



REVIEW ARTICLE

NURSES' COMPETENCIES IN MATERNAL ORAL HEALTHCARE: AN INTEGRATIVE REVIEW

Competências do enfermeiro na atenção à saúde bucal da gestante: revisão integrativa

Competencias del enfermero en la atención a la salud bucal de la gestante: revisión integrativa

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ABSTRACT

Introduction: managing oral health during pregnancy requires integrated and collaborative action, highlighting the importance of nurses in promoting, preventing, and early detecting oral conditions, although there are gaps in their training and recognition of their competencies in this context. **Objective:** to identify the responsibilities of nurses in the realm of pregnant people's oral healthcare. **Methods:** an integrative review was conducted, including original full-text articles, regardless of publication date or language. Searches were conducted in 2023, and the results were imported into the Rayyan platform. The study selection followed the guidelines set by PRISMA. **Results:** a total of 262 studies were identified, with seven meeting the inclusion criteria. The reviewed studies highlighted nurses' roles in oral health education, performing oral physical examinations, and referring patients to dentists. **Conclusion:** nurses play an integral role in pregnant people's oral healthcare, contributing to the prevention, identification, and appropriate referral of oral health issues during pregnancy.

Keywords: Nursing. Oral Health. Prenatal Care. Nurse's Role. Maternal-Child Nursing

RESUMO

Introdução: o manejo da saúde bucal na gestação requer atuação integrada e colaborativa, destacando a importância do enfermeiro na promoção, prevenção e detecção precoce de agravos. Embora lacunas na formação e no reconhecimento de suas competências nesse contexto. **Objetivo:** identificar os cuidados que competem ao enfermeiro no âmbito da atenção à saúde bucal da gestante. **Método:** revisão integrativa onde foram considerados para inclusão, artigos originais, disponíveis na íntegra, independentemente do período de publicação e do idioma. As buscas foram conduzidas em 2023. Os resultados das buscas foram importados para a plataforma Rayyan. A seleção dos estudos seguiu as diretrizes estabelecidas pelo PRISMA. **Resultados:** foram encontrados 262 estudos e após o processo de seleção sete responderam à questão norteadora. Ao que concerne aos cuidados de enfermagem no âmbito da saúde bucal de pessoas gestantes, os trabalhos apontaram especialmente a prática da educação em saúde bucal, realização de exame físico bucal e encaminhamento ao cirurgião-dentista. **Conclusões:** a atuação do enfermeiro na saúde bucal das gestantes desempenha papel integrado, contribuindo para a prevenção, identificação e encaminhamento adequado de questões relacionadas à saúde da cavidade oral durante a gestação.

Palavras-chave: Enfermagem. Saúde Bucal. Cuidado Pré-Natal. Papel do enfermeiro. Enfermagem Materno-Infantil

RESUMEN

Introducción: el manejo de la salud bucal durante el embarazo requiere una actuación integrada y colaborativa, destacando la importancia del enfermero en la promoción, prevención y detección precoz de afecciones orales, aunque existen lagunas en su formación y en el reconocimiento de sus competencias en este contexto. **Objetivo:** identificar los cuidados que competen al enfermero en el ámbito de la atención a la salud bucal de la gestante. **Método:** revisión integrativa en la que se consideraron para inclusión artículos originales, disponibles en texto completo, independentemente del período de publicación y del idioma. Las búsquedas se realizaron en 2023. Los resultados de las búsquedas fueron importados a la plataforma Rayyan. La selección de los estudios siguió las directrices establecidas por PRISMA. **Resultados:** se encontraron 262 estudios y, tras el proceso de selección, siete respondieron a la pregunta orientadora. En lo que respecta a los cuidados de enfermería en el ámbito de la salud bucal de las gestantes, los trabajos señalaron especialmente la práctica de la educación en salud bucal, la realización del examen físico bucal y la derivación al dentista. **Conclusiones:** la actuación del enfermero en la salud bucal de las gestantes desempeña un papel integrado, contribuyendo a la prevención, identificación y derivación adecuada de cuestiones relacionadas con la salud de la cavidad oral durante el embarazo.

