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BMJ Open

Primary caregivers' perceptions of factors influencing preschool children's oral health: social practices perspective—a protocol for qualitative metasynthesis

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ABSTRACT

Introduction The role of primary caregivers in setting the foundation for a child's oral health throughout life is well recognised. Due to the dominant behaviour-based approach, research to date has mainly focused on exploring individual primary caregivers' oral health knowledge and behaviours. A social science approach involving social practice theories moves beyond individual attitudes, behaviour and choices to offer a better understanding of the ways in which collective activity relates to health. This qualitative metasynthesis will involve an interpretive synthesis of data found in published qualitative literature from developed countries. The aim of the metasynthesis is to identify social practices in families from published qualitative research with caregivers on preschool children's oral health.

Methods and analysis This is a protocol for qualitative metasynthesis. The following databases will be used: MEDLINE, EMBASE, Global Health and Dentistry & Oral Sciences Source (DOSS) using the web-based database search platform Ovid, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Scopus. The research team has determined search strategies by using relevant key terms. Qualitative studies published in English language on family factors related to preschool children (aged 0–5 years) from developed countries (2022 United Nations classification) will be included. Qualitative data analysis will involve thematic analysis of the reported factors influencing oral health of preschool children, from the perspective of social practice theory. Researchers will use NVivo software for organising and managing the data.

Ethics and dissemination No ethics approval is required, as this study does not involve human subjects. Findings will be disseminated through professional networks, conference presentations and submission to a peer-reviewed journal.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This will be the first qualitative metasynthesis outlining the protocol for applying social practice theory to current qualitative oral health research.
⇒ The protocol will use selected databases and search terms with publications limited to qualitative studies published in English in peer-reviewed journals.
⇒ The protocol will not critically appraise the quality of evidence.

INTRODUCTION

Caries in deciduous teeth is a predictor of caries in permanent teeth.[1 2] Poor oral health in childhood can lead to a range of health and well-being issues. Children can experience dental pain, development issues, irritability, difficulty eating, sleeping and talking; they can miss school, have lower academic performance and an overall negative effect on their quality of life.[3–8] The negative impact of poor oral health extends to the child's family, with parents incurring the high cost of treatment and time off work when taking care of their child.[4] Early childhood caries (ECC) is an important contributor to children's poor oral health and is defined as 'the presence of one or more decayed (non-cavitated or cavitated lesions), missing (due to caries) or filled tooth surfaces (dmfs) in any primary tooth in a child under 71 months of age'.(9, p197) There is a high prevalence of ECC in young children,[9] and in 2017 532 million children globally were estimated to have untreated caries in their primary teeth.[10] Other contributors to children's poor oral health include traumatic dental injuries, malocclusions[11] and gum diseases.[12]

Due to its complex nature, there are multilevel influences that can impact children's oral health. Parental and family-level factors where conditions and features of a family environment strongly influence children's oral health.[13–16] Fisher-Owens *et al*[14] categorised influences on oral health outcomes of children as: (1) child-level influences (including physical and demographic characteristics, dental insurance, use of dental care, health behaviours and practices); these are embedded within (2) family-level influences (including socioeconomic status, social support, culture, health status of parents,

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family function, family health behaviours and practices that are both a part of wider, (3) community-level influences (including social environment, dental and healthcare systems, physical environment, social capital, culture, community oral health environment as caregivers' oral health behaviours, attitudes, knowledge and beliefs are likely to impact a child's oral health,[13 15] they have been the focus of health research and prevention. However, focusing on individual behaviour has been criticised as a victim blaming approach and may be ineffective in making a meaningful impact on improving children's oral health.[17]

An individualistic approach needs to be complemented with a broader socioecological framework that takes into account social determinants of oral health, recognising the role that socioeconomic status, family structure, social environment and culture play in a child's oral health.[18 19] A social science approach and social practice theories can help understand both individuals and social structures they inhabit, by exploring the practice patterns in everyday lives.[20] Social practices are defined as 'routinized way(s) in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood'. (22, p250) Elements making up a social practice include competence or skills to carry out the practice, materials needed such as objects or infrastructures and meanings including cultural conventions and ideas.[21 22] Elements are then linked and integrated into the performance of the practice. Understanding the ways oral health-related social practices are formed and re-enacted can help identify innovative ways to tackle this global health problem.

