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# *WOMEN'S HEALTH IN BORDER AREAS: A SCOPING REVIEW PROTOCOL*

# *LA SALUD DE LA MUJER EN LAS ZONAS FRONTERIZAS: UN PROTOCOLO DE REVISIÓN DE ESCOPO*

# SAÚDE DE MULHERES EM ZONAS FRONTEIRIÇAS: UM PROTOCOLO DE REVISÃO DE ESCOPO

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**ABSTRACT**
Introduction: The health of women in border areas represents a complex and multifaceted challenge, marked by social inequalities and barriers to accessing health services. In these regions, often characterized by intense migratory flows, socioeconomic vulnerabilities and limited state presence, women face increased risks related to sexual and reproductive health. Objective: To map the available scientific evidence on the barriers faced by women living in border areas in accessing health services, with an emphasis on sexual and reproductive health. Methods: A scoping review will be carried out in accordance with the recommendations of the Joanna Briggs Institute. The protocol will follow the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews checklist and will be registered on the Open Science Framework platform. The research question will be structured based on the PCC strategy, covering women (Population), access and barriers to health services (Concept), and border regions (Context). National and international studies dealing with access to healthcare for women in border areas will be included, with a focus on sexual and reproductive health, considering different age groups and geographical contexts. Searches will be carried out in databases such as CINAHL, MEDLINE/PubMed, Web of Science, EMBASE, LILACS, CAPES and Cochrane Library, as well as gray literature. Studies will be screened using Rayyan® software. Data extraction and analysis will be based on the JBI Manual for Evidence Synthesis and analyzed using the software Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires (IRAMUTEQ®).
**Keywords:** Women's Health; Sexual and Reproductive Health; Border Health; Border Areas; Health Inequalities.

**RESUMO**
Introdução: A saúde de mulheres em zonas fronteiriças representa um desafio complexo e multifacetado, marcado por desigualdades sociais e barreiras de acesso aos serviços de saúde. Nessas regiões, frequentemente caracterizadas por fluxos migratórios intensos, vulnerabilidades socioeconômicas e limitada presença do Estado, as mulheres enfrentam riscos ampliados relacionados à saúde sexual e reprodutiva. Objetivo: Mapear as evidências científicas disponíveis sobre as barreiras enfrentadas por mulheres residentes em zonas de fronteira no acesso aos serviços de saúde, com ênfase na saúde sexual e reprodutiva. Métodos: Será desenvolvida uma revisão de escopo conduzida conforme as recomendações do *Joanna Briggs Institute*. A elaboração do protocolo seguirá a *checklist Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews* e será registrada na plataforma *Open Science Framework*. A questão de pesquisa será estruturada com base na estratégia PCC, abrangendo mulheres (População), acesso e barreiras aos serviços de saúde (Conceito), e regiões de fronteira (Contexto). Serão incluídos estudos nacionais e internacionais que tratem do acesso à saúde de mulheres em zonas fronteiriças, com foco na saúde sexual e reprodutiva, considerando diferentes faixas etárias e contextos geográficos. As buscas serão realizadas em bases como CINAHL, MEDLINE/PubMed, Web of Science, EMBASE, LILACS, CAPES e Cochrane Library, além de literatura cinzenta. A triagem dos estudos será realizada no software *Rayyan*®. A extração e análise dos dados será conduzida com base no JBI *Manual for Evidence Synthesis* e analisada com auxílio do *software Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires* (IRAMUTEQ®).
**Palavras-chave:** Saúde das Mulheres; Saúde Sexual e Reprodutiva; Saúde Fronteiriça; Áreas Fronteiriças; Desigualdades em Saúde.

**RESUMEN**
Introducción: La salud de las mujeres en las zonas fronterizas representa un reto complejo y polifacético, marcado por las desigualdades sociales y las barreras de acceso a los servicios sanitarios. En estas regiones, a menudo caracterizadas por intensos flujos migratorios, vulnerabilidades socioeconómicas y escasa presencia estatal, las mujeres se enfrentan a mayores riesgos relacionados con la salud sexual y reproductiva. Objetivo: Mapear la evidencia científica disponible sobre las barreras que enfrentan las mujeres que viven en zonas fronterizas para acceder a los servicios de salud, con énfasis en la salud sexual y reproductiva. Métodos: Se llevará a cabo una revisión de alcance según las recomendaciones del *Instituto Joanna Briggs*. El protocolo seguirá la lista de verificación *Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews* y se registrará en la plataforma *Open Science Framework*. La pregunta de investigación se estructurará sobre la base de la estrategia PCC, abarcando a las mujeres (Población), el acceso y las barreras a los servicios sanitarios (Concepto) y las regiones fronterizas (Contexto). Se incluirán estudios nacionales e internacionales sobre el acceso de las mujeres a la atención sanitaria en las zonas fronterizas, con e special atención a la salud sexual y reproductiva, teniendo en cuenta los diferentes grupos de edad y contextos geográficos. Se realizarán búsquedas en bases de datos como CINAHL, MEDLINE/PubMed, Web of Science, EMBASE, LILACS, CAPES y Cochrane Library, así como en la literatura gris. Los estudios se cribarán mediante el programa informático *Rayyan*®. La extracción y el análisis de los datos se basarán en el Manual de Síntesis de la Evidencia del JBI y se analizarán utilizando el *software Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires (IRAMUTEQ®)*.
**Palabras-clave:** Salud de la Mujer; Salud Sexual y Reproductiva; Salud Fronteriza; Zonas Fronterizas; Desigualdades en Salud.

