treatment option to their patients, whether they practiced implant dentistry themselves or referred their patients to a specialist, how they handled complex cases if practicing implant dentistry by themselves, what were the various difficulties and hindrances faced while practicing

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implant dentistry and how they updated their knowledge for the same.

Completed questionnaires were coded and data tabulated prior to analysis. Frequencies and percentages were used to examine the distribution of responses for each variable. Descriptive statistical analysis was carried out using SPSS version 21.0 (IBM, USA).

1. Qualification:
 - a. BDS
 - b. MDS (1.Periodontist 2.Prosthodontist3.Oral Surgeon 4.Other _____)
2. Year of Graduation/Post-graduation- _____ / _____
3. The treatment you prefer for a missing tooth is: Implants/Fixed Partial Denture/Removable Partial Denture
4. Do you practice implantology? YES/ NO
(If YES, fill form 'A' & if NO then fill form 'B')

Form 'A'

1. Since how many years do you practice implantology in your clinic? _____
2. Do you place dental implants yourself? YES/ NO
3. If not then which specialist do you refer the case to? Periodontist/Prosthodontist/Oral Surgeon/ Any Other _____
4. How many implant systems do you follow? _____
5. Which tooth/teeth are frequently replaced using implants in your clinic? Incisors / Canines / Premolars / Molars
6. What according to you may be the hindrance in convincing the patients to undergo dental implant? Fear / Cost / Time-constraint / Awareness / Any other _____
7. In complex cases (sinus lift procedures, deficient bone, and full mouth rehabilitation) do you prefer opting for an interdisciplinary approach? YES / NO(Periodontist / Oral Surgeon / Prosthodontist)
8. If NO, why? Increased Cost / Self-skilled / Fear of Losing Patient / Any Other _____
9. Do you feel that there is a need for standardization of implant systems? YES / NO
10. How would you like to update or attain new knowledge about dental implantology? Books / Journals / Lectures / Courses / CDE Programs
11. How knowledgeable do you find the lab technicians regarding implant prosthesis? Excellent / Good / Average / Poor

Form 'B'

1. Do you find it difficult to convince the patients? YES / NO
2. Is it because patients are not able to meet the expense of implants? YES / NO
3. Do you feel that the patients are scared of the surgery? YES / NO

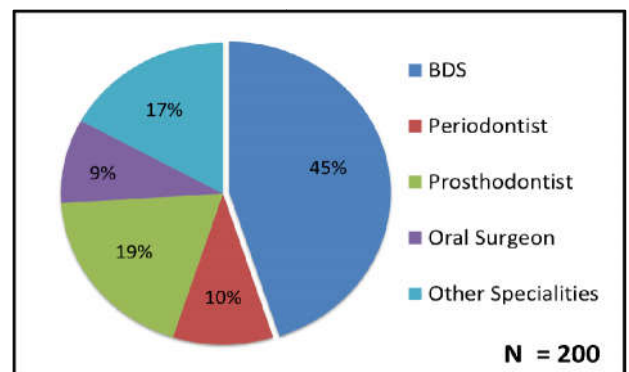
4. Lack of skills required to place implants YES / NO
5. Is it that you are too busy with other treatment/practice and you are not able to spare time to practice implantology? YES / NO
6. Does higher medico-legal risk acts as a hindrance for you? YES / NO
7. Lack of availability of diagnostic equipment's like CBCT/DIGITAL RADIOGRAPHY/OPG: YES / NO
8. Lack of equipment to place implants, as the cost of equipment is quite high: YES / NO
9. Are you confused with different implant systems YES / NO
10. Do you feel that there is a need for standardization of implant systems? YES / NO
11. Any other reason for not practicing implantology :
12. Would you like to incorporate implants in your practice in the near future? YES / NO
13. How would you like to update or attain new knowledge about dental implantology? Books / Journals / Lectures / Courses / CDE Programs

RESULTS

All the 200 questionnaires were collected and analyzed.