A preliminary search of MEDLINE, The Cochrane Database for Systematic Reviews and JBI Evidence Synthesis revealed a dearth of work on the topic of social practice theories applied to family factors influencing preschool children's oral health. Applying a social practice theory lens to qualitative metasynthesis helps identify gaps in this area for future research development. Therefore, the main aim is to synthesise and reinterpret the reported family factors related to preschool children's oral health in existing qualitative literature through the lens of social practice theory.

METHODS

Qualitative metasynthesis, also known as meta-ethnography, involves synthesis of data from multiple published qualitative studies that is then reinterpreted.[23] It enables the reanalysis and interpretation of a collective body of qualitative research to gain insight into a specific topic of interest. Factors from the perspective of primary caregivers that can impact oral health of preschool children have previously been reported.[24–26] However, a social practice lens has not been applied in this context. We will identify qualitative studies where primary caregivers have reported factors that impact oral health of preschool children and then apply social practice theory lens to analyse and interpret data from selected studies. The results of this metasynthesis will provide an insight on reported factors from a social practice perspective. The results will also help identify areas for future research into understanding of oral health-related social practices in preschool children.

The process of qualitative metasynthesis will involve steps adapted from Erwin *et al*[23]: (1) formulating the research question, (2) conducting a systematic literature search, (3) screening and selecting appropriate research articles based on predefined inclusion and exclusion criteria, (4) analysing and synthesising qualitative findings (v) presenting findings.

Step 1: formulating the research question

The purpose of this qualitative synthesis is to determine whether reported primary caregivers' perceptions on the factors that can impact oral health of preschool children can be reinterpreted from a social practice perspective. This is reflected in our research question *What are primary caregivers' perceptions of factors impacting preschool children's oral health in developed countries, and how can they can provide insight into oral health social practices?*

Step 2: conducting a systematic literature search

A literature search in qualitative metasynthesis should be as comprehensive as possible.[23] Relevant published studies will be identified by searching seven electronic databases: MEDLINE, EMBASE and Global Health using the web-based database search platform Ovid as well as Dentistry & Oral Sciences Source (DOSS), Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Scopus. Furthermore, searching reference lists of primary studies included in the review will be conducted for identifying any additional relevant studies.

The search strategy was developed to broadly capture the different relevant concepts. We identified keywords relevant to our topic, such as 'preschool children', 'dental health', 'family', 'qualitative' and related synonyms. The Ovid platform was used to perform a pilot search with these keywords in MEDLINE, EMBASE and Global Health between June and July 2022. It was used to refine relevant keywords and subject headings as well as define inclusion and exclusion criteria. The university librarians provided advice and feedback on: the choice of appropriate databases; selected keywords and subject headings and how to convert the search to other databases. The search strategy for the MEDLINE database in the Ovid platform was adapted for the remaining databases and the full-search strategy with filters used is included in online supplemental file 1. The database search started on June 2022. We expect to report the results in the first half of 2023.

In this review, 'developed countries' classification was adopted from the United Nations, based on data that World Economic Situation and Prospects used in 2022 for delineating all countries based on their economy.[27]

Step 3: screening and selection of relevant studies

All identified references retrieved will be imported into EndNote V.20[28] referencing software. The initial deduplication will be done in EndNote V.20. The articles will then

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Table 1 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Type of publication: published peer-reviewed journal articles with available full text; Timeframe: all full-text articles retrieved in database searches (with no time limits applied); Type of study: qualitative or mixed methods studies, if their qualitative component meets other inclusion criteria (rationale: qualitative studies selected to obtain in-depth understanding of factors that can impact oral health of preschool children); Language: English (rationale: the majority of studies published in English language); Population: primary caregivers of 0–5-year-old children (rationale: based on our research question); Location: developed countries, as per the United Nation classification from 2022[27] (rationale: countries with similar economies as being more comparable).	Studies focusing on children with medical conditions, physical or mental disabilities (rationale: exploring primary caregivers perceptions of factors that can influence oral health of children in these context warrants separate studies); Studies involving primary caregivers of children older than 5 years (rationale: inability to distinguish factors relevant specifically for the age group of our interest, 0–5-year olds); Studies focusing on primary caregivers from diverse backgrounds or particular populations, such as asylum seekers, immigrants, Indigenous, people from culturally and linguistically diverse backgrounds, (rationale: exploring social practices of these groups are beyond the scope of this study and require a separate study to explore specific cultural issues and to ensure cultural security in the research); Commentaries, reviews, editorials, grey literature.

