

Dental Neglect, one type of child abuse – Narrative review

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Dental neglect is defined as an intentional failure of the caretaker in the pursuit and continuity of necessary treatment to achieve an oral health that allows adequate function, free from pain and infection. We intend to clarify, according to the current scientific literature, the clinical indications for the identification of dental neglect in children. After the search in databases and search engines with the keywords “child”, “dental” and “neglect”, between 1996 and 2016, the results revealed that identifying this condition requires not only a detailed clinical history and clinical data that clearly show the lack of oral health care but also investigating the social and parental determinants in which the child is involved. Thus, inserting the dentist in teams of analysis in case of suspicion proves to be indispensable for the detection of this and other situations of abuse.

KEYWORDS: Child Abuse, Oral Health, Negligence.

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■ INTRODUCTION

Child neglect is generally defined as a persistent inability to meet the basic physical and/or psychological needs of the child and is likely to cause serious damage to the child’s development or health.¹⁻³ More precisely, dental neglect consists in the voluntary failure of the child’s educator or legal guardian to prevent situations of orofacial disease and/or failure to continue the necessary treatment to ensure adequate oral health, to establish adequate function, free from pain and infection. Thus, when the educator allows the child to constantly miss dental appointments that are necessary for his or her well-being, this fulfils the definition and must be considered an act of neglect.^{1,2,4}

Good oral health in children and adolescents increases their competence in physical and psychological development and in social activities. However, the existence of orofacial disease increases their chances of experiencing pain/discomfort, embarrassment, difficulty in cognitive development, reduction of self-esteem or limitation in daily activities.

These symptoms are common, even in developed populations that historically have experienced lower rates of caries.⁵ In Portugal, recent developments, linked to the presence of caries, reveal that in the six-year-old group, 88% of the temporary teeth had caries, and that half of the 12-year-old sample had already experienced caries. However, it is questionable whether the presence of untreated caries in the child, as an isolated act, may represent negligence.⁶

Considering the influence that dental neglect represents in children’s life, our objective was to identify and describe the clinical evidence that allows us to suspect dental negligence, as described by current scientific literature.

■ MATERIAL AND METHODS

A search was performed in Pubmed, SCOPUS and Web of Science, using the keywords “child”, “dental”, “neglect”, between 1996 and 2016. We used the Boolean operator “AND”. We selected observational or case-control descriptive articles written in English or Portuguese, that specifically addressed the topic of dental neglect in children.

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■ RESULTS

Table 1 summarizes the selection procedure: among the 25 articles analyzed,^{1,5,7-29} five were selected, four of which had a descriptive observational design^{17,19,21,27} and one had a case-control design,¹³ all were focused on the theme of dental neglect in children. Three articles included children and their educators,^{27,21,13} one included dentists¹⁹ and one included public health nurses.¹⁷ In three articles, a questionnaire was used as a method of collecting data;^{17,19} one used a clinical evaluation of children's the oral cavity¹³ and two combined these two methods of data collection.^{21,27}

It is difficult to enumerate the exact indicators of dental neglect, however, the articles that were selected^{13,17,19,21,27} reveal signs that raise a suspicion of this condition. These signs were included in three groups: oral manifestations and clinical history of the child, social determinants of the child; parental characteristics.^{17,19} The clinical history and oral manifestations of the included children were: the youngster (a) successively fails dental appointments;¹⁹ (b) caries lesions; (c) manifests significant untreated orofacial pain after the educator has been informed by the health professional;^{17,19} (d) presents with early childhood caries,²¹ bacterial plaque involving more than two thirds of the dental crown;¹³ (e) has spontaneous gingival bleeding.¹³ The social determinants of the child that may be suffering from dental neglect include (i) single parent families; (ii) families living in the street or in precarious home; (iii) situations of domestic abuse;¹⁷ (iv) low-income families.^{21,27} Parental characteristics include: (A) parental history of substance misuse,¹⁷ (B) oral health quality among child's educators, (C) parents who do not routinely visit the dentist or do not attend regular dental visits^{17,27} and (D) low level of parental schooling.²⁷

■ DISCUSSION

Oral manifestations and Clinical history of the child

In general, more than half of child's abuse signs occur in head and neck areas.¹⁵ Thus, it is important to carefully evaluate perioral and intraoral regions in such cases where abuse or neglect is suspected. Statistically, there are groups with a higher risk of maltreatment and neglect, such as pre-school children.^{12,15, 27,28}

Early childhood caries has been shown to be one of the parameters that allow us to suspect dental neglect. Figure 1 illustrates this point. However, the existence of caries lesions alone cannot be defined as an act of neglect, although this is an important finding in such cases.^{6,15,17,21,27} Through the clinical evaluation of the child, the health professional is expected to be aware of multiple factors, and to keep an updated record, not only of caries lesions and untreated orofacial pain in the child, but also of the

existence and extension of dental plaque and gingival bleeding.^{6,17,19} These factors, associated with privation or delay in seeking dental treatment for significant trauma, failure to complete recommended treatment, and allowing the child's oral health to deteriorate, are highlighted in a systematic review as defining recognizable characteristics of dental neglect.⁹

Social Determinants of the Child

Dental neglect is strongly associated with family conditions; however, its social determinants such as low socioeconomic level, poor living conditions, single-parent family or history of domestic abuse have proved to be important data to be registered, in the case of suspicion.

