JOURNAL OF DENTISTRY 42 (2014) 229–239

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.intl.elsevierhealth.com/journals/jden

Review

Characteristics of child dental neglect: A systematic review

Shannu K. Bhatia [a,*], *Sabine A. Maguire* [b], *Barbara L. Chadwick* [c], *M. Lindsay Hunter* [c], *Jennifer C. Harris* [d], *Vanessa Tempest* [b], *Mala K. Mann* [e], *Alison M. Kemp* [b]

[a] *University Dental Hospital, School of Dentistry, Cardiff University, Cardiff, UK*
[b] *College of Biomedical and Life Sciences, School of Medicine, Cardiff University, Cardiff, UK*
[c] *College of Biomedical and Life Sciences, School of Dentistry, Cardiff University, Cardiff, UK*
[d] *Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, UK*
[e] *Support Unit for Research Evidence, Cardiff University, Cardiff, UK*

ARTICLE INFO

Article history:
Received 29 April 2013
Received in revised form
7 October 2013
Accepted 10 October 2013

Keywords:
Neglect
Dental neglect
Oral neglect
Child maltreatment
Systematic review

ABSTRACT

Objective: Neglect of a child's oral health can lead to pain, poor growth and impaired quality of life. In populations where there is a high prevalence of dental caries, the determination of which children are experiencing dental neglect is challenging. This systematic review aims to identify the features of oral neglect in children.

Methods: Fifteen databases spanning 1947–2012 were searched; these were supplemented by hand searching of 4 specialist journals, 5 websites and references of full texts. Included: studies of children 0–18 years with confirmed oral neglect undergoing a standardised dental examination; excluded: physical/sexual abuse. All relevant studies underwent two independent reviews (+/− 3rd review) using standardised critical appraisal.

Results: Of 3863 potential studies screened, 83 studies were reviewed and 9 included (representing 1595 children). Features included: failure or delay in seeking dental treatment; failure to comply with/complete treatment; failure to provide basic oral care; co-existent adverse impact on the child e.g. pain and swelling. Two studies developed and implemented 'dental neglect' screening tools with success. The importance of Quality of Life tools to identify impact of neglected dental care are also highlighted.

Conclusions: A small body of literature addresses this topic, using varying definitions of neglect, and standards of oral examination. While failure/delay in seeking care with adverse dental consequences were highlighted, differentiating dental caries from dental neglect is difficult, and there is a paucity of data on precise clinical features to aid in this distinction.

Clinical significance: Diagnosing dental neglect can be challenging, influencing a reluctance to report cases. Published evidence does exist to support these referrals when conditions as above are described, although further quality case control studies defining distinguishing patterns of dental caries would be welcome.

* *Corresponding author at*: University Dental Hospital, School of Dentistry, Cardiff University, Cardiff CF14 4EA, UK. Tel.: +44 029 203 03950.
E-mail address: bhatiask@cardiff.ac.uk (S.K. Bhatia).

0300-5712/$ – see front matter © 2013 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.jdent.2013.10.010

1. Introduction

The United Nations Convention on the Rights of the Child,[1] ratified by all countries other than Somalia and the United States of America (USA), states that children have a right to be protected from all forms of negligent treatment, and enjoy the highest attainable standards of health. In addition, the UK government has identified the key outcomes, which matter most to children,[2] including being healthy and staying safe (i.e. being protected from harm and neglect).

Unfortunately child maltreatment, including abuse (physical, emotional and sexual) and neglect remain a tragic reality in our society. Neglect is the most common type of maltreatment, and is recorded in 44% of all children on child protection registers or the subjects of child protection plans in the UK[3] and 78.3% in the USA.[4] In Australia, emotional abuse and child neglect are the most commonly substantiated forms of harm to children.[5] Radford and co-workers[3] reported that one in 20 (5%) children under 11 have been neglected at some point, and one in 30 (3.7%) have been severely neglected. Furthermore, almost one in 10 young adults (9%) report a history of severe neglect by parents or guardians during childhood.

