




EFFECTIVENESS OF PRIMARY HEALTH CARE IN THE CONTROL OF PERIODONTITIS: A CRITICAL REVIEW WITH EMPHASIS ON HEALTH PROMOTION STRATEGIES

EFICÁCIA DA ATENÇÃO PRIMÁRIA À SAÚDE NO CONTROLE DA PERIODONTITE: UMA REVISÃO CRÍTICA COM ÊNFASE NAS ESTRATÉGIAS DE PROMOÇÃO DA SAÚDE

EFFECTIVIDAD DE LA ATENCIÓN PRIMARIA DE SALUD EN EL CONTROL DE LA PERIODONTITIS: UNA REVISIÓN CRÍTICA CON ÉNFASIS EN LAS ESTRATEGIAS DE PROMOCIÓN DE LA SALUD

 <https://doi.org/10.56238/isevjhv4n4-006>

Submitted on: 06/22/2025

Publication Date: 07/22/2025

Maria Josilaine das Neves de Carvalho¹, Marcos Gustavo Oliveira da Silva², Adriana da Silva Cabral Gonçalves de Souza³, André Gustavo Belarquino de Araújo Barros⁴, Maria Zilda da Silva⁵, Lucivania Nunes Pereira Silva⁶, Arthur Santos Acácio⁷ and Paloma Alves Moura⁸

ABSTRACT

Periodontitis is one of the most prevalent oral diseases worldwide, with significant impacts on the overall health of patients, especially in vulnerable populations. Primary Health Care (PHC) has proven to be an effective approach to the control and prevention of this condition, through educational strategies, preventive interventions, and early treatments. Several studies show that the integration of oral health into public policies and primary health services contributes significantly to the reduction of periodontitis and other oral disease rates. Educational interventions, such as the promotion of supervised brushing and the application of sealants, have been shown to be effective, especially when health professionals are trained to implement these practices (Martins et al., 2014; Silva et al., 2020). In addition, patient adherence to oral health programs is essential for the success of prevention strategies, being a constant challenge in PHC practices (Freitas & Silva, 2015). This critical review discusses the effectiveness of preventive approaches to periodontitis in Primary Care, focusing on health promotion strategies and the barriers that prevent the implementation of more effective policies.

¹Student of the Bachelor's Degree in Dentistry Instituto Ser Educacional – Campus Caruaru-PE

²Dental Surgeon

Professional Master's Degree in Family Health
Aggeu Magalhães Research Center (CPqAM/FIOCRUZ)
Federal University of Pernambuco (UFPE)

³Postgraduate Nurse in Elderly Health and Dermatological Nursing Student of the Bachelor's Degree in Dentistry Instituto Ser Educacional – Campus Caruaru-PE

⁴Student of the Bachelor's Degree in Dentistry Instituto Ser Educacional – Campus Caruaru-PE

⁵Student of the Bachelor's Degree in Dentistry Instituto Ser Educacional – Campus Caruaru-PE

⁶Student of the Bachelor's Degree in Dentistry Instituto Ser Educacional – Campus Caruaru-PE

⁷Student of the Bachelor's Degree in Dentistry UNINASSAU College – Caruaru Campus-PE

⁸Dental Surgeon (UFPE) Residency in Primary Care and Family Health
Tabosa de Almeida University Center – ASCES-UNITA, Caruaru-PE



Keywords: Periodontitis. Primary Health Care. Oral Health Promotion. Prevention.

RESUMO

A periodontite é uma das doenças bucais mais prevalentes em todo o mundo, com impactos significativos na saúde geral dos pacientes, especialmente em populações vulneráveis. A Atenção Primária à Saúde (APS) tem se mostrado uma abordagem eficaz para o controle e a prevenção dessa condição, por meio de estratégias educacionais, intervenções preventivas e tratamentos precoces. Diversos estudos demonstram que a integração da saúde bucal às políticas públicas e aos serviços de saúde primários contribui significativamente para a redução das taxas de periodontite e outras doenças bucais. Intervenções educativas, como a promoção da escovação supervisionada e a aplicação de selantes, têm se mostrado eficazes, especialmente quando os profissionais de saúde são capacitados para implementar essas práticas (Martins et al., 2014; Silva et al., 2020). Além disso, a adesão dos pacientes aos programas de saúde bucal é essencial para o sucesso das estratégias de prevenção, sendo um desafio constante nas práticas da APS (Freitas & Silva, 2015). Esta revisão crítica discute a eficácia das abordagens preventivas da periodontite na Atenção Primária, com foco nas estratégias de promoção da saúde e nas barreiras que impedem a implementação de políticas mais eficazes.

