

Dentistry Students' Knowledge of Pediatric Patients Who Suffered Violence: A Systematic Review

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ABSTRACT

Objective: To review the literature unprecedentedly to identify the dentistry students' knowledge of pediatric patients who suffered violence. **Material and Methods:** A systematic review was conducted using PubMed, Web of Science, LILACS, SciELO, Google Scholar, and OpenGrey electronic databases up to November 2021. The "Grey Literature" was verified through Google Scholar and Open Grey searches to avoid any selection bias. There was no restriction on the date of publication or language. **Results:** The systematic search yielded 2.756 studies in the first selection phase, but only twenty-two articles were included. All selected articles were published between 1998 and 2021 and used a questionnaire to evaluate the dentistry students' knowledge regarding child maltreatment cases. Brazil was the country that had the most studies included (10 articles). Despite the majority of the students presenting insufficient knowledge about child maltreatment, evidence from this research showed that every form of approach by professionals toward child maltreatment should be considered important. **Conclusion:** Therefore, there are deficiencies regarding the teaching-learning methodology, reinforcing the need for improvements in Dentistry undergraduate curricula.

Keywords: Child Abuse; Students, Dental; Violence; Education, Dental; Study Characteristics.

Introduction

According to the World Health Organization, the term "child and adolescent mistreatment" is determined by the violence that happens to a person under 18 years old. It encompasses all types of physical or emotional punishment, sexual misuse, neglect, negligence, and commercial or other exploitation, which produces actual or potential harm to the kid's health, survival, development, or dignity in the context of a relationship of responsibility, trust or power and implicates any action or omission that impairs the child's well-being, physical or psychological integrity or freedom and the right to complete outgrowth [1]. Violence against children can be committed outside or within the home ambiance [2,3]. The violent actions are often performed by family members, who are generally considered the child's protective agents. Such type of family violence tends to go unnoticed, and one of the reasons for that is the victim's fear of denouncing the abuser and, thus, to undergo retaliations at home [4].

Child and adolescent maltreatment is a significant public health problem. Yet, a gap in understanding its serious lifelong results and the cost and burden on society has hampered investment in prevention programs [5-7]. To effectively respond to the question, the World Health Organization report on the prevention of child maltreatment recommended expanding the scientific evidence base for the magnitude, consequences, and preventability of child violence [8]. The relationship between child sexual abuse and adverse psychological effects in adults is well established [9]. Maltreatment of children most often results in traumas with cognitive, behavioral, and emotional sequelae that can be prolonged for life [10,11].

In situations of violence, dentists are in a prerogative position to recognize possible victims due to the frequent involvement of orofacial structures [12,13]. Furthermore, the attendance frequency during the dental treatment is another point to contribute, as it enables the dentist to approach the patient and their family, helping to identify behaviors and physical injuries resulting from aggression against the child [13,14].

Faced with the exposed reality, a university education is considered of fundamental relevance, as reflected in the professionals' education and attitudes. The dentist must have skills and competencies, such as identifying dental negligence, suspecting physical, sexual, and psychological violence, and detecting the aggressors' possible characteristics. These actions should be part of the role of a health professional, within the perspective of integral attention to the patient's needs [15].

Thus, given the importance of the present subject and the scarcity of systematic reviews on child abuse in dentistry, the present article proposes to systematically review the literature to identify the dentistry students' knowledge of pediatric patients who suffered violence.

Material and Methods

A systematic review was carried out to identify publications about the perception, knowledge, and attitude of undergraduate dentistry students concerning situations of abuse in childhood.

This article aimed to answer the following research question: "What is the knowledge of undergraduate dentistry students regarding the situations of punishment against childhood?". The research guiding question was constructed using the following strategy: Population – Dentistry Students; Outcome – knowledge of dentistry students' conduct in treating abused patients. Secondary outcomes comprise the diagnostic ability of dental undergraduate academics to identify victims of abuse and their perceptions regarding the referral of the situations of child abuse to the appropriate authorities/agencies.

This study was described following the PRISMA guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) for systematic reviews [16] and was registered on the PROSPERO (International Prospective Register of Systematic Reviews) platform with protocol number [removed for anonymous peer review].

Search Strategy

The bibliographic research was conducted between 22 November 2016 and 17 November 2021 to analyze the most recent evidence. Searches using the MeSH (Medical Subject Headings) terms were conducted using synonyms and combinations of the following search terms: "dentists," "dentistry," "students, dental," "child abuse," and "violence" (Table 1). In addition to the electronic search, an analogical search was carried out in the bibliographic references of the selected articles. The merging of searches and removal of duplicate articles was performed in the Rayyan QCRI software (<https://www.rayyan.ai/>).

Table 1. These are the terms used in the search strategy in PubMed (MedLine).

Search	Terms Used
	Search #1 AND #2
#2	"Child abuse"[MESH] OR "Child abuse" OR "Abuse, Child" OR "Abuses, Child" OR "Child Abuses" OR "Child Neglect" OR "Neglect, Child" OR "Child Maltreatment" OR "Maltreatment, Child" OR "Child Mistreatment" OR "Mistreatment, Child" OR "Violence"[MESH] OR "Violence"
#1	"Dentists"[MESH] OR "Dentist" OR "Dentistry" OR "Odontology" [MESH] OR Students, Dental [MESH] OR "Dental Students" OR "Student, Dental" OR "Dental Student"

Databases

A systematic review was performed in the following electronic databases: PubMed, Web of Science, Scopus, LILACS, SciELO, Google Scholar, and OpenGrey. The "Grey Literature" was verified through Google Scholar; only the first 200 results were assessed, excluding patents and citations. The list of references for each article was also evaluated.

Inclusion and Inclusion Criteria

The inclusion criteria were no restrictions for date of publication and language. Cross-sectional (observational) studies were used to evaluate the perception, knowledge, and attitude of dental undergraduate students regarding cases of violence against children. The exclusion criteria were case reports, pilot studies, revisions of narrative literature, letters to the editor, books, book chapters, course papers, and studies not performed with undergraduate dental students.

Selection of Studies

The review was developed by two participants who independently applied the same criteria in the article screening. When it was impossible to reach a consensus about the inclusion or exclusion of an article, such conflict was analyzed with a third coworker.

Firstly, a screening was performed by reading the titles and abstracts, followed by the total reading of the pre-selected papers. Studies whose abstract was not available but the title suggested any relationship with the inclusion criteria of the present research were also selected for full reading.

In cases where the selected article was not fully available on the Internet, it was requested via e-mail from the corresponding author of the study in question. Also, these papers were requested from the library of the [removed for anonymous peer review]. The study was removed from the review when these location alternatives were inadequate.

Extraction of Data

An Excel spreadsheet (Microsoft Corporation, Redmond, WA, USA) was used to extract data into the included articles. Studies were categorized according to the following items according to Tables 2 and 3: Table 2: Author publication, country of research, publication's year, sample, gender of participants, age of participants, and university period of participants; and Table 3: Author, diagnosis, perception, and undergraduate level information.

Bias Risk Evaluation

The risk of bias in the included articles was verified following the instrument for non-randomized studies of interventions ROBINS-I [17] to avoid overestimating the results of the selected studies. The coworkers elected independently included articles and solved the unconformities by reciprocal consulting. This assessment was performed similarly to the study by Schmid et al. [18].

