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# Child abuse: knowledge, awareness, and experience among dentists in India

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## Abstract

**Background** Medical child abuse and neglect are part of a spectrum of conditions that can lead to significant morbidity and mortality in children. Recognition of these forms of child maltreatment is crucial to prevent harm. Dentists should have familiarity with the framework for diagnosing and reporting child abuse as the orofacial complex is the prime anatomical region to show any signs of abuse. **AIM:** The purpose of this cross-sectional study was to assess the knowledge, awareness, and experience of dentists in India on child abuse and their role as primary responders. **METHODS:** A self-administered questionnaire comprising 16 questions was distributed among dentists in India and responses were collected. The questionnaire included questions on the knowledge, awareness, and experience of dentists in child abuse identification, reporting, legal proceedings, and proposals for the betterment of the current scenario. The data collected were statistically analyzed.

**Results** A total of 203 dentists responded to the questionnaires through online platforms. Among them, 78.3% were females, and 65.3% had an institutional practice. While the majority (72.4%) were confident in identifying the indicators of child abuse, the knowledge on reporting was alarming. 98% of participants expressed their need for comprehensive education and training.

**Conclusion** The gap between the knowledge about indicators and the confidence to report suspicious cases are notable in this study. Adequate interventions in the hour of need require the involvement of support agencies and funding at both government and local levels.

**Keywords** Knowledge, Awareness, Child abuse, Dentists, Questionnaire

## Background

Child abuse (CA) is any form of physical or emotional exploitation, sexual abuse, neglect, or mistreatment by a person in a custodial role that has the potential to harm a child's health, development, or dignity. The first comprehensive series of reports on child maltreatment published in the British medical journal *The Lancet*, 2009 reported that the abuse and neglect suffered by children is much more than that reported by official child-protective agencies (Gilbert et al. 2009). Some studies report

the incidence to be 0.5 to 2.0 cases per 100,000 in children younger than 16 years and closer to 2.8 per 100,000 in children younger than 1 year (Jenny and Metz 2020). Research by Leiden University and TNO (Netherlands Organization for Applied Scientific Research) in 2010 estimated that approximately 119,000 children are abused each year (Euser et al. 2013). In 2016, child protective services in the USA received 676,000 reports of CA cases. (Fortson et al. 2016) The Indian scenario is no different.

A poll published by the Indian Ministry of Women and Child Development in 2017, depicted that two-thirds of children in India experience abuse in some form. (Murali and Prabhakar 2018) However, these reports likely represent the more severe end of the spectrum because many less severe cases of CA go unrecognized. Lack of recognition of the condition,

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unwillingness to consider the diagnosis, and having a high threshold for diagnosing CA make it likely to be grossly underreported. (Jenny and Metz 2020).

Human Rights Watch (2013) reported that no doctor in India (general practitioner, gynecologist, pediatrician, or dentist) has ever received training in the detection, examination, reporting, or remediation of CA (Dummett 2013). Dentists are in a unique position to identify child abuse and neglect, accounting for 65% of injuries in the orofacial region in recorded CA cases. Dentists should consider the possibility of CA when they identify unusual traumatic lesions in the oral cavity during the intraoral examination when a sexually transmitted disease is detected in a child's oral cavity, or when the report is not compatible with the type of injury. During these evaluations, it is imperative for dentists to possess knowledge about CA and know about the obligation to notify the authorities (Buldur et al. 2022).

The ADA in its Principles of Conduct and Code of Ethics, 1970 mandated dentists to familiarize themselves with perioral signs of child abuse and report suspected cases to appropriate authorities consistent with state laws (Mouden and Bross 1995). However, studies around the world do not reflect the ideal role dentists should play in addressing this issue. The current study aims to evaluate the knowledge, awareness, and experience of dentists in India toward child abuse.

## Methods

This was a cross-sectional study using a close-ended questionnaire comprising 16 questions in the English language. The questionnaire was distributed through *online platforms* pertaining to the inclusion criteria (dentists currently working in India). The study was carried out for a period of two months from 1st June 2022 to 31st July 2022. The validity of the questionnaire was performed with 10 dental practitioners to check for flaws and feasibility.