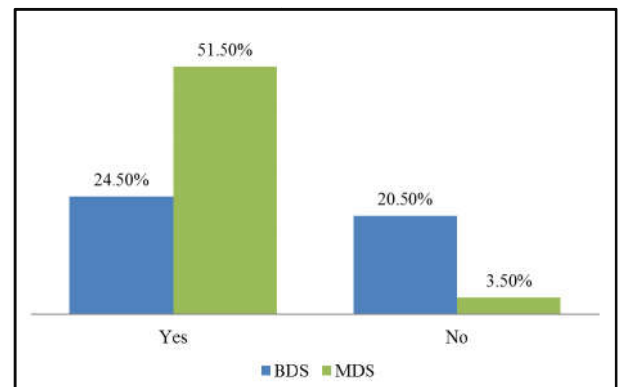
First part: Basic information about PDPs.

Graph 1 represents the qualification of PDPs (n=200).



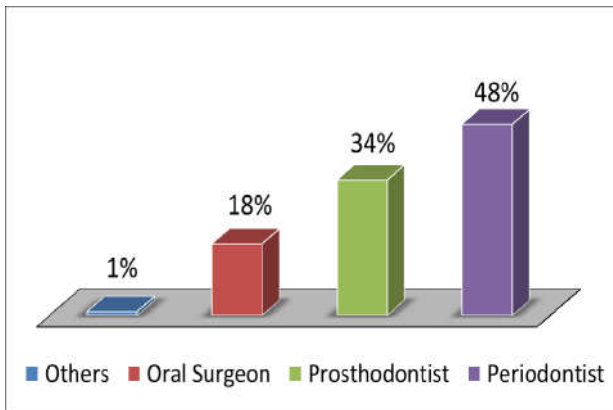
Graph 1 Qualification of Private Dental Practitioners (PDPs)

Graph 2 shows how many PDPs are practicing implant dentistry.



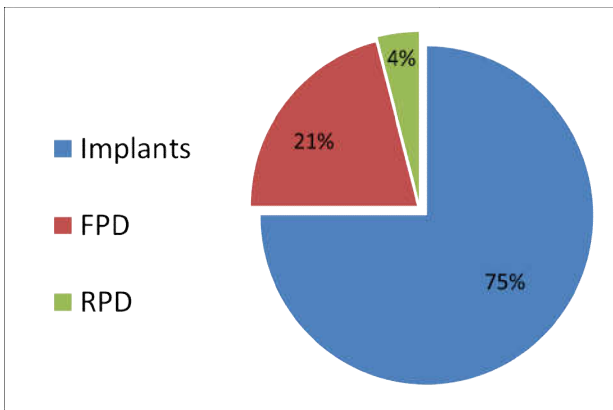
Graph 2 PDPs practicing implant dentistry (BDS and MDS)

Graph 3 represents the specialist preferred by PDPs not practicing implant dentistry by themselves.



Graph 3 Specialist preferred by non-practitioners.

Graph 4 represents the treatment preference for a missing tooth by PDPs.

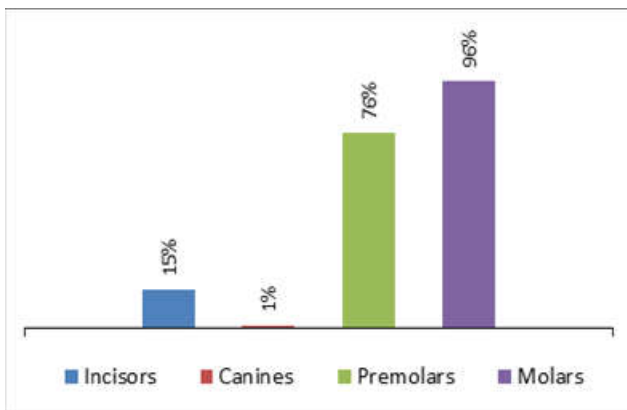


Graph 4 Treatment preference for missing teeth.