Statistical Analysis

The selected information was evaluated by the descriptive statistics indicating the values of the study variables.

Results

Search Details

The systematic search resulted in 2,756 studies in the first selection phase. A total of 1,974 studies remained after removing duplicates. One thousand nine hundred and forty (1,938) were subsequently excluded for different reasons for not meeting the inclusion criteria. The leading cause was studies that were not performed with undergraduate dental students.

Thirty-six potentially relevant studies were selected for full reading, of which 14 were excluded, 3 for not specifying the sort of abuse and maltreatment [19-21], 1 evaluated the teaching mode in cases of child abuse [21], 4 assessed the knowledge regarding cases of domestic violence [22-24], 2 of them were with dentists that had already graduated in Dentistry [24,25], 1 in the study with Dentistry resident students [26], one letter to the editor [27], one systematic review article on dentists knowledge about cases of domestic violence against children [28] and 1 study assessed or students facing ethical troubles, not specifying the kind of abuse [29]. Therefore, just 22 articles were included in this review (Figure 1).

Study Design and Characteristics

Data for the included articles are reported in Table 2. All the articles were published between 1998 and 2021. All the studies applied a questionnaire to evaluate the knowledge, perception, and attitudes of undergraduate dentistry students, most between the eighth semester and the end of the course, regarding cases of child maltreatment. According to Table 2, Brazil is the country with more selected articles, 10 of them. In addition, Table 3 summarizes the main results of the studies.

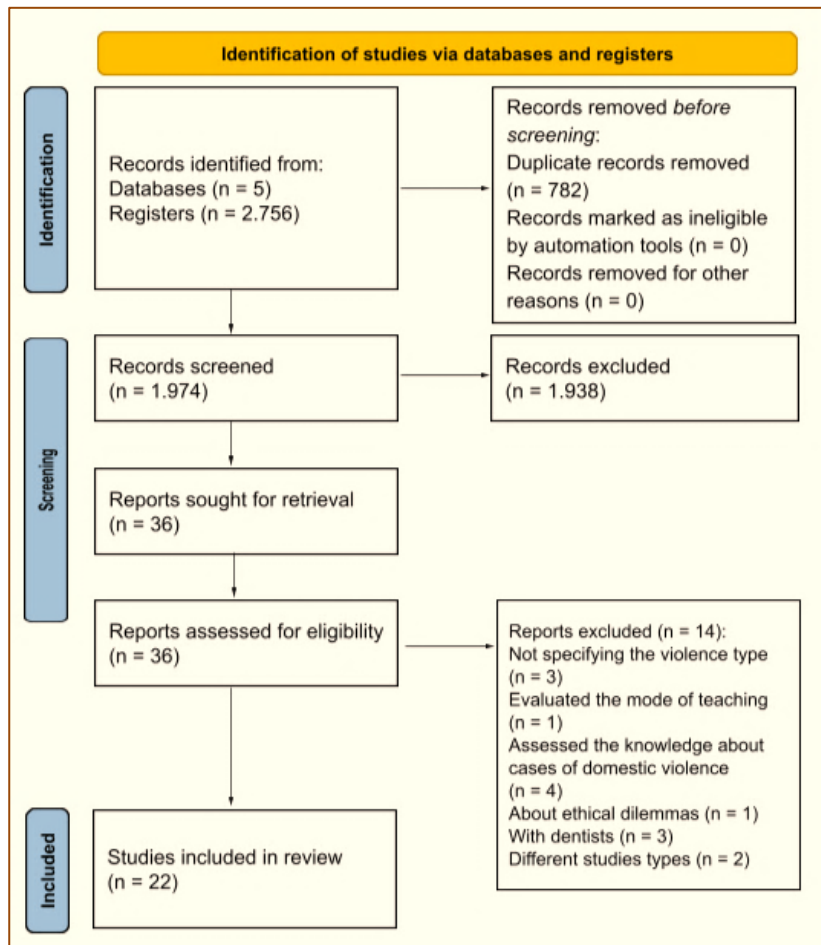


Figure 1. Diagram of the studies selection process according to PRISMA guidelines.

Risk of Bias within Studies

The risk of bias judgments in ROBINS-I, including pre-, at-, and post-intervention domains, are depicted in Table 4. Twenty-two non-randomized studies were evaluated to have an overall serious risk of bias. The domains with the majority that presented a severe risk of bias were confounding, as were the selection of participants and the selection of reported results. Also, almost all the authors did not report clearly the issue of missing data on results.

Effect of Interventions

Knowledge, Diagnosis, and Perceptions:

The majority of the students showed insufficient knowledge about child and adolescent maltreatment. Concerning the diagnosis, almost all the articles presented that the students know that the dentist has the legal responsibility to report cases of abuse, but not all the students thought they were able to diagnose situations and conduct them properly.

Regarding the students' perceptions, the outcomes of the studies are divergent; in some places, the scholars have demonstrated the knowledge of where the complaint is made, and in others, the insufficiency of teaching in this area was evident. Of the studies assessed, not all the students had contact with this field at the undergraduate level. However, some of them are at the beginning or half of their undergraduate level, so it is possible to have this content at the end of the course. Also, it is relevant to point out that in all the research, the students showed a desire to obtain more knowledge regarding the subject.

Table 2. Demographic data of included studies.

Author	Country	Year	Sample Size	Genus	Age	University Period
Jesse and Martin [30]	EUA	1998	221 Students	55.2% - male and 44.8% - female	Not reported.	1th to 4th year
Thomas et al. [31]	EUA	2006	309 Students	<ul style="list-style-type: none"> ▪ 3th year: 50.2% - female and 49.8% - male ▪ 4th year: 100% - female 	Not reported.	3th and 4th year
Carvalho et al. [32]	Brazil	2006	150 Students	70% - female and 30% - male	84% - among 20 and 24 years	7th to 10th semester
Josgrilberg et al. [33]	Brazil	2008	74 Students	Not reported.	Not reported.	4th year
Al-Jundi et al. [34]	Jordan	2010	383 Students	63.3% - female and 36.7% - male	82.5% - < 25 years 15.4% - among 25 and 35 years 2.1% - > 35 years	4th and 5th year
Gomes et al. [35]	Brazil	2011	91 Students	57.1% - female and 42.9% - male	64.1% - 21 to 24 years	4th and 5th year
Serpa and Santos [36]	Brazil	2011	61 Students	<ul style="list-style-type: none"> ▪ 6th semester: 51.6% - female and 48.4% - male ▪ 10th semester: 76.7% - female and 23.3% - male 	19 to 29 years: 6th semester - 22 years average 10th semester - 23.3 years average	6th and 10th semester
Sousa et al. [37]	Brazil	2012	59 Students	55.9% - female and 44.1% - male	93.2% - 20 to 29 years 6.8% - 30 years or more	9th and 10th semester
Jordan et al. [38]	Croatia	2012	544 Students	71.9% - female and 28.1% - male	Not reported.	1th to 6th year
Wacheski et al. [39]	Brazil	2012	96 Students	72% - female and 28% - male	Not reported.	3th to 5th year
Matos et al. [40]	Brazil	2013	77 Students	> 60% - female and > 10% - male	Not reported.	7th and 8th semester
Hashim and Al-Ani [41]	United Arab Emirates	2013	578 Students	76.6% - female and 23.4% - male	89.1% - < 25 years 10.4% - among 25 and 35 years 0.5% - > 35 years	4th and 5th year
Vergara et al. [42]	Colombia	2014	208 Students	64% - female and 35% - male	13% - < 20 years 87% - 20 - 44 years	6th to 10th semester
Moura et al. [43]	Portugal	2015	40 Students	63% - female and 37% - male	Not reported.	1th and 5th year
Silva Júnior et al. [44]	Brazil	2015	100 Students	63% - female and 37% - male	33% - 19 to 21 years 57% - 22 to 24 years 10% - 25 years or more	5th to 9th semester
Bromdulu et al. [45]	Turkey	2016	248 Students	55.3% - female and 44.7% - male	Not reported.	3th to 5th year
Abreu et al. [46]	Brazil	2017	195 Students	72.8% - female and 23.6% - male 3.6% - not reported	Among 20 and 44 years 24.4 years average	6th to 9th semester
Busato et al. [47]	Brazil	2017	363 Students	73% - female and 27% - male	21.3 years average	1th to 10th semester
Al-Dabaan and Allam [48]	Saudi Arabia	2018	141 Students	<ul style="list-style-type: none"> ▪ 4th year: 47.9% - female and 52.1% - male ▪ 5th year: 46.7 - female and 53.3 - male 	Not reported.	4th and 5th year
Aziz et al. [49]	Malaysia	2020	140 Students	85.7% - female and 14.3% - male	21 to 23 years - 90% 24 to 26 years - 8.6%	3th to 5th year