The questionnaire composed of five sections reflecting (a) demographic details, (b) knowledge of dentists about child abuse indicators, social issues, reporting procedures, and legal obligations, (c) their awareness and experience on child abuse (d) attitudes towards the need for further education, training, and (e) proposals for better recognition and reporting of CA in the future. This study protocol was approved by the Institutional Ethics Committee and the ethical committee number is IEC/M/24/2022/11/DCK.

## Statistical analysis

The collected data were tabulated, and statistics were performed using SPSS (Statistical Package for the Social Sciences) software. The Pearson chi-square test was used

to analyze the impact of demographic characteristics (gender and type of practice) on knowledge and awareness.  $P < 0.05$  was considered statistically significant.

## Results

Two hundred three participants engaged in the study, of which, 78.2% were females and 65.3% had an institutional practice (dental college, primary health center, or dental wing in a medical college) (Table 1).

Unusual clinical signs like bruises and bite marks, behavioral alterations like depression or anxiety, wounds at different stages of healing, and incomplete history from caregivers were voted as the main indicators in a suspected CA case. Though 72.4% of participants were confident in identifying these indicators; 63.5% anticipated a high chance for abuse cases to go unnoticed during a dental examination, which is daunting (Fig. 1).

The majority (83.7%) of participants believed that CA and socioeconomic status were interrelated. Only 15% were aware that the scope of the problem knows no social, educational, or financial boundaries and is not just confined to poor families. Sixty-five percent of responders were conscious of their role as mandated reporters in a suspected CA case (Figs. 2 and 3).

More than 50% of participants were unaware of the go-to organizations for reporting CA and 98% emphasized the need for training and education in this field for pre-equipping professionals. Elementary changes to the curricula emphasizing comprehensive training at the graduate level were voted the pressing priority followed by the incorporation of Continuing Dental Education (CDE) programs from time to time, and a functional government website to report, discuss, and scrutinize cases nationwide (Figs. 4 and 5).

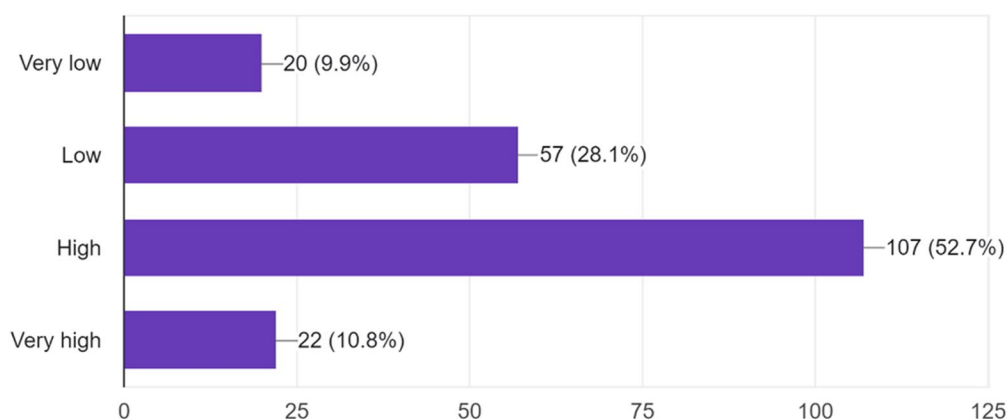
As with any sign of child abuse, a protocol must be followed that includes discovering, reporting, attending, and coordinating with the competent authorities to monitor the situation that is being experienced. However, a definite protocol to follow is non-existent and this impedes the overall process. While 56.4% of participants rooted for a

**Table 1** The demographic details of the participants

Criteria	Participants
Gender	
• Male	44 (21.7%)
• Female	159 (78.3%)
Type of practice	
• Institutional	132 (65%)
• Private	65 (32%)
• Both	6 (3%)

