

# *Patient safety in Primary Health Care:* a bibliometric study of the Brazilian scientific production

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**Abstract:** A bibliometric review study, which aimed to map the scientific productions on patient safety in primary health care in the Brazilian context, carried out in the databases SCIELO, LILACS, BDENF, IBECs, from 2013 to 2022. The sample body integrated 23 articles. The year with the highest publication was 2019 (30.4%); the regions with the highest representation of studies were Southeast (43.5%) and South (34.8%); most of the studies were linked to public institutions, and the main authors had the training of nurses (74%). The most used methodological approach was quantitative (48%), the largest number of publications in journals with Qualis/Capes A1, and the main theme was patient safety culture (30.5%). The analysis of keywords identified the terms "health and quality" as central elements to patient safety. Three articles with homonymous titles were found that used the same collection instrument. It is concluded that the scientific production in this field was little expressive in the North, Northeast and Midwest regions. There was a predominance of authors from a single professional category and greater representativeness of an object of study, the safety culture. Low encouragement was observed to scientific production aimed at the involvement of the user in their own security.

► **Keywords:** Patient safety. Primary Health Care. Bibliometric studies.

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## Introduction

The search for a guarantee of healthcare free from harm has brought together discussions on negative outcomes associated with health care and has boosted the formulation of public policies oriented to patient safety worldwide (Teixeira *et al.*, 2021; Simplicio *et al.*, 2023). In Brazil, the expansion of the scope of actions aimed at patient safety had a greater reach of political and regulatory commitment, with the implementation of the National Program for Patient Safety (NPPS), by the Portal GM/MS N. 529, of April 1, 2013 (Brasil, 2013).

Despite the fact that patient safety guidelines in Brazil were initiated in hospital care, possibly due to high technological density and a higher number of unfavorable outcomes and risks to patients, errors and incidents have often occurred in the context of primary care (Aguar *et al.*, 2020). Considering the Health Care Networks (HCN), it was within the scope of Primary Health Care (PHC) that the first initiatives of strategies focused on patient safety emerged (Brasil, 2022; Souza *et al.*, 2019).

The understanding of PHC as a coordinator of care in the country, within the scope of the Unified Health System (SUS), as a preferential gateway for users to the various scenarios of care of the SAR, leveraged the challenge of working with patient safety. Thus, in 2017, from the review of the National Policy on Primary Care (NPPC), were incorporated into its guidelines dimensions of quality and patient safety as an essential and strategic way, determining attributions to all primary care professionals (Brasil, 2017).

The attributes of PHC dialogue with patient safety when knowledge of the territory, epidemiological analysis and situational diagnosis are considered (Araújo *et al.*, 2019). Such facts enable the proper planning of the work process, favor the bond, longitudinality, community and family approach, assist the professional in the integral knowledge of people, in caring with greater assertiveness and protection, in the identification of risks arising from misdiagnosis, drug therapy or unnecessary interventions, constituting a power for patient safety (Nascimento *et al.*, 2017; Ribeiro *et al.*, 2021).

Safe primary care is essential to achieve universal health coverage (Silva *et al.*, 2019). Unsafe primary care can cause avoidable harm and injury to patients, unnecessary hospitalizations, overload of other levels of health care, increased costs related to care systems, and in some cases lead to disability and even death

(Simplicio *et al.*, 2023). Thus, patient safety in PHC is justified as a strategy capable of managing risks, maximizing benefits and minimizing long-term harm.

Given the above and considering the importance of the subject, this study, by bibliometric means, sought to map the scientific productions on patient safety in PHC in the Brazilian context. It is considered that the same can contribute to direct the development of knowledge production in this thematic field, which in turn guides health practices.

## Method

This is an exploratory, descriptive research supported by bibliometric variables and information provided from a cut of the scientific literature. Bibliometrics consists of performing statistical and measurement analyses, allowing to quantify the written communication process (Barros *et al.*, 2020). Thus, through the bibliometric review method, it was sought to ascertain the Brazilian scientific production about Patient Safety in Primary Health Care, between the years 2013 and 2022. The year 2013 was established as an initial time cut due to the regulatory framework of the implementation of NPPS in Brazil.

It is possible to infer that the bibliometric study has as purpose to measure indexes of bibliographic production and scientific contributions on a certain thematic, and while technical, it comprises the reading, the selection, eligibility of content of interest for the research question and study object (Ellegaard; Wallin, 2015). Thus, it contributes to the identification of progress in a particular area of knowledge.