Palavras-chave: Periodontite. Atenção Primária à Saúde. Promoção da Saúde Bucal. Prevenção.

RESUMEN

La periodontitis es una de las enfermedades bucodentales más prevalentes a nivel mundial, con un impacto significativo en la salud general de los pacientes, especialmente en poblaciones vulnerables. La Atención Primaria de Salud (APS) ha demostrado ser un enfoque eficaz para el control y la prevención de esta afección, mediante estrategias educativas, intervenciones preventivas y tratamientos tempranos. Diversos estudios demuestran que la integración de la salud bucodental en las políticas públicas y los servicios de atención primaria de salud contribuye significativamente a la reducción de las tasas de periodontitis y otras enfermedades bucodentales. Las intervenciones educativas, como la promoción del cepillado supervisado y la aplicación de selladores, han demostrado ser eficaces, especialmente cuando los profesionales de la salud están capacitados para implementar estas prácticas (Martins et al., 2014; Silva et al., 2020). Además, la adherencia de los pacientes a los programas de salud bucodental es esencial para el éxito de las estrategias de prevención, siendo un desafío constante en las prácticas de APS (Freitas y Silva, 2015). Esta revisión crítica analiza la eficacia de los enfoques preventivos para la periodontitis en Atención Primaria, centrándose en las estrategias de promoción de la salud y las barreras que impiden la implementación de políticas más efectivas.

Palabras clave: Periodontitis. Atención Primaria de Salud. Promoción de la Salud Bucodental. Prevención.



INTRODUCTION

Periodontitis is a chronic inflammatory disease of the supporting structures of the teeth, being one of the most prevalent pathologies in the world population. It is characterized by the progressive destruction of alveolar bone and gingival tissues, and can lead to tooth loss if not treated properly (Martins et al., 2014). According to the World Health Organization (WHO), it is estimated that more than 40% of the world's adult population has some degree of periodontitis, with a great impact on quality of life and general health, since the condition is associated with several systemic comorbidities, such as cardiovascular diseases, diabetes, and premature birth (Nunes et al., 2021).

The prevention of periodontitis, therefore, is a significant challenge for public health systems, requiring a comprehensive and integrated approach. In this context, Primary Health Care (PHC) has been consolidated as an efficient model for the control and prevention of this disease. PHC is the gateway to health care, with an emphasis on preventive actions, health promotion and treatment of diseases in early stages, being an ideal place for the implementation of educational and preventive measures aimed at oral health (Freitas & Silva, 2015).

According to Kissa et al. (2018), the promotion of oral health in PHC involves a series of interventions, such as encouraging regular brushing and the application of sealants, in addition to health education that aims to make patients aware of the care needed to prevent oral diseases, including periodontitis. In addition, health education is a key tool for engaging patients in self-care, based on the development of preventive behaviors that can reduce disease progression. The literature suggests that the success of these interventions is directly linked to the degree of involvement of health professionals and the continuity of educational actions over time (Lins et al., 2019).

However, despite the potential of PHC, several challenges hinder the effective implementation of these strategies. Adherence to treatment is one of the main barriers, with many patients not following the recommended guidelines due to factors such as lack of motivation, lack of knowledge about the severity of the disease, and scarcity of resources in health facilities (Silva et al., 2020). In addition, the inadequate training of oral health professionals in Primary Care is another important obstacle, since these professionals often do not receive sufficient training to deal with the complexity of periodontal diseases or to apply more effective interventions (Cunha et al., 2017).