Palabra Clave: Enfermería. Salud Bucal. Atención Prenatal. Rol de la Enfermera. Enfermería Maternoinfantil



INTRODUCTION

Managing the oral health of pregnant people requires a deep understanding of the various physiological events that occur during pregnancy, which can negatively impact both the mother's oral and general health, with repercussions for the mother-child relationship.⁽¹⁻²⁾ In light of this, a sequential approach throughout each trimester is necessary to provide holistic care for pregnant people, requiring inter-professional collaboration, including nurses.⁽¹⁾

Despite this need and the established relationship between pregnant people and nurses, there is a gap in the training and clinical practice of nurses in addressing oral care for expectant mothers.⁽³⁻⁵⁾ This shortcoming may be linked to a lack of awareness of their competencies in this care domain, as evidenced by uncertainty, limited knowledge, and lack of experience.⁽⁶⁻⁷⁾

Considering the intrinsic relationship between oral and general health, it is reasonable to assume that a nurse, aware of their duties, including those involving daily oral care, can play a decisive role in promoting the comprehensive health of pregnant people, in collaboration with other professionals. This awareness highlights the importance of this topic. In particular, such knowledge will prompt further learning and implementation of actions aimed at the mother's oral health, enabling the early detection of potential oral issues,⁽⁸⁾ the prevention of complications, and timely treatment.

Thus, this study aimed to identify the responsibilities of nurses in the realm of pregnant people's oral healthcare.

METHOD

This study is an integrative literature review, a research method employed in Evidence-Based Practice (EBP). This method was chosen because it allows for the simultaneous inclusion of diverse methodologies such as experimental, non-experimental, and theoretical studies providing a comprehensive and holistic understanding of the phenomenon that other review types might not capture.

This review was conducted following the steps: 1) Formulation of the research question; 2) Definition of inclusion and exclusion criteria; 3) Implementation of the search strategy; 4) Selection of articles based on title and abstract; 5) Selection of full-text articles; 6) Assessment of the quality of the included studies; and 7) Synthesis of the selected articles.⁽⁹⁾

The research question was formulated based on the PICO strategy, an acronym in English where "P" stands for Population, "I" for Interest, and "Co" for Context.⁽¹⁰⁾ Accordingly, the terms "Nurses" "Pregnant People's Oral Health," and "Nursing Care" were used for "P," "I," and "Co," respectively. The following research question was developed: "What are the oral care practices provided by nurses to pregnant people?"

For inclusion, the study considered original full-text articles, regardless of publication date or language. Exclusion criteria included duplicate articles and those that did not answer the research question. Data collection was initially conducted in June 2023 and updated in December 2025 to include recent findings, following the peer review process and editorial decision. The search was carried out in the following databases: Medical Literature Analysis and Retrieval System Online - MEDLINE (via PubMed); Latin American and Caribbean Health Sciences Literature (LILACS); Nursing Database (BDENF); Spanish Bibliographic Index in Health Sciences (IBECS); Brazilian Dentistry Bibliography (BBO); Virtual Health Library Public Health Campus - CVSP (accessed through the Regional Portal of the Virtual Health Library [BVS]); Scopus; and Web of Science. The research also included the academic search engine Science Direct. Access to these sources was obtained through the Federated Academic Community (CAFE), using the journal portal of the Coordination for the Improvement of Higher Education Personnel (CAPES) of the Ministry of Education (MEC).

The search strategy involved using the controlled descriptors “Nursing,” “Nursing Care,” “Oral Health,” and “Pregnant People,” sourced from the Health Sciences Descriptors (DeCS). Additionally, the terms "Nursing," "Nursing Care," "Oral Health," and "Pregnant Women" were extracted from the Medical Subject Headings (MeSH). These terms were combined using the Boolean operators "AND" and "OR" during the advanced search in the databases. The specific combinations performed in each database are outlined in Chart 1.