REVISTA ENFERMAGEM ATUAL IN DERME

## INTRODUCTION

Women living in border regions face significant vulnerabilities related to their sexual and reproductive health, compounded by social, historical, and geographic inequalities. In response to these challenges, the Brazilian government launched the National Policy for Comprehensive Women's Health Care (PNAISM) in 2004 to advance sexual and reproductive rights, strengthen actions against domestic and sexual violence, and consolidate previous achievements in women's health programs [1,2].

This policy stood out as innovative because it expanded beyond reproductive health to include marginalized groups within public health policies, such as Black women, quilombola communities, rural workers, lesbian women, and incarcerated women [2].

In 2011, the National Policy for Comprehensive Health Care for Populations of the Countryside and Forest (PNSIPCF) was implemented. This policy plays a crucial role in border regions, where many riverside, Indigenous, and quilombola communities reside. It aims to ensure proper care for pregnant and postpartum women who often encounter geographical, cultural, and institutional barriers to health services. The PNSIPCF reinforces the need for differentiated strategies for prenatal, childbirth, and postnatal care, promoting respectful and comprehensive health attention aligned with the principles of equity and universality of Brazil's Unified Health System (SUS) [3].

Although these public policies target women living in border zones, the provision of sexual and reproductive health services remains inefficient. Access to contraception, cervical cancer screening, sexually transmitted infection (STI) prevention, and care for victims of sexual and gender-based violence is still limited. As a result, women in these areas are more vulnerable to unintended pregnancies, preventable diseases, and unaddressed health risks [4,5].

A 2022 study demonstrated that countries like Australia, Israel, and the United States also face barriers in border regions, such as differences in language, limited patient–provider communication, educational inequalities, and individual factors that restrict access to healthcare [6]. Consequently, women continue to encounter legislative, geographic, sociocultural, and temporal obstacles that severely restrict access to essential medical assistance [7,8].

Additional challenges include the shortage of healthcare professionals in border regions, insufficient financial resources, insecurity in border territories, and inadequate patient identification systems, all of which contribute to unfavorable conditions for accessing health services [6]. Prenatal care in northern Brazilian border regions shows inadequate performance scores, largely due to service disorganization, weaknesses in appointment scheduling systems, and limited health promotion and disease prevention

REVISTA ENFERMAGEM ATUAL IN DERME

initiatives, which hinder the planning and execution of effective health actions [9].

Given this scenario, women's health in Brazilian border regions requires special attention, particularly in light of the geographic, social, and economic challenges that define these areas. This context aligns with the Sustainable Development Goals (SDGs), especially SDG 3 – Good Health and Well-Being, which aims to ensure healthy lives and promote well-being at all ages. Within this framework, target 3.1 seeks to reduce global maternal mortality rates, a goal that is particularly challenging in border areas with restricted access to healthcare. Additionally, SDG 5 – Gender Equality emphasizes the importance of guaranteeing women's sexual and reproductive rights.

Thus, this study aims to conduct a scoping review to map existing scientific evidence regarding the barriers faced by women living in border regions in accessing healthcare services, with particular emphasis on sexual and reproductive health.

## METHODS

### Study Design

This scoping review will follow the recommendations of the Joanna Briggs Institute (JBI) and the methodological stages proposed by Arksey and O'Malley [10]. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist will guide the reporting process to ensure that all essential items are addressed [11,12]. The protocol has been registered on the Open Science Framework (OSF) [13].

### Research Question

Following the PCC mnemonic, Population, Concept, and Context, Population: women; Concept: access to healthcare and barriers; Context: border regions, the research question will be: what evidence does the literature provide regarding access and the barriers women face in obtaining healthcare services in border regions?

