

DENTISTRY FOR INFANTS IN PRIMARY HEALTH CARE: INTEGRATIVE REVIEW

ODONTOLOGIA PARA BEBÊS NA ATENÇÃO PRIMÁRIA À SAÚDE: REVISÃO INTEGRATIVA

ODONTOLOGÍA PARA BEBÉS EN ATENCIÓN PRIMARIA DE SALUD: UNA REVISIÓN INTEGRADORA

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ABSTRACT

To identify, by means of an integrative literature review, evidence about the development of dentistry for infants in Primary Health Care services. We included articles on the subject in Portuguese, English or Spanish, available in full online, published between 2010 and 2020. Based on the inclusion and exclusion criteria, 16 articles were selected to compose the final sample. From the interpretative analysis of the selected studies, two thematic categories emerged: Oral health care of infants in the PHC setting and Performance of PHC professionals in promoting the oral health of babies. Early educational interventions have been developed in Primary Health Care, presenting positive impacts on the oral health conditions of babies. Doctors and nurses generally need training on the subject and a better understanding to refer babies to the dentist.

Descriptors: *Child Health; Primary Health Care; Oral Health.*

RESUMO

Identificar, por meio de revisão integrativa da literatura, evidências acerca do desenvolvimento de odontologia para bebês em serviços de Atenção Primária à Saúde. Incluíram-se artigos que contemplassem a temática nos idiomas português, inglês ou espanhol, disponíveis na íntegra on-line, publicados no período entre 2010 e 2020. Com base nos critérios de inclusão e exclusão, selecionaram-se 16 artigos para compor a amostra final. A partir da análise interpretativa dos estudos selecionados, emergiram-se duas categorias temáticas: Atenção à saúde bucal de bebês no âmbito da APS e Atuação de profissionais da APS na promoção de saúde bucal em bebês. Intervenções educacionais precoces vêm sendo desenvolvidas na Atenção Primária à Saúde, apresentando impactos positivos nas condições de saúde bucal de bebês. Médicos e enfermeiros, geralmente, necessitam de capacitação em relação à temática e melhor compreensão para realizar encaminhamentos de bebês ao dentista.

Descritores: *Saúde da Criança; Atenção Primária à Saúde; Saúde Bucal.*

RESUMEN

Identificar, mediante revisión integradora de la literatura, evidencias sobre el desarrollo de la odontología infantil en los servicios de Atención Primaria de Salud. Se incluyeron artículos que incluían el tema en portugués, inglés o español, disponibles en acceso completo y en línea, publicados entre 2010 y 2020. Con base en los criterios de inclusión y exclusión, se seleccionaron 16 artículos para componer la muestra final. Del análisis interpretativo de los estudios seleccionados surgieron dos categorías temáticas: Atención a la salud bucal de los bebés en el contexto de la APS y Actuación de los profesionales de la APS en la promoción de la salud bucal de los bebés. Se han desarrollado intervenciones educativas tempranas en Atención Primaria de Salud, con impactos positivos en las condiciones de salud bucal de los bebés. Los médicos y enfermeras, en general, necesitan una formación en relación con el tema y una mejor comprensión para hacer derivaciones de bebés al dentista.

Descriptores: *Salud del Niño; Atención Primaria de Salud; Salud Bucal.*

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INTRODUCTION

Primary Health Care (PHC) offers entry to the health system, comprising organizing principles that must be articulated to function effectively: first contact, longitudinality, integrality and coordination¹. In Brazil, child health care is a priority field of the Family Health Strategy (ESF)². In this perspective, the National Oral Health Policy directs that a dental appointment be carried out, at the latest, from six months of age³.

Dental care aimed at children aged from zero to 36 months, called Baby Dentistry, is effective in controlling oral diseases, providing better conditions for the development of the stomatognathic system, and therefore, assistance is widely recommended^{4,5}. Such assistance can be developed with consultations for guidance to parents/guardians, in order to make them aware of the importance of prevention and clinical examination of the child's oral cavity⁶.

Factors related to parents, such as socioeconomic level and low internal locus of parental control, that is, when parents do not perceive themselves as determinants of the health/disease process, may be related to the prevalence of caries in primary dentition⁷. Thus, the importance of including the family in counseling programs with follow-up guided by caries risk assessment is notorious⁸.