To perform the bibliometric technique, a bibliographic search was carried out in the following databases: Scientific Electronic Library Online (SCIELO), Latin-American and Caribbean Literature in Health Sciences (LILACS), Specialized Bibliographical Database in the area of Nursing (BDENF) and *Índice Bibliográfico Español en Ciencias de la Salud (IBECS)* on 20 June 2023. It is noted that the option for using *IBECS*, despite being a database that indexes health scientific journals published in Spain, was given because we often find Brazilian research published in Spanish journals.

As a search strategy, descriptors in Portuguese and English were used, from controlled vocabularies extracted from the classification of Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH), respectively: patient safety/patient's safety; primary health care/primary health care; and for LILACS and IBECS, the terms: *seguridad del paciente; atención primaria de salud* were used in a complementary way.

The Boolean operators AND and OR were used to cross terms in all bases researched, and was considered the time cut (2013-2022), which can be verified in Board 1.

As inclusion criteria for selection of articles, were considered: 1) original research, published in Portuguese, English or Spanish; 2) open access and available in full; 3) articles whose research locus/scenario investigated were in the Brazilian context. All publications were excluded: 1) that did not relate to the object "patient safety in primary health care"; 2) that were outside the established time limit; and 3) manuscripts of the editorial type, comments, reflection, experience report, documentary research and literature review.

The selection of articles included five steps: 1) cross-referencing in databases; 2) application of filters considering inclusion and exclusion criteria; 3) reading the title and abstract, verifying its conformity with the objective of this research; 4) reading the full text of the pre-selected articles to confirm their compatibility with the previously established inclusion criteria; 5) exclusion of repeated articles from databases. The selection steps are expressed in Figure 1.

It should be noted that the Word Cloud technique was used as a support tool in processing information from the keywords of the articles included in this study. The cloud was generated from the Website Word Cloud, highlighting the terms that appeared most frequently.

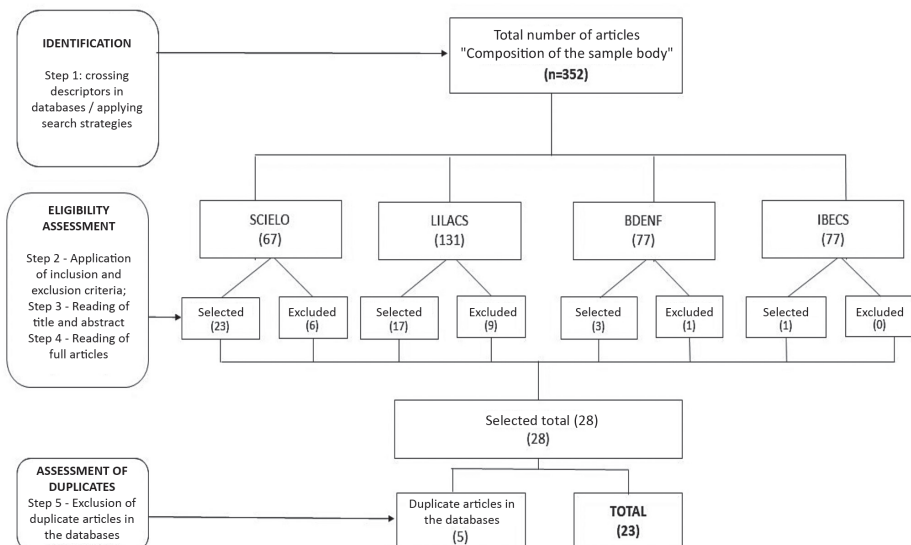
The analysis and comparison of statistical data took into account the calculation of bibliometric variables that involved numerical quantity and percentage variation, being considered the universal rule for approximation of numerical values to the percentage values. For the compilation of the study material, a matrix was organized in Microsoft Excel (version 2016), from the selected data, with the following information: database and language of publication, title, objective, method, journal, year of publication, number of authors/background of the main author, state/institution of research linkage, descriptors. From this matrix, data were extracted and synoptic analysis tables were constructed.

Regarding the compliance with ethical questions, this study did not need approval in the Ethics Committee, considering that the data collected are in the public domain. It is important to note that this study is part of the doctoral thesis entitled *User safety in primary health care: social representations of health workers*, within the scope of the Postgraduate Program in Collective Health, at the State University of Feira de Santana, Bahia, Brazil.