### 10. According to you, what are the chances of an abuse case going unreported in a dental setting?

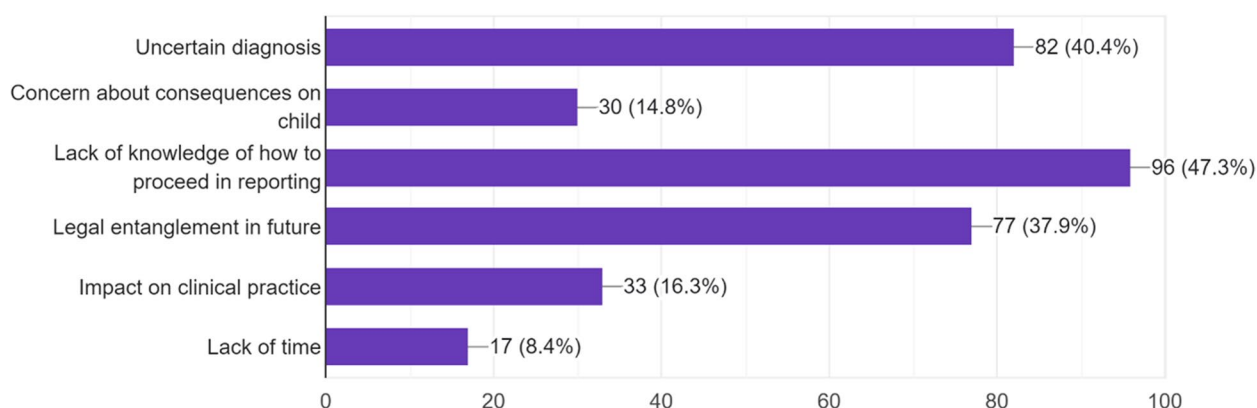
203 responses



**Fig. 1** Response rate on chances of CA going undetected in a dental clinic. A high chance for undetection of child abuse cases during a dental examination was anticipated by 63.5% of participants

### 11. Why may a dentist shy away from reporting?

203 responses



**Fig. 2** The reasons that accounted for the failed intimation of suspected CA to authorities. The most common reasons cited were lack of knowledge of the reporting procedures (47.3%), uncertain diagnosis (40%), fear of legal entanglement (37.9%), impact on clinical practice (16.3%), and concern about consequences on the child (14.8%)

universal protocol for standardization worldwide, 47% recommended a protocol with demographic variations to suit diverse populations (Fig. 6).

#### Evaluation of differences in knowledge and awareness of participants based on gender and type of practice

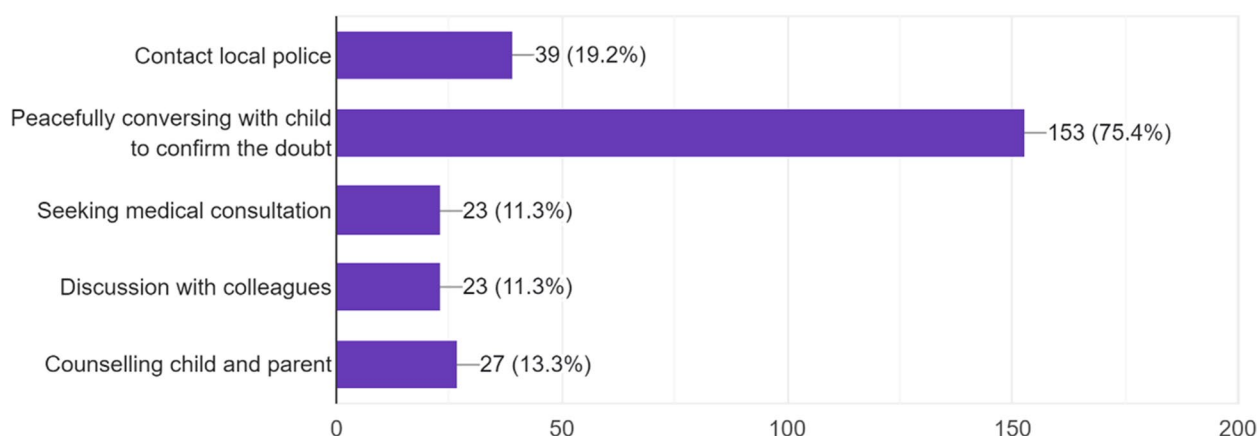
In an attempt to compare the participants' knowledge and awareness with gender, and type of practice, no significant difference was found ( $P > 0.05$ ).