Dental caries is a preventable disease, but it is the most common oral health problem in children⁹. Caries development is determined by sugar consumption and mediated by biofilm¹⁰. Thus, it is considered multifactorial, resulting from the interaction of cariogenic microorganisms (*Streptococcus mutans* and *Streptococcus sobrinus* are the most associated), exposure to carbohydrates and social variables⁹. Early Childhood Caries (CPI) is determined by the presence of caries lesions in children under six years of age¹⁰.

In addition to CPI, there are aspects of the baby's oral cavity that are unique and peculiar to this period. Thus, in addition to guidance and the search for dental treatment, the search for programs

aimed at the first years of life may occur due to the interest of parents in understanding possible changes in the anatomical structures and pathologies of the oral cavity of babies, which include changes in the chronology of the tooth eruption and soft tissue injuries¹¹.

For consolidation as a care model, it is essential that this care is understood in the educational/preventive essence, both by the population and professionals⁶. Therefore, the objective was to identify, through an integrative literature review, evidence about the development of dentistry for babies in PHC services.

METHODS

This is research in the form of an integrative literature review, using the Evidence-Based Practice (EBP) method, which provides the synthesis of knowledge and evidence in health. In this method, general conclusions in relation to an area to be studied are obtained by critically evaluating different studies with different methodologies¹².

The steps followed for this review were: definition of the theme and elaboration of the guiding question, elaboration of the inclusion and exclusion criteria of the studies; survey of publications in databases; categorization and analysis of works; evaluation of selected studies; presentation of results with critical analysis of the findings and synthesis of the review¹².

After defining the theme of the study, the PEO strategy (Population/Exposure/Outcomes-Outcomes)¹³ was adopted to prepare the guiding question. The Population involved babies (0-3 years); the Exhibition included dental assistance at the APS; while the Outcome was defined by health care. Thus, to conduct this study, the following question was structured: how is dental care for babies being developed in Primary Health Care?

Articles that addressed the topic in Portuguese, English or Spanish, available online, published in the period between 2010 and 2020, were

included. The following exclusion criteria were adopted: studies that addressed pathological changes, included dental care in children over the age of three and carried out outside the context of PHC. In addition, case studies, experience reports, review studies, editorials and opinion articles were excluded.

The search for articles was performed in three databases in the health area – Latin American and Caribbean Literature on Health Sciences (LILACS), US National Institutes of Health's National Library of Medicine (PubMed) and Scientific Electronic Library Online (SciELO). The search strategy used three descriptors, in Portuguese, English and Spanish, indexed in the Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH) of the National Library: Saúde da Criança/Child Health/Salud del Niño, Atención Primaria à Saúde/Primary Health Care/Atención Primaria de Salud and Bucal Health/Oral Health/Salud Bucal. These descriptors were combined, using the Boolean operator AND in the following ways: “Child Health” AND “Primary Health Care”, “Child Health” AND “Oral Health”, “Primary Health Care” AND “Oral Health”, “Children's Health” AND “Primary Health Care” AND “Oral Health”. The literature search took place between July and August 2020.

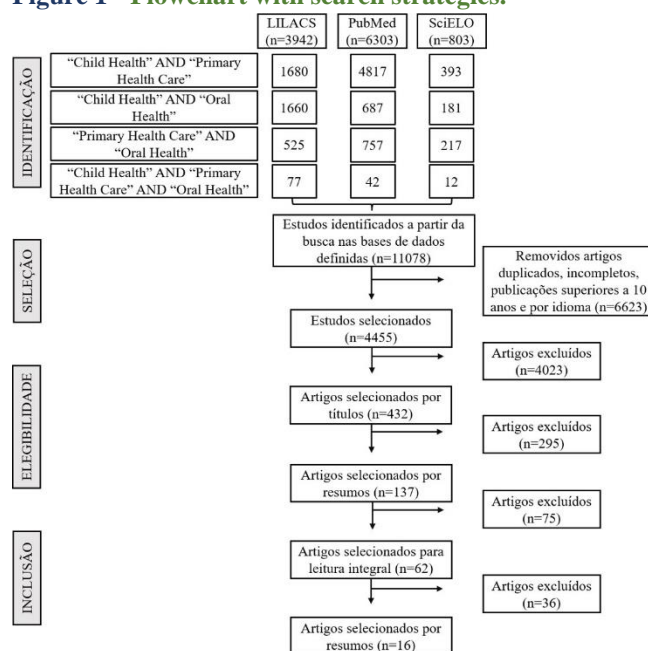
Thus, the search for articles in the aforementioned databases was carried out. The selected works were organized in the *Mendeley*® bibliographic manager, a tool that allowed the exclusion of duplicate productions and helped in the screening of titles and abstracts, according to the eligibility criteria. A single operator performed the searches and handled the articles found. Titles were first analyzed, followed by abstracts, in order to select only studies directly related to the proposed theme. Still in the search, the selected articles were read in full to verify the relationship with the content of interest, excluding those that did not meet the eligibility criteria. Finally, after obtaining the final sample of articles, a critical analysis of the

studies and a synthesis of the review were carried out.

