

Nursing interventions for smoking cessation in adults in primary health care: a scoping review protocol

Intervenciones de enfermería para dejar de fumar en adultos en atención primaria: protocolo de scoping review

Intervenções de enfermagem na cessação tabágica em adultos nos cuidados de saúde primários: protocolo de scoping review

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Abstract

The aim was to map nursing interventions aimed at smoking cessation in adults in primary health care. This scoping review protocol follows the Joanna Briggs Institute (JBI) methodology and the PRISMA-ScR guidelines. The search will be conducted in international databases and will include primary, secondary, and grey literature studies published between 2015 and 2025, in Portuguese, English, and Spanish, describing nurse-led interventions in primary care, based on the PCC strategy: P (Population) - Adults (≥ 19 and ≤ 64 years of age); C (Concept) - Nursing interventions aimed at smoking cessation; C (Context) - Primary health care. Hospital studies or studies without explicit nursing intervention will be excluded. Two independent reviewers will perform data selection and extraction, with disagreements resolved by a third reviewer, presenting a PRISMA-ScR flowchart. The results will be synthesized in descriptive and narrative tables, mapping the components of the interventions, outcomes, barriers, facilitators, and gaps. It is expected to clarify the role of nursing in primary smoking cessation, guiding clinical practice and future research.

Descriptors: Tobacco Use Cessation; Adult; Primary Health Care; Nursing; Tobacco Use Disorder.

Resumén

El objetivo fue mapear las intervenciones de enfermería dirigidas a la cesación tabáquica en adultos en atención primaria de salud. Este protocolo de revisión exploratoria sigue la metodología del Instituto Joanna Briggs (JBI) y las directrices PRISMA-ScR. La búsqueda se realizará en bases de datos internacionales e incluirá estudios de literatura primaria, secundaria y gris publicados entre 2015 y 2025, en portugués, inglés y español, que describan intervenciones dirigidas por enfermeras en atención primaria, basadas en la estrategia PCC: P (Población) - Adultos (≥ 19 y ≤ 64 años de edad); C (Concepto) - Intervenciones de enfermería dirigidas a la cesación tabáquica; C (Contexto) - Atención primaria de salud. Se excluirán los estudios hospitalarios o los estudios sin intervención de enfermería explícita. Dos revisores independientes realizarán la selección y extracción de datos, y los desacuerdos se resolverán con la intervención de un tercer revisor, presentando un diagrama de flujo PRISMA-ScR. Los resultados se sintetizarán en tablas descriptivas y narrativas, mapeando los componentes de las intervenciones, los resultados, las barreras, los facilitadores y las brechas. Se espera que este estudio aclare el papel de la enfermería en el abandono del tabaquismo primario, sirviendo de guía para la práctica clínica y la investigación futura.

Descriptorios: Abandono del Uso de Tabaco; Adulto; Atención Primaria de Salud; Enfermería; Tabaquismo.

Resumo

Objetivou-se mapear as intervenções de enfermagem direcionadas à cessação do tabagismo em adultos nos cuidados de saúde primários. Este protocolo de revisão de escopo segue a metodologia do *Joanna Briggs Institute* (JBI) e as diretrizes PRISMA-ScR. A pesquisa será conduzida em bases de dados internacionais e incluir-se-ão estudos primários, secundários e literatura cinzenta publicados entre 2015 e 2025, em português, inglês e espanhol, descrevendo intervenções lideradas por enfermeiros em cuidados primários, com base na estratégia PCC: P (População) - Adultos (≥ 19 e ≤ 64 anos de idade); C (Conceito) - Intervenções de enfermagem direcionadas à cessação tabágica; C (Contexto) - Cuidados de saúde primários. Excluir-se-ão estudos hospitalares ou sem intervenção explícita de enfermagem. Dois revisores independentes realizarão seleção e extração de dados, com divergências resolvidas por terceiro revisor, apresentando fluxograma PRISMA-ScR. Os resultados serão sintetizados em tabelas descritivas e narrativas, mapeando componentes das intervenções, resultados, barreiras, facilitadores e lacunas. Espera-se esclarecer o papel da enfermagem na cessação tabágica primária, orientando prática clínica e futuras pesquisas.