Low family income is an important health indicator, associated with weaker oral health and less favorable attitudes regarding oral care, contributing to the development of caries since an early age.^{9,30} Figure 2 illustrates the point. This is confirmed by analysis of some studies, showing a negative association with the socioeconomic level and the severity of early childhood caries, meaning that children with lower socioeconomic level have greater predisposition to develop severest lesions of early childhood caries.^{17,21}

Also, the number of educators within the family seems to influence the probability of dental neglect. Children that belong to single-parent families appear to be at greater risk of being neglected than two-parent families, since the single educator will probably have less resources (time and money) to devote to their child's healthcare.^{27,31}

Predictably, reports indicate that when a child lives in poorer conditions, especially when he or she lives in a precarious home or on the street, they tend to have irregular practices in their oral health.³²⁻³⁴ Thus, their medical record should contain this information, not only for tighter control of the child's oral health, but also (if the case is not already under surveillance) for signaling the case to social services.^{17,32}

Family violence, or a previous history of violence, is a contributory factor to child neglect in general.²⁸ A qualitative study performed by public health nurses revealed that a history of domestic abuse was one of the most telling warning signs in cases where dental negligence was suspected.¹⁷ However, most children that attend dental offices do not appear referenced with a history of violence/family abuse, so it is up to the dentist to have the appropriate sensitivity and training to identify, record and report these cases.²⁸

Parental Characteristics

Scientifically, the strong influence that parents have in their children's oral health is well evidenced.⁸ They are responsible, not only for making the child attend dentist appointments, but also for teaching and maintaining

Table 1. Articles general information and selection procedure

ARTICLE	JOURNAL	AUTHOR/YEAR/REF	INCLUSION
Dental neglect, child maltreatment, and the role of the dental profession	Contemp Clin Dent	Welbury; 2016 ¹	No
Assessing the impact of oral health on the life quality of children: implications for research and practice	Community Dent Oral Epidemiol	McGrath et al; 2004 ⁵	No
Children's Dental Health, School Performance, and Psychosocial Well-Being	J Pediatr	Guarnizo-Herreño et al; 2012 ⁷	No
Parental influence and the development of dental caries in children aged 0-6 years: A systematic review of the literature	J Dent	Hooley et al; 2012 ⁸	No
Characteristics of child dental neglect: A systematic review	J Dent	Bhatia et al; 2014 ⁹	No
Child neglect: Assessment and intervention	J Pediatr Health Care	Hornor; 2014 ¹⁰	No
Dental neglect in children	Paediatrics and Child Health	Harris; 2012 ¹¹	No
Oral and dental aspects of child abuse and neglect.	Pediatrics	Kellogg; 2005 ¹²	No
The dentist's role in recognizing childhood abuses: study on the dental health of children victims of abuse and witnesses to violence.	Eur J Paediatric Dent	Montecchi et al; 2009 ¹³	Yes
Hallazgos clínicos odontológicos en maltrato infantojuvenil en el departamento de odontología forense del CICPC Merida-Venezuela	Acta Bioclinica	Castellanos et al; 2016 ¹⁴	No
Orofacial aspects of childhood abuse and dental negligence	Cienc Saude Colet	Massoni et al; 2010 ¹⁵	No
Dental neglect and adverse birth outcomes: A validation and observational study	Int J Dent Hyg	Acharya et al; 2013 ¹⁶	No
Dental neglect as a marker of broader neglect: a qualitative investigation of public health nurses' assessments of oral health in preschool children.	BMC Public Health	Bradbury-Jones et al; 2013 ¹⁷	Yes
Political priority of oral health in Italy: An analysis of reasons for national neglect	Int Dent J	Benedetti et al; 2015 ¹⁸	No
New Zealand dental therapists' beliefs regarding child maltreatment	Aust N Z J Public Health	Tilvawala et al; 2014 ¹⁹	Yes
Croatian dentists' knowledge, experience, and attitudes in regard to child abuse and neglect	Int J Paediatr Dent	Cukovic-Bagic et al; 2015 ²⁰	No
Early childhood caries (ECC) and neglect in child care: Analysis of an Italian sample	Clin Ter	Scorca et al; 2013 ²¹	Yes
Impact of dental neglect score on oral health among patients receiving fixed orthodontic treatment: A cross-sectional study	J Int Soc Prev Community Dent	Pandey et al; 2016 ²²	No
Child Dental Neglect: A Short Review	Int J High Risk Behav Addict	Ramazani; 2014 ²³	No
Child abuse and neglect: diagnosis and management.	Dtsch Arztebl int	Jacobi et al; 2010 ²⁴	No
Current and historical involvement of dentistry in child protection and a glimpse of the future	Oral Dis	Park et al; 2016 ²⁵	No
Is dental caries neglect?	Br Dent J	Stevens; 2014 ²⁶	No
Testing a child dental neglect scale in South Australia	Community Dent Oral Epidemiol	Thomson et al; 1996 ²⁷	Yes
Child abuse and dental neglect: the dental team's role in identification and prevention.	Int j Dent Hyg	Nuzzolese et al; 2009 ²⁸	No
Injuries to the head, face, mouth and neck in physically abused children in a community setting	I J Paediatr Dent	Cairns et al; 2005 ²⁹	No

everyday habit routines that ensure good oral health.^{8,11,28} Thus, in the face of the suspicion of dental neglect, it is mandatory that the oral health professional should also consider the attitudes and the oral health of the educator.