The level of evidence of the studies included in the final sample was assessed¹⁴: I - systematic review or meta-analysis (higher level of evidence); II - randomized controlled trial; III - controlled trial without randomization; IV - case-control study or cohort study; V - systematic review of a qualitative or descriptive study; VI - qualitative or descriptive study; VII - opinion or consensus of expertise (lower level of evidence).

RESULTS

Figure 1 - Flowchart with search strategies.



Source – Developed by the authors.

After crossing the DeCS/Mesh Terms, 11,078 references were found (Figure 1). The references were cataloged in the *Mendeley*® bibliographic manager, eliminating duplicate studies. Considering the inclusion and exclusion criteria, 16 articles were selected. Figure 1 presents the flowchart with the search strategies.

Table 1 - Characterization of selected studies, according to authors/year, country of affiliation of the main author, article title, level of evidence and indexes.

AU-THORS/YEAR	COUNTRY OF AFFILIATION OF MAIN AU-THOR	ARTICLE TITLE	LEVEL OF EVIDENCE	INDEXERS
FONTANA ET AL. 2011 ¹⁵	USA	IDENTIFICATION OF CARIES RISK FACTORS IN TODDLERS	IV	LILACS
ARORA ET AL. 2012 ¹⁶	AUSTRÁLIA	CHILD AND FAMILY HEALTH NURSES' EXPERIENCES OF ORAL HEALTH OF PRESCHOOL CHILDREN: A QUALITATIVE APPROACH	IV	LILACS PUBMED
LONG ET AL. 2012 ¹⁷	USA	PEDIATRICIANS' ASSESSMENTS OF CARIES RISK AND NEED FOR A DENTAL EVALUATION IN PRESCHOOL AGED CHILDREN	IV	PUBMED
MAKINEN ET AL. 2013 ¹⁸	FINLAND	TOPICAL XYLITOL ADMINISTRATION BY PARENTS FOR THE PROMOTION OF ORAL HEALTH IN INFANTS: A CARIES PREVENTION EXPERIMENT AT A FINNISH PUBLIC HEALTH CENTRE	III	LILACS
BRANDEN ET AL. 2014 ¹⁹	BELGIUM	EFFECT EVALUATION OF AN ORAL HEALTH PROMOTION INTERVENTION IN PRESCHOOL CHILDREN	III	LILACS PUBMED
PESARESSI ET AL. 2014 ²⁰	PERU	BARRIERS TO ADOPTING AND IMPLEMENTING AN ORAL HEALTH PROGRAMME FOR MANAGING EARLY CHILDHOOD CARIES THROUGH PRIMARY HEALTH CARE PROVIDERS IN LIMA, PERU	VI	LILACS PUBMED
RABIEI ET AL. 2014 ²¹	IRAN	PRIMARY CARE NURSES' AWARENESS OF AND WILLINGNESS TO PERFORM CHILDREN'S ORAL HEALTH CARE	VI	LILACS PUBMED
ANDRADE ET AL. 2016 ²²	BRAZIL	CONHECIMENTO DE MÉDICOS E ENFERMEIROS SOBRE SAÚDE BUCAL	IV	LILACS