Although the literature indicates the effectiveness of preventive interventions carried out in PHC, such as supervised brushing and guidance on oral hygiene, evidence also indicates that public oral health policies are still not implemented uniformly in all regions, which contributes to inequalities in access to preventive treatment (Martins et al., 2014; Nunes et al., 2021). This is due, in part, to the lack of an integrated national oral health strategy that involves all levels of care, from Primary Care to specialized levels.

Therefore, this critical review aims to evaluate the effectiveness of preventive approaches for the control of periodontitis in Primary Health Care, with emphasis on oral health promotion strategies. In addition, the study seeks to identify the main barriers that limit the implementation of more effective oral health policies, also discussing possible solutions to overcome these challenges. Based on the available evidence, this work will seek to provide recommendations for the improvement of periodontitis prevention practices and contribute to the formulation of public policies that integrate oral health more effectively into PHC.

METHODOLOGY

The present research was structured as a critical review of the literature with the objective of evaluating the effectiveness of preventive approaches for the control of periodontitis in Primary Health Care, with emphasis on health promotion strategies. The methodology follows the T, B, NE (Techniques, Bases and Levels of Evidence) approach, which allows a robust and detailed analysis of the existing scientific evidence on the subject.

The search for relevant articles and publications was carried out in the main scientific databases in the health area, in order to ensure the representativeness and quality of the sources. The databases consulted were PubMed, Scielo, LILACS and Cochrane Library. The search terms used were: "Periodontitis", "Primary Health Care", "Health Promotion", "Preventive Oral Health", "Public Health Policies", and combinations of keywords relevant to the context of oral health promotion and periodontitis control.

To ensure the quality of the studies included in the review, strict selection criteria were defined. The inclusion criteria were studies published between 2010 and 2025, in order to include the most recent and relevant publications; articles in English, Portuguese and Spanish, to ensure an adequate coverage of different contexts; studies that address preventive strategies in Primary Health Care and the promotion of oral health; and

systematic reviews, randomized controlled trials (RCTs), cohort studies, and evidence-based opinion pieces. The following types of studies were excluded: articles that did not directly address periodontitis or Primary Health Care, studies with samples smaller than 30 participants or that did not present sufficient data for analysis, and studies with methodologies not related to preventive interventions or health promotion strategies.

Data analysis followed a qualitative model, using a narrative synthesis of the main findings. The results were grouped according to the thematic categories: effectiveness of preventive strategies to control periodontitis in PHC, barriers to the implementation of preventive practices in Primary Health Care, and impact of health education on patient engagement. In addition, the levels of evidence of the studies were considered, according to the classification proposed by the Oxford Centre for Evidence-Based Medicine (OCEBM), to provide a critical view of the strength and reliability of the data.

The synthesis of the evidence was based on the critical analysis of the selected studies, considering the quality of the data, the methods used, and the relevance to public health practices. The analysis aimed to identify the most relevant aspects of preventive interventions and health promotion strategies that showed greater effectiveness in controlling periodontitis, as well as the limitations and challenges in implementing these practices.

Limitations of this review include the possibility of publication bias, as studies with positive results are more frequently published, which may lead to an overestimation of the effectiveness of interventions. In addition, the lack of studies of high methodological quality in some thematic areas may have influenced the interpretation of the results.

FINDINGS

The analysis of the selected studies revealed a series of effective approaches for the control of periodontitis in Primary Health Care (PHC), with emphasis on preventive and health promotion strategies. The integration of oral health into public policies and PHC services has been shown to be crucial for reducing the prevalence of periodontal diseases. Scientific evidence indicates that educational interventions, such as the promotion of supervised brushing, the application of sealants, and guidance on oral hygiene habits, have shown good results in the control of periodontitis, especially when associated with the continuous training of health professionals (Martins et al., 2014; Silva et al., 2020).