Descriptorios: Abandono do Uso do Tabaco; Adulto; Atenção Primária à Saúde; Enfermagem; Tabagismo.



Introduction

Smoking continues to be one of the major public health problems globally, associated with high morbidity and mortality from cardiovascular, respiratory and oncological diseases, as well as a significant economic burden on health systems¹. The WHO estimates a progressive reduction in the global prevalence of tobacco use, but emphasizes that the decline is insufficient to meet global control targets, requiring the strengthening of evidence-based policies and interventions, especially in primary health care, where privileged opportunities for contact with adult smokers are concentrated¹. In Portugal, the National Program for the Prevention and Control of Tobacco Use shows that, despite regulatory and programmatic advances, tobacco consumption persists in approximately 12-15% of adults, reinforcing the need to intensify structured smoking cessation interventions in primary health care².

Primary health care is a strategic setting for the systematic identification of smokers, brief counseling, referral to support programs, and ongoing follow-up, integrating individual, group, and community approaches^{2,3}. The literature describes multiple strategies implemented in primary health care, including interventions based on behavioral change models, structured cessation group programs, intensive counseling, pharmacological therapies, as well as the use of referral tools to tailor the type of intervention to the smoker's profile^{3,4}. These programs emphasize the importance of a comprehensive initial assessment and a person-centered care plan, considering clinical, psychosocial, and contextual factors that influence cessation.

Nurses are particularly well-positioned to lead smoking cessation interventions, given their proximity to the community^{5,6}. Evidence suggests that structured nursing interventions, such as nurse-led programs, motivational interviewing, in-person and remote follow-up, and the use of educational materials, can increase abstinence rates and support cessation maintenance in different adult groups⁵.

Studies conducted in primary healthcare settings highlight that integrating structured approaches, such as the 5As model (Ask, Advise, Assess, Assist, Arrange), can increase the consistency and quality of smoking cessation interventions by systematizing the screening, counseling, and follow-up of smokers⁷. The use of referral tools for cessation programs and coordination between different professionals on the healthcare team also emerge as key elements to ensure that adult smokers have access to interventions appropriate to their motivation and needs^{4,8}. In parallel, the literature shows that complex social factors such as socioeconomic vulnerability and comorbidities require integrated intervention models capable of linking cessation support with responses to other health and social needs⁸.

by digital technologies have been incorporated into community-based smoking cessation programs, including personalized instant messaging, mobile applications, and conversational chatbots, which broaden the reach and intensity of support between face-to-face consultations^{9,10}.

Despite the diversity of approaches and the growing body of evidence, the literature points to gaps in the specific characterization of nursing interventions for smoking cessation in adults within the context of primary health care, particularly regarding the components of the interventions, the identification of barriers and facilitators that condition their implementation, as well as the measurement of results^{3,5,11}. Additionally, methodological guidelines for scoping reviews, such as the PRISMA-ScR extension, recommend comprehensive mapping of available evidence to clarify concepts, types of interventions, and knowledge gaps in complex and heterogeneous areas¹².

Given this context, the objective of this scoping review is to map, in the scientific literature, nursing interventions for smoking cessation in adults in primary health care, identifying the types and components of the interventions described, implementation contexts, describing the results obtained, and factors that facilitate or hinder their application.

Methodology

This study corresponds to a scoping review, which will be developed following the methodology recommended by the Joanna Briggs Institute (JBI)¹³. The presentation of the results will be guided by the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses - Extension for Scoping Reviews (PRISMA-ScR) checklist, specific to scoping reviews to ensure the methodological rigor and scientific quality of the study. The protocol for this review is registered on the Open Science Framework (OSF) platform and can be consulted at the following web address: <https://osf.io/shjrj>; with the respective DOI: <https://doi.org/10.17605/OSF.IO/SHJRQ>.