Second Part: Knowledge, Attitude and Practice of PDPs practicing implant dentistry

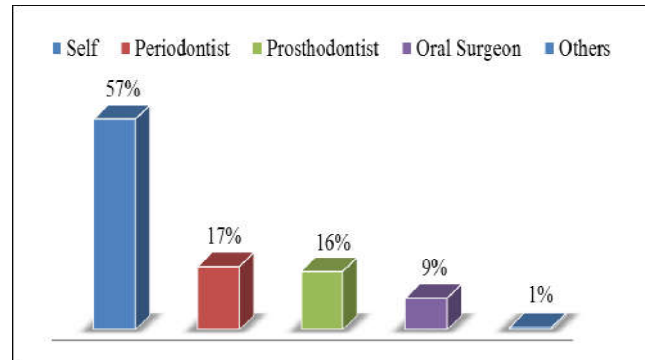
When the PDPs practicing implant dentistry were asked about the number of implant system used, the responses were with a range of 1 to 6.

The percentage of the teeth replaced frequently by dental implants by the PDPs in Navi Mumbai is represented by the graph 5.

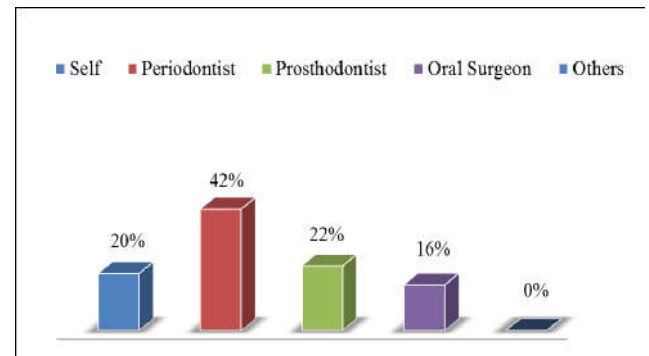


Graph 5 Frequently replaced missing teeth

Graph 6 and graph 7 provides information regarding treatment of simple and complex cases by PDPs practicing implant dentistry.