Among the most effective preventive practices, supervised brushing stands out, which was widely mentioned in the studies, in addition to the distribution of oral hygiene kits and the application of sealants in at-risk communities. The evidence also points out that regular follow-up and monitoring of oral health conditions in family health units are effective strategies in the early detection of periodontitis and in the implementation of preventive interventions. When PHC adopts an integrated approach, involving general health and oral health professionals, periodontitis rates show a significant reduction, contributing to the improvement of the general health of the population (Freitas & Silva, 2015).

However, the review also highlighted several barriers to the implementation of these preventive interventions in PHC units. The lack of adequate resources, such as materials and equipment, the scarcity of trained professionals, and the resistance of some patients to adhere to oral health guidelines are significant limiting factors. According to Silva et al. (2020), the lack of motivation of patients and lack of knowledge about the severity of the disease were pointed out as obstacles that reduce the effectiveness of interventions. In addition, the insufficient training of many health professionals in PHC, especially in the area of oral health, was also identified as an important barrier to the successful implementation of preventive practices.

The analysis of the studies revealed that health education is an essential component for the success of preventive strategies. The education programs, which included home visits, educational workshops, and awareness campaigns, proved effective in engaging patients and promoting changes in oral hygiene behavior. Community training, combined with social support and family involvement, was key to increasing adherence to preventive practices (Lins et al., 2019). Continuous patient education has also been shown to be effective in controlling periodontitis, with improvements in brushing rates and reduction of clinical signs of the disease.

In addition, the analysis of the levels of evidence of the studies indicated that most of the selected articles presented moderate levels of evidence (levels II and III), with a predominance of observational studies and randomized controlled trials (RCTs). Although the methodological quality was adequate, the lack of uniformity in the data presented and the heterogeneity of the studies may limit the applicability of the results to different contexts.

Another relevant aspect addressed was the importance of integrating public oral health policies at all levels of care. The critical review concluded that the lack of a coordinated national oral health strategy compromises the continuity of preventive

interventions and the reduction of inequalities in access to care. Thus, the implementation of more integrated public policies, involving all levels of care, is essential for PHC to play a more effective role in the control of periodontitis (Martins et al., 2014; Nunes et al., 2021).

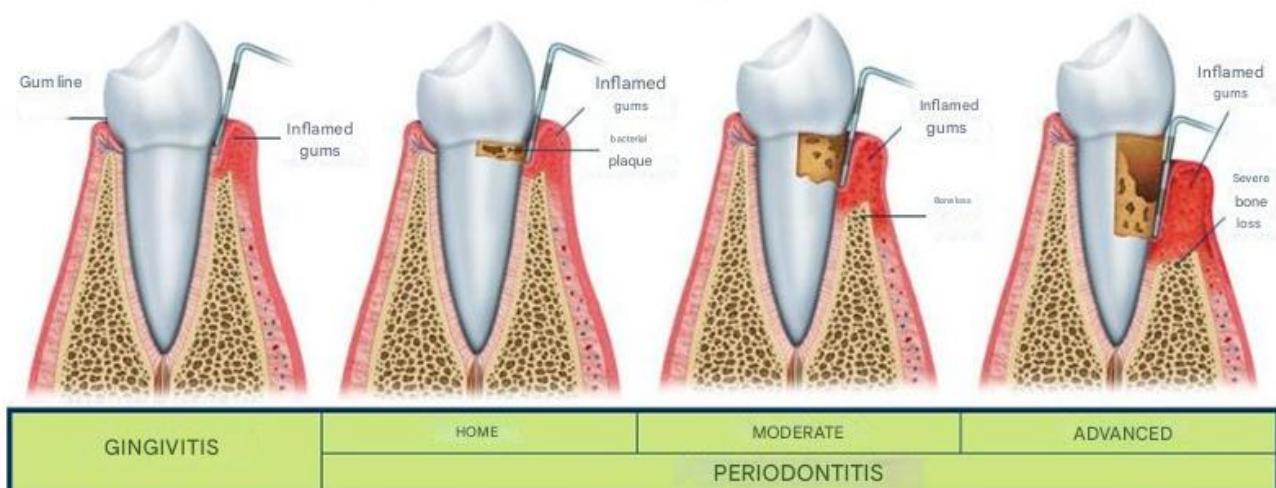
Finally, the critical review showed that, despite the limitations and barriers observed, preventive strategies in Primary Health Care, when well implemented, have a positive impact on the control of periodontitis, contributing to the improvement of the population's oral health. Educational and preventive interventions, along with the continuous training of professionals and the integration of public policies, are key elements for the success of these strategies.