**Board 1.** Database search strategy

DATABASES	SEARCH STRATEGY	RESULTS
SciELO	(Segurança do paciente) AND (atenção primaria à saúde) OR (patient safety) AND (primary health care) AND year_cluster:("2020" OR "2018" OR "2019" OR "2021" OR "2022"OR "2014" OR "2017" OR "2013" OR "2016" OR "2015")	67
LILACS	(segurança do paciente) AND (atenção primaria à saúde) OR (patient safety) AND (primary health care) OR (seguridad del paciente) AND (atención primaria de salud) AND ( db:("LILACS")) AND (year_cluster:[2013 TO 2022])	131
BDENF	(segurança do paciente) AND (atenção primaria à saúde) OR (patient safety) AND (primary health care) OR (seguridad del paciente) AND (atención primaria de salud) AND ( db:("BDENF")) AND (year_cluster:[2013 TO 2022])	77
IBECS	(segurança do paciente) AND (atenção primaria à saúde) OR (patient safety) AND (primary health care) OR (seguridad del paciente) AND (atención primaria de salud) AND ( db:("IBECS")) AND (year_cluster:[2013 TO 2022])	77
TOTAL:		352

Source: prepared by the authors, based on SCIELO, LILACS, BDENF, IBECS (2023).

**Figure 1.** Steps in the article selection process

Source: prepared by the authors, based on SCIELO, LILACS, BDENF, IBECS (2023).

## Results and Discussion

On the topic of patient safety in PHC, 352 publications were found, summing up the findings from all the databases surveyed (step 1). Of the 28 articles selected (after steps 2, 3 and 4), five were repeated in the databases and were excluded (step 5), thus 23 articles were part of the sample composition of this study and are described in Board 2.

**Board 2.** Summary of studies included in the review, according to article title/author, year, journal/periodical of publication

Cod.	Title	Author(s)/Year	Journal/Periodical publication
A1	Evaluation of the culture of patient safety in primary health care.	Bezerril; Costa; Freire; Andrade; Chiavone; Santos (2022)	Enfermería Global (Enfermagem Global)
A2	Incidence of immunization errors in Minas Gerais: cross-sectional study, 2015-2019.	Donnini; Silva; Gusmão; Matozinhos; Silva <i>et al.</i> (2022)	<i>RESS (Revista de Epidemiologia e Serviços de Saúde)</i>
A3	Patient Safety in Primary Health Care of a Brazilian municipality.	Rocha; Viana; Vieira (2021)	<i>Physis: Revista de Saúde Coletiva</i>
A4	Patient safety incidents in the Primary Health Care (PHC) of Manaus, AM, Brazil.	Aguiar; Lima; Moreira; Santos; Ferreira (2020)	<i>Interface/Botucatu</i>
A5	Culture of patient safety in Primary Health Care.	Souza; Ongaro; Lanes; Andolhe; Kolankiewicz; Magnago (2019)	<i>Rev Bras Enferm.</i>
A6	Patient safety culture from the perspective of primary care workers and teams.	Raimondi; Bernal; Matsuda (2019)	<i>Rev Saúde Pública</i>
A7	Patient safety in primary care: nurses' conceptions of the family health strategy.	Silva; Backes; Magnago; Colomé (2019)	<i>Rev Gaúcha Enferm.</i>
A8	Patient safety culture in primary health care: analysis by professional categories.	Raimondi; Bernal; Oliveira; Matsuda (2019)	<i>Rev Gaúcha Enferm.</i>
A9	Polypharmacy: a reality in primary care of the Unified Health System.	Nascimento; Álvares; Guerra Junior; Gomes; Silveira; Costa <i>et al.</i> (2017)	<i>Rev Saude Publica</i>

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Cod.	Title	Author(s)/Year	Journal/Periodical publication
A10	Characteristics of adverse events in primary health care in Brazil.	<i>Marchon; Mendes Junior; Pavão (2015)</i>	<i>Cad. Saúde Pública</i>
A11	Translation and adaptation of a questionnaire designed to assess patient safety in primary health care.	<i>Marchon; Mendes Junior (2015)</i>	<i>Cadernos de Saúde Pública [online]</i>
A12	Patient safety in primary care: perception of professionals from family health teams.	Ribeiro; Pardini; Silva; Menezes; Franco; Mata; Campos (2021)	<i>Rev de Enfermagem Referência</i>
A13	Impact of plan-do-study-act cycles on the reduction of vaccine-related error.	Nunes; Teixeira; Gabriel; Gimenes (2021)	<i>Texto Contexto Enferm [Internet]</i>
A14	Evaluation of patient safety in the vaccination room.	Teixeira; Raponi; Felix; Ferreira; Barichello; Barbosa E, Barbosa MH (2021).	<i>Texto Contexto Enferm [Internet]</i>
A15	Culture of patient safety in primary health care in large municipalities in the perception of workers.	Macedo; Haddad; Silva; Girotto (2020)	<i>Texto Contexto Enferm [Internet]</i>
A16	Evaluation of the culture of patient safety in Primary Health Care.	Dal Pai; Alves; Pluta; Winter; Kolankiewicz (2020)	<i>Rev Baiana Enferm.</i>
A17	Psychometric validation of an instrument that evaluates the safety culture in primary care.	Dal Pai; Langendorf; Rodrigues; Romero; Loro; Kolankiewicz (2019)	<i>Acta Paul Enferm.</i>
A18	Safety assessment in vaccine care: protocol construction and validation.	Medeiros; Lima Neto; Saraiva; Barbosa; Santos (2019)	<i>Acta Paul Enferm.</i>
A19	Patient safety and polymedication in primary health care: a cross-sectional study on patients with chronic diseases.	Araújo; Santos; Bodevan; Cruz; Souza; Silva-Barcellos (2019)	<i>Rev. Latino-Am. Enfermagem</i>
A20	Evaluation of the patient safety culture in primary health care.	Galhardi; Roseira; Orlandi; Figueiredo (2018)	<i>Acta Paul Enferm.</i>
A21	Transcultural adaptation of safety culture tool for primary care.	Timm; Rodrigues (2016)	<i>Acta Paul Enferm.</i>

