

ORIGINAL ARTICLE



Enhancing child protection responses in oral health practice: A scoping review of evidence-based approaches

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Abstract

Child abuse and neglect represent significant global health challenges with long-lasting adverse impacts. Oral health practitioners, who often interact with children, play a key role in detecting and responding to suspected cases. Despite this, there is a notable gap in the systematic child protection measures in dental practices globally. This scoping review, utilising the Joanna Briggs Institute methodology, aims to outline current approaches for oral health practitioners and identify gaps in the approaches designed to enhance their responsiveness. Covering studies from January 2000 to May 2023, the review explored educational programmes, guidelines and interdisciplinary training modules. A comprehensive search across multiple databases, including MEDLINE, CINAHL and Scopus, along with grey literature sources, identified 1230 sources, resulting in the inclusion of 20 relevant sources. Findings highlight three main approaches: dental-specific education programmes, practical guidelines for child protection responses and analysis of legal and professional obligations. These approaches demonstrate a mix of direct educational interventions and policy-driven strategies aimed at enhancing oral health practitioners' knowledge, attitudes and practices towards child abuse and neglect. Given the identified variability and gaps in training and resources, future research should assess the effectiveness of these approaches and develop comprehensive, culturally safe training for oral health practitioners globally.

KEYWORDS

child maltreatment, child safety measures, dental, interdisciplinary approaches, oral health, safeguarding, systematic review

Key Practitioner Messages

- Oral health practitioners should receive ongoing and comprehensive training to effectively identify and safely respond to child abuse and neglect cases.
- Interdisciplinary collaboration with health and social practitioners is essential for oral health practitioners to provide supportive care to children and their families.
- Oral health practitioners should understand and adhere to local legal and professional standards to ensure consistent and effective responses at the earliest possible instances across all settings.

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INTRODUCTION

The United Nations Convention on the Rights of the Child, which is the most widely ratified human rights treaty in history, states that all children have the right to necessary protection from abuse, neglect and exploitation (United Nations Human Rights, 1989). The immediate and long-lasting detrimental effects of child abuse and neglect (CAN) are widely recognised. These effects can range from permanent physical and psychological health issues (Mehta et al., 2021) to a heightened susceptibility to a range of health, emotional and social challenges in later life, such as depression and anxiety (Berber Çelik & Odacı, 2020; Leeb, Lewis, & Zolotor, 2011). Globally, it is estimated that up to one billion children aged two to 17 years are subjected to physical, sexual and emotional violence or neglect every year (Hillis et al., 2016). The World Health Organization (2019) has called for global health practitioners to be more attentive to the best interests of children and adolescents by promoting and protecting safety and non-discrimination in providing care and demonstrating respect towards children and caregivers. Their report provides recommendations for the health sector's response to CAN, including regular early detection and intervention training, interdisciplinary collaboration and creating supportive and enabling service environments (World Health Organization, 2019).

Oral health practitioners (OHPs), as frontline professionals in the provision of oral health care to children and adolescents, have a responsibility to be vigilant and act to promote and protect children's safety (Singh & Lehl, 2020). Children and adolescents often interact with OHPs across various dental care environments, including general dental offices, specialist practices, community dental clinics and school-based dental services. For some children and adolescents, regular dental visits may represent their only engagement with healthcare providers, especially where routine medical examinations are not standard. OHPs are positioned to identify signs of CAN at its various stages and respond to protect children from further or potential harm (Bradbury-Jones et al., 2021; Håkstad et al., 2023). Early interventions and prevention strategies can avert severe health and social outcomes (Colizzi, Lasalvia, & Ruggeri, 2020; Tabone et al., 2020; Van Der Put et al., 2018). The interventions can include making referrals to child welfare organisations or family support services and employing cooperative and interdisciplinary methods to help families obtain necessary assistance. Despite OHPs holding a vital position in protecting children against abuse and neglect, there exists a substantial worldwide challenge with insufficient reporting of potential cases and responding to those concerns. A recent Australian study revealed that OHPs were uncertain about identifying abuse and unsure of proper reporting protocol (Kuganathan et al., 2021); Croatian (Cukovic-Bagic et al., 2015) and New Zealand (Han et al., 2022) studies confirmed that less than half of CAN concerns were reported by OHPs to child protection agencies.

Improving the responsiveness of OHPs to CAN necessitates developing and implementing early intervention and prevention strategies. Incorporating these strategies within clinical settings encourages a proactive and integrated approach to improve responsiveness. This scoping review was guided by the following question: What are the current approaches to address the responsiveness of OHPs in child protection? The review aimed to systematically map the literature and identify gaps in the approaches utilised by OHPs to enhance responsiveness in child protection. Approaches include, but are not limited to, educational programmes, practical guidelines and interdisciplinary collaboration training modules.

METHOD

Given the limited research on approaches to enhance the responsiveness of OHPs in child protection, a scoping review is an appropriate method to systematically and comprehensively map and summarise evidence on this subject. This review was conducted following the Joanna Briggs Institute methodology for scoping review guideline (JBI guideline) (Peters et al., 2020) and reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR) (Tricco et al., 2018). The JBI guideline supports a clear scope definition, rigorous and transparent processes and the ability to incorporate diverse evidence types (Peters et al., 2020). The PCC (Population, Concept, Context) framework (Peters et al., 2020) was used to develop inclusion and exclusion criteria (discussed below) and a comprehensive search strategy.