Young children are reliant upon their carers to maintain their oral health. This includes managing oral hygiene and diet, and seeking treatment when needed. Untreated dental disease can have a significant adverse impact on the health, wellbeing, and quality of life of the child.[6–11] Consequences of untreated dental disease include pain,[8,12] sleep deprivation,[8] interference with performance at school[13,14] and social activities.[6] A reduction in body weight[10,15,16] and head circumference,[16] and an effect on nutrition[17] have also been demonstrated. From a purely dental viewpoint, caries in primary teeth may cause developmental defects of enamel in succeeding permanent teeth.[18] In addition, some young children may require general anaesthesia (GA) for removal of painful or infected carious teeth. This is a procedure that is never without risk.[19] In recent years, there has been an increase in the number of children being admitted for dental extractions under GA in the UK, a 66% increase in England being reported between 1997 and 2007.[20] Of particular concern is the observation that some young children are having repeated GA for dental extractions.[21,22]

During the year 2011–2012, up to 71% of children in the UK (7.8 million estimated) were seen by a National Health Service (NHS) dentist.[23] General dental practitioners will, therefore, encounter cases of child neglect in their daily practice. The General Dental Council (GDC) states that dentists have an ethical responsibility to find out about, and follow local child protection procedures.[24] In the UK, dental neglect has been defined as ''*the persistent failure to meet a child's basic oral health needs, likely to result in the serious impairment of a child's oral or general health and development*''.[25] Despite guidelines issued by the National Institute for Health and Care Excellence (NICE)[26] and the British Society of Paediatric Dentistry (BSPD),[25] studies have shown that dentists and dental care professionals are reluctant to report suspected cases of child abuse and neglect in the UK[27–31] and worldwide.[32–38] Lack of certainty of diagnosis has been identified as an important contributory factor towards the failure of this professional duty.

As dental caries is one of the most common chronic diseases in the world, the mere presence of dental caries or other oral pathology cannot be considered to constitute dental neglect. Regrettably, there is no 'threshold' number of carious teeth, beyond which a diagnosis of dental neglect is made[25] and the question as to what oral and dental features should be considered sufficient to constitute a diagnosis of dental neglect warranting referral from dental professionals to appropriate health or social care services remains unanswered. The aim of this systematic review of the international literature was to determine the scientific evidence underpinning the characteristics of dental neglect in children.

2. Methods

For the purpose of this review of the world literature, the authors developed a definition based on internationally agreed definitions,[2,25,39–41] which was: ''Neglect refers to the failure of a parent or guardian to meet a child's basic oral health needs, such that the child enjoys adequate function and freedom from pain and infection, where reasonable resources are available to the family or caregiver'' (Fig. 1). An all-language literature search across 15 bibliographic databases was conducted to identify original articles published between 1947 and September 2012. Online Appendix 1 shows the databases and websites searched. The initial search strategy (Online Appendix 2) was developed across OVID Medline databases using keywords and Medical Subject Headings (MeSH headings) and was modified appropriately to search the remaining bibliographic databases.

The search strategy was augmented by a range of supplementary 'snowballing' techniques including consultation with subject experts and relevant organisations, hand searching selected websites, non-indexed journals and the references of all full-text articles (Online Appendix 1). Identified citations, once scanned for duplicates and relevancy, were transferred to a purpose-built Microsoft Access database to coordinate the review and collate critical appraisal data. Abstracts and selected full-text articles were scanned by the Principal Investigator and eligible studies identified for review (Fig. 2). Relevant foreign language articles were considered for translation, though none was required. Where applicable, authors were contacted for primary data and additional information.

The systematic review was carried out by Core Info Cardiff Child Protection Systematic Reviews; this group has conducted 21 Systematic Reviews of all aspects of physical child abuse, and early child neglect.[42–45]

A panel of 22 reviewers comprising community and paediatric dentists, paediatricians, child protection practitioners, a lecturer in dental public health, a social worker and a pathologist were trained in critical appraisal, using a training programme specifically designed for this review. Each relevant article was independently reviewed by two reviewers drawn from this panel of 22, using strict inclusion and exclusion criteria (Fig. 1). Reviews were undertaken using a standardised critical appraisal form (Online Appendix 3) based on criteria defined by the National Health Service's Centre for Reviews and Dissemination,[46] and supplemented by systematic review