Duman et al. [50]	Australia, Pakistan, Turkey, Jordan, the Turkish Republic of Northern Cyprus, Poland, the Republic of South Africa, Nigeria, Cambodia, and the United States of America	2021	660 Students	64.9% -female and 35.1% - male	27 years or above - 1.4% Not reported.	Final-year
Al-Ani et al. [51]	Germany	2021	181 Students	61.9% - female and 38.1% - male	60.2%: < 25 years 39.8%: > 25 years	3th to 5th year

Table 3. Summary of results of included studies.

Author	Knowledge	Diagnosis	Perception	Graduation Information
Jesse and Martin [30]	Not reported.	Not reported.	Most know that the dentist has a moral obligation to recognize and report cases of child maltreatment.	More than 60% of the students reported that the content needed to be improved.
Thomas et al. [31]	Seven point seven percent of the academics correctly described child and adolescent mistreatment, while the others gave a partially correct response to the same question.	<ul style="list-style-type: none"> The students had a low percentage of correct answers to questions about signs of violence. Dentistry students answered just 3.42 of the six questions correctly. 	The percentage of dental students who knew how to report all suspected cases of child and adolescent abuse/neglect (67.8%).	Every student reported that they had learned about child and adolescent abuse/neglect in the classroom setting.
Carvalho et al. [32]	Most of the students presented partial knowledge about the subject.	The majority of students cited physical injuries besides behavioral changes such as signs of mistreatment.	No student was able to inform the professional's conduct correctly.	<ul style="list-style-type: none"> Fifty-one point four percent had received information on this topic during the undergraduate course. Ninety-six percent would like to receive more information.
Josgrilberg et al. [33]	<ul style="list-style-type: none"> Twenty point nine percent know that the orofacial structures are the most affected region in the body by violence. Ninety-eight point four percent of them know the relevance of anamnesis and clinical examination to recognize situations of abuse. 	When examining the patient, 66.7% are worried only about the mouth.	Eighty-eight point seven percent would conduct the situation correctly, denouncing the Guardianship Council.	Not reported.
Al- Jundi et al. [34]	<ul style="list-style-type: none"> Most students know that the law in Jordan does not demand dentists to report these cases of abuse. Just 32.4% of students knew where to report child and adolescent mistreatment (Department of Family Protection) 	All students from both universities lack knowledge of indicators of diagnosis of mistreatment.	Ninety point one percent believed they had an ethical duty to report the trouble.	Eighty point two percent did receive insufficient training to recognize and report childhood mistreatment.
Gomes et al. [35]	Eighty-five point seven percent of students said being capable of defining child and adolescent mistreatment.	Ninety-one point two percent of the students answered that it is the	Fifty-nine point three percent said that they would be capable of	Thirty-four point one percent, 34.1%, had received information during the undergraduate program,

	<ul style="list-style-type: none"> ▪ Almost half of the students (49.5%) reported they knew the kinds of abuse. 	<p>professional's responsibility to diagnose these situations.</p> <ul style="list-style-type: none"> ▪ The majority would be able to diagnose cases of mistreatment (94.5%). 	<p>dealing with the detection of mistreatment.</p> <ul style="list-style-type: none"> ▪ About the conduct, the most frequently reported action was the complaint to the tutelary board / competent organ (83.3%) and questioning parents (29.6%). 	<p>and 19.4% of these said that the information was sufficient.</p> <ul style="list-style-type: none"> ▪ Ninety-five point six percent would like to receive more training on this topic.
Serpa and Santos [36]	<p>Eighty-six point nine percent of the students answered that they know how to define child abuse cases. The definition was considered adequate in 62.3% of the situations.</p>	<p>Ninety-six point seven percent answered that it is the dentist's responsibility to diagnose and report cases of abuse.</p>	<p>Forty-one percent would know how to act in the face of a suspicion of mistreatment, and nearly 60% would communicate to the Guardianship Council.</p>	<ul style="list-style-type: none"> ▪ Ninety percent of the students in the 10th period reported that the information received at graduation was insufficient. ▪ Eighty-six point seven percent would like to access more training.
Sousa et al. [37]	<ul style="list-style-type: none"> ▪ Seventy-nine point seven percent reported being able to define child maltreatment. ▪ Seventy-four point five percent defined "child maltreatment" incompletely. ▪ Forty-five point eight percent stated that they knew the types of maltreatment. 	<ul style="list-style-type: none"> ▪ Ninety-three point two percent believe that it is the responsibility of the dentist to recognize situations of abuse. ▪ Seventy-six point three percent would be capable of diagnosing signs of mistreatment. ▪ The majority answered correctly about the signs and symptoms of the mouth and body. 	<ul style="list-style-type: none"> ▪ Seventy-eight percent said that they would act in the face of detection of child and adolescent mistreatment. ▪ Eighty point four percent said there was a need to report to the competent organ. 	<ul style="list-style-type: none"> ▪ Eighty-nine point eight percent of the students reported receiving information about the topic during graduation. ▪ Eighty-one point four percent were interested in receiving more training.
Jordan et al. [38]	<ul style="list-style-type: none"> ▪ A gap in knowledge about abuse and neglect was identified between the students. ▪ Fifty-eight point six percent of academics answered the question about where to communicate a suspected case correctly. 	<p>The academics were not aware of some of the signs and symptoms of abuse.</p>	<ul style="list-style-type: none"> ▪ About the legal obligation to communicate cases, the correct answers ranged from 48.3% to 70.7%. ▪ More than 60% of the students were aware of the obligation to communicate suspected situations of abuse and neglect. 	<p>Sixty percent of all students faced situations of child abuse during the course and received information about the topic in detail.</p>
Wacheski et al. [39]	<p>Seventy-four percent of academics correctly answered the definition of maltreatment.</p>	<p>Seventy-one percent answered that they might know how to recognize, 4% said they would not, and 25% thought they could.</p>	<p>About which institution is responsible for suspected cases of mistreatment, 56% of the academics answered the Guardianship Council.</p>	<p>Not reported.</p>
Matos et al. [40]	<p>Forty-nine point three percent were unaware of the legal implications for professionals in situations of mistreatment.</p>	<p>Seventy-six point six percent felt trained to diagnose children and adolescents suffering from maltreatment.</p>	<ul style="list-style-type: none"> ▪ Ninety-three point five percent of students never suspected child maltreatment. ▪ Sixty-two point three percent reported being the Guardianship Council, the local, for denunciation. 	<p>Sixty-two point three percent of the academics learned about the topic under graduation in Legal Dentistry.</p>
Hashim and Al-Ani [41]	<ul style="list-style-type: none"> ▪ Eighty-seven point five percent know that professionals are legally required to communicate child and adolescent abuse. 	<ul style="list-style-type: none"> ▪ Seventy-eight point two percent know that repeated teeth injury that results in avulsion or discolored crowns may indicate repeated trauma from physical violence. 	<p>Not reported.</p>	<ul style="list-style-type: none"> ▪ More than three-quarters of the dental students reported that they learned about child abuse in their dental school.