The protocol for this review ([doi:10.1371/journal.pone.0296650](https://doi.org/10.1371/journal.pone.0296650)) was published to ensure transparency, provide a methodology for conducting the review, and allow for reproducibility and scrutiny by other researchers in the field (Han et al., 2024). Minor amendments include changing the search end date from March 2023 to May 2023.

Inclusion and exclusion criteria

The PCC (Population, Concept, Context) framework (Peters et al., 2020) was used to determine inclusion and exclusion criteria (Table 1) with the additional consideration of source type. The population of interest included

TABLE 1 Inclusion and exclusion criteria.

	Inclusion criteria	Exclusion criteria
Population	<ul style="list-style-type: none"> OHPs who are registered with national regulatory bodies (general dentists, paediatric dental specialists, pedodontists, other dental specialists, oral health therapists, dental therapists, dental hygienists and orthodontic auxiliaries) Undergraduate and postgraduate students in dental-related programmes 	<ul style="list-style-type: none"> Non-registered oral health providers OHPs as a part of broader health practitioners (unless data is disaggregated by discipline)
Concept	<ul style="list-style-type: none"> Child abuse and neglect response strategies Child protection response strategies Current approaches include but are not limited to interdisciplinary practice policies or pre-service or in-service professional education 	<ul style="list-style-type: none"> Only reporting the current detecting and reporting status Only reporting barriers to responding to child abuse and neglect concerns Future recommendations only rather than current practice
Context	<ul style="list-style-type: none"> All international dental-related settings, including private and public dental services Dental services provided in community settings, such as schools 	
Type of sources	<ul style="list-style-type: none"> Primary studies, including quantitative, qualitative and mix-methods study designs Systematic reviews and meta-analysis Discussion papers, editorials and government and international health organisations' policy documents English, full-text Publication year: January 2000 to May 2023 	<ul style="list-style-type: none"> Book reviews, book chapters, news articles, commentaries, letters, legal judgements

registered OHPs and students in both undergraduate and postgraduate programmes, such as general dentists and paediatric dentists, dental specialists, oral health therapists, dental hygienists, dental therapists, dental nurses and orthodontic auxiliaries. The intent was to review and assess the broad application of child protection strategies in oral health, underlining the universal relevance of these strategies across different professional roles within the field. This scoping review included all members of the oral health community, emphasising that the responsibility to enhance child protection responsiveness is shared by all professionals in the field, regardless of their specific roles or positions. However, sources that included OHPs along with other health professionals were excluded if they did not disaggregate the analysis of OHPs.

The concept central to this review was the examination of current strategies employed to enhance the responsiveness of OHPs in preventing and responding to CAN worldwide. This included identifying, reporting and appropriate management of such cases, with a focus on interventions such as policy implementation, interdisciplinary practices and professional education programmes aimed at training OHPs. Sources that only proposed and recommended possible approaches were excluded from the review. Also, sources that focused on reporting the current prevalence of CAN, response rates of OHPs or identifying barriers to responding were excluded, as they did not address the research question. The context for this review encompassed various dental settings where OHPs practice, including private and public dental clinics, as well as school-based and university training clinics. Only sources published in English from January 2000 to May 2023 were considered to ensure the relevance of the findings.

To pilot the inclusion and exclusion criteria, the titles and abstracts of 30 randomly selected sources were screened by two independent reviewers based on the inclusion and exclusion criteria, followed by full-text screening. Future recommendations, rather than current practices, were added to the exclusion criteria to clarify the aim of exploring current practices and approaches rather than future recommendations.

Search process

This scoping review included a search of multiple databases and a grey literature search to identify any relevant sources. An initial exploratory search was conducted of MEDLINE (via EBSCO) and CINAHL (via EBSCO) to understand the potential scope of the review. Key terms from the initial search were used to develop a comprehensive search strategy (Supplementary Material 1). A full search was conducted across five databases (MEDLINE-EBSCO, CINAHL-EBSCO, Dentistry & Oral Science Source-EBSCO, Cochrane Library and Scopus). Search keywords were adapted for each database to suit the requirement. To identify any grey literature not indexed in a search database, key terms were searched using Google Scholar. The first 100 sources were reviewed to identify relevant literature.

Screening

Following the search, a two-step screening was conducted to identify relevant sources. All identified records ($n = 1230$) were collated and uploaded to the web-based review software tool Covidence (Veritas Health Innovation, Melbourne, Australia) and duplicates ($n = 434$) were removed. Titles and abstracts of 787 identified records were then independently screened by two reviewers using the inclusion and exclusion criteria (Table 1). The research team discussed any disagreements between the two reviewers. If there was insufficient information in the title and abstract to achieve consensus, the record advanced to full-text review. Full texts of 38 reports were read and screened by 2 independent reviewers, and any disagreements were discussed by the research team to achieve consensus. Twenty reports were included in the review (Figure 1). References from the 20 reports were screened to identify any relevant sources that were not identified during the previous search. Some relevant sources were identified but not included in the review, as those articles were multiple publications for the same training programmes.