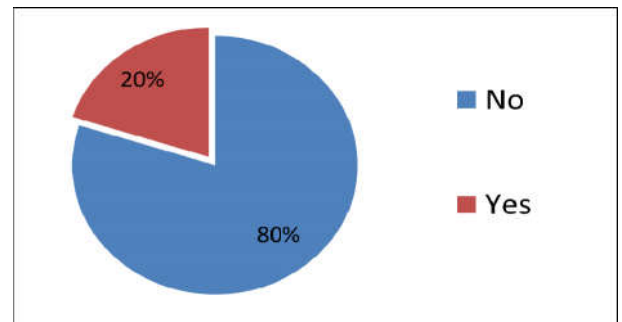


Graph 6 Who manages implant dentistry for basic cases

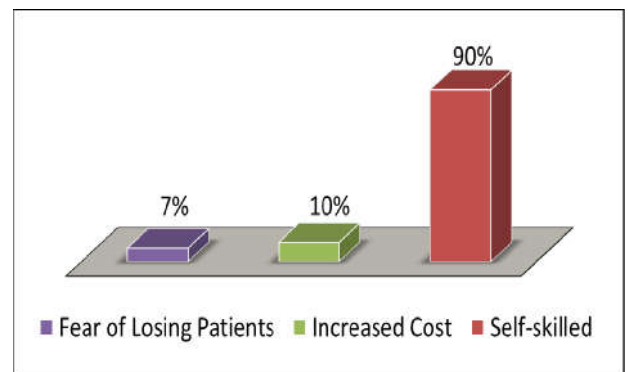


Graph 7 Who manages implant dentistry for complex cases

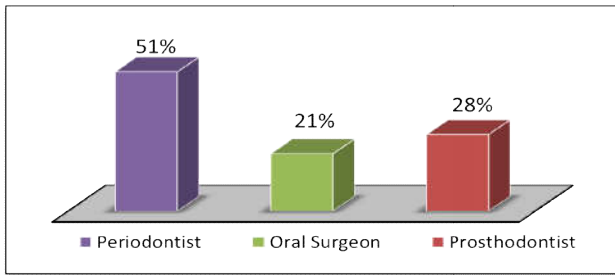
Graph 8, 9 and 10 reflects the attitude of PDPs about multidisciplinary approach regarding complex cases such as sinus lift procedures, deficient bone, full mouth rehabilitation, etc



Graph 8 Interdisciplinary approach preference for complex cases

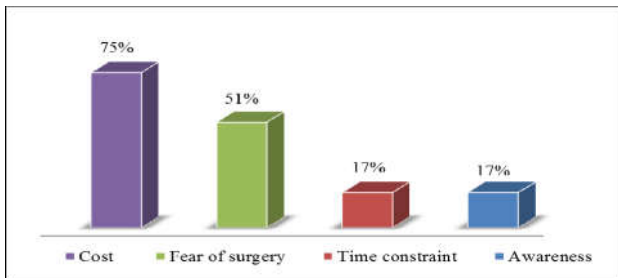


Graph 9 Reasons for not having a multidisciplinary approach



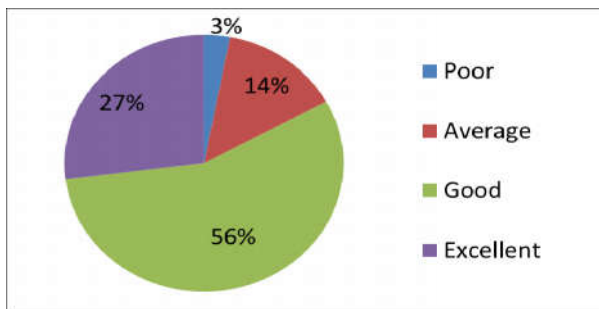
Graph 10 Specialist approached for multidisciplinary cases.

Graph 11 represents the hindrances faced by PDPs in convincing the patients for implant treatment. Majority of the PDPs said that cost was a major hindrance for them in convincing patients for implants.



Graph 11 Hindrances in convincing the patients for implant treatment.

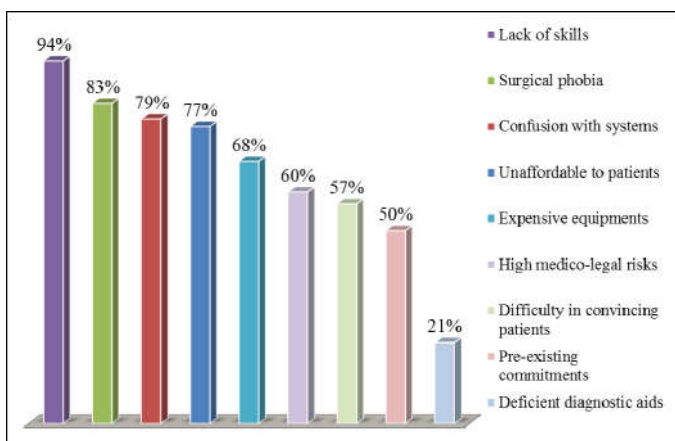
Graph 12 describes the quality of lab support available for implant-supported prosthesis.



Graph 12 Quality of lab support.

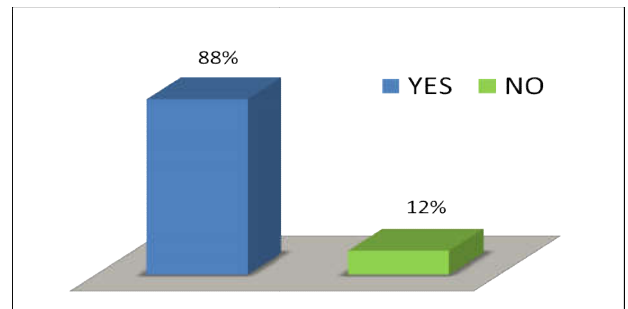
Third Part: Knowledge, Attitude and Practice of PDPs not practicing implant dentistry

Graph 13 represents the reasons listed by the PDPs for not practicing implant dentistry.