	<ul style="list-style-type: none"> ▪ Thirty-six point two percent of the academics know where to communicate the abuses. 	<ul style="list-style-type: none"> ▪ Forty-six point four percent know that bruises noted around the neck are usually related to accidental trauma. 	<ul style="list-style-type: none"> ▪ More than 91% indicated that they did not receive enough formal training in recognizing and reporting child abuse.
Vergara et al. [42]	<ul style="list-style-type: none"> ▪ Ninety-six percent know about the obligation to communicate suspected cases. ▪ Seventy-three percent know where to report. ▪ Knowledge regarding the mistreatment was evaluated, resulting in a higher occurrence of acceptable results (60.1%) for psychological abuse and good (52.4%) for sexual abuse. 	<p>Identification of violent lesions associated with the dental office, obtaining the highest percentages in the presence of cheek bruises (94.2%), object burns (90, 8%), repeated lesions, and dental avulsion or fracture (89.4%).</p>	<p>Ninety-eight point five percent realize a connection between oral negligence and physical negligence.</p> <p>Fifty-seven point six percent believe they don't have enough knowledge on the topic. They believe that the question deserves more training.</p>
Moura et al. [43]	<p>Not reported.</p>	<ul style="list-style-type: none"> ▪ About the examination in cases of abuse, all students selected the "Intra and extraoral" option. ▪ Most students chose "head and neck" as the area most injured in these situations. 	<p>In a suspected mistreatment situation, most students would either warn the police or report the case.</p> <p>Forty-seven percent of 1st year and 60% of 5th year students reported receiving information during their undergraduate.</p>
Silva Junior et al. [44]	<p>The majority of academics showed poor knowledge regarding the concept of child and adolescent abuse.</p>	<p>The majority of academics mentioned physical injuries (bruises, wounds, marks on the body) together with behavioral changes as a sign of suspected mistreatment.</p>	<ul style="list-style-type: none"> ▪ Regarding the conduct in suspected cases, the academics could not inform the correct sequence of necessary procedures. ▪ Seventy-two percent would communicate the suspicion to Guardianship Council / Police. ▪ In a situation of abuse identification, 66% would not attend to the patient. <p>Seventy-four percent did not obtain information about the topic.</p> <p>More than 90% would like to receive information on identifying and referring suspected situations.</p>
Bromdulu et al. [45]	<ul style="list-style-type: none"> ▪ They reported deficiencies in the knowledge of signs and symptoms of child and adolescent abuse. ▪ Fifth-year academics demonstrated more knowledge about childhood mistreatment than third and fourth-year students. ▪ Thirty-seven point four percent of third-year academics, 43.5% of fourth-year, and 50% of fifth-year knew where to report abuse. 	<p>Not reported.</p>	<p>Most students were aware of their ethical responsibility for protecting the kids from abuse.</p> <p>Two point two percent of third-year, 13.3% of fourth-year, and 21.4% of fifth-year academics answered that they had formal training on the subject.</p>
Abreu et al. [46]	<ul style="list-style-type: none"> ▪ Seventy-four point four percent of students knew the agency or institution they could turn to communicate suspected situations of child abuse, and 28.2% would use more than one agency or institution to report this problem. ▪ Eighty-six percent of the participants identified fear as the main barrier to 	<ul style="list-style-type: none"> ▪ Three point one percent identified cases that involved orofacial trauma. ▪ 9th-period academics consider themselves more apt to diagnose than 7th-period students (p=0.008). ▪ The 6th-period academics were more willing to be involved in detecting child abuse than the 8th-period group period (p=0.013). 	<ul style="list-style-type: none"> ▪ Fourteen point four percent of academics said they had witnessed suspected situations of child abuse among their patients. ▪ Notification was made only by 5 (2.6%) students. <p>Eighty-nine point seven percent express interest in receiving training on identification mechanisms and notification of child abuse cases.</p> <p>Ninety-six point six percent believe these should be part of professional training courses.</p>

	notification, followed by insufficient knowledge (81.9%) and lack of confidentiality (62.3%).			
Busato et al. [47]	<ul style="list-style-type: none"> 3.3% of students correctly defined "Child Physical Abuse," 30.6% defined it incorrectly, 63.9% defined it incompletely, and 8% did not answer the question. Thirty-five point three percent claimed to know what the Child and Adolescent Statute was, 63.6% were not aware of it, and 1.1% did not answer this question. 	Eighty-six point eight percent feel able to identify child abuse, 11.8% do not feel able, and 1.4% did not respond.	Fifteen point seven percent of students from Lages and 27.6% from Vitória stated that they had witnessed such situations.	As for receiving more information on this subject, 95.1% answered yes, and only 4.9% answered no.
Al-Dabaan and Allam [48]	<ul style="list-style-type: none"> Seven point one percent have had previous training in child protection: 5.5% male students versus 9.0% females. Four point nine percent had training in the undergraduate, just 2.1% had attended a workshop, while only 2.8% had online training. 	Not reported.	Not reported.	Eight point four percent of dental students agreed that more training is required in this field.
Aziz et al. [49]	Dentistry journals hold the lowest outcome on how the academics know about the information relating to child and adolescent mistreatment (4.3 percent).	Seventy point seven percent were capable of diagnosing physical abuse between the child mistreatment.	<ul style="list-style-type: none"> Majority decided that they prefer to communicate the mistreatment to the police rather than the family, hospital, or social services. The hospital is the last place that the academics want to communicate abuse cases. 	<ul style="list-style-type: none"> More than 90% still needed formal training to handle this issue. Nearly 50% of the academics said they did not get the information from dental school, dentistry journals, and lectures.
Duman et al. [50]	<ul style="list-style-type: none"> Students' knowledge concerning childhood abuse has been verified as good (46.8%) / moderate (42.8%) / poor (10.3%). The knowledge was significantly higher in Australia, the United States, and Jordan than in other countries. Internet (60.3%) was commonly used as an information source. 	The majority of the students said that professionals should be legally responsible for communicating the abuses, and 95% agreed that health professionals should be trained in the management of child and adolescent mistreatment.	Most students agreed that the dentists who failed to communicate a suspected situation may have inadvertently enabled the patient to be continuously injured.	<ul style="list-style-type: none"> A total of 56% of the participants received formal training on childhood abuse. Eighty-six percent indicated a desire for more training in recognizing and reporting abuses.
Al-Ani et al. [51]	Some academics answered positively when asked whether a professional was legally required to communicate situations of mistreatment in Germany (72.4%).	Most of the academics were unable to recognize the signs and symptoms of physical abuse clearly.	Most agreed that professionals had an ethical obligation to communicate childhood mistreatment.	Nearly 95% of academics indicated that they have insufficient training regarding childhood mistreatment.