Data extraction, synthesis and presentation

The data extraction table was adapted from the JBI guideline (Peters et al., 2020) and modified to answer the research question. The research team piloted the table with three sample sources to ensure consistency and accuracy. Once reviewers had familiarised themselves with the table and the process, two independent reviewers extracted the data, including the title, authors, year of publication, type of sources, aims, objectives, methods (study design, population/participants and setting), description of approaches, key findings or results and other information (e.g., description of roles of OHPs in child protection, interdisciplinary collaboration, discussion of equity and culture and funding

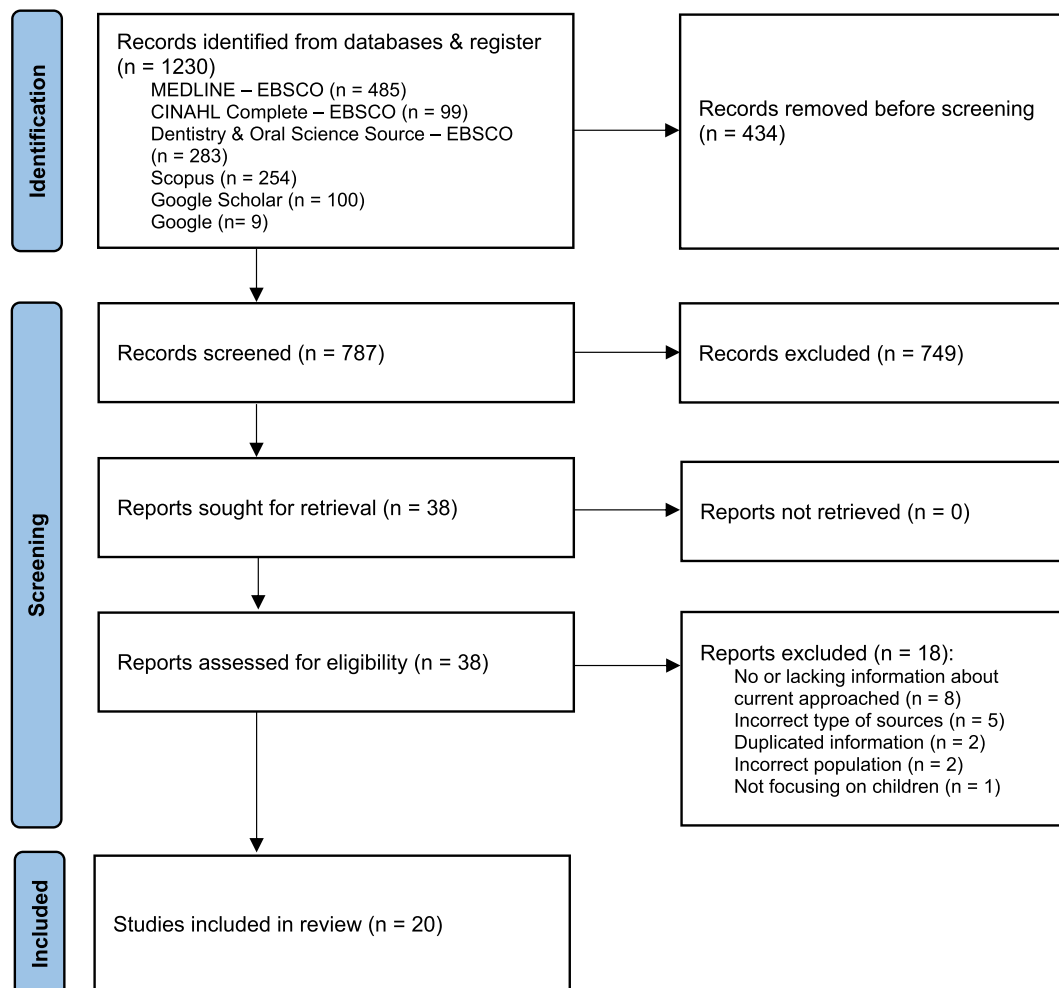


FIGURE 1 PRISMA flow chart for source identification.

information). Interdisciplinary collaboration included joint actions of multiple disciplines to support children and families. Referring to child protection statutory agencies was not included as interdisciplinary collaboration. The primary reviewer collated the two independently extracted datasets. The data were then exported to Microsoft Excel (Microsoft Corporation, WS, USA) for analysis. Quality assessment of the included sources was not conducted, as the primary aim was to map the existing literature on a topic, rather than assess the quality or strength of the identified sources.

Qualitative content analysis (Sandelowski, 2000) was used to summarise the content of the data. Current approaches, such as training, practice guides and policy documents, were categorised based on their nature. Then, the data for each category were summarised to understand how each category enhances the responsiveness of OHPs in child protection. The findings were then presented in summarised tables and narrative statements.

RESULTS

Overview

Most of the 20 sources included in this scoping review were published in the USA (11 sources) and UK (6 sources). Other sources were from Sweden, Saudi Arabia and one international source across four countries (Croatia, the UK, Canada and Italy). Source publication dates ranged from 2001 to 2021, and most sources were published in the 2010s (14 sources). In terms of methodological design, six sources (30%) used quasi-experimental methods surveying pre- and post-training modules to evaluate approaches utilised by OHPs to enhance responsiveness in child protection. Other sources included practical guidelines for child protection response (eight sources), a discussion about educational resources (three sources) and an analysis of legal and professional standards (three sources). Analysis of the included sources identified three themes: (1) dental-specific education programmes; (2) practical guidelines on child protection responses; and (3) analysis of legal and professional obligations.