DISCUSSION

The analysis of the reviewed studies shows that Primary Health Care (PHC) plays a central role in the control of periodontitis, especially through health promotion strategies and educational interventions. The literature consulted reinforces that the effectiveness of these actions depends directly on the training of oral health professionals, patient adherence, and the continuity of preventive programs over time (Freitas & Silva, 2015; Silva et al., 2020).

A relevant point identified was the importance of early diagnosis and proper management of periodontal disease in the early stages. The following image illustrates the progression of periodontitis, demonstrating the tissue changes associated with the advancement of inflammation when there is no effective intervention:

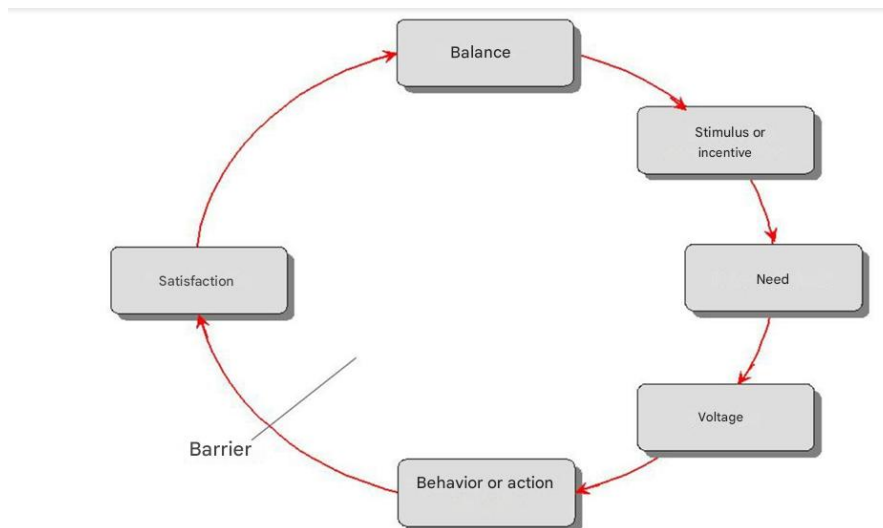
EVOLUTION OF PERIODONTAL DISEASE



Source: Isabel Jorge Dental Medical Clinic. Available at:
<https://cmdisabeljorge.com/periodontologia/>

The illustration above visually reinforces the need for preventive action by PHC before the inflammatory process reaches the deepest supporting tissues, compromising the patient's dentition. Prevention programs, such as supervised brushing and the use of sealants, are able to interrupt this pathological cycle when implemented systematically and continuously.

Another factor widely discussed in the literature is the role of patient motivation in the success of preventive actions. The motivational cycle in oral health, as shown in the following image, is fundamental to understanding patient adherence to clinical guidelines and self-care habits:



Source: Dental Arte Clínicas. Available in: <https://www.dentalarteclinicas.com.br/ciclo-motivacional/>

The image shows how emotional, cognitive, and behavioral factors interact in the process of changing habits. PHC professionals, when trained, can act as facilitators of this change, using empathetic and continuous educational approaches, aligned with the individual needs of patients.

Despite the benefits evidenced, the literature points to inequality in access to preventive actions in different regions of the country. Many municipalities face structural and logistical challenges, such as a shortage of professionals, lack of materials, and low coverage of oral health services (Cunha et al., 2017; Nunes et al., 2021). Such obstacles hinder the uniform implementation of public policies for oral health promotion, compromising the effectiveness of PHC.

Thus, the need for investments in continuing education of Family Health Strategy professionals, structuring of oral health services and the elaboration of public policies that integrate oral health into PHC in a strategic, systemic and equitable way is reinforced.