Table 4. Risk of bias judgments in non-randomized studies of interventions according to ROBINS-I.

Author	Confounding	Selection of Participants	Classification of Interventions	Deviations from Intended Interventions	Missing Data	Measurement of Outcomes	Selection of Reported Results	Overall
Jesse and Martin [30]	Serious	Serious	Low	Low	Low	Serious	Serious	SERIOUS
Thomas et al. [31]	Serious	Serious	Low	Moderate	Moderate	Moderate	Serious	SERIOUS
Carvalho et al. [32]	Serious	Serious	Low	Moderate	Not Informed	Serious	Moderate	SERIOUS
Josgrilberg et al. [33]	Serious	Serious	Low	Moderate	Not Informed	Moderate	Moderate	SERIOUS
Al- Jundi et al. [34]	Serious	Moderate	Low	Moderate	Not Informed	Moderate	Serious	SERIOUS
Gomes et al. [35]	Serious	Moderate	Low	Moderate	Low	Moderate	Serious	SERIOUS
Serpa and Santos [36]	Serious	Moderate	Low	Moderate	Low	Moderate	Serious	SERIOUS
Sousa et al. [37]	Serious	Serious	Low	Moderate	Not Informed	Serious	Serious	SERIOUS
Jordan et al. [38]	Serious	Serious	Low	Moderate	Not Informed	Moderate	Serious	SERIOUS
Wacheski et al. [39]	Serious	Serious	Low	Low	Not Informed	Serious	Serious	SERIOUS
Matos et al. [40]	Serious	Serious	Low	Low	Not Informed	Moderate	Serious	SERIOUS
Hashim and Al-Ani [41]	Serious	Serious	Low	Moderate	Not Informed	Moderate	Serious	SERIOUS
Vergara et al. [42]	Serious	Serious	Low	Moderate	Not Informed	Moderate	Serious	SERIOUS
Moura et al. [43]	Serious	Serious	Low	Moderate	Not Informed	Moderate	Serious	SERIOUS
Silva Junior et al. [44]	Serious	Serious	Low	Moderate	Low	Moderate	Serious	SERIOUS
Bromdulu et al. [45]	Serious	Serious	Low	Moderate	Low	Moderate	Serious	SERIOUS
Abreu et al. [46]	Serious	Serious	Low	Moderate	Not Informed	Serious	Serious	SERIOUS
Busato et al. [47]	Serious	Serious	Low	Moderate	Not Informed	Moderate	Serious	SERIOUS
Al-Dabaan and Allam [48]	Serious	Serious	Low	Serious	Not Informed	Serious	Serious	SERIOUS
Aziz et al. [49]	Serious	Serious	Low	Moderate	Not Informed	Moderate	Serious	SERIOUS
Duman et al. [50]	Serious	Serious	Low	Moderate	Not Informed	Serious	Serious	SERIOUS
Al-Ani et al. [51]	Serious	Moderate	Low	Low	Not Informed	Serious	Serious	SERIOUS

Low comparable to a well-performed randomized trial, Moderate sound for a non-randomized study, but not comparable to a rigorous randomized trial, Serious presence of essential problems, Critical too problematic to provide any valid evidence on the effects of intervention, Overall risk of bias equal to the most severe level of bias found in any domain.

Discussion

Despite the legal obligation to denounce situations suspected of violence against children and to be in a prerogative function to realize such situations, there are still many situations of under-reporting by health workers [52,53]. The obligatory inclusion of this topic in the curriculum of the Dentistry courses is primordial, thus enabling greater contact and the student's learning on the subject.

Besides the dental students' knowledge regarding situations of child mistreatment, some of them showed insufficient knowledge about the topic [32,35-38,42,43]. In the paper written by Gomes et al. [35], 85.7% of the academics reported being able to define a child's mistreatment. Among them, the most, 65.4%, defined it as completely correct. A similar outcome was found in the study by Serpa and Santos [36], in which 86.9% responded that they knew how to describe situations of childhood mistreatment. Still, the concept was considered adequate in 62.3% of the situations. In the investigation conducted by Sousa et al. [37], around 79% of the scholars reported being capable of defining correctly, although no one defined it correctly, and more than 70% defined it incompletely. Thus, it is essential to rethink academic methodologies to provide more education on child abuse in dental school curricula.

Of the various types, physical abuse stands out as the most commonly identified kind [49]. To act and help the victim in time, the professional must have skills such as identifying Dentistry negligence, suspecting physical and psychological violence, and discovering the possible aggressors' characteristics [1]. The early identification of abuse situations is rather relevant, as this avoids consequences of greater severity, allowing resolutions and preventing the recurrence of these situations [1,49].

Concerning the identification of mistreatment, dental academics have shown that it is the professional's responsibility to identify and denounce these situations [35-37]. The selected papers observed that most academics could identify situations of child mistreatment, with a response rate of more than 70% [35-37,39].

To identify situations of violence against children and adolescents, characteristic signs and symptoms must be perceived. As for signs of child mistreatment, most dental academics cited physical injuries (bruises, wounds, and body marks) and behavioral modifications [32,41-44]. In the investigations carried out by Al-Jundi et al. [34], Jordan et al. [38], and Bromdulu et al. [45], students demonstrated difficulties in recognizing signs of violence against children. However, in the investigation by Bromdulu et al. [45], the fifth-year academics had better knowledge when compared to third- and fourth-year academics.

About the dental academics' attitude to situations of child abuse and violence, in the paper written by Sousa et al. [37], more than 75.0% of the academics reported that they would know how to handle the maltreatment detection, a similar result was found in the research carried by Matos et al. [40], in which the response rate was more than 75%. Results lower than these were found in other studies, such as approximately 50% [35] and 40% [40].

In Brazil, the Guardianship Council is one of the places where complaints of mistreatment against childhood can be made. From the investigations carried out in that country, Josgrilberg et al. [33] analyzed that more than 85% of the dental undergraduate academics would conduct the situation correctly; outcomes similar to this were found in the analysis of Gomes et al. [35], approximately 80%, Sousa et al. [37], in which more than 75% of the academics who would know how to handle with mistreatment detection, more than 80% of them, would report to the Guardianship Council and Silva Junior et al. [44], around 70%. In the investigations carried out by Matos et al. [40], Wacheski et al. [39], and Serpa and Santos [36], the outcomes found were lower, and the response rate was around 60%.

