

# EVALUATION OF KNOWLEDGE, AWARENESS, AND ATTITUDE OF DENTAL SURGEONS OF KERALA TOWARDS CHILD ABUSE: A CROSS-SECTIONAL STUDY

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## ABSTRACT:

**Background:** Child abuse is a grave societal issue that demands immediate attention and effective intervention. The World Health Organization defines child abuse as any act of commission or omission that results in harm, potential harm, or threat to the well-being of a child. It can manifest in various forms, including physical, sexual, emotional, or neglectful abuse.

Detecting and addressing child abuse requires the involvement of professionals from various fields, including healthcare providers. Dental surgeons play a crucial role in the overall healthcare of children. Their unique position offers opportunities to find signs of child abuse and intervene appropriately. However, to fulfill this role effectively, dental surgeons need to have adequate knowledge, awareness, and the right attitude towards child abuse.

**Aim:** The aim of the study is to assess the level of knowledge awareness and attitude among dental surgeons in Kerala about child abuse.

**Materials & Methodology:** This cross-sectional study conducted among 104 dental surgeons included who are working in Kerala state willing to take part in the study using a predesigned structured questionnaire. Dental surgeons working in fields other than dentistry and BDS students and interns are excluded from studying.

**Result & Observations:** Majority were aware of child abuse and neglect. The respondents showed a positive attitude towards improving their professional knowledge. Though many of the dentists were aware of child abuse sensitization on identification, reporting and treating of abuse is called for by continuing education programs and seminars

**Key words:** Child abuse, neglect, dental surgeons



## INTRODUCTION:

Child abuse is a serious public health concern that affects millions of children worldwide, with an estimated 1 billion children experiencing some form of violence or abuse each year (Hillis et al., 2016) <sup>[1]</sup>. Dental surgeons, as primary healthcare providers, are in a unique position to find and report suspected cases of child abuse, given their frequent

interactions with children and families (Kellogg et al., 2007) <sup>[2]</sup>. However, their ability to do so effectively depends on their knowledge, awareness, and attitude towards child abuse.

Studies have shown that healthcare professionals, including dental surgeons, often lack the necessary knowledge and

training to find and report child abuse (Dubowitz et al., 2014) [3]. In India, where child abuse is a significant concern, dental surgeons' knowledge and attitudes towards child abuse have been found to be inadequate (Sharma et al., 2018) [4]. Kerala, a state in southern India, has a high literacy rate and a well-established healthcare system, but child abuse stays a significant concern.

This cross-sectional study aims to evaluate the knowledge, awareness, and attitudes of dental surgeons in Kerala towards child abuse, including their understanding of its signs, symptoms, and reporting procedures. The findings of this study will help find areas for improvement in dental education and training, enhancing the role of dental surgeons in preventing and addressing child abuse in Kerala.

**OBJECTIVES:** To assess the level of knowledge, awareness, attitude among dental surgeons on child abuse, including signs, and risk factors.

## **MATERIALS AND METHODS:**

**STUDY DESIGN:** Cross-sectional study

**STUDY POPULATION:** This study was conducted among dental surgeons of Kerala after taking informed consent

**INCLUSION CRITERIA:** Dental Surgeons who are working in Kerala state are willing to take part in the study.

**EXCLUSION CRITERIA:**Dental surgeons working in fields other than dentistry BDS students and Interns

**STUDY DURATION:**Study conducted within 6 Months of Institutional committee clearance.

**SAMPLE SIZE CALCULATION:** In a similar study conducted by Taugeer Ul Nisa et al [5]

Mean total score among general dentist=9.22+/- 1.79

SD =1.79, d=Relative precision=5% of mean

$$=9.22 \times 0.05 = 0.461$$

$$n = \frac{4SD^2}{d^2}$$

$$= \frac{4 \times 1.79 \times 1.79}{0.461 \times 0.461}$$

$$= \frac{4 \times 1.79 \times 1.79}{0.461 \times 0.461}$$

$$= 60.3 \text{ rounded off to } 100$$

**DATA COLLECTION:** The data were collected using a pre-designed validated questionnaire framed in English, created on Google Forms to ensure ease of access and convenience for participants. The questionnaire consisted of multiple-choice questions that covered areas such as knowledge of child abuse, awareness of signs and symptoms, reporting procedures, and attitudes towards child abuse.