Dental-specific education programmes

Exploring the impact of dental-specific education programmes was a central theme of the sources (Table 2). The most common strategies identified from the included sources were educational programmes designed for frontline OHPs and undergraduate students. Several sources found evidence that both online and face-to-face training sessions significantly improved OHPs' awareness of their role in child protection responses and successfully introduced local response protocols or policies (Al-Dabaan, 2014; Harmer-Beem, 2005; Harris et al., 2011). All sources conducted pre- and post-training surveys or tests that indicated improved responses in terms of self-reported awareness and the perceived likelihood of detecting and responding (Al-Dabaan, 2014; Chaffin & Richter, 2002; Harmer-Beem, 2005; Shapiro, Anderson, & Lal, 2014; Welbury et al., 2001). Chaffin & Richter (2002) reported statistically significant improvements in post-training online scores and student engagements, and Harmer-Beem (2005) reported statistically significant improvements in various knowledge indicators. Al-Dabaan (2014) also found that 27.4% of participants reported suspected cases in the last month since the completion of the training. Interactive and problem-based learning activities were evident in undergraduate training programmes reported (Ivanoff & Hottel, 2013; Shapiro, Anderson, & Lal, 2014). Those programmes were more structured and comprehensive than other continuing education programmes for registered OHPs. Participants indicated that the interactive training module was more engaging and helpful (Shapiro, Anderson, & Lal, 2014).

Many training programmes from the 2000s and early 2010s in the USA adopted or modified the PANDA (Prevent Abuse and Neglect through Dental Awareness) programme (originated from the USA), which originated as an initiative to assist OHPs in recognising and reporting signs of abuse and neglect among their patients (Brown, 2010; Chaffin & Richter, 2002; Goldie, 2011; Harmer-Beem, 2005). The PANDA training programmes focus on improving perceived knowledge related to CAN and improving the likelihood of reporting any suspected cases. Chaffin & Richter (2002) adopted the PANDA programme for their in-person training session, targeting military personnel to create an understanding of the issue, identify the symptoms of CAN, document observations and refer victims according to the army policy. More recent strategies had elements of interdisciplinary collaboration or efforts to address equity and culture (Al-Dabaan, 2014; Ivanoff & Hottel, 2013). Ivanoff & Hottel (2013) introduced a multidisciplinary hybrid curriculum so that undergraduate students could work with medical and law students, understand their professional and ethical duties and engage in multidisciplinary problem-based learning together. Al-Dabaan (2014) identified community, society, culture and religious characteristics as potentially influencing factors for CAN. The author recognised that perceptions of parenting, as well as what constitutes abusive and neglectful behaviour, can vary significantly across different contexts, highlighting the importance of cultural sensitivity (Al-Dabaan, 2014). Combining online and

TABLE 2 Summary of ‘dental-specific education programme’ theme.

Source citation	Location	Key approaches	Descriptions of key approaches	Data collection method	Findings	Discussions on interdisciplinary collaboration or efforts to address equity or culture	Recommended improvements on key approaches
(Al-Dabaan, 2014)	Saudia Arabia and the UK	Online continuing education programme	Online training with eight modules on CAN, providing an overview and catering to both countries’ systems	Anonymous post-training survey	Increased identification and reporting of dental neglect in the UK compared to Saudi Arabia and significant knowledge increase post-training	Discuss community characteristics, society and cultural characteristics as risk factors	Introduction of the programme to undergraduates and comprehensive multi-agency training
(Shapiro, Anderson, & Lal, 2014)	USA	Under-graduate online training programme	Interactive online module with text, images and activities on CAN recognition and reporting	Anonymous pre- and post-training survey	Significant knowledge improvement post-training and high engagement and resource usefulness	-	Combining online training with advanced lecture formats and developing new e-learning strategies
(Ivanoff & Hottel, 2013)	USA	Under-graduate training programme	Multidisciplinary, hybrid curriculum with traditional problem-based, experiential and reflective learning activities (including actor role-plays)	-	-	Emphasise understanding professional and ethical duties through multidisciplinary learning and advocates multidisciplinary problem-based learning	Implementation of community framework for prevention and treatment strategies
(Harris et al., 2011)	UK	Continuing education resources	Handbook and website on child protection awareness, responsibilities, mechanisms to respond and strategies to make organisational changes	Anonymous post-training survey	Improved personal, team and group knowledge of child protection and established child protection leaders and policies; positive feedback on educational resources; and proactive arrangement of further training	Focus on identifying local contacts for advice and referral	Regular updates for additional content and increased availability of resources
(Goldie, 2011)	USA	Continuing education programme	The PANDA education programme (various PANDA coalitions across 44 states and seven countries) designed to help health and social practitioners recognise and respond to signs of abuse and neglect	-	-	-	-

TABLE 2 (Continued)