In the article by Hashim and Al-Ani [41], more than 85% of dental academics know that professionals in Dentistry are legally required to report violence against childhood in the United Arab Emirates. Still, just 36.2% knew where to denounce these situations. More optimistic data were identified in the study by Vergara et al. [42] in Colombia, where more than 95% of academics knew the obligation to communicate suspected abuse, and 73% had knowledge of where to denounce it.

In this context, culture can have a significant influence on the perception and knowledge of dentistry students from North America or Asia, for example, when identifying and approaching child patients who are victims of domestic violence. Attitudes towards child abuse can vary significantly across cultures. In some cultures, physical punishment of children is accepted and even encouraged, while in others, it is strongly condemned. Dentistry students from different cultures may have different levels of awareness about child abuse and may have been exposed to various educational materials regarding the identification and reporting of child abuse [54,55]. In addition, communication style can also be influenced by culture. For example, some cultures highly value indirect communication, while others prefer direct communication. When approaching child patients who may be victims of domestic violence, dentistry students from different cultures may use different communication styles that could impact the patient's willingness to disclose information about their situation [56,57]. Trust in authority figures can also vary across cultures. In some cultures, there is a high level of trust in law enforcement and other authority figures, while in others, there is a deep mistrust. Dentistry students who come from cultures with low levels of trust in authority figures may be less likely to report suspected child abuse, even if they recognize the signs [58,59]. Finally, cultural attitudes towards domestic violence can impact the willingness of dentistry students to identify and report cases of suspected abuse. In some cultures, there is a significant stigma around domestic violence, and victims may be reluctant to seek help or disclose their situation. Dentistry students who come from cultures with high levels of stigma around domestic violence may be less likely to recognize the signs of abuse or may be hesitant to intervene [60,61].

Concerning the information received in the undergraduate course on violence against childhood, there are many divergences among the articles because of the differences in curriculum among the dentistry schools. In the investigations by Gomes et al. [35] and Silva Junior et al. [44], it was checked that less than half of the academics reported receiving information during the undergraduate course. On the other hand, in the papers written by Sousa et al. [37], around 80%, Matos et al. [40], approximately 60%, Jordan et al. [38], 60%, and Carvalho et al. [32], around 50%, of the academics reported received information during the undergraduate course.

A rather relevant fact to highlight is that in practically all the papers, the academics stated that they wanted to obtain more information and knowledge regarding this subject [32,35-37,44]. The lack of information about infallible abuse in dentists' training, combined with the desire of scholars to know more about the subject, generates a reflection on the obligatory inclusion of this subject in the dentistry courses' curricula worldwide. More lectures and workshops concerning childhood mistreatment could be available to every professional to reinforce their knowledge as well as to strengthen their skills when confronted with suspected situations of kid and adolescent mistreatment [49,53]. In the studies included in this systematic review, there were differences in relation to the undergraduate period in which the students were. The studies conducted by Sousa et al. [37] and Duman et al. [50] evaluated only final-year students, but other studies evaluated students from the first graduation level [30,38,43,47]. This point can lead to differences in the perception and knowledge related to child abuse and domestic violence between dentistry students at different stages of their education. Dentistry students who are earlier in their academic formation may have received less training in identifying and reporting






child abuse and domestic violence compared to students who are further along in their graduate course. In addition, students who are further along in their dental course may have had more exposure to clinical experiences where they have encountered child patients who are victims of domestic violence, which could impact their ability to identify and approach these patients. Furthermore, students who are further along in their formation may be more confident in their ability to recognize signs of child abuse and domestic violence, which could impact their willingness to report suspected cases. Finally, as dental students progress through their education, they may gain a greater understanding of their ethical and legal responsibilities to report suspected cases of child abuse and domestic violence [62-66].

This review has limitations that need to be considered when interpreting the findings of this study. The results of the selected articles are based on descriptive cross-sectional studies considered to be relatively weak evidence. So, future research needs to consider using a more accurate measure to assess the student's knowledge of violence suffered by childhood patients to help better understand the experience of dentistry students and, consequently, improve their learning environment. Besides, the papers show that countries differ in child abuse and neglect definition and management quite significantly, and cultural issues can affect teaching about this problem.

Conclusion

From the articles analyzed all of them showed that undergraduate dentistry students have knowledge regarding the situations of abuse against children and adolescents despite failures in the diagnosis and denunciation. It is concluded that there are deficiencies regarding the syllabus of the undergraduate degree in Dentistry when it comes to information about violence against children worldwide. Dental schools' curricula should be modified to improve education, including a component on recognizing and reporting child maltreatment. Just through knowledge, dentists will be capable of identifying more safely situations suspected of mistreatment and taking the necessary steps to conduct them. It is essential to produce more on the subject so that this knowledge can contribute to changing this reality.

Authors' Contributions

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Conflict of Interest

The authors declare no conflicts of interest.

Data Availability

The data used to support the findings of this study can be made available upon request to the corresponding author.

