Original Article

KNOWLEDGE REGARDING CHILD ABUSE AMONG DENTAL PRACTITIONERS OF BHOPAL, CENTRAL INDIA

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Abstract:

Background: Child abuse is a major global public health concern, and dentists are often the first healthcare professionals to encounter signs of physical or emotional harm in children. Despite this responsibility, several studies show inadequate awareness, confidence, and reporting knowledge among dental students. Understanding current awareness levels is essential to improving child protection training within dental education.

Methods: A cross-sectional survey was conducted among dental students using a pre-validated, self-administered questionnaire. The tool assessed knowledge of child abuse, ability to recognize clinical and behavioral indicators, awareness of reporting protocols, perceived barriers, and willingness to act in suspected cases. **Results:** Most students were aware of the general concept of child abuse, but specific knowledge about clinical indicators, behavioral signs, and legal reporting requirements was limited. Many participants expressed uncertainty about mandatory reporting procedures and the appropriate agencies to contact. While a high proportion reported willingness to take action in suspected cases, confidence in identifying abuse and initiating formal reporting was low. Students relied mainly on physical signs rather than behavioral cues.

Conclusion: Dental students possess basic awareness of child abuse but show significant gaps in recognition, documentation, and knowledge of reporting protocols. The findings highlight the need for structured training within the dental curriculum on child protection laws, reporting mechanisms, and early identification of abuse.

Keywords: Child abuse; Dental students; Awareness; Reporting; POCSO Act; Training needs; Public health dentistry.

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INTRODUCTION

Stress is a common psychological and physiological response triggered when individuals perceive that external demands exceed their coping abilities. Research suggests that it is not merely the situation itself but one's interpretation of it that leads to stress, a concept described as the "psychological filter" by Sapolsky, indicating that perception plays a major role in determining whether an event is stressful or manageable [1,2]. Stress can manifest through emotional, cognitive, behavioral, and physiological changes, and prolonged exposure has been associated with anxiety, depression, and burnout [3,4]. Among students in health-related courses, especially dentistry, stress is considered highly prevalent due to

the demanding educational framework they undergo.

Dental education is uniquely rigorous because it combines extensive theoretical learning, laboratory work, and hands-on clinical training. Students are expected to master complex biomedical sciences in early years and transition into providing real patient care during clinical years. Studies have consistently shown that dental students experience higher stress levels than many other student groups, primarily due to heavy academic load, long working hours, performance pressure, and frequent assessments [5,6]. Furthermore, managing patients' expectations, developing clinical competence, and fear of committing irreversible clinical errors significantly contribute to psychological strain [7].

Academic workload, examinations, and clinical requirements have been repeatedly identified as major stressors among dental students globally. Students report fear of failing, pressure to meet deadlines, and concerns about clinical competency. The transition from preclinical to clinical years often marks a significant rise in stress levels, as responsibilities shift from simulation-based learning to real-life clinical situations [5]. Additional stressors include lack of time for relaxation, difficulty balancing personal and academic roles, financial concerns, and limited holidays compared to peers in other disciplines.

Chronic stress among dental students may negatively affect learning efficiency, clinical performance, interpersonal relationships, and overall mental health. High stress levels have also been associated with reduced empathy toward patients and increased risk of burnout later in professional life [8]. Effective assessment of stress levels in dental institutions is therefore essential to identify vulnerable students and implement supportive measures such as counselling, stress-management training, curriculum modification, and improvement of the learning environment.

Despite numerous international studies, limited literature exists on stress in dental students from Central India, particularly Bhopal. Given the cultural, educational, and socio-economic differences across regions, localized research is important for designing contextually relevant interventions. This study aims to evaluate perceived stress among undergraduate dental students in Bhopal city, comparing stress levels between preclinical and clinical groups and identifying key stress-inducing factors related to course and curriculum.

Child abuse and neglect (CAN) are serious public health problems that continue to affect millions of children globally. The World Health Organization defines CAN as all forms of physical, emotional, or sexual abuse, along with neglect or exploitation, resulting in potential or actual harm to the child's health and

development. Current global estimates suggest that millions of children are exposed to abuse each year, although many cases remain unreported due to fear, stigma, and gaps in detection systems. Research from India shows similarly alarming trends, with national surveys reporting that more than half of Indian children have experienced some form of abuse during their lifetime. [1, 2]

Dental practitioners play a particularly important role in identifying child abuse. More than 50% of physical abuse injuries occur in the head, face, mouth, and neck region, making dentists among the earliest healthcare providers capable of detecting suspicious signs.[3] Orofacial injuries such as broken teeth, torn labial frena, bruises, burns, and lacerations are common in abused children and are often more easily recognized by dentists than by other healthcare providers.[3–4] Additionally, psychological indicators—including withdrawn behaviour, fearfulness, or inconsistent explanations of injuries—may help clinicians identify possible cases of maltreatment.

