

Original Research

Knowledge and Awareness among Parents and General Dental Practitioners regarding Rehabilitation with Full Coverage Restoration in Children in melmaruvattur -A Cross sectional descriptive study

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ABSTRACT:

Introduction: Full coverage restorations (FCRs), such as stainless steel and cosmetic crowns, are critical in pediatric dentistry for restoring severely decayed or damaged primary teeth. They ensure the preservation of tooth structure, support proper eruption of permanent teeth, and prevent further oral health issues. The success of FCRs depends largely on the understanding and acceptance of both parents and general dental practitioners (GDPs). **Objectives:** This study aimed to evaluate the awareness and understanding of FCRs among parents and GDPs, identify barriers to their acceptance, and propose strategies for improving pediatric dental care. **Results:** Among 100 parents, 85% understood the importance of primary teeth, but 28% believed crowns were only for adults. Of 100 GDPs, 69.9% identified root canal treatment as optimal for pulpally involved primary teeth, while 24.3% preferred extraction. Additionally, 35% of GDPs reported inadequate knowledge of pediatric restorative methods. Barriers to FCR acceptance included cost, limited knowledge, and misconceptions. **Conclusion:** Significant gaps in awareness and understanding of FCRs exist among parents and GDPs. Addressing these gaps through improved education, training, and affordable care access is essential for better pediatric dental outcomes.

Keywords: Full coverage restorations, pediatric dentistry, parental awareness, general dental practitioners.

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INTRODUCTION

The rising occurrence of dental cavities and various oral health issues in children has made it essential to employ efficient restorative methods to maintain the shape and functionality of the teeth. Complete coverage restorations (CCRs), like crowns, are frequently used in pediatric dentistry to treat teeth that are significantly decayed or broken. These restorations are essential for preserving oral health, avoiding additional dental issues, and facilitating the proper development of the permanent teeth. Nevertheless, the effectiveness of complete coverage restoration techniques heavily relies on the understanding and awareness of both parents and general dental practitioners (GDPs) concerning their indications, advantages, and constraints¹.

Parents' awareness of the importance of prompt and thorough dental rehabilitation significantly influences treatment acceptance and adherence. Although the benefits of prompt restorative treatments are well-established, numerous parents still do not recognize the significance of these interventions, potentially postponing essential care or resulting in poor decisions concerning their children's dental health. Simultaneously, general dentists, who frequently act as the initial point of contact for recognizing and addressing dental problems in children, might not possess sufficient knowledge of advanced pediatric restorative methods, such as full coverage restorations. GDPs might encounter difficulties concerning the choice of suitable materials, handling

young patients, and conveying intricate treatment alternatives to parents.

Numerous studies have pointed out the knowledge deficiencies present in both parents and practitioners regarding pediatric restorative treatments. For example, research revealed that numerous GDPs lacked knowledge about the most recent developments in full coverage restorations, resulting in underuse of these therapies despite their clinical benefits². Additionally, a study showed that parents' comprehension of children's restorative dental procedures tended to be restricted, leading to decreased acceptance rates for comprehensive restorations in pediatric patients⁴.

Moreover, a study showed that numerous general practitioners believe they are not adequately prepared to handle the complexities of pediatric full coverage restorations, mentioning inadequate training and a lack of confidence when discussing these options with parents¹. An additional study highlighted the significance of ongoing professional growth for GDPs, indicating that enhanced understanding of pediatric restorative choices might boost the chances of endorsing FCRs in suitable situations³.

This article seeks to evaluate the existing knowledge and awareness related to complete coverage restorations in pediatric dental rehabilitation among parents and general dental practitioners. It will investigate elements affecting these awareness levels, such as education, communication methods, and availability of current clinical guidelines. By tackling these shortcomings, the article aims to improve

decision-making and elevate the overall standard of pediatric dental care.