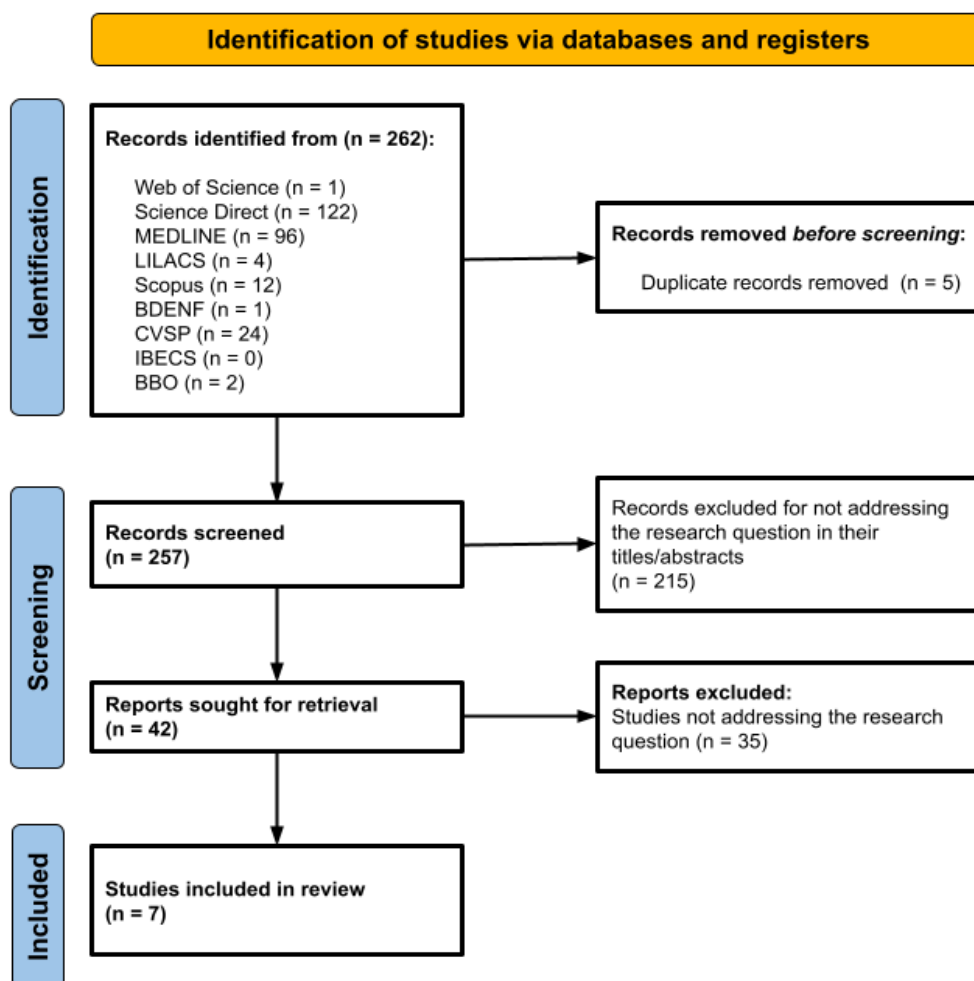
Chart I - Search strategies used in databases. Redenção, CE, Brasil, 2023

Database	Strategies
LILACS, BDENF, IBECs, BBO, CVSP	(Nursing OR “Nursing Care”) AND (“Oral Health”) AND (Pregnant People)
<i>Web of Science</i>	Nursing AND “Nursing Care” AND “Oral Health” AND “Pregnant People”
<i>Science Direct</i>	(Nursing OR "Nursing Care") AND "Oral Health" AND "Pregnant People"
<i>Scopus</i>	(nursing) OR ("Nursing Care") AND ("Oral Health") AND ("Pregnant People"))
MEDLINE	(Nursing OR "Nursing Care") AND "Oral Health" AND "Pregnant People"

Note: LILACS - Latin American and Caribbean Literature in Health Sciences; BDENF - Nursing Database; IBECs - Spanish Bibliographic Index in Health Sciences; BBO - Brazilian Bibliography of Dentistry; CVSP - Virtual Health Library Public Health Campus; MEDLINE - Medical Literature Analysis and Retrieval System Online.

After applying the search strategies to the databases, a total of 262 publications were retrieved. Following the exclusion of duplicates and the application of inclusion and exclusion criteria during the screening of titles and abstracts, 42 articles were selected for full-text reading. From this sample, 7 articles addressed the guiding question of this review. The study selection process is illustrated in Figure 1.

Figure I - Flowchart of the selection process of studies included in the review, according to the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA). Redenção, CE, Brasil, 2023



Source: Authors 2023, adapted from PRISMA (2020).

The resulting articles were exported to the Rayyan® software.⁽¹¹⁾ The selection of studies was carried out in two distinct stages. In the first stage, the titles and abstracts of the articles were analyzed. In the second stage, the articles were read in full to select the final sample. Only studies that met the inclusion criteria were included. The selection process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist.⁽¹²⁾ Two independent reviewers conducted the selection process, with a third researcher participating to resolve any conflicts.

For the data collection and analysis of the studies, a spreadsheet was created in Microsoft Excel® 2016, version 2310, to extract relevant information. Subsequently, the data were processed using the Epi Info® 2020 software, version 7.2.1.0, to calculate the relative and absolute frequencies of the variables. Data were summarized in synoptic charts for results presentation.