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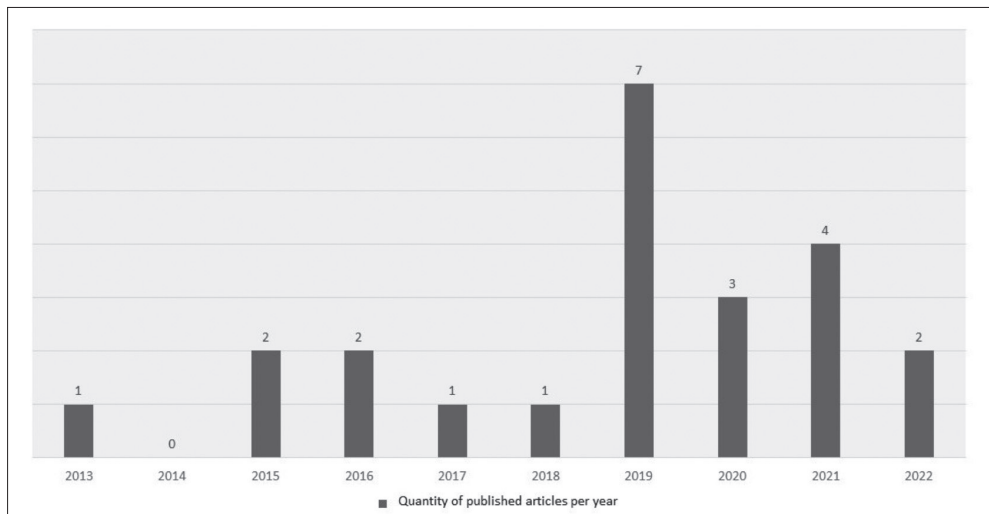
Cod.	Title	Author(s)/Year	Journal/Periodical publication
A22	Support for learning from the perspective of patient safety in primary health care.	Paranaguá; Bezerra; Tobias; Ciosak (2016)	<i>Rev. Latino-Am. Enfermagem</i>
A23	Culture of patient safety in primary health care.	Paese; Dal Sasso (2013)	Texto Contexto Enferm [Internet]

Source: prepared by the authors, based on SCIELO, LILACS, BDENF, IBICS (2023).

\*Legend: Code = Code

In this selection, on the question "quantitative information regarding the scientific production of articles on patient safety in PHC in the last ten years, between January 2013 and January 2023", 2019 was highlighted, with the highest amount of publications, seven (30.4%), followed by 2021 with four studies (17.4%), 2020 with a total of three (13.05%) and the years 2015, 2016 and 2022 had only two (8.7%) publications (Chart 1).

**Chart 1.** Scientific production of articles on Patient Safety in Primary Health Care per year (2013 to 2022).



Source: Data collected in the survey.



It is observed that the awareness about patient safety and the increase in scientific production between 2019 and 2022 corroborates the Brazilian regulatory frameworks focused on patient safety in PHC. Although the NPPS was implemented in 2013, only from 2017, with the revision of guidelines for the organization of Primary Care under the Unified Health System (SUS), the NPPS, through Ordinance N 2,436, began to make PHC health workers responsible for the institution of actions for patient safety and adoption of measures aimed at reducing adverse events and risks to users (Brasil, 2017).

As for the regions that published more articles, there is a predominance of publications in the South and Southeast regions (Table 1). The Southeast region with greater expressiveness in scientific production (10), corresponding to 43.5% of the total sample, followed by the South region (8) with 34.8%. The North, Northeast and Midwest regions had lower number of publications. These findings provide subsidies for the recognition that these regions need to develop research aimed at patient safety in APS, in order to guarantee the premises of the NPPS, that aims to contribute to the qualification of health care in all environments where health care takes place (Brasil, 2013).