#### Discussion

The incidence of CA is increasing in India. Dr. Lovleen Kacker IAS in 2015 stated that children between 5 and 12 years are the most vulnerable to CA in India, with 53.22% having experienced one or more types of child sexual abuse (Kacker 2015). Further, victims of CA often sustain injuries in the neck and orofacial areas. Research conducted in the USA, Canada, Turkey, and Jordan has confirmed that dentists receiving education on CA have a greater awareness and are

### 9. What may be your first response if you come across a suspected abuse case?

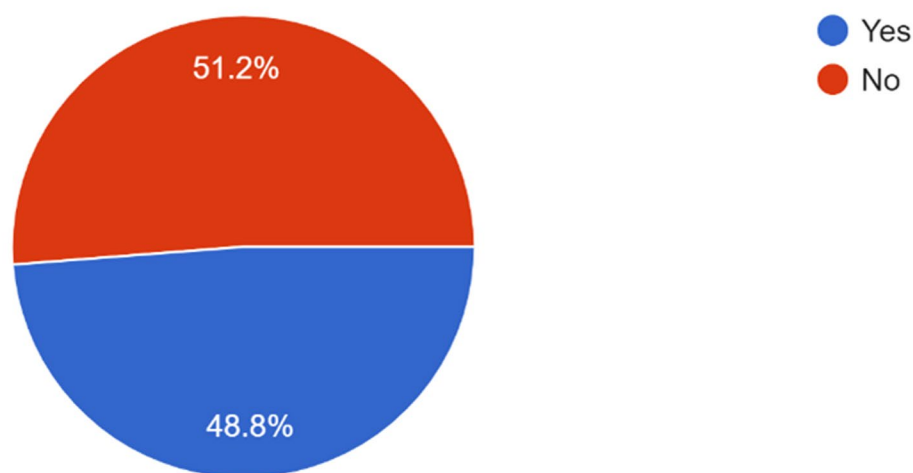
203 responses



**Fig. 3** The suggested initial responses of dentists on the verge of suspicion. While 75.4% of participants felt the need to confirm their doubts before reporting, only 19.2% suggested contacting local police or authorities on the verge of suspicion

### 8. Are you aware of the go-to organisations to report such incidents?

203 responses

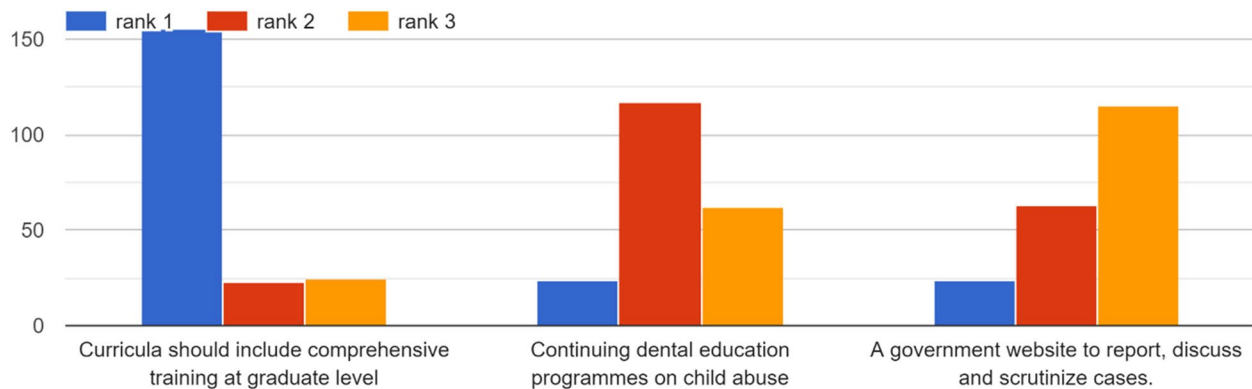


**Fig. 4** The awareness of participants on entrusted organizations to report abuse

more likely to report the problems to the authorities (Borres and Hägg 2007; Agirtan et al. 2009). However, very limited research attention has been paid to the knowledge of practicing dentists in India about CA. Thus, this study examined the knowledge, awareness, and experience of dentists in India toward CA. Overall, ample knowledge was observed in the study, however, insufficient dental education and reluctance in reporting CA were noted.