Source citation	Location	Key approaches	Descriptions of key approaches	Data collection method	Findings	Discussions on interdisciplinary collaboration or efforts to address equity or culture	Recommended improvements on key approaches
(Brown, 2010)	USA	Continuing education programme	Training PANDA educators in each region on how to identify signs of abuse and report suspicions	Anecdotal narrative	Positive feedback from a PANDA educator on supporting other clinicians	-	Expansion of training programme
(Harmer-Beem, 2005)	USA	Continuing education programme	Training using the PANDA Coalition of Maine and the University of Minnesota’s Family Violence training model: An Intervention and Training Model for Dental Professionals	Anonymous pre- and post-training survey	Increased self-perceived knowledge and likelihood of reporting post-training	-	Reinforcement of the need for adequate training and seek continuing education courses in abuse recognition and reporting
(Chaffin & Richter, 2002)	USA	Training programme for military personnel	One-hour seminar on the PANDA training module, focusing on recognition, documentation and referral of CAN cases within the Army Dental Care System	Anonymous pre- and post-training survey	Increased awareness of the issue and the Army regulations post-training	-	Additional training on Army regulations governing abuse and neglect
(Welbury et al., 2001)	UK	Online continuing education programme	computer-assisted learning programme with interactive tutorials, multiple-choice questions and feedback focused on physical child abuse signs	Pre- and post-training survey	Significant post-training improvements in knowledge and clinical recognition of non-accidental injury	Includes a ‘Cultural’ tutorial, specifics not detailed	Cost-effectiveness evaluation

face-to-face training modules (Shapiro, Anderson, & Lal, 2014) and regular updates to include additional resources (Harris et al., 2011) were suggested to ensure that training effectively addresses new challenges and insights into CAN and remains current.

Practical guidelines on child protection responses

Dental-specific practical guidelines on child protection responses were a common theme to enhance the responsiveness of OHPs in child protection responses (Table 3). Many sources provide comprehensive definitions of different types of abuse (Balmer, Gibson, & Harris, 2010; Harris & Welbury, 2013; Nagelberg, 2015; Offen, 2021; Riley & AlQahtani, 2020; Yellen, 2009). Riley & AlQahtani (2020) discussed how cultural and religious differences can influence definitions of CAN, which can result in varying perceptions among caregivers and OHPs regarding what constitutes abusive or neglectful behaviours. Elements of interdisciplinary collaboration to provide integrated support to children and their families were evident in many guidelines (Balmer, Gibson, & Harris, 2010; Offen, 2021; Park, 2015). Balmer, Gibson, & Harris (2010) recommended how to respond when OHPs consider the possibility of neglect (i.e., looking for other alerting features, discussing with other OHPs and collaborating with other agencies or disciplines) and when they suspect it (i.e., refer to children’s social care). Furthermore, some authors introduced the concepts of preventive dental team management and preventive multi-agency management. Preventive dental team management

TABLE 3 Summary of ‘practical guideline on child protection responses’ theme.

Source citation	Location	Key approaches	Descriptions of key approaches and relevant findings	Discussions on interdisciplinary collaboration or efforts to address equity or culture	Recommended improvements on key approaches
(Offen, 2021)	UK	Practical guideline	Detailed definition of safeguarding, types of abuse, prevalence statistics, and an overview of the referral process with a supplementary checklist to reduce barriers in practice, such as appointing a safeguard lead, updating policies and enhancing documentation and training	Refer to the Multi-Agency Safeguarding Hub which coordinates referrals for children and adults	Regular training to improve familiarity with the safeguarding procedure
(Riley & AlQahtani, 2020)	USA	Practical guideline	Different types of abuse with physical and behavioural indications and outlines reporting processes and emergency situations, highlighting the importance of confidentiality when a child discloses abuse	Discuss cultural differences in defining CAN	Training on office protocols, action plans and improving knowledge of relevant laws
(Nagelberg, 2015)	USA	Educational supplement with practical guideline	Definitions and signs of different types of abuse, factors associated with abuse, legal requirements and practical guidelines on what to do when suspecting CAN and how to file a report with post-educational assessment	Discuss engaging with local Child Welfare Services	Additional support to improve training
(Park, 2015)	UK	Practical guideline with case studies	Practical guideline with three case studies - witnessed assault, dental neglect and dealing with aggressive patients, emphasising preventive care and preventive multi-agency management and effective communication	Focuses on engaging with other professionals like health visitors and social workers to collaborate on preventive measures and plans	More use of scenarios within the module for training
(Harris & Welbury, 2013)	USA	Practical guideline	Different types of abuse and observations to note, with questions that practitioners can ask when suspecting child physical abuse. Also refers to the manual “Child Protection and the Dental Team”	Involves seeking advice from Health Boards’ Child Protection Advisors and local Child Protection Teams	-
(Kvist et al., 2012)	Sweden	Practical guideline analysis	Public dental service guidelines on handling suspected child abuse, neglect or dental neglect and management routines for children with repeated missed dental appointments - variation in management strategies across departments noted	Discuss engaging with social services	Educational activities to further develop awareness of guidelines and cooperation with the social services
(Balmer, Gibson, & Harris, 2010)	UK	Practical guideline with case studies and professional obligation analysis	Analysis of two national guidelines produced by the National Institute for Health and Clinical Excellence and the British Society of Paediatric Dentistry, providing evidence-based recommendations and case studies on preventive and referral strategies for child neglect and emphasising preventive dental team management, prevent multi-agency management and child protection referral	Discuss preventive dental team management - using resources with the dental team to support families to overcome difficulties in accessing care (social inequity), preventive multi-agency management (inviting health and social practitioners to seek help and provide a joint plan to support families)	Interdisciplinary collaboration and tailoring interventions that work for the child and the family