AU-THORS/YEAR	COUNTRY OF AFFILIATION OF MAIN AU-THOR	ARTICLE TITLE	LEVEL OF EVIDENCE	INDEXERS
		NA PRIMEIRA INFÂNCIA		
RIGO ET AL. 2016 ²³	BRAZIL	IMPACTO DA ORIENTAÇÃO ODONTOLÓGICA PARA MÃES DURANTE A GESTAÇÃO EM RELAÇÃO À SAÚDE BUCAL DOS FILHOS	VI	SCIELO
MACAMBIRA ET AL. 2017 ²⁴	BRAZIL	CONHECIMENTO DE PAIS/CUIDADORES SOBRE SAÚDE BUCAL NA INFÂNCIA	VI	LILACS
PINTO ET AL. 2017 ²⁵	BRAZIL	ARE MATERNAL FACTORS PREDICTORS FOR EARLY CHILDHOOD CARIES? RESULTS FROM A COHORT IN SOUTHERN BRAZIL	IV	SCIELO
SINGHAL ET AL. 2017 ²⁶	CANADA	KNOWLEDGE, ATTITUDE, WILLINGNESS AND READINESS OF PRIMARY HEALTH CARE PROVIDERS	VI	PUBMED
ADENIYI ET AL. 2018 ²⁷	NIGERIA	EFFECT OF HEALTH EDUCATION INTERVENTION CONDUCTED BY PRIMARY HEALTH CARE WORKERS ON ORAL HEALTH KNOWLEDGE AND PRACTICES OF NURSING MOTHERS IN LAGOS STATE	IV	PUBMED
JAMIESON ET AL. 2018 ²⁸	AUSTRÁLIA	DENTAL DISEASE OUTCOMES FOLLOWING A 2-YEAR ORAL HEALTH PROMOTION PROGRAM FOR AUSTRALIAN ABORIGINAL CHILDREN AND THEIR FAMILIES: A 2-ARM PARALLEL, SINGLE-BLIND, RANDOMISED CONTROLLED TRIAL LISA	II	PUBMED
MELO ET AL. 2019 ²⁹	BRAZIL	INCREASE IN DENTAL CARIES AND CHANGE IN THE SOCIO-ECONOMIC	IV	PUBMED

AU-THORS/YEAR	COUNTRY OF AFFILIATION OF MAIN AU-THOR	ARTICLE TITLE	LEVEL OF EVIDENCE	INDEXERS
		PROFILE OF FAMILIES IN A CHILD COHORT OF THE PRIMARY HEALTH CARE IN NORTHEAST		
BATRA ET AL. 2020 ³⁰	ÍNDIA	INTEGRATION OF ORAL HEALTH IN PRIMARY HEALTH CARE THROUGH MOTIVATIONAL INTERVIEWING FOR MOTHERS OF YOUNG CHILDREN: A PILOT STUDY	II	PUBMED

Source – Developed by the authors.

Table 1 shows the main information from the initial analysis of the selected studies: authors/year of publication, country of affiliation of the main author, article title, level of evidence and indexers. The years of publication with the most articles were 2014 (n=3) and 2017 (n=3). Brazil was the country with the highest prevalence (n=5). In all, 13 articles were published in English. After reading in full, seven articles were classified as evidence level IV. The PubMed database prevailed in this review, with 10 articles. Table 2 (ANNEX B) describes the objectives of the selected studies and main results.

With different approaches, five studies^{19,23,24,27,28} brought an analysis about the dental care developed by PHC services for babies and family members. Three studies^{25,29,30} developed within the scope of PHC demonstrated the important association between the oral health of mothers and the occurrence of dental caries in their children.

A study of potential clinical measures of caries prevention in infants was identified¹⁸, which evaluated the use of xylitol in children aged six to eight months for 36 months. Another study carried out an assessment of the risk of caries in children between 18-36 months of age¹⁵.

Table 2 - Selected studies with objectives and main results.