Graph 13 Reasons for not practicing implant dentistry

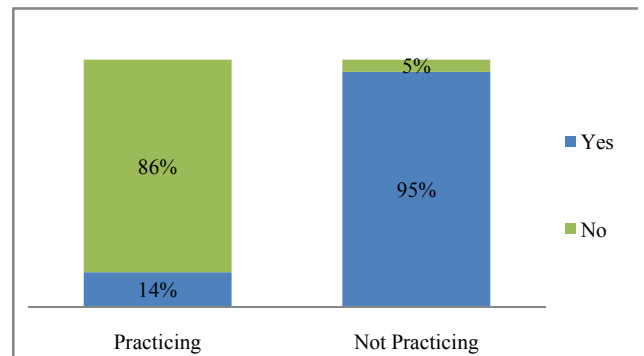
Graph 14 reflects the percentage of PDPs willing to include and practice implant dentistry in the future.



Graph 14 Future implantology practice

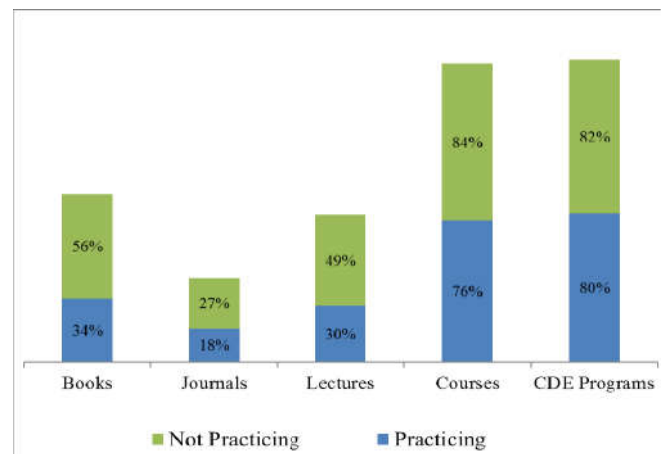
Common questions for PDPs practicing and not practicing implant dentistry

Graph 15 represents the responses of PDPs when they were enquired about the need for standardization of implant systems.



Graph 15 Standardization of implant systems

Graph 16 outlines the responses obtained when enquired about the different approaches to update knowledge regarding implant dentistry.



Graph 16 Approaches to update knowledge

DISCUSSION

Dental implant restoration has a high success rate in managing edentulous ridge (Moraschin et al., 2015) even with complex cases like maxillary sinus lift and lateral ridge augmentation, (Del Fabbro et al., 2004, Donos et al., 2008) thus making them as an optimal treatment choice.

Navi Mumbai is an urban area of the state of Maharashtra and above 75% of the PDPs are practicing implant dentistry. (Nagappa *et al.*, 2016) This was in contrast to a study carried out in UK wherein only 49.5% of consultants provided implant retained restorations in UK in the year 2001. (Butterworth *et al.*, 2001) Most of the graduate PDPs were not practicing implant dentistry due to lack of skills. This indicates a need to revise undergraduate dental curriculum at various dental schools to improve the knowledge and thus practice of implant dentistry. (Chaudhary *et al.*, 2013, Lang-Hua *et al.*, 2013, Lambade *et al.*, 2015)

The PDPs in Navi Mumbai preferred implants as the treatment of choice (75%) for patients with missing teeth, followed by 21% for fixed partial dentures and only 4% for removable partial dentures. This was in accordance with a study carried out by R Chowdhary *et al.*, in which it was reported that 77.66% of dentists preferred dental implants as a better treatment option. (Chowdhary *et al.*, 2012)