Identifying the Research Question

The research question was developed based on the PCC (Population, Concept, and Context) strategy, recommended by the Joanna Briggs Institute for scoping reviews (Chart 1). The population is considered to be adults (≥ 19 and ≤ 64 years of age), the concept is nursing interventions aimed at smoking cessation, and the context is primary health care. Thus, the research question was defined as: "What nursing interventions are used to promote smoking cessation in adults in primary health care?".

Chart 1. PCC strategy applied in scope review. Barcarena, Portugal, 2026

P (Population)	Adults (≥ 19 and ≤ 64 years of age)
C (Concept)	Nursing interventions aimed at smoking cessation
C (Context)	Primary health care



Eligibility Criteria

Studies addressing nursing interventions aimed at smoking cessation in adults within the context of primary healthcare will be included. Studies published in Portuguese, English, and Spanish between 2015 and 2025 will be considered, provided the full text is available (via institutional access, library services, or contact with authors). Articles without an accessible full text will be excluded after screening, and the reasons will be reported in the PRISMA-ScR flowchart. Eligible studies include quantitative, qualitative, and mixed-methods studies, as well as relevant reviews conducted by nurses or that explicitly include nursing intervention in the smoking cessation process. Studies addressing pediatric or adolescent populations, interventions conducted exclusively in hospital or specialized settings, and articles that do not clearly describe the nursing intervention or are not related to primary healthcare will be excluded. Digital interventions will only be included if described as led or implemented by nurses in primary care.

Research Strategy

The research strategy will be carried out in multiple stages, as recommended by the Joanna Briggs Institute and the PRISMA-ScR and PRISMA-S guidelines¹⁴. Initially, a preliminary search will be conducted in the PubMed/MEDLINE and CINAHL Complete databases to identify relevant descriptors and keywords. Subsequently, a

complete search strategy will be developed, adapted for each included database. The search strategy will initially be developed for MEDLINE via PubMed (Chart 2) using a combination of MeSH descriptors and free terms in the title/abstract “([tiab])”, structured according to the PCC framework, considering: (P) adults, (C) nursing interventions aimed at smoking cessation, integrating both terms related to smoking cessation and those referring to nursing professionals, and (C) primary health care, and subsequently adapted for each included database, respecting the syntax and specific controlled vocabularies of each and equivalent search fields of each interface. No study design limits will be applied to maximize the scope of the scoping review. The languages included will be English, Portuguese, and Spanish, with a publication time limit from 2015 to 2025. All complete search strategies, execution dates, and total number of records retrieved per database will be documented and presented in the appendix of the final article, ensuring full reproducibility according to PRISMA-S.

The research will be conducted in the PubMed/MEDLINE and CINAHL Complete databases, as well as in the Open Access Scientific Repositories of Portugal and Google Scholar, with the aim of identifying relevant literature on the topic under study in the latter two. Additionally, the bibliographic references of the selected articles will be analyzed to identify studies potentially eligible for inclusion in the review.

Chart 2. Search strategy used in the PubMed/MEDLINE database. Barcarena, Portugal, 2026

Database	Search strategy	Results
Pubmed/ MEDLINE	“(“Smoking Cessation”[Mesh] OR “Tobacco Use Disorder”[Mesh] OR smoking cessation[tiab] OR tobacco cessation[tiab] OR quit smoking[tiab] OR stop smoking[tiab] OR tobacco use disorder[tiab] OR brief intervention*[tiab] OR behavioral counseling[tiab] OR behavioural counselling[tiab]) AND (“Nursing”[Mesh] OR “Nurses”[Mesh] OR “Nurse Practitioners”[Mesh] OR nurse[tiab] OR nurses[tiab] OR nursing[tiab] OR nursing staff[tiab] OR registered nurse*[tiab] OR nurse-led[tiab] OR nurse-delivered[tiab] OR nurse practitioner*[tiab] OR advanced practice nurse*[tiab] OR community health nurse*[tiab]) AND (“Primary Health Care”[Mesh] OR “Community Health Services”[Mesh] OR primary health care[tiab] OR primary care[tiab] OR community care[tiab] OR public health care[tiab] OR family practice[tiab] OR general practice[tiab] OR ambulatory care[tiab] OR outpatient care[tiab]) AND (“Adult”[Mesh] OR “Young Adult”[Mesh] OR “Middle Aged”[Mesh] OR adult*[tiab] OR “middle aged”[tiab])”.	609
Limiters	Publication date: 2015/01/01 – 2025/12/31	206
	Language: English	205
	Language: Portuguese	205
	Language: Spanish	205
	Full text	200