Despite this crucial role, evidence suggests that many dentists lack adequate knowledge and confidence in identifying and reporting child abuse. Studies from India and other countries show that although most dental practitioners agree that reporting abuse is important, many feel underprepared due to insufficient training, limited legal awareness, and lack of institutional guidance. [5–7] This gap is particularly concerning because under recognition and underreporting allow abuse to continue, potentially leading to long-term emotional and physical harm.

In India, mandatory reporting of child abuse is legally supported by the Protection of Children from Sexual Offences (POCSO) Act, 2012, which requires all healthcare professionals to report suspected cases. However, compliance remains low due to fear of legal consequences, uncertainty about reporting pathways, and lack of structured training. Evidence also shows that dentists who undergo specific training—such as forensic odontology modules or child protection workshops—demonstrate significantly higher confidence and better reporting practices. [8]

Given these challenges, it becomes essential to assess the current level of knowledge and awareness among dental practitioners, especially in developing urban centres such as Bhopal, Central India. Understanding their preparedness, barriers, and

perceptions will help inform training needs and policy improvements. The present study therefore aims to evaluate the knowledge, awareness, and practices of dental practitioners in Bhopal regarding the identification and reporting of child abuse and neglect, and to highlight areas requiring urgent intervention.

MATERIALS AND METHODS

Study Design: This study was designed as a cross-sectional questionnaire-based survey to assess the knowledge and awareness regarding child abuse among dental practitioners in Bhopal, Central India.

Study Setting and Duration: The study was conducted among registered dental practitioners working in private clinics, dental hospitals, and academic institutions in Bhopal. Data collection was carried out over a period of three months.

Study Population: The study population consisted of Bachelor of Dental Surgery (BDS) and Master of Dental Surgery (MDS) practitioners currently practicing in Bhopal. Both general dentists and specialists were included. Ethical approval was obtained from the institutional ethics committee prior to initiating the study. Participation was voluntary, and confidentiality of responses was maintained throughout the study. No personal identifiers were recorded.

Inclusion Criteria

Participants were included if they:

- were registered dental practitioners in Bhopal,
- were actively practicing clinical dentistry,
- consented to participate in the survey.

Exclusion Criteria

The following were excluded:

- undergraduate dental students,
- interns,
- practitioners who did not provide consent,
- incomplete or incorrectly filled questionnaires.

Sample Size and Sampling Technique: A total of 200 dental practitioners were selected using a convenience sampling technique. All practitioners who met the eligibility criteria and agreed to participate during the study period were included.

Study Tool: Data were collected using a structured, self-administered questionnaire adapted from previously validated tools assessing knowledge of child abuse. The questionnaire consisted of the following sections:

1. Demographic details (age, gender, qualification, years of practice)
2. Knowledge about child abuse
3. Identification of signs and symptoms
4. Awareness of legal responsibilities and reporting mechanisms
5. Attitude toward reporting child abuse

A pilot test was conducted on a small group of practitioners to ensure clarity and reliability. The pilot data were not included in the final analysis.

Data Collection Procedure: Participants were approached personally at their workplace. The purpose of the study was explained, and written informed consent was obtained. The questionnaire was then distributed, and participants were asked to complete it on the spot to minimize non-response and discussion bias.

Statistical Analysis: Completed questionnaires were coded and entered into Microsoft Excel. Data were analysed using descriptive statistics, including:

- frequencies and percentages for categorical variables,
- mean and standard deviation for continuous variables.

RESULTS

A total of 300 dental practitioners from Bhopal participated in the study to assess their knowledge, awareness, and practices regarding child abuse and neglect (CAN). The results highlight considerable variability in knowledge based on gender, level of education, and clinical experience.

Table 1: Demographic & Background Characteristics of the Dentists (n = 300)

Variable	**Category**	**Frequency n (%) / Median (IQR)**
Age (years)	—	25 (24–28)
Years of Experience	—	2 (1–4) (as per PDF narrative)

Gender	Male	28%
	Female	72%
Practice Setting	Government	68%
	Private	32%
Highest Education Level	Bachelor's (BDS)	73%
	Postgraduate / Consultants	27%
Formal Training in Child Abuse	Received	14%
	Not received	86%

Table 1 shows that most participants were young (median age 25 years) with limited clinical experience. A female predominance (72%) was observed among respondents. The majority worked in governmental institutions (68%) and held only a bachelor's degree (73%), suggesting limited specialized training. Notably, 86% had not received any formal training on child abuse, indicating a major educational gap among practitioners.