Regarding the educational organizations that produced more scientific contributions on the subject, federal institutions (13) lead research on the topic, especially Federal University of Rio Grande do Norte (RN) and Federal University of São João Del-Rei (MG), with two articles published each.

**Table 1.** Distribution of studies on Patient Safety in Primary Care in relation to region and educational institution (N=23)

REGION	N	%	EDUCATIONAL INSTITUTIONS LINKED TO PRODUCTIONS
North	1	4.3	Federal University of Amazonas (AM)
Northeast	3	13.1	Independent College of the Northeast (BA) Federal University of Rio Grande do Norte (RN)*
Midwest	1	4.3	Federal University of Goiás (GO)
South	8	34.8	Federal University of Santa Maria (RS) Franciscan University (RS) State University of Maringá (PR)* State University of Londrina (PR) Northwestern Regional University of the State of Rio Grande do Sul (RS)* Federal University of Santa Catarina (SC)

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REGION	N	%	EDUCATIONAL INSTITUTIONS LINKED TO PRODUCTIONS
Southeast	10	43.5	Federal University of São João Del-Rei (MG)* Federal University of Minas Gerais (MG) Sergio Arouca National School of Public Health, Oswaldo Cruz Foundation (RJ)* University of São Paulo, School of Nursing of Ribeirão Preto (SP) University of Brasília (DF) Federal University of Triângulo Mineiro (MG) Federal University of the Jequitinhonha and Mucuri Valleys (MG) Federal University of São Carlos (SP)
<b>TOTAL</b>	23	100%	18 institutions (01 regional; 02 state; 02 private and 13 federal)

Source: Data collected in the survey.

Caption: \*institutions with 2 productions.

In the question "variation of number of authors per article", the highest indices were concentrated in the ranges between 3-4 and 5-6 authors. These variations of intervals were repeated in eight articles, each corresponding to 34.8% of the study sample. Only one scientific production had more than eight authors (12 in total), and was derived from a cross-sectional research, part of the component "Services of the National Research on Access, Use and Promotion of Rational Use of Medicines". It is noted that the predominance of group research, rather than individual, indicates a characteristic of research in the field of health sciences.

When it comes to the training of the main authors, nurses stood out significantly (74%), followed by equivalence between pharmaceutical and nutritionist authors (8.7%), doctors and dentists, with 4.3% (Table 2). No studies with other professional categories were found. These findings point to the need to broaden the scope of publications among professional categories, considering that patient safety should be ensured by all multiprofessional teams involved in PHC, such as physiotherapists, social workers, psychologists.

**Table 2.** Characterization regarding the variation in the number of authors per article and professional training of the main authors of articles published between 2013 and 2022

Variation in number of authors per article	N (23) / (100%)	Professional training of main authors	N (23) / (100%)
1 to 2 authors	4 (17.4%)	Nurses	17 (74%)
3 to 4 authors	8 (34.8%)	Doctors	1 (4,3%)
5 to 6 authors	8 (34.8%)	Dentists	1 (4,3%)
7 to 8 authors	2 (8.7%)	Nutritionists	2 (8,7%)
More than 8 authors	1 (4.3%)	Pharmacists	2 (8,7%)

Source: Data collected in the survey.

In the "methodological approaches" question, considering the productions studied, there was a predominance of quantitative studies (48%), followed by qualitative research and mixed studies (quanti-qualitative) both with 26% (Table 3). There was a tendency to carry out quantitative studies associated with cross-sectional cuts, a type of observational study that seeks to collect data to study a population at a certain point in time (Zangirolami-Raimundo; Echeimberg; Leone, 2018). We also verified the use of questionnaires to measure the patient's safety culture in the context of PHC.

In the qualitative studies, the prevalence of descriptive and exploratory methods was observed, possibly in search of the apprehension of non-quantifiable aspects, allowing to understand the phenomenon of patient safety in PHC and its multiple dimensions, considering the complexity of SAR within the SUS. In the mixed studies, it was identified the prevalence of the use of the Delphi technique, often used in processes of validation of protocols, questionnaires, checklist, indicators, which consists of building consensus opinions from a group of experts on certain content, as in the study by Marchon and Mendes Junior (2015).