Dental professionals practicing in various locations across Kerala were invited to take part in the study. Simple random sampling was employed to recruit participants from dental colleges, private practices, and government healthcare facilities till the desired sample size was recruited. Before taking part in the study, all dental professionals were provided with detailed information about the study's aims, procedures, and

potential risks and benefits. Informed consent was obtained from each participant. Participants' confidentiality was strictly supported by assigning unique identification codes to the collected data. Ethical clearance obtained from the institutional committee.

Participation in the study was entirely voluntary, and participants had the right to withdraw at any stage without any consequences.

**STUDY COST :**The cost of study was met by the principal investigator.

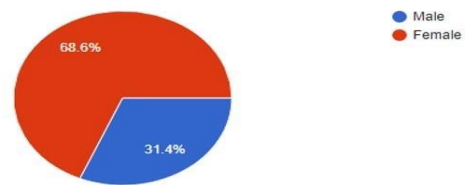
**DATA ANALYSIS:** Data was entered into a Microsoft Excel sheet, and analysis was conducted using IBM Statistical Package for the Social Sciences version 25.0 Software (SPSS Inc., Chicago, Illinois, USA). For descriptive statistics, mean, standard deviation, and proportion were used. For inferential statistics, paired t-tests, unpaired t-tests, and chi-square tests were applied. P-values less than 0.05 were considered statistically significant for all tests. Descriptive statistics (mean, standard deviation) were used to describe demographic characteristics and scores on knowledge, awareness, and attitude scales. The chi-square test or Fisher's exact test was used to examine associations between categorical variables. t-tests or ANOVA were employed to compare mean scores between diverse groups. Pearson correlation was used to assess the relationship between knowledge, awareness, and attitude scores. Logistic regression was utilized to identify

predictors of knowledge, awareness, and attitude levels.

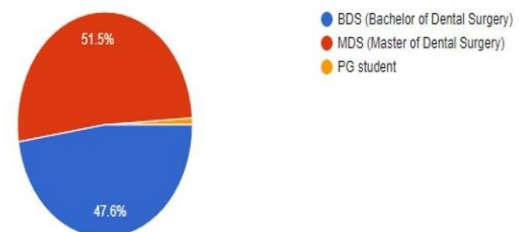
## RESULTS:

A total of 104 dental surgeons were polled. 68.6% of the participants were female, while 31.4% were male (Fig.1). The data shows an equal distribution of qualifications among the respondents, with 48.1% holding a BDS degree and 51.9% holding an MDS degree (Fig 2). This writes down a balanced representation of both undergraduate and postgraduate qualifications among the participants.

**Fig 1. Distribution of Participants by Gender**



**Fig 2. Educational Qualification of Participants**



- Most specialties, including Oral Medicine And Radiology, OMFS, Orthodontics, Pediatric Dentistry, Oral Pathology, Conservative Dentistry, and Prosthodontics show a high percentage of respondents

without training, ranging from 66.7% to 100%. The specialties with some respondents having received training are OMFS (33.3%), OMR (16.7%), Orthodontics (11.1%), Pediatric Dentistry (14.3%), Public Health Dentistry (20.0%), and Oral Pathology (14.3%). Periodontics, Conservative Dentistry, and Prosthodontics show 100% of respondents with no training in child abuse and neglect. This data highlights a significant gap in

training on child abuse and neglect across various dental specialties. Despite the potential importance of this training for all dental professionals, most respondents from each specialty have not received this education. This underscores a potential area for improvement in training and professional development within dental education and practice.

**Table 1: How familiar are you with the signs and symptoms of child abuse and neglect?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	20	19.2	19.2	19.2
	1	81	77.9	77.9	97.1
	2	3	2.9	2.9	100.0
	Total	104	100.0	100.0	

Many participants (77.9%) reported that they are familiar with the signs and symptoms of child abuse and neglect. A smaller group (19.2%) wrote down that they are not familiar at all, while an

exceedingly small percentage (2.9%) claimed to be familiar. This suggests that most respondents have some awareness, though only a few are highly knowledgeable in this area. (Table 2.)

**Table 2: Have you ever experienced a case of suspected child abuse or neglect in your dental practice?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	86	82.7	83.5	83.5
	1	17	16.3	16.5	100.0
	Total	103	99.0	100.0	
Missing	System	1	1.0		
Total		104	100.0		

Most respondents (83.5%) reported that they have not encountered a case of

suspected child abuse or neglect in their dental practice, while 16.5% have. This

suggests that while most dental professionals in this sample have not come across such cases, a significant minority has, highlighting the relevance of this issue in dental practice.