MATERIALS AND METHODS:

The research utilized a comprehensive questionnaire method to assess the understanding and perceptions of parents and healthcare professionals concerning dental care, with an emphasis on primary teeth. This study aimed to assess how aware parents are of the significance of maintaining primary teeth, the effects of dental decay, and their general attitude toward their children's oral health. The survey also sought to evaluate the knowledge and comprehension of general dental practitioners (clinicians) related to the management of pediatric dental problems and their awareness of the importance of primary teeth in a child's overall oral health development.

The study focused on two separate groups: 100 parents from Melmaruvattur, who mainly communicated in Tamil, and 100 clinicians, who were professionals conversant in English. To guarantee precision and clarity in answers, the surveys were customized to fit the language and context of every participant group. The questionnaire was translated into Tamil for the parents, while it was given in English for the clinicians. The questionnaires were distributed through google forms 203 responses were collected some didn't response, Once the filled-in questionnaire were gathered, the answers were compiled and examined utilizing the Statistical Package for Social Sciences (SPSS) software

TABLE 1 REPRESENTS THE DESCRIPTIVE STATISTICS BASED ON THE AGE DISTRIBUTION AND TYPE OF PRACTICE BY THE DENTIST IN THE STUDY

PARAMETER	OPTIONS	FREQUENCY	PERCENTAGE
AGE IN YEARS	A)20_25	89	86.4
	B)25_30	12	11.7
	C) 30 an	2	1.9
TYPE OF PRACTICE	A) clinicians	12	11.7
	B) undergraduate	81	78.6
	C)post graduate	10	9.7

Table 1 represents the descriptive statistics based on the age distribution and type of practice by the dentist in the study Age Distribution: The age distribution of participants reveals that the majority (86.4%) fall in the 20–25-year age group, indicating that most of the participants are likely to be in the early stages of their dental education or training. A smaller proportion (11.7%) are in the 25–30 age group, while only 1.9%

are aged 30 and above, reflecting the study's focus on younger dental students or early-career professionals. Type of Practice:

The majority of participants (78.6%) are undergraduate dental students, demonstrating the study's primary target population. A smaller percentage (11.7%) consists of clinicians, and 9.7% are postgraduate students.

TABLE 2 REPRESENTS THE DESCRIPTIVE STATISTICS BASED ON THE RESPONSE GIVEN BY THE PARENTS TO THE QUESTIONNAIRE GIVEN

QUESTIONS	OPTIONS	FREQUENCY	PERCENTAGE
Importance of primary teeth	A) Primary teeth are important	85	85.0
	B) Primary teeth not important	15	15.0
Can pulpally involved primary teeth be treated?	A)Yes	71	71.0
	B)No	8	8.0
	C)Do not know	21	21.0

When do you visit your dentist?	A)Every 6 months	17	17.0
	B) During onset of pain symptoms	62	62.0
	C)When see decayed teeth	21	21.0
Choice of dentist	A)Family dentist	70	70.0
	B)General practitioner near home	16	16.0
	C)Specialist	14	14.0
Can root canal treatment be done for primary teeth?	A)Yes, can be done	63	63.0
	B)No, cannot be done	18	18.0
	C)Extraction is only treatment	19	19.0
Can crowns/full coverage restorations be given for primary teeth?	A)Yes, can be done	58	58.0
	B)No, cannot be done	14	14.0
	C)Can be done for adults only	28	28.0
Reason for non-usage of crown in primary teeth?	A)Not informed by dentist	20	20.0
	B)Costly	27	27.0
	C)Not required as milk teeth will shed	53	53.0

Importance of Primary Teeth:The majority of parents (85%) acknowledge the importance of primary teeth, indicating an overall awareness of their role in a child’s oral health.

Can Pulpally Involved Primary Teeth Be Treated?A significant proportion of parents (71%) are aware that pulpally involved primary teeth can be treated, but 21% of respondents do not know this, and 8% believe treatment is not possible..

When Do You Visit Your Dentist? Most parents (62%) only visit the dentist when their child exhibits pain symptoms, and 21% seek dental care when decay is visible. Only 17% adhere to regular 6-month checkups.