be imported into Covidence[29] where a secondary deduplication will take place. The final list of articles will then be screened using a team approach. There will be two levels in screening studies: (1) title and abstract screening and (2) full-text review. In level 1 screening, all titles and abstracts of retrieved publications will be screened independently by one researcher based on a predetermined inclusion and exclusion criteria outlined below, developed in consultation with the research team. All articles considered relevant will be included in the full-text review. If relevance of a study could not be determined from the title and abstract, the article will be moved to the full-text review. Following the title and abstract screening, level 2 screening will involve two reviewers independently reviewing full-text articles against inclusion/exclusion criteria. Any discrepancies will be resolved through discussion with a third researcher until consensus is reached. A flowchart of search results outlining the study selection process will be presented according to the PRISMA (The Preferred Reporting Items for Systematic reviews and Meta-Analyses) 2020 flow diagram.[30]

Inclusion and exclusion criteria

The inclusion criteria for this study were developed based on the research question and are defined before the screening process to ensure consistency in decision-making. After the pilot search, the research team decided that relevant studies will be included if they meet the inclusion criteria, presented in table 1. Based on the pilot search and a large number of retrieved articles that were not relevant to our research question, we formulated exclusion criteria, as presented in table 1.

Step 4: analysing and synthesising qualitative findings

The 'data' analysed will be all of the text labelled as 'Results' in primary studies, which includes participants' direct quotes and results as reported by the authors. For the in-depth analysis and interpretation of findings from original studies, full-text articles will be imported into NVivo V.20.[31] We will use a combination of inductive and deductive approaches in our data analysis.[32] The analysis will involve three stages and we will follow the process for the first two stages from Thomas and Harden.[33] The first stage will include inductive line-by-line coding of the data. In the second stage, we will group the codes and construct 'descriptive' themes. In the third stage, we will use deductive approach where the descriptive themes will be analysed through social practice theory lens. We will start by identifying what constitutes 'social practices' in the included studies. As social practices consist of three elements—meanings, competences and materials[22]—for each of the identified practices, we will categorise and assign our descriptive themes accordingly.

Step 5: presenting findings

The contextual information about the characteristics of the included studies will be presented in tabular format. The results from existing literature will be presented in a narrative format and graphical format. When presenting their findings, the researchers will reflect on the process and provide an explanation of their approach as well as any potential sources of bias.[23]

Patient and public involvement

None.

Implications

This qualitative metasynthesis will enable the authors to explore and apply social practice theory to existing qualitative studies on preschool children's oral health as a way to deepen understanding of this complex issue. It will also help identify how future research can reorient its focus towards social practice theory as a more holistic approach to tackling the major preventable health issue of poor oral health in early childhood. Results may be useful for researchers, policymakers and health practitioners with an interest in preschool children's oral health, as it will provide an alternative view of oral health-related practices beyond individual behaviour.

Dissemination and ethics

The results of the study will be disseminated through professional networks, presented at conferences, and submitted to a peer-reviewed journal. As this qualitative metasynthesis will consist of reviewing de-identified data from publicly available information in published articles, this study does not require a separate ethics approval.