**Pediatric Dentistry, Public Health Dentistry, and Oral Pathology:** These specialties show the highest proportions

of professionals who have met suspected child abuse or neglect cases. While an outside proportion of respondents have not met such cases, those in certain specialties like Pediatric Dentistry are more likely to have met them, reflecting the nature of their practice and patient demographics.

**Table 3. Childline service 24-hour toll-free number**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	32	30.8	30.8	30.8
	1	72	69.2	69.2	100.0
	Total	104	100.0	100.0	

The data shows that 69.2% of the respondents are aware of the Childline service 24-hour toll-free number (1098), while 30.8% do not know this vital information. This suggests that while many respondents are knowledgeable about this critical resource, a sizable part still lacks awareness, saying a potential

area for further education and awareness-raising.

This suggests that dental professionals are more likely to follow the recommended protocols of documenting and reporting suspected cases of child abuse or neglect, while a minority take alternative actions or are uncertain about the proper steps to take.

**Fig 3.**

How often do you inquire about the home environment and family dynamics of your child patients?

104 responses

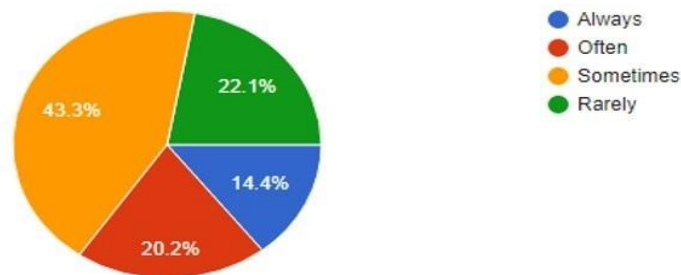


Table 4		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	23	22.1	22.1	22.1
	1	45	43.3	43.3	65.4
	2	21	20.2	20.2	85.6
	3	15	14.4	14.4	100.0
	Total	104	100.0	100.0	

The data reveals that the most customary practice among respondents is to "sometimes" inquire about the home environment and family dynamics of child patients, with 43.3% of participants showing this frequency. A smaller percentage, 22.1%, "rarely" ask these questions, while 20.2% do so

"often," and 14.4% "always" inquire (Fig 3, Table 4). This suggests that while many dental professionals recognize the importance of understanding the child's home environment, there is variability in how consistently this practice is implemented.

**Table 5 Have you ever reported a case of child abuse or neglect to the proper authorities?**

		Frequency	Percent	Valid Percent	Cumulative Percent
1		4	3.8	3.9	100.0
		103	99.0	100.0	
System		1	1.0		
		104	100.0		

- Across both qualification groups, an exceedingly high percentage of dental professionals (96.1%) have never reported a case of child abuse or neglect to the authorities.
- Only a small minority (3.9%) of respondents, regardless of qualification, have taken the step of reporting. (Table 5)

This data suggests that the act of reporting suspected child abuse or neglect is rare among dental professionals, with extraordinarily slight difference between those with BDS or

MDS qualifications. Despite their knowledge and the importance of reporting, most dental professionals in this sample have not reported cases to the authorities. This could reflect a range of factors, including uncertainty about showing cases, fear of consequences, or a lack of encountered cases. Pediatric Dentistry specialty shows a higher percentage (15.4%) of reporting, which may reflect its higher exposure to cases of child abuse or neglect due to the nature of its patient demographic.

**Table 6 Would you be interested in attending workshops or training sessions on child abuse and neglect for dental professionals**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	3.8	3.8	3.8
	1	78	75.0	75.0	78.8
	2	22	21.2	21.2	100.0
	Total	104	100.0	100.0	

Many dental professionals (75%) across all specialties expressed interest in attending workshops or training sessions on child abuse and neglect (**Table 6**). This

indicates a strong willingness among dental professionals to engage in further education on this critical topic.

**Table 7 Do you believe that dental professionals have a role in identifying and addressing child abuse and neglect cases?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	3.8	3.8	3.8
	1	41	39.4	39.4	43.3
	2	59	56.7	56.7	100.0
	Total	104	100.0	100.0	

- A significant majority of dental professionals (56.7%) strongly agree that training on child abuse and neglect should be mandated as part of their professional development (**Table 7**) This shows a strong consensus on the necessity of such training. Given the strong agreement from pediatric dentists and other specialties, targeted efforts could be made to design training programs that are relevant to the specific needs and practices of different specialties.
- **Policy Implications:** The fanatical support for mandatory training could be used to advocate for policy changes within professional dental organizations or regulatory bodies to implement such training as a standard part of professional development.