TABLE 3 (Continued)

Source citation	Location	Key approaches	Descriptions of key approaches and relevant findings	Discussions on interdisciplinary collaboration or efforts to address equity or culture	Recommended improvements on key approaches
(Yellen, 2009)	USA	Practical guideline with case studies	Professional obligations to document and report suspected cases, including definitions of different types of abuse, information for documentation and differences in mandatory reporting regulations between states	References to the Child Welfare Information Gateway Mandatory Reporters of Child Abuse and Neglect website	-

involves using the resources of the dental team to overcome difficulties in accessing care. Preventive multi-agency management involves inviting other professionals to collaborate and create a joint plan for the child’s well-being. These approaches are promoted as supportive interventions, focusing on early prevention and support rather than directly referring cases to child protection statutory agencies (Balmer, Gibson, & Harris, 2010; Park, 2015). The concept of interdisciplinarity is repeated in different themes, which signifies its importance in CAN responses. Kvist et al. (2012) audited the practical guidelines of public dental services to see how suspected CAN and repeatedly missed dental appointments are managed by surveying public dental clinicians and department heads. Most clinics had guidelines, but some department heads were unaware of them, and 64% of department heads requested additional educational support to develop further awareness of guidelines for implementation and cooperation with social services (Kvist et al., 2012). Multiple sources recommended training and educational activities to increase awareness and implement practical guidelines for daily practices (Kvist et al., 2012; Nagelberg, 2015; Riley & AlQahtani, 2020).

Analysis of legal and professional obligations

Across the sources, analysing legal and professional obligations was identified as a common theme (Table 4). One source analysed legal and professional standards from four countries: Croatia, the UK, Canada and Italy (Cukovic-Bagic et al., 2013). Some countries (Croatia, Canada and Italy) mandate OHPs to report suspected CAN cases, whereas the UK does not mandate OHPs to report concerns (Cukovic-Bagic et al., 2013). Each country had specific legal requirements and ethical codes, but all emphasised the responding obligations rather than diagnosing CAN. Different countries had unique supportive networks and resources available to assist OHPs in collaborating and responding adequately to CAN cases (Cukovic-Bagic et al., 2013). Harris and co-authors (2018) analysed existing evidence and expert consensus from the UK. Legal and professional obligations emphasised the importance of putting systems in place to safeguard children. Responses were divided into three levels: preventive dental team management (focusing on relief of pain and other dental symptoms followed by offering adequate social and health support); preventive multi-agency management (seeking parental consent to consult other professionals to provide joint support); and child protection referral (immediate referral to child protection agencies for significant harm or risk) (Harris, Balmer, & Sidebotham, 2018). Lastly, Katner & Brown (2012) indicated that a failure to report suspected child abuse in the USA may result in the imposition of criminal sanctions, highlighting professional obligations to report CAN. They advocated for an interdisciplinary approach that involves collaborating with state child protection agencies and authorities, which could enhance the responsiveness of OHPs (Katner & Brown, 2012).

DISCUSSION

To our knowledge, this is the first review to map and synthesise approaches to enhance responsiveness in child protection utilised by the international dental community. One of the central findings of this scoping review was the continuous effort to protect children from potential and actual harm. All approaches aimed to enhance the responsiveness of OHPs by increasing awareness, educating them on how to detect and/or guiding them on how to prevent CAN and respond to suspected cases. Educational programmes with mixed-delivery modes, such as online courses, face-to-face seminars and training series, were readily used to educate clinicians and undergraduate students. Training significantly increased their knowledge of CAN and/or improved their attitude to be responsive to CAN issues (Al-Dabaan, 2014; Chaffin & Richter, 2002; Harmer-Beem, 2005; Harris et al., 2011; Shapiro, Anderson, & Lal, 2014; Welbury et al., 2001). However, most training programmes evaluated their impacts immediately after training, with long-term

TABLE 4 Summary of ‘analysis of legal and professional obligations’ theme.

Source citation	Location	Key approaches	Descriptions of key approaches	Discussions on interdisciplinary collaboration or efforts to address equity or culture	Recommended improvements on key approaches
(Harris, Balmer, & Sidebotham, 2018)	UK	Analysis of existing evidence and expert consensus on legal and professional obligations	Definitions of different types of abuse, including dental neglect, with methods to identify and respond and emphasise the need for systems to safeguard children, focusing on preventive dental team management and multi-agency management, including collaboration with other professionals	Highlight the importance of coordination and support between professionals to address child protection concerns (preventive multi-agency management)	Regular training and improved treatment provision strategies incorporating interdisciplinary approaches
(Cukovic-Bagic et al., 2013)	Croatia, UK, Canada and Italy	Analysis of legal and ethical standards	Review of mandatory reporting obligations and the protection of vulnerable groups across different countries, including each country’s specific legal requirements and the ethical codes emphasising responding rather than diagnosing abuse	References additional support available in each country for collaboration	Calls for greater international consensus on CAN-related legislations and additional training at undergraduate and postgraduate levels
(Katner & Brown, 2012)	USA	Analysis of criminal and civil status	Legal requirements to protect children from CAN, including the implications of failing to report, incorporating the American Dental Association Principles of Ethics and Code of Professional Conduct and highlighting professional obligations to report CAN	Emphasise the need for collaboration with state child protection agencies and authorities, incorporating interdisciplinary approaches	Increasing dental professionals’ awareness and compliance with updated state-specific information on reporting procedures