Female participants made up 78.3% of the total responders in the present study. This could be the effect of the feminization of the dental workforce. It is a global trend that points to the numerical increase of women in traditionally male-dominated professions like medicine and dentistry. Research by the WHO confirms that 70% of the world's health and social care workforce is now female. Furthermore, 50% of dental professionals worldwide under the age of 35 are women. It's possible that

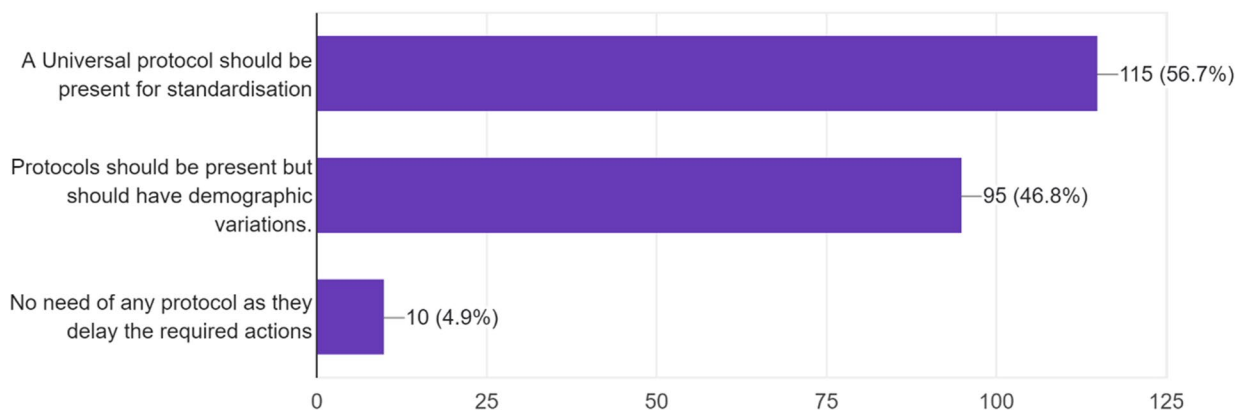
16. How would you rank the following based on their relevance as tools in training dentists for the same?



**Fig. 5** Future directions

14. What are your thoughts about a universal protocol to be followed worldwide in recognizing and reporting abuse cases?

203 responses



**Fig. 6** Need of a universal protocol

this emerging pattern was reflected in the current study. (Fleming et al. 2022).

Adequate knowledge about the indicators of CA was showcased by 73% of participants in this study which is in accordance with few studies in the literature (Bandi et al. 2017; Kaur et al. 2016). Nevertheless, 63.5% of participants reported a high chance for abuse cases to go unnoticed during dental examinations. This disparity portrayed the fact that the lack of knowledge is not the main reason for the failure to report suspected CA cases. This indicates that even with increasing levels of knowledge,

some clinicians may be reluctant to report suspected cases when faced with child abuse (Al-Jundi et al. 2010; Azizi and Shahhosseini 2017). In the present study, only 15% of participants were conscious of the fact that CA is not confined to a particular socioeconomic group which is in concordance with studies among dental residents in Andhra Pradesh, Gujarat, and UAE, where only 5.9%, 27.7%, and 40.3% of participants responded accurately (Bandi et al. 2017; Deshpande et al. 2015; Hashim and Al-Ani 2013).

Sixty-five percent of dentists in this study were aware that failure to report a suspected abuse case is punishable

as a criminal offense and stated multifaceted reasons (Fig. 2). Many studies in existing literature are in agreement with these findings (Kaur et al. 2016; Al-Jundi et al. 2010). Azizi et al., in a review of doctors and paramedics, classified the barriers to reporting CA into four categories: personal, interpersonal, organizational, and situational barriers (Azizi and Shahhosseini 2017). In regard to this issue, the U.S. Department of Health and Human Services, Children's Bureau imposed penalties on mandatory reporters who willfully fail to make a report when they suspect CA (Penalties for failure to report and false reporting of child abuse and neglect. 2014).

The participants of this study intimated the need for further education and comprehensive training at the graduate level, along with CDE programs at regular intervals. None of them have received any training in this matter, which was in accordance with previous studies (Mouden and Bross 1995; Kaur et al. 2016). The most prominent rationale for the need for training was the fact that dental or medical education failed to adequately cover CA issues (Penalties for failure to report and false reporting of child abuse and neglect. 2014). New York is the only state that mandates all physicians, and certain other professionals, to take a 2-h course called Identification and Reporting of Child Abuse and Maltreatment prior to licensing (Flaherty and Sege 2005).