### Eligibility Criteria

#### Population

We will include studies involving women, particularly pregnant and postpartum women, across all age groups and without restriction regarding ethnicity, socioeconomic status, or educational level. We will exclude studies involving women with psychological disorders or those who died during the study period.

#### Concept

We will include studies addressing the Alyne Attention Network and women's access to healthcare services, especially those concerning sexual and reproductive health planning. Studies must clearly describe how women accessed these services. We will exclude studies that do not allow identification of access pathways.

REVISTA ENFERMAGEM ATUAL IN DERME

**Context**

We will include research conducted in terrestrial border regions worldwide, including Brazilian border regions (North, South, West, Northwest, Southwest) and international borders. We will exclude studies that discuss access barriers without specifying that the population lives in a border zone.

**Types of Sources of Evidence**

Searches will be carried out during the second semester of 2025 in the following databases: CINAHL, MEDLINE/PubMed, Web of Science, EMBASE, LILACS, CAPES Periodicals Portal, and Cochrane Library. Grey literature will be explored through Google Scholar and academic thesis and dissertation repositories.

**Search Strategy**

The search strategy will combine controlled descriptors from DeCS and MeSH with Boolean operators (AND/OR). Terms will be used in both Portuguese and English according to the requirements of each database. We will include synonyms and terminological variations to maximize the retrieval of relevant studies. For the DeCS terms in Portuguese, we will use the following controlled vocabulary: ("Mulheres" OR "Gestantes" OR "Puerpério" OR "Saúde da Mulher" OR "Saúde Materna" OR "Saúde Reprodutiva" OR "Planejamento Familiar") AND ("Acesso aos Serviços de Saúde" OR "Atenção Primária à Saúde" OR "Serviços de Saúde" OR "Serviços de Saúde Materna" OR "Equidade em Saúde" OR "Determinantes Sociais da Saúde") AND ("Regiões de Fronteira" OR "Zona de Fronteira" OR "Fronteiras Internacionais" OR "Tríplice Fronteira" OR "Região de Fronteira Brasil-Paraguai-Argentina") AND ("Populações Vulneráveis" OR "Desigualdades em Saúde" OR "Acesso aos Cuidados de Saúde"). In English, we will actively apply the following MeSH terms: ("Women"[MeSH Terms] OR "Pregnant Women"[MeSH Terms] OR "Postpartum Period"[MeSH Terms] OR "Maternal Health"[MeSH Terms] OR "Women's Health"[MeSH Terms] OR "Reproductive Health"[MeSH Terms] OR "Family Planning Services"[MeSH Terms]) AND ("Health Services Accessibility"[MeSH Terms] OR "Primary Health Care"[MeSH Terms] OR "Health Services"[MeSH Terms] OR "Maternal Health Services"[MeSH Terms] OR "Health Equity"[MeSH Terms] OR "Social Determinants of Health"[MeSH Terms]) AND ("Border Regions"[MeSH Terms] OR "International Borders"[MeSH Terms] OR "Cross-Border Region" OR "Triple Frontier" OR "Border Areas" OR "Frontier Zones") AND ("Vulnerable Populations"[MeSH Terms] OR "Health Disparities"[MeSH Terms] OR "Access to Health Care").

**Study Selection**

All retrieved studies will be imported into Rayyan® for screening [14] in order to carry out the screening, selection and exclusion of studies. Thus, the steps will be conducted independently

REVISTA ENFERMAGEM ATUAL IN DERME

by two reviewers, and, in cases of divergence, a third reviewer will be consulted to reach consensus, before proceeding with the full reading and inclusion of the studies in the review. The titles and abstracts of the studies will be read and analyzed, then the full reading of the selected studies will proceed.

### Data Extraction

Data will be extracted into a spreadsheet created in Microsoft Excel 365/2025, following JBI guidelines. Extracted variables will include title, authors/year, study design, sample, population, objectives, and key findings.

### Data Analysis and Presentation

Once the studies are obtained, the data will be synthesized using the software Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires (IRAMUTEQ) version 0.7, alpha 2[15], and subsequently, the findings of the studies will be synthesized descriptively, following the guidelines of the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) tool [16]. For the analysis of the levels of evidence of the articles, Oxford Centre Evidence-Based Medicine will be considered [17].

### Ethical Considerations

As this is a scoping review protocol based solely on published data and does not involve human participants or primary data collection, ethical approval is not required according to Brazilian Resolution 510/2016.

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3. contributed to the drafting and/or critical review and final approval of the published version: dos Santos GG, de Farias AS, Rocha GST, de Oliveira C, Nascimento MVF, Ribeiro EES, do Nascimento ES, Pirozi LRR, Coelho HER, Viana ILRS, Beserra Junior CR

**Declaration of Conflict of Interest:**

Nothing to declare

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