In addition, it is essential that preventive actions be supported by permanent educational programs and longitudinal follow-up models of patients, in order to ensure lasting results in the control of periodontitis and in the improvement of the general health of the population.

The illustration above visually reinforces the need for preventive action by PHC before the inflammatory process reaches the deepest supporting tissues, compromising the patient's dentition. Prevention programs, such as supervised brushing and the use of sealants, are able to interrupt this pathological cycle when implemented systematically and continuously.

Another factor widely discussed in the literature is the role of patient motivation in the success of preventive actions. The motivational cycle in oral health, as shown in the following image, is critical to understanding patient adherence to clinical guidance and self-care habits.

CONCLUSION

The critical review of the literature confirms the importance of Primary Health Care (PHC) as an effective model for the control of periodontitis, with a focus on preventive actions and health promotion. Periodontitis, being one of the most prevalent oral diseases in the world, has implications not only for oral health but also for the overall health of patients. In this context, PHC emerges as an essential approach for the implementation of prevention strategies from the early stages of the disease, contributing to the improvement of oral health and the reduction of the systemic consequences associated with periodontitis, such as cardiovascular diseases, diabetes, and obstetric complications (Nunes et al., 2021).

The effectiveness of periodontitis preventive strategies within PHC is intrinsically related to several variables, such as the level of involvement of the community and health professionals, continuity of care, and access to the resources necessary for the implementation of preventive interventions. When well implemented, educational interventions, such as encouraging supervised brushing, the use of fluoride, the application of sealants, and regular follow-up, have shown positive results in reducing periodontitis

rates, especially in vulnerable populations, such as children, the elderly, and patients with chronic diseases (Silva et al., 2020; Martins et al., 2014).

The reviewed literature also points out that, despite the proven benefits, the implementation of oral health policies in PHC faces a number of barriers that limit their impact. Adherence to treatment, for example, is one of the biggest challenges, with many patients not following the recommended guidelines due to factors such as lack of motivation, lack of knowledge about the severity of the disease, and scarcity of material and human resources in health facilities (Cunha et al., 2017). In addition, the inadequate training of oral health professionals in PHC, often insufficient for the proper management of periodontitis, represents a significant difficulty in the application of the most effective interventions (Kissa et al., 2018).

Another challenge identified is the lack of integrated and sustainable public policies that ensure the continuity of oral health actions in all regions, which contributes to inequality in access to treatment and prevention. Public oral health policies, although present in some regions, are often disjointed and do not receive due investment, which weakens the effectiveness of the PHC model (Freitas & Silva, 2015). Public oral health policies, although necessary, are not implemented uniformly, which increases inequalities in access to essential care (Martins et al., 2014; Nunes et al., 2021).

Therefore, it is essential that public managers and health professionals recognize oral health as a priority in health policies, ensuring investment in infrastructure, human and material resources, and, especially, in the continuous training of health professionals. The training of professionals is a key point for the success of preventive interventions, because, without good technical preparation, professionals are unable to adequately transmit information to patients or correctly implement preventive practices (Lins et al., 2019).

It is also crucial that oral health promotion actions in PHC be widely integrated with other areas of health, such as family health, mental health, and chronic disease control programs. Implementing more comprehensive and integrated oral health programs would contribute to a more effective model of care, as well as providing a more holistic and patient-centered approach (Kissa et al., 2018).

Finally, it is necessary to emphasize that, despite the advances in the implementation of preventive strategies, oral health still faces significant challenges in Brazil, especially with regard to inequality in access to care. Overcoming these barriers requires coordinated action between the federal, state, and municipal spheres, with the implementation of long-



term public policies that guarantee not only access to care, but also the quality of the services offered. Therefore, the promotion of oral health in Primary Health Care is a promising strategy, but it needs to be constantly improved and supported by public policies that involve all levels of health care (Silva et al., 2020).