Selection of Studies

The references identified in the research will be exported to bibliographic management software, where duplicate records will be removed. Subsequently, the studies will be transferred to the Covidence online platform, used to support the screening process. The selection of studies will be conducted in two stages. Initially, titles and abstracts will be screened by two independent reviewers, based on

previously defined eligibility criteria. Studies considered potentially relevant will advance to the full-text reading phase, also carried out independently by the reviewers. Exclusions made after full-text reading will be duly justified and recorded. Any disagreements between reviewers will be resolved by consensus or, when necessary, through the intervention of a third reviewer. Articles excluded at this stage will be listed in an appendix, explaining the reason for



their exclusion. The study selection process will be presented in the final scoping review report, following the PRISMA-ScR recommendations¹², using a PRISMA flowchart¹⁵. Any changes to the initially established protocol will be documented and described in the final manuscript.

Data Extraction

Data extraction will be performed using an instrument previously developed by the reviewers, in accordance with the guidelines of the Joanna Briggs Institute (JBI). Before the start of the final extraction, a pilot test will be conducted with two independent reviewers, based on the analysis of the full text of the included studies, to verify the application of the eligibility criteria and assess the adequacy

of the data extraction form. If adjustments are needed, the instrument will be revised and updated, with all modifications duly justified and recorded in the scoping review. Any disagreements during the extraction process will be resolved by consensus among the reviewers or, if necessary, with the participation of a third reviewer. Information relating to the methodological characteristics and main results of the included studies will be extracted, namely: authors and year of publication, study title, country where the study was conducted, study objective, methodological design, population characteristics, type of nursing intervention, and main results. The data will be organized and presented descriptively, as exemplified in Chart 3.

Chart 3. Instrument for extracting data from articles. Barcarena, Portugal, 2026

Author/ year	Title	Country	Study objective	Study design	Population	Implementation context	Intervention	Main results	Barriers/ facilitators identified

Data Analysis and Presentation

The data analysis will be descriptive, aiming to provide a comprehensive overview of nursing interventions directed at smoking cessation in adults within the context of primary healthcare. Data extracted from the included studies will be organized and synthesized according to methodological characteristics and key identified outcomes. A narrative summary of the findings will be prepared, describing the different types of interventions, their components, implementation methods, results obtained, as well as barriers and facilitators associated with nursing practice in this context. Results will be presented using tables, charts, figures, and diagrams to facilitate data visualization and understanding, ensuring alignment with the objectives of the scoping review. Where appropriate, diagrams or graphical representations may be used to summarize the identified categories. The presentation of the results will follow the PRISMA-ScR recommendations, with

the findings organized in a way that maps and synthesizes existing knowledge about nursing interventions for smoking cessation in primary health care.

Expected Results

Smoking is one of the main public health problems and remains one of the leading preventable causes of death worldwide, being associated with the development of chronic diseases and increased healthcare costs, which reinforces the need for effective smoking cessation strategies¹⁶. Nurses play a key role in primary health care, contributing to health promotion, health education, and the implementation of preventive actions, including support for smoking cessation⁶. The findings of this review may contribute to strengthening evidence-based clinical practice, support decision-making by health professionals and managers, and guide the development of future research and strategies in primary health care.

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