

Knowledge, Awareness And Practice Among General Dental Practitioners In Navi Mumbai Regarding Rehabilitation With Full Coverage Restoration In Children.

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ABSTRACT

Background: Use of full coverage restoration in permanent teeth is well-known and highly used by dental practitioners as compared to primary teeth. Stainless steel crowns are an excellent option for restoring primary and young permanent teeth over conventional restorations.

Methodology: A cross-sectional survey was done among 260 general dental practitioners in Navi Mumbai selected by a random convenience sampling method. A self-administered, multiple-choice questionnaire, validated by 4 independent experts, was used for the data collection. 16 multiple-choice questions concerning knowledge and practice of use of crowns, tooth preparation, how often primary crowns are placed by them in the clinic, most common treatment rendered in children, any difficulty faced by them and most difficult aspect of it.

Result: 67.7% of the participants were females, while 32.3% were males. Out of the total participants, 79.2% treat children in their practice. 67.7% of the dentists did not have any additional qualification in pediatric dentistry. 42.9% treated 1–5 patients of the pediatric age group monthly, whereas 32.1% daily, and 25% weekly. 41.2% of them said they often call pediatric consultants. 89% of the participants commented that pulp therapy is the best treatment available for pulpally involved primary teeth, on the contrary 10.7% of them said extraction. The majority of dentists agreed to the necessity to restore pulpectomized teeth with a full coverage crown. Only 3.5% of dentists think that a stainless steel crown should not be given.

Conclusion: There was considerable variation in the knowledge and practices of the general practitioners. The study concludes that there is a need to enhance their understanding of full-coverage restorations in pediatric dental rehabilitation..

Keywords: Full coverage restoration, Stainless steel crown, Pulpectomized tooth

1. INTRODUCTION

Primary teeth are often neglected leading to loss of function, aesthetics, and instability of the arch due to their limited time span in the oral cavity.¹ Stainless Steel Crowns (SSCs) provide good seal, durability and is a reliable restoration which reduces chance of repeated treatment.² Any tooth that is restored with full coverage restoration in contrast to any dental filling retains longer in the mouth.³ However, Full coverage restorations for primary teeth after endodontic treatment are less opted compared to permanent teeth. A Primary tooth having time to exfoliate can be rehabilitated with a full coverage restoration to prevent the chances of recurrent caries, protect the tooth structure, retain the function, give aesthetics, and act as an abutment for space maintainers and orthodontic appliances.^{4,5}

Utilization of stainless-steel crown in pediatric patients is done more by the pediatric dentist than the general dental practitioners.^{6,7,8} as most of the general dental practitioners felt uncomfortable with their skills and administration of local anesthesia in children.⁹ The awareness of the parents and the knowledge of general dental practitioners of full coverage restorations in primary teeth is relatively less. The present study aimed to assess the Knowledge, awareness and practice among general dental practitioners in Navi Mumbai regarding rehabilitation with full coverage restoration in children

2. MATERIALS AND METHODS:

A cross-sectional survey study was done among 260 general dental practitioners selected by a random convenience sampling method in Navi Mumbai after receiving approval from ethical committee of Mahatma Gandhi Mission Dental College and Hospital. A self-administered multiple-choice questionnaire made in consultation with pedodontists and an English teacher.

was used. The questionnaire was validated by four independent specialists. The pilot survey was done among 10 dental practitioners. The questionnaire comprised of 16 multiple-choice questions regarding knowledge and practice of use of stainless steel crowns, tooth preparation, how often primary crowns are placed by them in the clinic, most common treatment rendered in children, any difficulty faced by them, most difficult aspect of it, different kind of finish lines they use in primary crowns, preferred primary crowns etc. Forms were then collected and assessed under SPSS software. For all the statistical tests, $p < 0.05$ was statistically significant, keeping α error at 5% and β error at 20%, thus giving a power to the study as 80%

Results

About 67.7% of the participants were females while 32.3% were males (Table 1). Table 2 depicts the no. of years in practice of all the participants. Out of the total participants, 79.2% had pediatric patients in their OPD. 67.7% of the dentists did not have any additional qualification in pediatric dentistry (Table 3). About 42.9% treated 1–5 pediatric age group patients monthly, 32.1% treated daily, and 25% treated. About 41.2% of chose to call consultants. (Table 4)

Table 1 – Gender distribution in sample

GENDER	NO. OF PARTICIPANTS	PERCENTAGE
Female	176	67.7
Male	84	32.3

Table 2 – Distribution based of No. of Years of Practice

NO. OF YEARS IN PRACTICE	NO. OF PARTICIPANTS	PERCENT
5-10 years	84	32.3
10-15 years	53	20.4
Less than 10 years	22	8.5
Less than 5 years	58	22.3
More than 10 years	1	.4
more than 15 years	42	16.2

Table 3 – Additional Qualifications

	Frequency	Percent
Nil	5	1.9
Fellowship courses	7	2.7
Hands on courses	52	20.0
None	176	67.7
Others - Specify	20	7.7
Total	260	100.0

Table 4 – Distribution based on Referral

BASED ON REFERAL	NO. OF PARTICIPANTS	PERCENT
By myself	95	36.5
Refer	58	22.3
Routine Consultation	107	41.2

About 89% participants said that pulp therapy is the best treatment for pulpally involved primary teeth, on contrary to 10.7% said extraction. Table 5 shows the agreement to the necessity to restore pulpectomized tooth with full coverage crown. Only 3.5% of dentists think that stainless steel crown should not be given (Table 6). 48.8% dentists feel the necessity to place stainless steel crown after pulpectomy (Table 7). In this study, 39% of the dentist did not face any difficulty while doing the procedure (Table 8).