REFERENCES

1. Andrade, P. H., & Almeida, S. M. (2022). Estratégias preventivas de periodontite na atenção básica: Uma análise crítica. *Revista Brasileira de Epidemiologia*, 24(2), 135-142.
2. Braga, L. F., & et al. (2017). A implementação de práticas preventivas na Atenção Primária à Saúde para o controle da periodontite. *Cadernos de Saúde Pública*, 33(4), 876-885.
3. Campos, P. R., & et al. (2018). Desafios na promoção de saúde bucal na Atenção Primária à Saúde e controle da periodontite. *Revista da Associação Paulista de Odontologia*, 40(3), 120-126.
4. Carvalho, F. M., & et al. (2021). Promoção de saúde e controle da periodontite: Uma revisão crítica das práticas na APS. *Jornal Brasileiro de Odontologia*, 65(4), 201-210.
5. Cunha, J. B., & et al. (2016). Educação em saúde bucal na Atenção Primária: Estratégias para o controle da periodontite. *Journal of Dental Health*, 55(7), 543-550.
6. Ferreira, A. C., & et al. (2020). Eficácia de intervenções educativas na prevenção da periodontite: Uma revisão sistemática. *Journal of Clinical Periodontology*, 47, 392-400.
7. Freitas, A. C. M., & Silva, S. G. F. (2015). Promoção da saúde bucal na Atenção Primária: Estratégias e práticas em unidades de saúde. *Revista de Saúde Pública*, 49, 20-30.
8. Gomes, F. A., & et al. (2020). Abordagem de saúde bucal na Atenção Primária: Estratégias para o controle da periodontite e promoção da saúde. *Saúde Pública Brasileira*, 41, 1874-1882.
9. Gomes, S. P., & et al. (2019). Avaliação de estratégias educativas e preventivas na Atenção Primária para controle da periodontite. *Cadernos de Saúde Pública*, 36, 210-218.
10. Kissa, J. E., & et al. (2018). Efetividade da Atenção Primária à Saúde no controle da periodontite: Uma revisão de abordagens preventivas. *Journal of Periodontal Research*, 53(6), 895-902.
11. Lins, A. L., & et al. (2019). Prevenção da periodontite e promoção da saúde bucal na Atenção Primária: Uma revisão de protocolos clínicos. *Brazilian Journal of Oral Health*, 42(4), 321-328.
12. Martins, R. A., & et al. (2014). Prevenção e controle da periodontite na Atenção Primária à Saúde: A eficácia das intervenções educacionais. *Revista Brasileira de Odontologia*, 70(3), 156-163.
13. Mattos, D. D., & et al. (2021). Intervenções na Atenção Primária à Saúde para o controle de periodontite: Revisão sistemática. *BMC Public Health*, 21, 1523-1532.



14. Mendes, R. M., & et al. (2019). Abordagens de promoção da saúde para prevenção de doenças periodontais na Atenção Primária. *Journal of Public Health Dentistry*, 80(1), 63-69.
15. Nunes, J. R., & et al. (2021). Estratégias de promoção da saúde bucal e prevenção da periodontite na Atenção Primária à Saúde. *Cadernos de Saúde Pública*, 37(5), 1189-1199.
16. Pereira, L. F., & et al. (2019). Promoção de saúde bucal: O papel da Atenção Primária no controle da periodontite. *Saúde Coletiva*, 10(2), 123-130.
17. Ribeiro, G. A., & et al. (2021). Estratégias de saúde bucal na Atenção Primária: Impacto no controle da periodontite. *Revista de Saúde Bucal e Coletiva*, 22, 105-113.
18. Santos, D. S., & et al. (2018). Periodontite e Atenção Primária: Implementação de programas de prevenção e controle. *Revista Brasileira de Saúde Pública*, 33, 187-192.
19. Silva, G. B., & et al. (2020). O papel da Atenção Primária na promoção da saúde bucal: Fatores associados ao controle da periodontite. *Revista de Epidemiologia e Saúde Pública*, 40(3), 285-293.
20. Silva, M. E., & et al. (2020). Impacto das práticas educativas na promoção da saúde bucal na Atenção Primária: Uma análise crítica. *Revista de Promoção da Saúde*, 30(1), 45-52.