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REFERENCES

1 Berg P, Coniglio D. Oral health in children overlooked and undertreated. *JAAPA* 2006;19:40,
2 Skeie MS, Raadal M, Strand GV, *et al*. The relationship between caries in the primary dentition at 5 years of age and permanent dentition at 10 years of age-a longitudinal study. *Int J Paediatr Dent* 2006;16:152–60.
3 Jackson SL, Vann WF, Kotch JB, *et al*. Impact of poor oral health on children's school attendance and performance. *Am J Public Health* 2011;101:1900–6.
4 Martins-Júnior PA, Vieira-Andrade RG, Corrêa-Faria P, *et al*. Impact of early childhood caries on the oral health-related quality of life of preschool children and their parents. *Caries Res* 2013;47:211–8.
5 Nora ÂD, da Silva Rodrigues C, de Oliveira Rocha R, *et al*. Is caries associated with negative impact on oral health-related quality of life of pre-school children? A systematic review and meta-analysis. *Pediatr Dent* 2018;40:403–11.
6 Bönecker M, Abanto J, Tello G, *et al*. Impact of dental caries on preschool children's quality of life: an update. *Braz Oral Res* 2012;26 Suppl 1:103–7.
7 Rodd HD, Marshman Z, Porritt J, *et al*. Oral health-related quality of life of children in relation to dental appearance and educational transition. *Br Dent J* 2011;211:E4.
8 Glick M, Williams DM, Kleinman DV, *et al*. A new definition for oral health developed by the fdi world dental federation opens the door to A universal definition of oral health. *Am J Orthod Dentofacial Orthop* 2017;151:229–31.
9 Chen KJ, Gao SS, Duangthip D, *et al*. Prevalence of early childhood caries among 5-year-old children: a systematic review. *J Investig Clin Dent* 2019;10:e12376.
10 GBD 2017 Oral Disorders Collaborators, Bernabe E, Marcenes W, *et al*. Global, regional, and national levels and trends in burden of oral conditions from 1990 to 2017: a systematic analysis for the global burden of disease 2017 study. *J Dent Res* 2020;99:362–73.
11 Abanto J, Carvalho TS, Mendes FM, *et al*. Impact of oral diseases and disorders on oral health-related quality of life of preschool children. *Community Dent Oral Epidemiol* 2011;39:105–14.
12 Cohen LC, Dahlen G, Escobar A, *et al*. Dentistry in crisis: time to change. La Cascada Declaration. *Aust Dent J* 2017;62:258–60.
13 Hooley M, Skouteris H, Boganin C, *et al*. Parental influence and the development of dental caries in children aged 0-6 years: a systematic review of the literature. *J Dent* 2012;40:873–85.
14 Fisher-Owens SA, Gansky SA, Platt LJ, *et al*. Influences on children's oral health: a conceptual model. *Pediatrics* 2007;120:e510–20.
15 Castilho A de, Mialhe FL, Barbosa T de S, *et al*. Influence of family environment on children's oral health: a systematic review. *J Pediatr (Rio J)* 2013;89:116–23.
16 Mouradian WE, Huebner CE, Ramos-Gomez F, *et al*. Beyond access: the role of family and community in children's oral health. *J Dent Educ* 2007;71:619–31.
17 Watt RG. From victim blaming to upstream action: tackling the social determinants of oral health inequalities. *Community Dent Oral Epidemiol* 2007;35:1–11.
18 da Fonseca MA, Avenetti D. Social determinants of pediatric oral health. *Dent Clin North Am* 2017;61:519–32.
19 Watt RG. Social determinants of oral health inequalities: implications for action. *Community Dent Oral Epidemiol* 2012;40 Suppl 2:44–8.
20 Vihalemm T, Keller M, Kiisel M. *From intervention to social change*. London: Taylor & Francis Group, 2015.
21 Maller CJ. Understanding health through social practices: performance and materiality in everyday life. *Sociol Health Illn* 2015;37:52–66.
22 Shove E, Pantzar M, Watson M. *The dynamics of social practice: everyday life and how it changes*. 1 Oliver's Yard, 55 City Road, London EC1Y 1SP United Kingdom: Sage, 2012.
23 Erwin EJ, Brotherson MJ, Summers JA. Understanding qualitative metasynthesis: issues and opportunities in early childhood intervention research. *J Early Interv* 2011;33:186–200.
24 Arora A, Lucas D, To M, *et al*. How do mothers living in socially deprived communities perceive oral health of young children? A qualitative study. *Int J Environ Res Public Health* 2021;18:3521.
25 Lewis CW, Linsenmayer KA, Williams A. Wanting better: a qualitative study of low-income parents about their children's oral health. *Pediatr Dent* 2010;32:518–24.
26 Elison S, Norgate S, Dugdill L, *et al*. Maternally perceived barriers to and facilitators of establishing and maintaining tooth-brushing routines with infants and preschoolers. *Int J Environ Res Public Health* 2014;11:6808–26.
27 Statistical Annex. World economic situation and prospects country classifications: united nations. 2022. Available: https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2022_ANNEX.pdf
28 *EndNote version 20*. PA, USA: Clarivate Analytics,
29 *Covidence systematic review software*. Melbourne, Australia: Veritas Health Innovation,
30 Page MJ, McKenzie JE, Bossuyt PM, *et al*. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *PLoS Med* 2021;18:e1003583.
31 NVivo. *Mac release 1.6.2*. Australia: QSR International Pty Ltd,
32 Green J, Thorogood N. *Qualitative methods for health research*. London: SAGE, 2004.
33 Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med Res Methodol* 2008;8:45.

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