AUTHORS/YAER	OBJECTIVES	MAIN RESULTS
FONTANA ET AL. 2011 ¹⁵	IDENTIFY RISK FACTORS FOR THE PROGRESSION OF CARIES IN CHILDREN IN PHC TO GUIDE PREVENTIVE AND REFERRAL STRATEGIES.	FAMILY EXPERIENCE OF CARIES, TRANSMISSION-RELATED BEHAVIORS, DIETARY FACTORS, BELIEFS ABOUT HEALTH, AND LOW INCOME HAVE BEEN IDENTIFIED AS RISK FACTORS FOR PROGRESSION FROM CARIES TO CAVITATION IN INFANTS.
ARORA ET AL. 2012 ¹⁶	TO ANALYZE THE EXPERIENCES AND REFLECTIONS OF PHC NURSES IN THE ORAL HEALTH OF CHILDREN IN THE CONTEXT OF FAMILIES	NURSES CONSIDERED THAT ORAL PROBLEMS IN YOUNG CHILDREN WERE UNDERESTIMATED IN MULTICULTURAL AND SOCIOECONOMICALLY DISADVANTAGED POPULATIONS, WITH LACK OF KNOWLEDGE ABOUT THE CARIES DISEASE PROCESS.
LONG ET AL. 2012 ¹⁷	IDENTIFY RISK FACTORS ASSESSED BY PEDIATRICIANS FOR CARIES IN EARLY CHILDHOOD AND THEIR ASSOCIATION WITH THE NEED FOR REFERRAL TO THE DENTIST.	BEHAVIORAL RISK FACTORS WERE PREVALENT BUT NOT STRONG PREDICTORS OF THE NEED FOR ASSESSMENT. CARIES LESIONS WERE MORE ASSOCIATED WITH THE NEED FOR REFERRAL.
MAKINEN ET AL. 2013 ¹⁸	TEST THE TOPICAL USE OF XYLITOL AS A PROTOCOL FOR PROMOTING ORAL HEALTH IN INFANTS	THE USE OF XYLITOL RESULTED IN A SIGNIFICANT REDUCTION IN THE INCIDENCE OF CARIES AND IN THE COUNT OF <i>STREPTOCOCCUS MUTANS</i> (P<0.001).
BRANDEN ET AL. 2014 ¹⁹	EVALUATE THE EFFECTIVENESS OF AN ORAL HEALTH PROMOTION INTERVENTION PROGRAM "SMILE FOR LIFE" FOR BABIES IN BELGIUM.	A REDUCTION IN THE NUMBER OF DENTAL SURFACES WITH CARIES AND BETTER ORAL HEALTH BEHAVIOR WAS IDENTIFIED. IN THE LONG TERM, THERE WAS NO EFFECT ON THE CARIES EXPERIENCE.
PESARESSI ET AL. 2014 ²⁰	IDENTIFY BARRIERS TO PARTICIPATION IN AN ORAL HEALTH PROGRAM TO PREVENT CPI IN THE NURSES' PERCEPTION	IT WAS NOTICED THAT PROFESSIONALS UNDERSTAND THEIR ROLE IN MAINTAINING GOOD ORAL HEALTH IN INFANTS AND CHILDREN. NURSES WERE WILLING TO ADVISE PARENTS AFTER TRAINING IN ORAL HEALTH.
RABIEI ET AL. 2014 ²¹	IDENTIFY THE KNOWLEDGE OF NURSES ABOUT THE ORAL HEALTH OF BABIES, ATTITUDES AND WILLINGNESS TO OBTAIN INFORMATION ON THE SUBJECT.	NURSES WITH A LOWER LEVEL OF EDUCATION, BETTER ORAL HEALTH BEHAVIOR AND WHO WORK IN A MORE SOCIOECONOMICALLY VULNERABLE REGION HAD A MORE POSITIVE ATTITUDE TOWARDS THEIR KNOWLEDGE OF ORAL HEALTH.
ANDRADE ET AL. 2016 ²²	CHECK THE KNOWLEDGE OF DOCTORS AND NURSES, INCLUDED IN THE FAMILY HEALTH STRATEGY, IN THE CITY OF PATOS, PARAÍBA, ABOUT ORAL HEALTH FOR CHILDREN AGED 0 TO 36 MONTHS.	PROFESSIONALS REPORTED NOT KNOWING HOW DENTAL BIOFILM IS REMOVED. 65.1% OF PROFESSIONALS UNDERSTAND THAT THE FIRST VISIT TO THE DENTIST IS INDICATED BEFORE THE TEETH ERUPT, 77.8% HAVE ALREADY REFERRED BABIES AGED 0-36 MONTHS TO THE DENTIST AND 68.3% OFFER INFORMATION ABOUT ORAL HEALTH.