The majority of parents (70%) prefer consulting a family dentist for their child’s oral health needs, while 16% choose a nearby general practitioner Can Root

Canal Treatment Be Done for Primary Teeth? While 63% of parents understand that root canal treatment is an option for primary teeth, 18% believe it is not possible, and 19% think extraction is the only option. **Can Crowns/Full Coverage Restorations Be Given for Primary Teeth?**

Only 58% of parents recognize that crowns can be used for primary teeth. A notable percentage (28%) mistakenly believe crowns are only for adults, and 14% think crowns cannot be used. **Reason for Non-Usage of Crowns in Primary Teeth:**

The most common reason for not using crowns in primary teeth (53%) is the belief that treatment is unnecessary as primary teeth will eventually shed. Additionally, 27% cite cost as a barrier, and 20% report not being informed by their dentist.

TABLE 3 REPRESENTS THE DESCRIPTIVE STATISTICS BASED ON THE RESPONSE GIVEN BY THE DENTIST TO THE QUESTIONNAIRE GIVEN

QUESTIONS	OPTIONS	FREQUENCY	PERCENTAGE
Pediatric dental patients referred	A)To family dentists	14	13.6
	B)To pediatric dentists	73	70.9
	C)Not referred	10	9.7
What is the best treatment for pulpally involved primary teeth?	A)Extraction	25	24.3
	B)RCT	72	69.9
	C)No treatment is required as they are milk teeth	6	5.8
Is it important to use crowns after pulpal treatment in primary teeth?	A) Yes	91	88.3
	B)Not required	8	7.8
	C)Crowns only for permanent teeth	4	3.9
What is the best type of full coverage restoration in primary teeth?	A)Stainless steel crowns	94	91.3
	B)Lab fabricated	5	4.9
	C)Do not know	4	3.9
Are aesthetic crowns for primary teeth available?	A) yes	80	77.7
	B) No	18	17.5
	C)Do not know	5	4.9
Reason for non-usage	A)Patient not interested	45	43.7

of crowns in primary teeth	B) Cost factor	22	21.4
	C) Do not have knowledge	36	35.0

Table 3 represents the descriptive statistics based on the response given by the dentist to the questionnaire given

1. Pediatric Dental Patients Referred: The majority of dentists (70.9%) refer pediatric dental patients to pediatric dentists, A smaller proportion (13.6%) refer patients to family dentists, while 9.7% do not refer patients at all..

2. Best Treatment for Pulpally Involved Primary Teeth: Most dentists (69.9%) agree that root canal treatment (RCT) is the best approach for pulpally involved primary teeth, However, 24.3% recommend extraction, and 5.8% believe no treatment is necessary.

3. Importance of Crowns After Pulpal Treatment in Primary Teeth: The vast majority of dentists (88.3%) believe that crowns are essential after pulpal treatment in primary teeth, reflecting adherence to best practices for preventing further damage. However, 7.8% do not consider crowns necessary, and 3.9% believe crowns are only for permanent teeth, revealing a minority that may benefit from updated knowledge on the advantages of crowns for primary teeth.

4. Best Type of Full Coverage Restoration in Primary Teeth: A significant majority (91.3%) identify stainless steel crowns (SSCs) as the best option for full coverage restoration in primary teeth, which aligns with current pediatric dentistry guidelines. Only 4.9% prefer lab-fabricated crowns, and 3.9% lack knowledge on the subject, indicating overall strong awareness but with room for further education for a small group.

5. Availability of Aesthetic Crowns for Primary Teeth: Most dentists (77.7%) are aware of the availability of aesthetic crowns for primary teeth, indicating a growing acceptance of cosmetic options for pediatric patients. However, 17.5% believe aesthetic crowns are not available, and 4.9% are unsure, suggesting that some practitioners may lack exposure to the latest advancements in pediatric restorative materials

6) The primary reasons for not using crowns in primary teeth are a lack of patient interest (43.7%), cost concerns (21.4%), and insufficient dentist knowledge (35.0%), highlighting the need for improved patient education, affordability discussions, and professional development.