To assess the level of evidence of the studies, the categorization proposed by Melnyk and Fineout-Overholt was followed, which classifies studies into six levels: Level I - meta-analysis of controlled and randomized studies; Level II - experimental study; Level III - quasi-experimental study; Level IV - descriptive/non-experimental or qualitative approach study; Level V - case report or experience; and Level VI - consensus and expert opinion.⁽¹³⁾

RESULTS

The included studies were published between 2011 and 2019. Brazil and the United States accounted for the highest number of articles in this review, with 2 (28.57%) from each country (Chart 2).

In terms of databases, journals, and language, 4 studies (57.14%) were indexed in MEDLINE, 3 (42.86%) were published in dental journals, and 6 (85.71%) were in English. Concerning study design and level of evidence, there was a predominance of descriptive and cross-sectional studies (n=5, 71.43%) and studies with level IV evidence (n=6, 85.71%).

Chart II - Characterization of the studies included in the sample. Redenção, CE, Brasil, 2023

C*	Author/ Year/ Country	Title	Database/ Journal/ Language	Design/Level of Evidence
A1	Arantes DC, et al./ 2017/ Brazil ⁽¹⁴⁾	The Nursing care with the oral health of pregnant women: a qualitative study	LILACS/ Brazilian Research in Pediatric Dentistry and Integrated Clinic/ Portuguese	Descriptive and cross-sectional study/ Level IV
A2	De Carvalho JAM, et al./ 2014/ Brazil ⁽¹⁵⁾	Assessment of pregnant women's access to care dental care carried out by the PET-Saúde group from the State University of Londrina-PR	LILACS/ Journal of the Brazilian Association of Dental Education (ABENO)/ Portuguese	Descriptive and cross-sectional study/ Level IV
A3	Dolce MC / 2014/ United Kingdom ⁽¹⁶⁾	Integrating oral health into professional nursing practice: an interprofessional faculty tool kit	ScienceDirect/ Journal of Professional Nursing/ English	Descriptive and documentary study / Level IV
A4	Wagner Y., et al./ 2016/ Germany ⁽¹⁷⁾	Midwives' oral health recommendations for pregnant women, infants and young children: results of a nationwide survey in Germany	MEDLINE/ BMC Oral Health/ English	Descriptive and cross-sectional study/ Level IV
A5	Cibulka NJ, et al./ 2011/ United States ⁽¹⁸⁾	Improving oral health in low-income pregnant women with a nurse practitioner-directed oral care program	MEDLINE/ Journal of the American Academy of Nurse Practitioners/ English	Experimental case-control study/ Level II
A6	George A., et al./ 2013/ Australia ⁽¹⁹⁾	Views of pregnant women in South Western Sydney towards dental care and an oral-health program initiated by midwives	MEDLINE/ Health Promotion Journal of Australia/ English	Descriptive and cross-sectional study/ Level IV
A7	Horowitz AM, et al./ 2019/ United States ⁽²⁰⁾	Obstetric providers' role in prenatal oral health counseling and referral	MEDLINE/American Journal of Health Behavior/ English	Descriptive and cross-sectional study/ Level IV

*Article code.

Source: Authors.

Regarding nursing care in the context of pregnant people's oral health, the studies highlighted oral health education (n=6, 85.71%) as the most prevalent practice assigned to this professional category in prenatal oral healthcare. This was followed by the performance of oral physical examinations (n=3, 42.86%) and referrals to dental surgeons, with the same number (n=3, 42.86%) (Table 1).

Table I - Nurses' skills in caring for oral cavities of pregnant people. Redenção, CE, Brasil, 2023.

Skills	Article (n - %)
Performing a physical oral examination	A1; A3; A6 (n = 3 - 42.86%)
Referral to the dentist	A1; A6; A7 (n = 3 - 42.86%)
Scheduling an appointment with the dentist	A5 (n = 1 - 14.28%)
Guidance on the need to adhere to prenatal dental care	A1; A4 (n = 2 - 28.57%)
Oral health education	A1; A2; A3; A4; A5; A6 (n = 6 - 85.71%)

Source: Authors.

DISCUSSION

This review gathers and integrates knowledge available in the literature regarding the role of nurses in oral healthcare during pregnancy. Particularly, by presenting a broader view of the subject, this research provides scientific evidence that can support decision-making in clinical practice, improving the quality of care provided by nurses to pregnant people concerning oral health.