AUTHORS/ YAER	OBJECTIVES	MAIN RESULTS
RIGO ET AL. 2016 ²³	TO ANALYZE THE PERCEPTION OF MOTHERS IN RELATION TO THEIR CHILDREN'S ORAL HEALTH AND THE INFLUENCE OF DEMOGRAPHIC VARIABLES, PERCEPTION AND PREVENTIVE PRACTICE IN DENTAL GUIDANCE DURING PREGNANCY.	MOTHERS WHO RECEIVED DENTAL ADVICE DURING PREGNANCY HAD A GREATER PERCEPTION OF THEIR CHILDREN'S ORAL HEALTH: ALL CHILDREN VISITED THE DENTIST IN THE FIRST YEAR OF LIFE (P<0.001) AND BREASTFED UNTIL SIX MONTHS OF AGE (P=0.05).
MACAMBIRA ET AL. 2017 ²⁴	TO ASSESS THE KNOWLEDGE OF PARENTS/CAREGIVERS ABOUT CHILDHOOD ORAL HEALTH IN A PRIMARY HEALTH CARE UNIT IN FORTALEZA, CEARÁ, BRAZIL.	IN CHILDCARE GROUPS WITH INSERTION OF DENTISTRY (GO), ALL CHILDREN ADHERED TO TOOTHBRUSHING, WITH A DAILY FREQUENCY OF TWO OR THREE TIMES IN 87.1% AND ALL HAD VISITED THE DENTIST AT LEAST ONCE. IN THE GROUP WITHOUT DENTISTRY (GS), 16.1% DID NOT BRUSH DAILY AND 58% BRUSHED TWICE OR THREE TIMES A DAY (P=0.01).
PINTO ET AL. 2017 ²⁵	DETERMINE THE INFLUENCE OF MATERNAL FACTORS ON EARLY CARIES DEVELOPMENT.	CPI OCCURRED IN 15.1% AND CARIES IN MOTHERS IN 74.4% (P=0.056). CHILDREN WITH A HIGHER INCIDENCE OF CARIES WERE DAUGHTERS OF LOW SOCIOECONOMIC STATUS MOTHERS WITH MORE DECAYED TEETH AND GINGIVAL BLEEDING.
SINGHAL ET AL. 2017 ²⁶	ASSESS KNOWLEDGE, ATTITUDE, WILLINGNESS AND READINESS OF HEALTH PROFESSIONALS TO CARRY OUT ORAL HEALTH CARE ACTIVITIES IN CHILDREN DURING THE FIRST VISIT..	MORE THAN 80% EXAMINE THE ORAL CAVITY IN MORE THAN 50% OF CHILDREN. MORE THAN 50% CANNOT IDENTIFY THE FIRST SIGNS OF TOOTH DECAY. LACK OF TIME WAS THE MAIN REASON FOR NOT TAKING MEASURES TO PREVENT ORAL DISEASES.
ADENIYI ET AL. 2018 ²⁷	TO ASSESS THE EFFECT OF ORAL HEALTH EDUCATION SESSIONS PROVIDED BY PHC PROFESSIONALS ON THE KNOWLEDGE AND PRACTICES OF MOTHERS WITH BABIES AGED THREE MONTHS OR LESS.	THERE WAS AN INCREASE IN THE MEAN KNOWLEDGE SCORES AFTER THE INTERVENTION. 7.3% AGREED THAT A TOOTHBRUSH WAS NECESSARY FOR THE BABIES' ORAL HYGIENE, WITH A SIGNIFICANT CHANGE IN THIS PERCEPTION AFTER THE INTERVENTION (52.3%; P = 0.000).
JAMIESON ET AL. 2018 ²⁸	TO DETERMINE THE EFFECTIVENESS OF AN INTERVENTION PERFORMED (FROM PREGNANCY TO 18 MONTHS) IN ABORIGINAL CHILDREN.	THE PROPORTION OF CHILDREN WITH CARIES WAS 4% LOWER IN THE INTERVENTION GROUP COMPARED TO THE CONTROL GROUP. THE INTERVENTION RESULTED IN IMPROVEMENTS IN THE ORAL HEALTH OF ABORIGINAL CHILDREN.
MELO ET AL. 2019 ²⁹	TO PRESENT RISK FACTORS RELATED TO THE INCREASE IN DENTAL CARIES IN PRIMARY DENTITION IDENTIFIED BETWEEN 2006 (18-36 MONTHS) AND 2010 (5-7 YEARS).	THE PREVALENCE AND MEAN OF DMFT (DECAYED TEETH, WITH INDICATED EXTRACTION AND FILLED) CHANGED SIGNIFICANTLY (P<0.005) WITH THE LEVEL OF EDUCATION AND OCCUPATION OF THE MOTHER. COMMON RISK PREDICTORS FOR INCREASES