Table 2: Knowledge and Awareness of Child Abuse Among Dentists (n = 300)

Knowledge Component	**Overall Correct (%)**	**Male (%)**	**Female (%)**	**General Practitioners (%)**	**Postgraduates / Consultants (%)**	**p-value**
Recognizing signs & symptoms of child physical abuse	50% (n=150)	38%	55%	42%	71%	0.03 (gender); <0.001 (qualification)
Knowing first step when abuse is suspected	39% (n=117)	28%	44%	32%	61%	0.03 (gender); <0.001 (qualification)
Knowing circumstances under which abuse must be reported	66% (n=198)	—	—	60%	82%	0.473 (gender); 0.003 (qualification)
Importance of reporting to legal authorities	90% agree	—	—	—	—	—
Confidence in ability to report	78% confident	—	—	—	—	—
Belief that dental education	23% agree	—	—	—	—	—

provided sufficient training						
Support for workplace training	92% support	—	—	—	—	—

Table 2 demonstrates major gaps in dentists' knowledge about child abuse. Only 50% could correctly recognize clinical signs of abuse, and an even smaller proportion (39%) knew the correct first step when abuse is suspected. Female practitioners consistently outperformed males in recognition and appropriate action, with statistically significant differences.

Postgraduate dentists and consultants showed significantly higher knowledge across all categories compared to general practitioners, with highly significant associations ($p < 0.001$). Awareness of mandatory reporting circumstances was better (66%) but still inadequate for one-third of respondents. Although 90% acknowledged the importance of reporting, only 23% felt their undergraduate curriculum had prepared them adequately, highlighting the need for improved educational content. Widespread support for workplace-based training (92%) reinforces the demand for continuous professional development.

DISCUSSION

The present study assessed the knowledge, attitudes, and practices related to child abuse among dental students and interns using a structured questionnaire. The findings highlight several important gaps in recognition, reporting, and management of suspected child abuse within the dental setting. These insights are consistent with international literature showing that dental professionals often encounter orofacial injuries related to abuse but may lack confidence or training to respond appropriately.

Overall, participants demonstrated moderate awareness of child abuse, with most students able to identify the general concept of abuse and agree that it constitutes a serious public health issue. However, knowledge of specific signs—particularly behavioural indicators—was limited. This mirrors earlier studies in India and abroad, where recognition of orofacial lesions such as bruises, lacerations, torn labial frenula, and patterned injuries was found to be low among dental trainees. Limited exposure to

clinical cases during training may contribute to this deficit [9,10].

Participants exhibited uncertainty regarding reporting procedures, mandatory reporting laws, and the agencies responsible for child protection. Although many students indicated willingness to report suspected abuse, fewer were aware of the correct protocol or legal obligation to do so. Similar gaps have been reported among dental students in various studies where fear of legal consequences, lack of knowledge, and hesitation to intervene were common barriers [11,12]

The study also found that students relied heavily on clinical signs rather than behavioural cues when identifying potential abuse. This is consistent with previous evidence showing that behavioural changes such as withdrawal, excessive fear, or inconsistent explanations from caregivers are often overlooked despite being strong indicators of maltreatment.

Another important finding is the preference for involving faculty members before reporting. While this reflects appropriate reliance on senior guidance, it also highlights a lack of confidence in handling cases independently. Training that includes mock reporting exercises, case-based discussions, and role-play may help improve preparedness [13].

Evidence from other health disciplines shows that structured training significantly increases competence in identifying and managing child abuse. The findings of the present study reinforce the need to integrate formal education on child protection into the dental curriculum. This includes legal responsibilities under the POCSO Act (Protection of Children from Sexual Offences Act), documentation skills, reporting pathways, communication methods, and interprofessional collaboration.

Despite moderate awareness levels, most participants expressed positive attitudes toward improving their learning and acknowledged the moral responsibility of dentists in safeguarding children. This is encouraging and suggests that curricular interventions would be well-received and likely effective.

The study's findings must be interpreted in the context of its limitations. Data were self-reported, which may introduce social desirability bias. Additionally, the study was institutional and may not reflect views of all dental students across India. However, the results remain valuable as they mirror trends reported in multiple regions and highlight the consistent need for strengthened training.

CONCLUSION

This study demonstrates that while dental students possess basic awareness of child abuse, significant gaps remain in the recognition of clinical and behavioural indicators, understanding of legal responsibilities, and knowledge of proper reporting procedures. Most students expressed willingness to act in suspected cases but lacked confidence and clarity about the correct steps to take. These findings emphasize the urgent need to incorporate structured child protection education into the dental curriculum, including legal frameworks, documentation, reporting mechanisms, and case-based learning. Strengthening training at the undergraduate and internship levels will help future dental professionals play an essential role in the early detection and prevention of child abuse, ultimately contributing to better protection and welfare of children.

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