The analyzed studies reveal that the quality of parents' oral health, and the failure to attend their regular dental appointments, are also associated with dental neglect of their children.^{17,27} When the oral health is neglected



Figure 1. Two 5-year-old children with early childhood caries, with a history of missing scheduled appointments.



Figure 2. Spontaneous gingival bleeding, gingival pain and multiple caries lesions in a young patient with low family income

by the parent, such neglect is likely to be a predictor of caries for their children, since it is within the family that the child adopts habits that will define his/her behavior towards oral health; this is especially true with respect to mothers' attitudes.³⁵ Additionally, the importance of oral health among parents, and their education level are factors to consider when suspecting dental neglect. The health professional should consider the educator's degree of perception regarding his child's oral health, and if required, attempt to increase his knowledge.^{9,23} However, through the analysis of a systematic review, we verified that mothers of children from ethnic minorities present greater difficulties in communication and lower levels of schooling, which may result in worse oral health conditions. This should be considered by the health professional when collecting information.³² Parental education level can determine the ease of increasing oral health knowledge and is considered a determinant factor in dental neglect, in which, once again, it is the maternal figure who has the greatest influence.²⁷ Education level is associated with employability, social status, income and resource accessibility, being the main predictor of a series of risk factors for oral health.⁸ Likewise, the studies analyzed indicate that children belonging to families with low level of education, are more likely to have their oral health neglected.²⁷ This condition also occurs when educators have a history of substance misuse. Children with this parental history are more likely to be neglected, and tend to present high rates of dental trauma,

gingival bleeding, caries lesions and orofacial infections, as exemplified in Figure 3. Therefore, this should be an evidence to consider when suspecting dental neglect.^{17,35}



Figure 3. Multiple and extensive caries lesions with orofacial pain, and abundant biofilm in a 10-year-old child whose educators have a history of substance abuse.

■ SUMMARY

Although dental neglect in children is included in the cases in which the health professional has an obligation to report, many do not do so, because of their doubts regarding the diagnosis. In addition to the undeniable reduction in quality of life and the imminent risks to the child's overall health, the confirmation of dental neglect allows us to suspect the occurrence of neglect in a generalized way.

Dental neglect may appear associated with a wide range of signs such as: chronic orofacial pain, trauma of the orofacial region, untreated caries, unfinished dental care despite caregivers being informed of the need, repeated orofacial infections and orofacial edema due to dental abscesses or cellulitis. Consequently, there is an enormous potential for the creation of health professional teams in which dentists are essential.

■ CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

■ AUTHOR PARTICIPATION

Ana Sofia Baptista: Conception and design of the study, acquisition of data, analysis and/or interpretation of data, drafting the manuscript, approval of the version of the manuscript to be published. Elisa Laranjo: Conception and design of the study, analysis and/or interpretation of data, approval of the version of the manuscript to be published. Ana Alves Norton: Conception and design of the study, revising the manuscript critically for important intellectual

content, approval of the version of the manuscript to be published. David Casimiro de Andrade: Conception and design of the study, revising the manuscript critically for important intellectual content, approval of the version of the manuscript to be published. Cristina Areias: Conception and design of the study, revising the manuscript critically for important intellectual content, approval of the version of the manuscript to be published. Ana Paula Macedo: Conception and design of the study, revising the manuscript critically for important intellectual content, approval of the version of the manuscript to be published.

NEGLIGÊNCIA DENTÁRIA, UMA MODALIDADE DE ABUSO INFANTIL – REVISÃO NARRATIVA

A negligência dentária é definida como a falta intencional do responsável pela criança na procura e manutenção do tratamento necessário para garantir um nível de saúde oral essencial para a função adequada, livre de dor e infecção. Neste sentido, pretendemos esclarecer, de acordo com a literatura científica atual, os indícios clínicos para a identificação de negligência dentária em crianças. Após pesquisa em bases de dados e motores de busca, com as palavras-chave “child”, “dental”, “neglect”, entre 1996 e 2016, os resultados revelaram que a identificação desta condição requer, não só a obtenção de uma história clínica detalhada e de dados clínicos que evidenciem claramente a falta de cuidados na saúde oral como também a investigação dos determinantes sociais e parentais em que a criança se insere. Assim, inserir o médico dentista nas equipas de análise nos casos de suspeita revelou-se indispensável para o despiste desta e outras situações de abuso.

PALAVRAS-CHAVE: abuso infantil, saúde oral, negligência

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