AUTHORS/ YAER	OBJECTIVES	MAIN RESULTS
		IN CARIES WERE SUGAR CONSUMPTION AND PUBLIC SCHOOL ATTENDANCE.
BATRA ET AL. 2020 ³⁰	TEST THE INTEGRATION OF ASPECTS RELATED TO ORAL HEALTH WITH HEALTH EDUCATION IN PHC AND TEST THE FEASIBILITY OF MOTIVATIONAL INTERVIEWING IN PROVIDING ORAL HEALTH EDUCATION FOR MOTHERS OF BABIES AGED 8-12 MONTHS.	THE PRESENCE OF BACTERIAL PLAQUE ON THE GINGIVAL MARGINS OR OVER THE TOOTH SURFACE WAS IDENTIFIED IN 65% OF CHILDREN. ABOUT 19% OF INFANTS HAD TOOTH DECAY IN ONE OR BOTH OF THE MAXILLARY CENTRAL INCISORS. 100% OF MOTHERS AGREE THAT IT IS OKAY FOR THE BABY TO SLEEP WITH A BOTTLE AND THAT CARIES IN PRIMARY TEETH DOES NOT MATTER.

Source – Developed by the authors.

Articles related to the performance of other PHC professionals were also selected, bringing different discussions: experiences and reflections on the work of nurses in PHC in relation to the oral health of young children¹⁶, risk factors assessed by pediatricians for CPI and referral of babies for evaluation dentistry¹⁷, barriers to participation in oral health programs from the perspective of nurses²⁰, knowledge of PHC professionals in relation to the oral health of babies^{21,22,26}.

DISCUSSION

From the interpretive analysis, two thematic categories were originated: Attention to the oral health of babies within the scope of PHC and Action of PHC professionals in the promotion of oral health in babies.

Oral health care for babies within the scope of PHC

Dental follow-up, during childcare appointments, with repetition of oral hygiene instructions, can lead to changes in habits such as greater adherence to toothbrushing, greater number of first appointments with the dentist and lower sugar consumption²⁴.

Early educational intervention aimed at mothers is an adequate strategy to be performed before the children's behavioral training, also discussed in another study²⁷. In a study carried out in Nigeria, positive results of an intervention with two health education sessions on knowledge and oral

health practices of mothers were identified²⁷. In this study, the importance of integrating oral health with general health within the PHC was highlighted. Participation in an early dental care program can influence the absence of caries lesions. This assertion reinforces the importance of dental actions performed in the first years of life³¹, corroborating two studies²³⁻²⁴.

Unlike these studies^{23,24,27}, research in Flanders, Belgium¹⁹, identified that intervention programs to promote oral health can have limited success in the short term. In the study, it was observed that the positive effects of the intervention decreased with the reduction in contact with preventive health services. Changes in the oral health behavior of the population or the "Hawthorne effect" were also associated with this result, in which participation in research can have an impact on health habits.

For the development of programs that promote oral health in PHC, it is essential to consider the great impact of the oral health of mothers on the oral health of their children^{25,29,30}. A study pointed out that this relationship can be developed by oral hygiene behaviors, suggesting that mothers who do not practice self-care will not be involved in their children's oral health care²⁵. Thus, the oral health of mothers was considered a potential risk factor for dental caries in childhood. In this perspective, another study observed a correlation between the participation of mothers of babies aged zero to 18 months in an educational-preventive program and the reduction in the percentage of bacterial plaque in their children³².

Social variables influence the distribution of dental caries with levels of importance related to the population³³. Three articles in this review found that the level of education of mothers affected the oral health status of babies and their knowledge on the subject^{23,27,29}. This relationship was also identified with the occupation of the mothers²⁹ and their age group²⁷.

It was observed that oral health guidelines, during the gestational period, can have positive

influences, with a dental appointment up to the first year of life and a significant association with breastfeeding up to six months of age²³. Another listed publication considered that interventions performed at four times, from pregnancy to the baby's 18 months, resulted in improvements in the oral health of Aboriginal children in Australia²⁸. This approach to the baby's oral health during pregnancy has been associated with a greater willingness of pregnant women to receive guidance that improves their own life and that of the baby³⁴.

A study carried out in India³⁰ with mothers of babies aged 8 to 12 months found that the child's oral health is a neglected domain: all mothers agreed that caries in primary teeth is unimportant and none was aware of the beginning of the development of caries caused by plaque. Health education was highlighted, through motivational interviews (collaborative conversation with strengthening of motivation), also used in another selected study²⁸, as a viable and economical alternative to improve the oral health status of children. Another publication also showed that interventions with motivational interviews proved to be important in adhering to dentists' instructions³².

An article listed for this review identified that family experience of caries, dietary factors, beliefs about health and low income are risk factors for caries progression in very young children¹⁵. It is noteworthy that no counts of *Streptococcus mutans*, ratio of *Streptococcus mutans*/total *Streptococcus*, baseline experience of caries, dental plaque and gingivitis were found as significant predictors of caries progression.