DISCUSSION

The research assesses the knowledge and comprehension of full coverage restorations (FCRs) among parents and general dental practitioners (GDPs), uncovering a notable knowledge gap that impacts the adoption and execution of effective pediatric restorative therapies. FCRs, like stainless steel and aesthetic crowns, are essential for rehabilitating badly decayed primary teeth,

maintaining the integrity of the arch, and facilitating the correct eruption of permanent teeth⁶. A study conducted by Omar et al., 2021 suggests that prompt restorative treatments can enhance oral health results and decrease future dental issues. Nonetheless, even though 85% of parents acknowledge the significance of primary teeth, 15% viewed them as unimportant, and 28% thought that crowns were exclusively for adults, highlighting the necessity for improved parental education as given by Meera et al., 2019. Parental acceptance of FCRs is shaped by misunderstandings, worries about expenses, and the notion that primary teeth will fall out on their own⁹. Research conducted by Mishra et al., 2018 indicates that dental counseling greatly enhances parental approval of restorative treatments

In a similar vein, the application of FCRs is impacted by gaps in GDP understanding and practices. The fact that 24.3% of GDPs still favored extraction despite 69.9% of them correctly identifying root canal therapy (RCT) as the best option for pulpally affected primary teeth suggests that they were unaware of the long-term advantages of keeping primary teeth intact¹¹. Many GDPs avoid sophisticated pediatric restorative therapies because they lack the necessary experience, demonstrating the importance of confidence and training in treatment decisions¹⁷. Despite stainless steel crowns being the preferred FCR, according to 91.3% of GDPs, 3.9% were not sure, showing gaps in ongoing education¹². Research by Zadik et al. (2017) emphasizes the need for postgraduate training courses to guarantee GDPs stay current on industry best practices in

Multiple obstacles prevent the broad adoption of FCRs. Financial worries played a significant role, as 27% of parents considered crowns to be overpriced, highlighting the necessity for insurance or financial aid¹³. Moreover, 20% of parents indicated they were not informed about FCRs by their dentists, implying that GDPs frequently emphasize preventive care over restorative treatments, a finding also noted by Moore et al., 2021. Efficient communication techniques, such as visual tools and counseling, can bridge this divide and enhance treatment acceptance¹⁶. Moreover, gaps in professional training continue to be an issue, with 35% of general dental practitioners acknowledging a lack of proficiency in pediatric restorative methods, which results in their referral of cases to specialists¹⁷. Improving both undergraduate and postgraduate education can greatly increase confidence and skill levels in GDPs²⁰.

To enhance understanding and execution of FCRs, various strategies need to be employed. Focused parental education initiatives ought to highlight the significance of primary teeth along with accessible restorative treatments by means of brochures, online materials, and community-oriented dental programs¹⁹.

Professional training initiatives, such as workshops and ongoing education classes, ought to be incorporated into dental programs to keep general dental practitioners well-informed²⁰. Tackling cost obstacles is essential as well, prompting governments and insurance companies to broaden coverage for pediatric restorative care to guarantee affordability across all socioeconomic levels²¹. Furthermore, merely 70.9% of GDPs referred pediatric cases to specialists, highlighting deficiencies in referral practices. Creating distinct referral standards will guarantee that children obtain the necessary care when required²². Ultimately, boosting parental awareness, advancing professional training, minimizing cost obstacles, and improving referral processes will greatly increase the adoption and execution of full coverage restorations in pediatric dentistry, resulting in improved long-term oral health for children.

CONCLUSION

The research highlights considerable deficiencies in understanding and awareness of comprehensive coverage restorations among parents and general dental practitioners. Tackling these challenges via education, training, financial assistance, and better communication can improve pediatric oral health results. Future studies should investigate how educational interventions influence the acceptance rates of FCRs.

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