benefits and impacts unknown. Furthermore, training programme evidence often relied on test scores or self-perceived knowledge and awareness (Chaffin & Richter, 2002; Harmer-Beem, 2005; Harris et al., 2011; Shapiro, Anderson, & Lal, 2014; Welbury et al., 2001). While evidence-based test scores or self-perceived perceptions of knowledge and awareness remain important, comprehensive evaluation of changes in OHPs’ practices is limited. In Al-Dabaan (2014), 27.4% indicated that they had reported a suspected case in the last month since the training. The interactivity of training programmes has become a common theme, especially in recent years. Interaction with other learners, facilitators and other disciplines has made it more engaging for some educational programmes (Al-Dabaan, 2014; Shapiro, Anderson, & Lal, 2014). Moving away from traditional lecture-style delivery can be beneficial in the sense that it allows OHPs to connect with others, share their own experiences of responding to CAN and build a supporting network. Integrating professionals from related fields into interactive training programmes could enhance interdisciplinary understanding and collaboration. This approach would provide a more comprehensive perspective on child protection, allowing oral health practitioners to better understand their role within the broader child protection system.

Multiple practical guidelines tailored to specific local dental environments and incorporating local support mechanisms were available to OHPs at both personal and organisational levels (Balmer, Gibson, & Harris, 2010; Harris & Welbury, 2013; Offen, 2021). However, rigorous evaluation of these guidelines was lacking, as most sources were discussion papers or descriptive studies. Many of these guidelines served as educational supplements or signposts, aiding OHPs in understanding their roles and the response strategies available within their communities (Balmer, Gibson, & Harris, 2010; Harris & Welbury, 2013; Nagelberg, 2015; Offen, 2021; Park, 2015). This was also highlighted in international legal and ethical standards (Cukovic-Bagic et al., 2013). Notably, some guidelines have effectively employed case studies to provide relatable scenarios that help contextualise theoretical knowledge into everyday practice (Balmer, Gibson, & Harris, 2010; Park, 2015). The lack of rigorous evaluation suggests a need for future research to focus on assessing the effectiveness and impact of these guidelines in actual practice settings.

Another review finding underscores the significance of preventive approaches, highlighting the dental community’s proactive shift towards early intervention and comprehensive care. Various strategies, including practical guidelines

(Balmer, Gibson, & Harris, 2010; Park, 2015), and a legal analysis document (Harris, Balmer, & Sidebotham, 2018), introduced preventive care and preventive multi-agency management approaches to support children and families to receive adequate dental care, overcome any difficulties in accessing oral health care, and provide joint support with other health and social practitioners to prevent CAN or intervene at the earliest instances. An element of the multidisciplinary approach was also embedded in the educational framework designed by Ivanoff & Hottel (2013). OHPs are not experts in responding to CAN, underscoring the importance of closely collaborating with child welfare professionals (Bradbury-Jones et al., 2021). This element of multidisciplinary and interdisciplinary connection and cooperation was a shared idea across different themes, highlighting its significance in enhancing the responsiveness of OHPs and other professionals involved in child protection. Collaborative approaches ensure that OHPs can contribute effectively to multidisciplinary and interdisciplinary approaches and safely address potential concerns with families in a coordinated and coherent way. OHPs can provide specific dental expertise while relying on broader insights and skills of social workers, paediatricians, and other specialists. This mutual exchange of expertise can be further enhanced through joint training programmes and the development of comprehensive, multi-agency response protocols. The combined efforts of these diverse professionals help create a safety net that can more effectively identify, prevent and intervene in cases of CAN at an early stage. By adopting such interdisciplinary approaches, the strategies outlined in this review become more applicable and valuable to a wider range of professionals involved in child protection, potentially leading to more holistic and effective interventions.

When addressing CAN, it is crucial to consider global cultural contexts as different cultures have varying definitions of parenting and disciplinary practices (Lansford et al., 2015; Nadan, Spilsbury, & Korbin, 2015). Recognising the cultural background of each family is essential for OHPs to respond effectively to any suspected case. Unfortunately, the emphasis on cultural influences appears limited in the reviewed sources. Al-Dabaan (2014) noted community characteristics, society and cultural traits as potential factors influencing CAN. However, other training programmes either lack a component addressing cultural influences or fail to describe it explicitly within their texts. Furthermore, the association between social and healthcare access inequities and CAN is widely recognised (Featherstone et al., 2019; Hunter & Flores, 2021). However, current approaches do not focus on highlighting the importance of not solely blaming the family but rather attempting to provide adequate support to children and families. Greater emphasis on integrating cultural and equity elements into current approaches should be placed to enhance OHPs' awareness and ability to deal with CAN in a culturally competent manner, taking into account the broader social and cultural factors that influence child welfare. Additionally, it is important to address the potential for bias in reporting. Cultural misunderstandings or lack of awareness can lead to the misidentification of certain behaviours as neglect or abuse when they may be culturally normative practices. This underscores the need for comprehensive training that includes cultural sensitivity and awareness to mitigate biases and ensure fair and accurate responses to CAN cases.