An additional method of preventing dental caries in babies was evaluated in a public health center in Finland¹⁸, which consisted of the application of xylitol in the primary teeth of babies aged six to eight months by family members until they reached 36 months of age. Considerable prevention of tooth decay with the use of topical xylitol was identified and returns were cited as an important factor in maintaining high interest in oral health by families. It has been suggested that the

administration of topical xylitol in infants may be strategic in preventing caries¹⁸. However, other studies show that the efficacy of xylitol on the incidence of caries still has little evidence, making its preventive action uncertain³⁵⁻³⁶.

Role of PHC professionals in promoting oral health in babies

Doctors and nurses have priority monitoring of babies from prenatal care and generally have the first contact with the child before the dentist²⁶. In many health systems, nurses may be the only professionals to transmit oral health information to families²¹. When considering this advantageous and strategic position of nurses, in regular and close contact with mothers and babies, a study cited the formation of a link between nurses and socioeconomically disadvantaged populations in maintaining oral health²⁰. Professionals were willing to train and participate in oral health programs aimed at reducing caries in childhood. Another study listed revealed a low level of knowledge in oral health among PHC nurses. Less than half were interested in incorporating oral health care into routine visits²¹.

In another study, the need for training physicians and nurses in relation to knowledge about oral health in children aged between zero and 36 months was also perceived²². A considerable part of the interviewees declared that they did not know how to remove the dental biofilm. 68.3% reported that they pass on information about oral health in their appointments. Also, there was a lack of knowledge about child oral health by nurses and physicians from the PHC, pointing to the need for continuing education²¹.

According to a selected study, it was observed that family physicians and pediatricians know the importance of oral health in general²⁶. However, consistent with the findings of previous studies^{22,37}, professionals reported not knowing the signs, symptoms and causes of oral problems.

A study in Australia identified oral health problems associated with low socioeconomic levels as a considerable segment of infant health

problems, from the perspective of nurses¹⁶. Professionals related tooth decay mainly to the lack of knowledge on the part of parents, especially regarding eating habits.

Regarding the referral for dental care in the PHC of young children with caries or at high risk, in a study in North Carolina (USA)¹⁷, low rates of referrals by physicians were identified. Behavioral risk factors were prevalent in this study, but they were not strong predictors of referral for dental evaluation. Corroborating this study, an article observed that pediatricians commonly believed that parents were not very motivated to seek dental care or that oral health counseling had a small effect on parental behavior³⁷. Such beliefs become a barrier to accessing preventive oral health services provided in primary care.

FINAL CONSIDERATIONS

In this integrative literature review, it was identified that a considerable part of the selected articles did not present dentistry for babies in PHC as the main discussion, addressing other outcomes, such as the relationship between the oral health of the mother-infant binomial.

From this review, it can be considered that the oral health of mothers is a potentially important risk factor for dental caries in childhood; the level of education and occupation of mothers affect the oral health condition of their babies; early educational interventions have been developed in PHC and can have an appropriate approach to modify behavior and improve oral health conditions, highlighting motivational interviews and dental follow-up in childcare consultations with repetition of oral hygiene instructions; socioeconomic factors were identified as risk factors for caries progression in babies; and PHC professionals, such as doctors and nurses, despite having an advantageous position in relation to the oral health care of babies, generally need more training in relation to knowledge in this area and better understanding to carry out referrals of babies to the dentist.

Despite not having the description of this service as the main point, the selected studies reflected how fathers/guardians, especially mothers, have been receiving this assistance in different parts of the world during the last few years. This allows for a panoramic view of oral health care for babies, enabling better targeting of oral health promotion initiatives and allocation of resources for these services in primary care.

The need for reflection on the role of dentists on the oral health of babies is also understood, in order to strengthen their key role, within the multidisciplinary team, in the longitudinality of care.

Another limitation of this review is due to the fact that the selected publications are, for the most part, cross-sectional studies, with questionnaires applied to the participants, allowing a bias in terms of the reliability of the reports.

It is also essential to consider that studies from different countries were selected. And, despite being publications developed in primary care, each country has a health system with particularities.

When considering the scarce literature on the subject focused on the age group from zero to 36 months, it is expected that this work will stimulate the development of other studies on this audience.



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Submitted

03/06/2021

Accepted

26/09/2021

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