While educating professionals to recognize abuse is only half the battle, encouraging them to make the required reports makes the other half (Dummett 2013). Prevent Abuse and Neglect through Dentist Awareness (P.A.N.D.A.), established in the USA, is a training program backed by a group of public and private organizations to help dental office staff to identify and report instances of CA. They contend that while dentists and dental staff members are required to report suspected CA, filing a report is not considered an accusation. Reporting can be initiated with a simple telephone call to the appropriate child protective services agency based on a "reasonable suspicion" followed by a written report (Mouden 1996).

Childline number 1098 is supported by the Ministry of Women and Child Development, India, and works in partnership with state governments, NGOs, bilateral and multilateral agencies, and the corporate sector in order to set up a nationwide toll-free helpline for children in distress. The POCSO (The Protection of Children from Sexual Offences) Act, enacted in India in 2012 aims to protect minors under 18 years from all types of sexual abuse. POCSO Act under Sect. 21(1) has made it mandatory for everyone including parents, doctors, and school personnel to report incidents of child sexual abuse to authorities. Section 19(1) ensures that no person shall incur any civil or criminal liability for giving the information in good faith. However, failing to do so might result

in imprisonment for up to 6 months, with or without a fine.

Reporting abuse to the child helpline or authorities remains confidential, however, the anonymity of reports by mandated reporters (e.g., dentists) could be highly subjective. These reports are duly followed by the victim interview and medical examination by a trained professional, preferably a pediatrician, alongside the timely collection of appropriate evidence. The testimony of this trained medical examiner could be of utmost importance at the court (Kaur et al. 2021).

Child Protection Services, a flagship program of the Government of India provide preventive, statutory, and rehabilitation services to children who need care and protection and to those in conflict with the law under the Juvenile Justice (Care and Protection of Children) Act, 2015. The allocations for this sector have increased by almost 44% and a large portion of this growth may be ascribed to the increased funding for "Mission Vatsalya", which includes the former Integrated Child Protection Services Scheme and Child Welfare. However, given the rise in the number of kids who have been abandoned, became orphans, or lost a parent, current funding in this regard is insufficient (Jain 2023).

## Conclusions

The gap between the knowledge about indicators and the confidence to report suspicious cases are notable in this study. Dental professionals can play a significant role as the first responders in child abuse if provided with adequate education and training. Proper intervention in the hour of need requires the involvement of support agencies and funding at both government and local levels. Implementation of robust policies to encourage regional and international cooperation is necessary as the change must occur globally.

## Limitations

This research has several limitations. This study could only be completed online because of the Covid-19 pandemic and the study population was majorly dentists from academic institutes; therefore, the results might not be generalizable to all dentists practicing in India. In future studies, more representation of private dental practitioners is highly recommended. Dentists' behaviors were assessed using a self-administered questionnaire, which is a subjective assessment method (detection bias). The sample used was small, homogenous, and primarily focused on participants' perceptions. Hence no response could be considered incorrect. Additionally, qualitative research in the form of an in-depth interview might be helpful to obtain more reliable results.



## Abbreviations

CA	Child abuse
SPSS	Statistical Package for the Social Sciences
CDE	Continuing Dental Education
IAS	Indian Administrative Service
WHO	World Health Organization
UAE	United Arab Emirates
USA	United States of America
PANDA	Prevent Abuse and Neglect through Dentist Awareness
POCSO	The Protection of Children from Sexual Offences Act

## Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s41935-023-00355-0>.

**Additional file 1.**

**Additional file 2.**

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## Authors' contributions

BJ: study conception and design, drafting of the manuscript. LMC, PS: critical revision and supervision. SR, RPC, SS: resources and data curation. All authors have read and approved the final manuscript.

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## Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

## Declarations

### Ethics approval and consent to participate

This study protocol was approved by the Institutional Ethics Committee(IEC)/ Institutional Review Board (IRB), Government Dental College, Kottayam as per Order No. D/164/2012/DCK dated 20-10-2017 and the ethical committee number is IEC/M/24/2022/11/DCK.

### Consent for publication

Not applicable.

### Competing interests

The authors declare that they have no competing interests.

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