**Table 8 Are you aware of any resources or materials specifically designed to educate dental professionals about child abuse and neglect**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	93	89.4	89.4	89.4
	1	11	10.6	10.6	100.0
	Total	104	100.0	100.0	

- There is a strong overall awareness (90.7%) among dental professionals about resources for child abuse and neglect education, indicating that such resources are well-distributed and accessible.

**DISCUSSION:**

Child abuse remains a critical issue that demands attention from all sectors of society, including the healthcare system. Dental surgeons, due to their unique role in the healthcare system, are in a strategic position to identify and report cases of child abuse. This cross-sectional study aimed to evaluate the knowledge, awareness, and attitudes of dental surgeons in Kerala towards child abuse.

**Knowledge and Awareness**

The study reveals that a significant majority of dental surgeons in Kerala are aware of the issue of child abuse. This finding aligns with research indicating that healthcare professionals, including dental practitioners, are increasingly recognizing the importance of their role in identifying and addressing child abuse (6). The prominent level of awareness among the participants suggests that foundational education about child abuse is present. However, awareness

alone is not sufficient. Effective detection and intervention require not only knowledge but also practical skills and a proactive attitude (7).

**Attitudes Towards Child Abuse**

The study indicates a positive attitude among dental surgeons towards enhancing their professional knowledge about child abuse. This is an encouraging sign as a positive attitude is critical for implementing effective interventions. Previous studies have shown that a positive attitude towards child abuse can significantly impact the likelihood of reporting suspected cases (8). Despite the overall positive attitude, the study highlights a gap in continuous education and training. This gap points to the need for ongoing professional development programs focusing on the identification, reporting, and management of child abuse cases.

**Education and Training**

The necessity of continuing education programs for dental professionals is underscored by this study. Although many dental surgeons are aware of child abuse, the lack of formal training in identifying and handling such cases can undermine their ability to act effectively (9). Continuous education and training



can bridge this gap by providing dental professionals with updated knowledge and practical skills required to manage cases of abuse. For instance, workshops and seminars specifically designed to address child abuse can significantly improve the readiness and competence of dental professionals in dealing with such sensitive issues (10).

### ***Comparative Analysis***

Comparing the findings with similar studies, such as those conducted in different regions or countries, can provide additional insights. For example, studies conducted in the United States and the United Kingdom have shown varying levels of preparedness and training among dental professionals concerning child abuse(11,12) . These studies often highlight that while awareness is present, there is considerable variability in the effectiveness of training programs and their impact on professional practice.

### ***Implications for Policy and Practice***

The results of this study have several implications for policy and practice. First, there is a need for the integration of child abuse training into the regular continuing education requirements for dental professionals. Second, dental schools and professional organizations should consider incorporating comprehensive child abuse education into their curricula and professional development programs. Finally, collaborative efforts between dental and child protection services can enhance the effectiveness of interventions and

support systems for abused children (13).

### **Key Takeaways:**

- **General Enthusiasm:** There is a clear interest and openness among dental professionals to take part in training on child abuse and neglect, which could be leveraged to improve practices and knowledge in finding and handling such cases.
- **Specialty Focus:** Given the high interest from Pediatric Dentistry professionals, targeted workshops for different specialties could be beneficial, ensuring that training is relevant to the specific needs and experiences of each group.
- **Future Actions:** The data suggests that organizing workshops or training sessions could be well-received and potentially lead to improved identification and reporting of child abuse cases by dental professionals.

This discussion emphasizes the importance of continuous education and training for dental professionals to improve their ability to detect and report child abuse. It also highlights the need for integrating child abuse training into professional development programs to ensure that dental surgeons are equipped to handle these critical situations effectively.

### **CONCLUSION:**

In summary, while dental surgeons are in a prime position to find and address child abuse and neglect, there is still a gap in

their knowledge and preparedness for handling such cases. Strengthening education and training programs for dental professionals, along with fostering a supportive environment for reporting and intervention, are essential steps towards improving the identification and

management of child abuse. Future research and continued efforts in this area are necessary to ensure that dental professionals are fully equipped to contribute to the protection and well-being of vulnerable children.

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