STRENGTHS AND LIMITATIONS

This review followed the widely used JBI scoping review guideline process, ensuring that the review was thorough and replicable. The review adopted a comprehensive and methodological search strategy and a data extraction protocol. All search and data extraction steps were piloted by the research team, and the eligibility criteria were updated to clarify the specific inclusion and exclusion parameters and ensure that the sources included were comprehensively addressed. The eligibility criteria were updated to clarify the specific inclusion and exclusion parameters, ensuring that the included sources comprehensively addressed the research question. The search strategy also included multiple databases and a broad grey literature search to identify any sources related to the research topic. Another strength is that data selection and extraction were conducted independently by two reviewers, and any discrepancies were discussed by the research team, ensuring that all citations and sources were correctly accounted for during the process.

One study limitation was the absence of a quality appraisal of the included sources because it aimed to map approaches to enhance responsiveness in child protection. Thus, we were unable to comment on the robustness or rigour of the sources (Brown, 2010; Goldie, 2011; Yellen, 2009). Secondly, some sources with no or limited descriptions of the approaches taken to enhance the responsiveness of OHPs were excluded, as they had limited ability to answer the research questions. The excluded sources may have offered insights into alternative approaches or highlighted areas in need of further investigation. Thirdly, the definitions of the current strategies and the included types of sources were very broad, which widened the scope of this review. Having different types of sources (e.g. discussion papers, quasi-experimental studies, legal analysis) brought diversity in perspectives but also introduced heterogeneity in study designs, methods and outcomes. This variability may have affected the consistency and comparability of the findings. Despite these challenges, the broad scope of this study enabled the identification of three key themes, providing a rich, multifaceted understanding of the strategies used in the field. A focused review of each theme is recommended to explore specific aspects in greater detail, which will enhance our understanding of the nuances and effectiveness of various

strategies. Finally, the review only considered sources in English, which primarily identified sources from Western countries. This language limitation may have excluded relevant research and viewpoints from non-English speaking regions, potentially missing important cultural perspectives.

A limitation of the included sources is that some did not provide comprehensive descriptions of strategies, potentially omitting critical details such as elements of interdisciplinary collaboration or initiatives addressing cultural aspects and health and social equity issues. For example, Welbury and co-authors (2001) had a chapter on the cultural aspect of their online training programme, however, the details of its contents and the integration with the rest of the programme were absent. This incomplete description may hinder a full understanding of the strategies' scope and impact, underscoring the need for more detailed reporting in future research to capture these essential dimensions.

RECOMMENDATIONS FOR FUTURE STUDIES

Considering the review's aim of mapping current approaches and identifying the main themes, a targeted exploration of each identified theme would be beneficial, particularly in the context of interdisciplinary collaboration. This would allow for a deeper understanding of specific areas and potentially uncover the details and complexities that a broad review might miss. Detailed investigations of each theme could reveal insights into their practical applications in various dental and educational settings, as well as in other professional contexts involved in child protection, such as health-care, social services and law enforcement. These applications are essential for developing more effective interdisciplinary strategies in the field. There is a notable need for evaluative studies that assess the effectiveness and long-term impacts of practical guidelines, educational programmes and interdisciplinary service delivery currently in use. It is critical to promote interdisciplinary learning and clarify how OHPs and other professionals can actively contribute to the broader health and social care system for child protection. Prioritising interdisciplinary cooperation and interconnection would be vital to support children and their families when addressing child safety concerns. Future research should explore how collaborative models can enhance child protection efforts. Such studies would provide valuable feedback on the utility and adaptability of these strategies, potentially leading to better approaches that enhance the responsiveness of not only OHPs but also other relevant professionals involved in child protection. This research could also improve the understanding of diverse cultural and socioeconomic contexts related to CAN to develop more culturally safe and equitable practices across disciplines.

CONCLUSION

This scoping review mapped and synthesised various approaches the international oral health community utilises to enhance responsiveness in child protection. It has revealed ongoing efforts to educate and prepare OHPs through diverse educational methods, practical guidelines and professional standards and obligations tailored to local needs. However, the review also highlights gaps, particularly in the long-term evaluation of these approaches and in integrating cultural and social factors. The findings highlight the need for rigorous evaluative studies to assess the practical effectiveness and sustainability of the identified strategies. By addressing these gaps, future initiatives can be better designed to provide OHPs with the evidence-based knowledge and tools needed to respond effectively to CAN in a culturally sensitive manner, ultimately enhancing the safety and well-being of children worldwide.

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CONFLICT OF INTEREST STATEMENT

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ETHICS AND INTEGRITY STATEMENT

This scoping review was conducted as a synthesis of existing literature and did not involve new data collection with human participants; therefore, it did not require approval from an ethics review board. The data that support the findings of this study are available on request from the corresponding author.

INFORMED CONSENT

As this study is a scoping review based on previously published literature, informed consent from direct participants was not applicable.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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