**Table 3.** Most represented methods in articles on the topic of Patient Safety in Primary Health Care from 2013 to 2022

Methods	N	(-)%
<b>QUALITATIVE STUDIES</b>	<b>6</b>	<b>26%</b>
Descriptive, transversal	2	8.7%
Exploratory	2	8.7%
Descriptive, exploratory	1	4.3%
Intervention	1	4.3%
<b>QUANTITATIVE STUDIES</b>	<b>11</b>	<b>48%</b>
Transversal, descriptive	2	8.7%
Observational, descriptive, exploratory	1	4.3%
Transversal	5	22%
Sectional, descriptive	1	4.3%
Transversal, descriptive, survey,	1	4.3%
Transversal, prospective	1	4.3%
<b>MIXED STUDIES (quanti-qualitative)</b>	<b>6</b>	<b>26%</b>
Sectional, descriptive	1	4.3%
Transversal, exploratory, evaluative	1	4.3%
Observational, descriptive, prospective	1	4.3%
Methodological (Delphi)	2	8.7%
Methodological	1	4.3%
<b>TOTAL</b>	<b>23</b>	<b>100%</b>

Source: Data collected in the survey.

In the question "journal with greater amount of publication", the journals *Texto e Contexto Enfermagem* (4) and *Acta Paulista Enfermagem* (4), Quali/Capes A3 and A4, respectively, were highlighted. It is important to highlight that all the journals were in the health area, with expressiveness of publications in nursing field journals. The stratification of the quality of intellectual production of the sample studied can be validated, considering that most articles were published in journals with "A" concept, six of which in journals with Quali/Capes "A1". It is worth noting that, for the above inferences, the Quali/Capes classification was considered in the four-year period 2017-2020 (Table 4).

**Table 4.** Characterization of journals/year of publication, number of articles published (N) and Qualis/Capes classification (Quadrennium 2017-2020))

Journals/year of publication	N	Qualis/Capes (Quadriennium 2017-2020)
<i>Enfermería Global</i> /2022	1	B1
<i>Epidemiologia e Serviços de Saúde: revista do SUS(RESS)</i> /2022	1	A3
<i>Physis: Revista de Saúde Coletiva</i> /2021	1	A3
<i>Interface (Botucatu)</i> /2020	1	A3
<i>Revista Brasileira de Enfermagem</i> /2019	1	A4
<i>Revista de Saúde Pública</i> /2017 (1), 2019 (1)	2	A1
<i>Revista Gaúcha de Enfermagem</i> / 2019 (2)	2	A3
<i>Caderno de Saúde Pública</i> /2015(2)	2	A1
<i>Revista de Enfermagem Referência</i> /2021	1	B2
<i>Texto e Contexto Enfermagem</i> /2013(1), 2020(1), 2021 (2)	4	A3
<i>Revista Baiana Enfermagem</i> /2020	1	B2
<i>Acta Paulista de Enfermagem</i> /2016(1), 2018 (1), 2019 (2)	4	A4
<i>Revista Latino-Americana de Enfermagem</i>	2	A1

Source: Data collected in the survey.

To ensure care in all health facilities of the national territory, the NPPS has created axes that help achieve this objective: Axis 1: The encouragement of a safe practice; Axis 2: Citizen involvement in their safety; Axis 3: Inclusion of patient safety in teaching; Axis 4: The increase in research on patient safety (Brasil 2014). In this direction, the interrelationship between the objects of studies of the sample surveyed and the axes of NPPS (Table 5) was verified, being observed a greater quantity of knowledge productions focused on Axis 1 (38.4%), expanding the dialogue about errors and safe practices.

The object "patient safety culture" was explored in seven studies, and pervades the four axes of the NPPS, corresponding to 30.5% of the publications of the surveyed sample. The safety culture is prioritized by the opportunity to learn from mistakes, without blame or punishment, it is defined as behaviors, skills values and attitudes that guide commitment to safety management, should be stimulated in

the processes that encompass all axes of the NPPS (Dal Pai *et al.*, 2020; Galhardi *et al.*, 2018; Bezerril *et al.*, 2020).

Studies with objects aimed at measuring damage and validating instruments, which sought to portray evidence or guide safer care, composed the Axis 4 (21.7%) and occupied the third position in the ranking of scientific productions, considering inter-Relationship between the axes of NPPS and objects of selected studies. However, no article was found that fell under Axis 2, suggesting a scientific gap and the need for research that guide professionals to empower users to engage in their own security within SAR, in order to establish a safe link, participatory and co-responsible.

**Table 5.** Interrelationship between the Axes of the National Program for Patient Safety and objects of study of the articles selected for the bibliometric review, period 2013-2022.