Table 5 - Distribution as per what extent do you agree that it is necessary to restore pulpectomized tooth with full coverage crown

	Frequency	Percent
Nil	22	8.5
Agree	99	38.1
Disagree	3	1.2
Neutral	87	33.5
Strongly believe	48	18.5
Strongly disagree	1	.4
Total	260	100.0

Table 6 - Distribution as per How often are primary tooth crowns placed

	Frequency	Percent
Not done	9	3.5
Often	131	50.4
Rarely	98	37.7
Very Often	22	8.5
Total	260	100.0

Table 7 - Distribution as per in which case primary tooth crowns should be placed

	Frequency	Percent
Multi surface lesions	129	49.6
Others-Specify	4	1.5
Pulpectomy	127	48.8
Total	260	100.0

Table 8 – Difficulty faced by the General Dental Practitioners

	Frequency	Percent
Crown adaptation	80	30.8
Crown instrumentation	23	8.8
Crown preparation	36	13.8
Crown selection	13	5.0
Other	108	41.5
Total	260	100.0

Table 9 – Type of finish lines given for SSC by General Dental Practitioners

	Frequency	Percent
Chamfer	110	42.3
Feather edge	52	20.0
Others- specify	70	26.8
Shoulder	28	10.8
Total	260	100.0

3. DISCUSSION

In this study, majority of the participants preferred to call consultants for treatment in pediatric patients. And are not very willing to treat child patients.¹⁸ which was like the finding in the study by Bedre.¹¹ Majority of the study participants said that pulp therapy is the ideal treatment for pulpally involved primary teeth. According to a study by Aman Moda et al., 40% of the general dentists chose to do extraction for necrotic primary teeth.¹² Very few general dental practitioners reported to use stainless steel crowns in their daily practice. On giving a scenario of a patient for placement of a stainless-steel crown, only 7% agreed to the this mode of treatment. For most of the General Dental Practitioners, stainless steel crowns were not the treatment of choice for restoration of extensively carious primary molar.¹³ In this study, 50% agreed that it is mandatory to restore primary teeth with crowns following pulp therapy. In a study by Aman Moda et al., only 33% of the general dental practitioners appreciated the importance of full coverage restoration for primary teeth after pulp therapy out of which only 13% participants were aware of stainless steel crowns for the same purpose. In this study, the younger general dental practitioners were more aware of the same¹², which can be an outcome of the inclusion of such advancements in the recent undergraduate curriculum. McKnight-Hanes et al. on comparing the recommendations for treatment of primary teeth, concluded that more general dental practitioners opted for restorations whereas pediatric dentists supported the use of stainless-steel crowns followed by pulp therapy.¹⁴ A conclusion was made by Rani et al that 66.5% of general dental

practitioners knew the importance of placing crown on endodontically treated primary tooth and the availability (59%) of preformed stainless-steel crowns (SSC).⁹ The study population in this study showed sufficient knowledge and awareness about stainless steel crown but lacked clinical skills for same.

GDPs demonstrated low confidence in some clinical skills⁸ which can act as a barrier to good treatment which is in accordance with this study showing only 33% of the practitioners treated pediatric patients by themselves which contradicting to the study by Gouth et al.¹⁵ When asked regarding the limited use of crowns in primary teeth specifically, most of the dentists enlisted two major reasons, namely patient's lack of knowledge, and time consuming procedure. In a study by Moda, 62% of general dental practitioners stated patient's noninterest in providing crowns over the cost and lack of knowledge being the secondary reasons.¹² In this study, majority of the dentist did not face any difficulty while doing the procedure however, the maximum difficulty was placement of the stainless steel crown which was in line with the opinion by Innes PT.¹⁶ In this study, 49.6% dentist chose to place SSC in primary teeth with multisurface caries¹⁷ and 48.8% for pulpectomized teeth, which was in support of a study done by Uhlen¹⁸ who showed SSCs are an infrequent treatment choice among general dentists. In this study, 42.3% GDP gave a chamfer type of margin for placement of SSC which contrasted with the minimal preparation done by participants in the study done by Bedre.¹¹ The present study showed a very prospective aspect of participants in this study chose stainless steel crown and zirconia crown over other crowns for restoring primary posterior teeth in contrast to the lesser acceptance in the study done by Helen Rogers.¹⁹ Limitations of the study comprised a small sample size and limited geographical area coverage.

4. CONCLUSION

There was considerable variation in the knowledge and practices of the general practitioners. Although most demonstrated a reasonable level of knowledge and awareness about advantages of full coverage restoration in primary teeth, many expressed lack of clinical skill to for the procedure few cited the lack of interest from parental side. The study concludes that there is a need to enhance clinical skill for full coverage restoration in undergraduate training and also increasing the awareness among general population about the same.

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