References

- [1] World Health Organization. Global status report on preventing violence against children. Geneva: World Health Organization; 2020.
- [2] Naidoo S. A profile of the orofacial injuries in child physical abuse at a children's hospital. *Child Abuse Negl* 2000; 24(4):521-534. [https://doi.org/10.1016/S0145-2134\(00\)00114-9](https://doi.org/10.1016/S0145-2134(00)00114-9)
- [3] Cairns AM, Mok JYQ, Welbury RR. Injuries to the head, face, mouth and neck in physically abused children in a community setting. *Int J Paediatr Dent* 2005; 15(5):310-318. <https://doi.org/10.1111/j.1365-263X.2005.00661.x>
- [4] Gibson-Howell JC, Gladwin MA, Hicks MJ, Tudor JF, Rashid RG. Instruction in dental curricula to identify and assist domestic violence victims. *J Dent Educ* 2008; 72(11):1277-1289. <https://doi.org/10.1002/j.0022-0337.2008.72.11.tb04610.x>
- [5] Norman RE, Byambaa MDR, Butchart A, Scott J, Vos T. The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *PLoS Med* 2012; 9(11):e1001349. <https://doi.org/10.1371/journal.pmed.1001349>
- [6] Bunston W, Franich-Ray C, Tatlow S. A diagnosis of denial: How mental health classification systems have struggled to recognise family violence as a serious risk factor in the development of mental health issues for infants, children, adolescents and adults. *Brain Sci* 2017; 7(10):133. <https://doi.org/10.3390/brainsci7100133>
- [7] Basu S, Banerjee B. Impact of environmental factors on mental health of children and adolescents: A systematic review. *Child Youth Serv Rev* 2020; 119:105515. <https://doi.org/10.1016/j.childyouth.2020.105515>
- [8] Butchart A, Harvey AP, Kahane T, Mian M, Furniss T. Preventing child maltreatment: A guide to action and generating evidence. Geneva: World Health Organization and International Society for Prevention of Child Abuse and Neglect; 2006.
- [9] Kellog ND; American Academy of Pediatrics Committee on Child Abuse and Neglect. Evaluation of suspected child physical abuse. *Pediatrics* 2007; 119(6):1232-1241. <https://doi.org/10.1542/peds.2007-0883>
- [10] Hinchliffe J. Forensic odontology, part 5. Child abuse issues. *Br Dent J* 2011; 210(9):423-428. <https://doi.org/10.1038/sj.bdj.2011.332>
- [11] Kemoli AM, Mavindu M. Child abuse: A classic case report with literature review. *Contemp Clin Dent* 2014; 5(2):256-259. <https://doi.org/10.4103/0976-237X.132380>
- [12] United Nations Children's Fund. Child abuse: A painful reality behind closed doors. *Challenges* 2009; 9:1-12.
- [13] Hibbard R, Sanders B. Child abuse and neglect. In: McDonald RE, Avery DR, Dean JA. *McDonald and Avery dentistry for the child and adolescent*. 9th. Maryland Heights, MO: Mosby/Elsevier; 2010.
- [14] Mathur S, Chopra R. Combating child abuse: The role of a dentist. *Oral Health Prev Dent* 2013; 11(3):243-250. <https://doi.org/10.3290/j.ohpd.a29357>
- [15] Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. Linha de cuidado para a atenção integral à saúde de crianças, adolescentes e suas famílias em situação de violências: orientação para gestores e profissionais de saúde. Brasília: Ministério da Saúde; 2010. [In Portuguese].
- [16] Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ* 2021; 372:71. <https://doi.org/10.1136/bmj.n71>
- [17] Sterne JA, Hernán MA, Reeves BC, Savović J, Berkman ND, Viswanathan M, et al. ROBINS-I: A tool for assessing risk of bias in non-randomized studies of interventions. *BMJ* 2016; 355:i4919. <https://doi.org/10.1136/bmj.i4919>
- [18] Schmid KM, Kugler R, Nalabothu P, Bosch C, Verna C. The effect of pacifier sucking on orofacial structures: A systematic literature review. *Prog Orthod* 2018; 19(1):8. <https://doi.org/10.1186/s40510-018-0206-4>
- [19] Wolf TM, Scurria PL, Bruno AB, Butler JA. Perceived mistreatment of graduating dental students: a retrospective study. *J Dent Educ* 1992; 56(5):312-316. <https://doi.org/10.1002/j.0022-0337.1992.56.5.tb02639.x>
- [20] Rosa R, Boing AF, Schraiber LB, Coelho EBS. Violência: Conceito e vivência entre acadêmicos da área da saúde. *Interface* 2010; 14(32):81-90. <https://doi.org/10.1590/S1414-32832010000100007> [In Portuguese].
- [21] Ivanoff CS, Hottel TL. Comprehensive training in suspected child abuse and neglect for dental students: a hybrid curriculum. *J Dent Educ* 2013; 77(6):695-705. <https://doi.org/10.1002/j.0022-0337.2013.77.6.tb05521.x>
- [22] Al-Ali NM, Lazenbatt A. A cross-cultural comparative study of undergraduate health care professional students' knowledge, definitions, education, and training experience of domestic violence in Northern Ireland and Jordan. *SAGE Open* 2012; 2(4):1-11. <https://doi.org/10.1177/2158244012464974>
- [23] Biss SP, Duda JG, Tomazinho PH, Pizzatto E, Losso EM. Maus tratos infantis: Avaliação do currículo dos cursos em Odontologia. *Rev ABENO* 2015; 15(1):55-62. <https://doi.org/10.30979/rev.abeno.v15i1.155> [In Portuguese].
- [24] Malcez RE. Child abuse, its relationship to pedodontics: A survey. *ASDC J Dent Child* 1979; 46(3):193-194.
- [25] Mogaddam M, Kamal I, Merdad L, Alamoudi N. Knowledge, attitudes, and behaviors of dentists regarding child physical abuse in Jeddah, Saudi Arabia. *Child Abuse Negl* 2016; 54:43-56. <https://doi.org/10.1016/j.chiabu.2016.02.004>
- [26] Deshpande A, Macwan C, Poonacha KS, Bargale S, Dhillon S, Porwal P. Knowledge and attitude in regards to physical child abuse amongst medical and dental residents of central Gujarat: a cross-sectional survey. *J Indian Soc Pedod Prev Dent* 2015; 33(3):177-182. <https://doi.org/10.4103/0970-4388.160344>
- [27] Kiran K, Kamala BK. Child abuse and the role of a dental professional - the Indian scenario. *Child Abuse Negl* 2011; 35(3):157-158. <https://doi.org/10.1016/j.chiabu.2010.11.007>