NPPS AXES	OBJECTS OF STUDY	N	% per axis
<b>Axis 1:</b> Encouraging safe care practices (Protocols; Plans; NSP; Notifications)	Incidence of immunization errors	1	34.8%
	Patient safety incidents	2	
	Improving quality and reducing errors related to vaccine administration	1	
	Safety in vaccine care (protocol construction and validation)	1	
	Adherence to patient safety recommendations in the vaccination room	1	
	Patient safety actions	2	
<b>Axis 2:</b> Citizen involvement in their security (partnership, co-responsibility)	-----	-----	0%

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NPPS AXES	OBJECTS OF STUDY	N	% per axis
<b>Axis 3:</b> Inclusion of the topic of patient safety in teaching (in continuing education, health undergraduate and postgraduate courses)	Learning to improve work processes and patient safety	1	13%
	Conceptions of patient safety in PHC	2	
<b>Axis 4:</b> Increased research on patient safety (measuring damage, understanding the causes, identifying solutions, evaluating the impact and translating the evidence into safer care)	Polypharmacy and associated factors	1	21.7%
	Patient safety and polypharmacy	1	
	Translation and adaptation of the Primary Care International Study of Medical Errors (PCISME) questionnaire	1	
	Translation, adaptation and validation of the Medical Office Survey on Patient Safety Culture (MOSPSC) research instrument	1	
	Psychometric validation of the Brazilian version of the instrument for Research on Patient Safety Culture for PHC	1	
Axes 1, 2, 3 and 4	Patient safety culture	7	30.5%
TOTAL		23	100%

Source: Data collected in the survey.

As for the keywords used, in addition to the expressions "patient safety" and "primary health care", the terms "health" and "quality" were highlighted as central elements of the relationships established around the objects of study of the analyzed articles. The keywords expressed in the term cloud acted not only as a gateway to the text, but portray the theme and contents addressed, being observed an approximation of the objects of studies in this bibliometric cut. Among other terms that have strong links with the objects of study, stand out: "assistance"; organizational culture"; "team", "nursing"; "vaccines"; "patient"; "care".

**Figure 2.** Cloud of terms originating from the keywords of publications on patient safety in Primary Health Care in the period 2013-2022

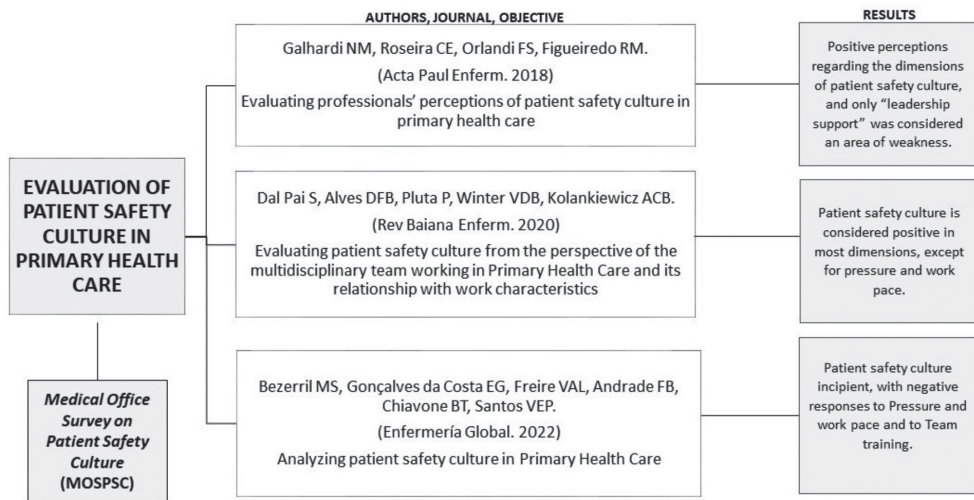


Source: Data collected in the survey, processed by *website Word Cloud* (2023).

In the bibliometric analysis, three articles with homonymous titles were observed, described as: "Evaluation of the Patient Safety Culture in Primary Health Care", published in different journals, with similar objectives, and that used the same research instrument (Figure 3) See also. There was a trend of studies focused on the measurement of patient safety culture in PHC in different Brazilian regions, which may contribute to strengthen practices, identify potential and challenges, considering the locoregional health context. Both studies used the Medical Office Survey on Patient Safety Culture (MOSPSC), a questionnaire translated and adapted transculturally for Brazil in 2016, entitled "Research on Patient Safety Culture for Primary Care" (Timm; Rodrigues, 2016).



**Figure 3.** Studies on Patient Safety in Primary Care published between 2013 and 2022 with homonymous titles



Source: Data collected in the survey.

## Final considerations

This study has made it possible to map the scientific production on patient safety in primary health care over the last ten years, demonstrating research patterns and identifying trends for future academic scientific productions.

Among the types of methodological approaches, there was a predominance of quantitative studies (48%), of the cross-sectional type, being verified expressive quantitative authors nurses (74%). This indicates the need for research by other professional categories, considering that the "safety" dimension should pass through multiprofessional care.