The temporal pattern observed among the publications in this study may be related to the increase in the number of studies on oral health starting in 2009.⁽²¹⁾ This phenomenon is primarily attributed to the implementation of public health policies in various countries, which fostered scientific interest and a subsequent rise in academic production.⁽²¹⁾ The prominence of Brazil and the United States in these findings aligns with the results of this review, reflecting the impact of robust public health agendas and research investments in these nations.

Specifically, in 2014, Brazil celebrated 10 years of the National Oral Health Policy (PNSB), known as "Brasil Sorridente",⁽²²⁾ which may have stimulated research development. For the United States, that same year, the Department of Health and Human Services, through the Health Resources and Services Administration, launched the Integration of Primary Care and Oral Health Practices. This initiative defines clinical competencies focused on primary oral health care, including responsibilities for professionals who attend pregnant people, such as nurse midwives.⁽²³⁾ This action may have encouraged the development of studies on oral health care for this population by the nursing profession, which may explain the results obtained here.

The higher number of studies published in dental journals may be a consequence of the topic addressed, despite focusing on nursing care for oral health. This finding stands out by allowing the dissemination of nursing responsibilities in oral healthcare among dental professionals.⁽²⁴⁾

Regarding the prevalence of level IV evidence in this review, although not a high level of evidence, it still emphasizes the importance of the topic. Observational studies, categorized as level IV evidence, are frequently conducted on oral health during pregnancy, as this type of research provides valuable insights into the subject and allows researchers to observe and analyze the real behavior and oral health conditions of pregnant people.⁽²⁵⁻²⁶⁾

The mention of oral health education actions as a nursing care responsibility for pregnant people, highlighted by most studies, aligns with the reality in Brazil regarding nursing actions. However, this practice remains deficient. A study conducted in Minas Gerais, involving 715 pregnant and postpartum women, revealed that most had not received oral health guidance for themselves or their babies during their first pregnancy.⁽²⁷⁾ This situation is not exclusive to Brazil. In the United Kingdom and the United States, the integration of oral health care into nursing practices for pregnant people has been a growing area of development, although significant gaps still exist.⁽²⁸⁾

In this context, it is essential to note that educational support should be provided by all professionals caring for pregnant people, including doctors, nurses, nutritionists, and dentists. This approach aims to foster knowledge transformation and behavioral changes, encouraging access to dental care during the prenatal period.

Given that nurses are educators, they should provide oral health guidance tailored to the gestational trimester. During the first trimester, topics should include oral and general health, offering guidance on physiological changes during pregnancy that affect the oral cavity. Healthy eating habits to prevent cavities should be discussed, emphasizing the importance of a balanced diet to avoid cariogenic foods. Additionally, detailed oral hygiene instructions should be given, covering proper techniques and the appropriate frequency of tooth brushing and flossing. Myths and misconceptions surrounding these topics should also be addressed.⁽²⁹⁾

During the second trimester, nurses should encourage pregnant people to recall previously discussed topics, fostering questions and sharing experiences. Care for nausea and vomiting should be highlighted, along with the discussion of the health-disease process related to cavities, gingivitis, and periodontal disease. The importance of breastfeeding and its benefits for both general and oral health should also be emphasized. Furthermore, information about medication use, smoking, and drug consumption and their potential impacts on fetal and dental development should be provided.⁽²⁹⁾

In the third trimester, it is crucial to review the previously discussed topics, emphasizing self-care promotion for the pregnant woman's oral health and the baby's oral cavity care. Additionally, exclusive breastfeeding for the first six months of life should be encouraged, along with discouraging the use of pacifiers or bottles at the appropriate time.⁽²⁹⁾

The inclusion of oral physical examinations as a nursing responsibility, cited in some articles, contrasts with the findings of Pereira (2019).⁽³⁰⁾ According to the authors, nurses in Brazil rarely engage in dental care, often not assessing the oral cavity before referring pregnant people to dentists, nor do they discuss optimal oral health conditions. This situation may stem from a lack of knowledge about the procedure and limited experience among nurses, who do not prioritize oral health during prenatal consultations.^(3,30)

However, prenatal consultations present an ideal opportunity to inquire about oral pain or gingival bleeding and to perform an oral examination. The physical exam should begin with inspecting the lips for color, texture, hydration, contour, and possible lesions. This is followed by evaluating the oral mucosa for ulcers, abrasions, cysts, and deeper areas for jaundice or pallor in patients with normal pigmentation, as well as identifying dense white patches in chronic nicotine and alcohol users.⁽³¹⁾