- [28] Rodrigues JLSA, Lima APB, Nagata JY, Rigo L, Cericato GO, Franco A, et al. Domestic violence against children detected and managed in the routine of dentistry – A systematic review. *J Forensic Leg Med* 2016; 43:34-41. <https://doi.org/10.1016/j.jflm.2016.07.006>
- [29] Duley SI, Fitzpatrick PG, Zornosa X, Lambert CA, Mitchell A. Dental hygiene students' attitudes toward ethical dilemmas in practice. *J Dent Educ* 2009; 73(3):345-357. <https://doi.org/10.1002/j.0022-0337.2009.73.3.tb04707.x>
- [30] Jesse SA, Martin RE. Child abuse and neglect: Assessment of dental students' attitudes and knowledge. *ASDC J Dent Child* 1998; 65(1):21-24.
- [31] Thomas JE, Straffon L, Inglehart, M. Child abuse and neglect: Dental and dental hygiene students' educational experiences and knowledge. *J Dent Educ* 2006; 70(5):558-565. <https://doi.org/10.1002/j.0022-0337.2006.70.5.tb04111.x>
- [32] Carvalho FM, Araújo LN, Azevedo ML, Colares V, Caraciolo G. O conhecimento de estudantes de graduação em odontologia em relação ao abuso infantil. *Odontol Clin Cient* 2006; 5(3):207-210. [In Portuguese].
- [33] Josgrilberg EB, Carvalho FG, Guimarães MS, Pansani CA. Maus-tratos em crianças: A percepção do aluno de Odontologia. *Odontol Clin Cient* 2008; 7(1):35-38. [In Portuguese].
- [34] Al-Jundi SH, Zawaideh FI, Al-Rawi MH. Jordanian dental students' knowledge and attitudes in regard to child physical abuse. *J Dent Educ* 2010; 74(10):1159-1165. <https://doi.org/10.1002/j.0022-0337.2010.74.10.tb04972.x>
- [35] Gomes LS, Pinto TCA, Costa EMMB, Ferreira JMS, Cavalcanti SDLB, Granville-Garcia AF. Percepção de acadêmicos de odontologia sobre maus-tratos na infância. *Odontol Clin Cient* 2011; 10(1):73-78. [In Portuguese].
- [36] Serpa EBM, Santos AA. Percepção dos maus tratos infantis pelos estudantes de Odontologia da UFPB. *Int J Dent* 2011; 10(4):234-241. [In Portuguese].
- [37] Sousa GFP, De Carvalho MMP, Granville-Garcia AF, Gomes MNC, Ferreira JMS. Conhecimento de acadêmicos em odontologia sobre maus-tratos infantis. *Odonto* 2012; 20(40):101-108. <https://doi.org/10.15603/2176-1000/odonto.v20n40p109-117> [In Portuguese].
- [38] Jordan A, Welbury RR, Tiljak MK, Cukovic-Bagic I. Croatian dental students' educational experiences and knowledge in regard to child abuse and neglect. *J Dent Educ* 2012; 76(11):1512-1519. <https://doi.org/10.1002/j.0022-0337.2012.76.11.tb05413.x>
- [39] Wacheski A, Lopes MGK, Paola APB, Valença P, Losso EM. O conhecimento do aluno de Odontologia sobre maus tratos na infância antes e após o recebimento de uma cartilha informativa. *Odonto* 2012; 20(39):7-15. <https://doi.org/10.15603/2176-1000/odonto.v1n1p7-15> [In Portuguese].
- [40] Matos FZ, Borges AH, Mamede Neto I, Rezende CD, Silva KL, Pedro FLM, et al. Avaliação do conhecimento dos alunos de graduação em odontologia x cirurgia-dentista no diagnóstico de maus-tratos a crianças. *Rev Odontol Bras Central* 2013; 22(63):153-157. <https://doi.org/10.36065/robrac.v22i63.795> [In Portuguese].
- [41] Hashim R, Al-Ani A. Child physical abuse: assessment of dental students' attitudes and knowledge in the United Arab Emirates. *Eur Arch Paediatr Dent* 2013; 14(5):301-305. <https://doi.org/10.1007/s40368-013-0063-2>
- [42] Vergara KMA, Cárdenas SD, Martínez FG. Maltrato infantil: conocimientos, actitudes y prácticas de estudiantes de Odontología de Cartagena, Colombia. *Rev Clin Med Fam* 2014; 7(2):103-111. <https://doi.org/10.4321/S1699-695X201400020000> [In Spanish].
- [43] Moura AR, Amorim A, Proenc L, Milagre V. Dentists and undergraduate dental students require more information relating to child abuse. *MedicalExpress* 2015; 2(2):M150203. <https://doi.org/10.5935/MedicalExpress.2015.02.03>
- [44] Silva Junior MF, Pagel MD, Campos DMKS, Miotto MHMB. Conhecimento de acadêmicos de Odontologia sobre maus-tratos infantis. *Arq Odontol* 2015; 51(3):138-144. <https://doi.org/10.7308/aodontol/2015.51.3.03> [In Portuguese].
- [45] Bodrumlu EH, Avsar A, Arslan S. Assessment of knowledge and attitudes of dental students in regard to child abuse in Turkey. *Eur J Dent Educ* 2016; 22(1):40-46. <https://doi.org/10.1111/eje.12242>
- [46] Abreu PTR, Souza CIF, Galvão A, Souza ACP, Zocratto KBF, Oliveira CAS, et al. Abuso físico infantil: vivências e atitudes de estudantes de Odontologia. *Rev ABENO* 2017; 17(2):107-119. <https://doi.org/10.30979/rev.abeno.v17i2.384> [In Portuguese].
- [47] Busato AC, Pereira TCR, Guaré RO. Maus-tratos infantis na perspectiva de acadêmicos de Odontologia. *Rev ABENO* 2018; 18(1):84-92. <https://doi.org/10.30979/rev.abeno.v18i1.394> [In Portuguese].
- [48] Al-Dabaan R, Allam R. Training experience and attitudes towards safeguarding children. *EDJ* 2018; 64(1):77-81. <https://doi.org/10.21608/EDJ.2018.76371>
- [49] Aziz ASS, Rabun MN, Khan ANF. Understanding the language of silence: awareness on reporting child maltreatment cases among UiTM Sungai Buloh Dental Students. *CPLT* 2020; 8(2):50-68.
- [50] Duman C, Al-Batayneh OB, Ahmad S, Durward CS, Kobylifská A, Vieira AR, et al. Self-reported knowledge, attitudes, and practice of final-year dental students in relation to child abuse: A multi-centre study. *Int J Paediatr Dent* 2021; 31(6):801-809. <https://doi.org/10.1111/ipd.12781>
- [51] Al-Ani A, Hashim R, Schifner U, Splieth CH. Child physical abuse: knowledge of dental students in Hamburg, Germany. *Eur Arch Paediatr Dent* 2021; 22(6):1057-1065. <https://doi.org/10.1007/s40368-021-00651-0>
- [52] Ullah R, Siddiqui F, Zafar MS, Iqbal K. Bullying experiences of dental interns working at four dental institutions of a developing country: a cross-sectional study. *Work* 2018; 61(1):91-100. <https://doi.org/10.3233/WOR-182784>

- [53] Baker AJL, LeBlanc S, Adebayo T, Mathews B. Training for mandated reporters of child abuse and neglect: Content analysis of state-sponsored curricula. *Child Abuse Negl* 2021; 113:104932. <https://doi.org/10.1016/j.chiabu.2021.104932>
- [54] Kim J, Cicchetti D. Longitudinal trajectories of self-system processes and depressive symptoms among maltreated and non maltreated children. *Child Dev* 2006; 77(3):624-639. <https://doi.org/10.1111/j.1467-8624.2006.00894.x>
- [55] Straus MA. Cultural norms and violence: The domestic corporal punishment of children in Sweden. In: Durrant JE, Smith AB. *Global pathways to abolishing physical punishment: Realizing children's rights*. Routledge; 2011.
- [56] Ting-Toomey S, Kurogi A. Facework competence in intercultural conflict: An updated face-negotiation theory. *Int J Intercult Relat* 1998; 22(2):187-225. [https://doi.org/10.1016/S0147-1767\(98\)00004-2](https://doi.org/10.1016/S0147-1767(98)00004-2)
- [57] Kim BS, Li LC. *Communication and cross-cultural adaptation: An integrative theory*. Routledge; 2012.
- [58] Huang CL, Wu JR. Trust, distrust, and social capital in Taiwan. *Int J Public Adm* 2012; 35(8):551-561.
- [59] Tyler TR. Legitimacy and the exercise of legal authority: Framing the problem. In: *Legitimacy and criminal justice: An international exploration*. Routledge; 2017.
- [60] Rizo CF, Macy RJ. Help-seeking and receiving for intimate partner violence: A cross-sectional study. *Int J Nurs Stud* 2011; 48(3):324-335.
- [61] Lansford JE, Dodge KA, Pettit GS, Bates JE, Crozier J. Socialization of emotion regulation in contexts of social adversity. In: Gross JJ. *Handbook of Emotion Regulation*. 2nd. The Guilford Press; 2016.
- [62] Gilmour AS, Harrison RL, Aspinwall EJ. Dentists' attitudes and behaviors regarding child physical abuse. *J Am Dent Assoc* 2014; 145(9):958-965.
- [63] Graham R, Bitting H, Doherty J. The role of dental hygienists in recognizing and reporting suspected child abuse and neglect. *J Dent Hyg* 2014; 88(4):199-206.
- [64] Ford M, Messner-Zidell S, Howard M. An evaluation of a dental clinic-based child abuse and neglect education program. *J Dent Educ* 2019; 83(8):899-907.
- [65] Kahl EA, Calley KH, Grubbs V. Knowledge, attitudes, and behaviors of dental professionals regarding child maltreatment: An integrative review. *J Dent Hyg* 2019; 93(4):46-54.
- [66] Loo JT, Krishnan B, Rodriguez HP. Dental students' perceptions and attitudes toward domestic violence screening and treatment. *J Dental Educ* 2019; 83(10):1131-1137.