Most of the PDPs practicing implant dentistry, managed the basic dental implant cases themselves, and took the services of specialists like periodontists and prosthodontists only for managing complex cases. This is in contrast to the study done at Gujarat, wherein most of the PDPs were referring most of their cases to specialists for implant therapy. (Shah *et al.*, 2014) Also in a survey in 2007, 80.4% referrals for implants were to a Periodontist & 89.8% to Oral Surgeons. (American Dental Association Survey Centre., 2007) Whereas, in the current study 48% referrals were to a periodontist, 34% to a prosthodontist and only 18% to oral surgeons.

80% of PDPs did not prefer a multidisciplinary approach for complicated cases like direct sinus lift, deficient bone, full mouth rehabilitation, etc. The dentists who did prefer approached periodontist (51%), prosthodontist (28%) and oral surgeons (21%) which was in contradiction to the study in the UK in which most emphasis (80%) was shown on team work with oral surgeons. (Butterworth *et al.*, 2001)

The most common hindrance faced by PDPs to convince patients for dental implant treatment were the high implant cost and patient's fear for surgery which was in accordance to the results of various studies done in India and abroad. (Chaudhary *et al.*, 2013; Pommer *et al.*, 2011; Johany *et al.*, 2010; Zimmer *et al.*, 1992; Akagawa *et al.*, 1988)

The study also suggested availability of many implant systems in India, as a hindrance for PDPs not practicing implant dentistry and 95% of these suggested some need of standardization of implant systems because they believed that it will reduce the cost of the treatment & make the procedure simpler. Whereas, 86% of the PDPs in Navi Mumbai practicing implantology did not support that there should be standardization of dental implant dimensions & the surgical kits; which was in accordance with the 82.11% European & 75.6% Australian dentists. (Chowdhary *et al.*, 2012)

PDPs have always been instrumental in creating dental awareness amongst patients and the same stands true regarding implants dentistry. (Chowdhary *et al.*, 2010) Hence, it is paramount that the practitioners update their knowledge about implant dentistry. The study reflected that, most of the PDPs

were keen in updating their knowledge through hands-on courses or Continuing Dental Education (CDE) programs.

CONCLUSION

Though dental implants have changed the outlook of dentistry in last few decades, the knowledge and practice of implants by dental practitioners in Navi Mumbai is still limited and there is a need to improve the same. In spite of the increasing number of dental practitioners practicing implant dentistry it can be found out that cost & lack of skills were the predominant factors preventing dentists from practicing implantology. One of the inhibitions for not going for implant treatment is cost so an effort should be made to educate the patient about the advantages of doing dental implants over other treatment modalities & that the cost is justified. The patient should also be made aware that dentistry is not expensive, neglect is.

As 88% of dental practitioners wished to practice implant dentistry in the near future, the private dental practitioners should be encouraged to attend more CDE programs and courses in order to overcome their lack of skills. As very few dental practitioners preferred an interdisciplinary approach, multi-disciplinary study groups & programs should be conducted to share and discuss complicated cases. Taking into consideration the present scenario, there is a need for incorporating the basic knowledge and skill related to implant dentistry at the undergraduate level to develop this branch of dentistry for the benefit of the dental patients.

Furthermore, as this survey was conducted in a limited group of people with limited amount of information extracted, further large scale studies are needed to know the level of implant dentistry practiced and various problems encountered in implant dentistry by the dental practitioners.

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How to cite this article:

Varsha Rathod et al.2017, Awareness About Dental Implants Amongst Dental Practitioners in Navi Mumbai: A Knowledge, Attitude And Practice Study. *Int J Recent Sci Res*. 8(5), pp.17013-17018.
DOI: <http://dx.doi.org/10.24327/ijrsr.2017.0805.0265>