The gums should also be carefully examined for color, edema, retraction, bleeding, and lesions. The tongue should be thoroughly inspected on all sides, and the floor of the mouth should be checked for nodules or cysts, as the underside of the tongue and mouth floor are common sites for oral cancer lesions. Lastly, the hard and soft palates should be examined for color, shape, and the presence of bone protrusions or other abnormalities.⁽³¹⁾

In addition to the oral exam during prenatal consultations, referring pregnant people to a dentist is another important nursing responsibility highlighted in the articles. This finding aligns with research conducted in Brazil, which aimed to identify interdisciplinary approaches to

prenatal dental care from the perspective of nurses. The study revealed the implementation of interdisciplinary approaches to pregnant people's dental care, fostering collaboration between nurses and dentists. However, significant weaknesses were noted, such as impaired professional interactions and the absence of referrals for oral health issues.⁽³²⁾

The referral of pregnant people to dentists should occur during the first prenatal consultation in Primary Health Care (PHC),⁽³³⁾ often conducted by nurses. This action not only facilitates access to dental services but is also advocated by the National Oral Health Policy, which mandates that pregnant people should be referred by the health team for dental care.⁽³³⁾ Moreover, scheduling dental appointments by nurses increases adherence to prenatal dental care. Studies show that scheduling in advance, rather than waiting in queues on the day of the dental consultation, improves access to dental services.⁽³⁴⁻³⁵⁾

In the United States, prenatal care providers such as obstetricians, family physicians, certified nurse midwives, certified midwives, and advanced practice nurses are encouraged to integrate oral health into their practice.⁽³⁶⁻³⁷⁾ Their actions include assessing the pregnant woman's oral condition, referring her to a professional oral health center, encouraging her to maintain dental follow-ups, guiding her on oral health care for herself and her child, and sharing relevant information with oral health professionals.⁽³⁷⁾

A study conducted in Belo Horizonte, Brazil, aimed at evaluating dental care for pregnant people in the public PHC network through the practices adopted by dentists in this network, demonstrated that participation in prenatal dental care occurred through immediate referral after the first prenatal consultation and by reserving appointment slots in the dental service schedule, among other approaches.⁽³⁸⁾ Such actions reiterate the importance of collaboration among health professionals, strengthening the bond with the oral health team.⁽³⁸⁾

Considering nursing responsibilities in pregnant people's oral health care, it is crucial to encourage their active involvement in this area. This encouragement should be supported through continuous education initiatives, whether by the state through public policies or by dentists who are part of the multidisciplinary PHC team. Moreover, the topic should be emphasized in nursing education to ensure that professionals are equipped to identify signs and symptoms suggestive of oral alterations during pregnancy. Additionally, the information presented here can expand knowledge and contribute to developing nursing skills, enabling more targeted care for the needs of the mother and her baby.

This review has the limitation of including a predominance of cross-sectional studies with level IV evidence. Reviews are often dependent on the availability and quality of published studies. In the absence of such studies, or when methodological rigor is lacking, the ability of literature reviews to provide robust and generalizable conclusions is impacted. Cross-sectional studies offer only a snapshot of reality at a single point in time, with limited duration, making long-term investigations impossible. Therefore, the development of studies with advanced methodological rigor is necessary to explore nursing contributions to improving pregnant people's oral health. This will allow for a better understanding of the real impact of nursing work in this area of care.

CONCLUSION

Nurses play a crucial role in oral healthcare for pregnant people, performing various functions that contribute to promoting adequate oral health during pregnancy. Some of the responsibilities of these professionals include conducting physical examinations of the oral cavity, referring patients to dental surgeons, scheduling dental appointments, providing guidance on the importance of adhering to prenatal dental care, and carrying out educational activities on oral health.

It is concluded that nurses play an integrated and comprehensive role in pregnant people's oral healthcare, contributing to the prevention, identification, and appropriate referral of issues related to oral health during pregnancy.

By clearly identifying the actual responsibilities of nurses in this area of care, this may prompt the profession to seek professional development and incorporate these functions into the routine of PHC. This could facilitate the early detection of oral diseases and encourage pregnant people to adhere to prenatal dental care as early as the first trimester, thereby promoting the well-being of both mother and child.

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