There was a 50% drop in scientific productions between 2021 (17.4%) and 2022 (8.7%), which suggests the need to promote new scientific productions, considering the theme's relevance. The research also contributed to the identification of the objects of study, with emphasis on the culture of patient safety (30.5%) and the identification of trends as to the use of a collection instrument adapted transculturally to the Brazilian reality, that aims to quantify the culture as positive or negative, with reach, if replicated in the various scenarios and providing a national panorama.

With this bibliometric analysis, it was possible to identify the correlation between objects of studies and axes of NPPS. It was observed that the research establishes, more expressively, interface with Axis 1 of NPPS (stimulus to a safe assistance practice), and are aimed at measuring incidents related to patient safety, to safe practices and adherence to recommended recommendations. No studies were found on the patient's own engagement in their safety, suggesting a gap in this field, which may be significant in the orientation of future production choices.

An approximation of the objects of the sample body studies was verified, from the keywords, with emphasis on the terms "health" and "quality". In addition, it is considered that there is still a need for more investment in the amount of research that portrays state and private universities and the regions North, Northeast and Midwest, to explore the patient safety dimensions in different contexts and regions of the country where primary care is inserted.<sup>1</sup>

## References

- AGUIAR, T. L. *et al.* Incidentes de segurança do paciente na Atenção Primária à Saúde de Manaus, AM, Brasil. *Interface (Botucatu)*, v. 24, supl. 1, e190622, 2020. Available at: <https://doi.org/10.1590/Interface.190622>. Access on: 12 Oct. 2023.
- ARAÚJO, L. U. *et al.* Patient safety in primary health care and polypharmacy: cross-sectional survey among patients with chronic diseases. *Rev. Latino-Am. Enfermagem*, v. 27, e3217, 2019. Available at: <http://dx.doi.org/10.1590/1518-8345.3123.3217>. Access on: 08 dez. 2023.
- BARROS, A. V. M. *et al.* Levantamento bibliométrico dos artigos publicados na Revista da ABENO no período entre 2001 e 2019. *Revista da ABENO, [S. l.]*, v. 20, n. 2, p. 38-46, 2020. Available at: <https://doi.org/10.30979/rev.abeno.v20i2.1076>. Access on: 12 dez. 2023.
- BEZERRIL, M. S. *et al.* Avaliação da cultura de segurança do paciente na Atenção Primária à Saúde. *Enfermagem Global*, v. 21, n. 3, p. 376-408, 2022. Available at: <https://doi.org/10.6018/eglobal.503031>. Access on: 18 dez. 2023.
- BRASIL. Agência Nacional de Vigilância Sanitária. *Plano Integrado para Gestão Sanitária de Segurança do Paciente*. Monitoramento e Investigação de Eventos Adversos e Avaliação das Práticas de Segurança do Paciente. Brasília: ANVISA; 2022. Available at: <https://www.gov.br/anvisa/ptbr/centraisdeconteudo/publicacoes/servicosdesaude/publicacoes/plano-integrado-2021-2025-final-para-publicacao-05-03-2021.pdf>. Access on: 10 Oct. 2023.
- BRASIL. Ministério da Saúde. Conselho Nacional de Saúde. *Portaria nº 529*, de 1º de abril de 2013. Institui o Programa Nacional de Segurança do Paciente (PNSP). Brasília, DF:

Ministério da Saúde, 2013. Available at: [https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2013/prt0529\\_01\\_04\\_2013.html](https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2013/prt0529_01_04_2013.html). Access on: 12 Oct. 2023.

BRASIL. Ministério da Saúde; Fundação Oswaldo Cruz; Agência Nacional de Vigilância Sanitária. *Documento de referência para o Programa Nacional de Segurança do Paciente*. Brasília: Ministério da Saúde, 2014. 4p. Available at: [https://bvsmms.saude.gov.br/bvs/publicacoes/documento\\_referencia\\_programa\\_nacional\\_seguranca.pdf](https://bvsmms.saude.gov.br/bvs/publicacoes/documento_referencia_programa_nacional_seguranca.pdf). Access on: 12 Oct. 2023.

BRASIL. Ministério da Saúde. *Portaria nº 2.436*, de 21 de setembro de 2017. Aprova a Política Nacional de Atenção Básica, estabelecendo a revisão de diretrizes para a organização da Atenção Básica, no âmbito do Sistema Único de Saúde (SUS). Brasília, DF: Ministério da Saúde, 2017. Available at: [https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2017/prt2436\\_22\\_09\\_2017.html](https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2017/prt2436_22_09_2017.html). Access on: 10 Oct. 2023.

DAL PAI, S. *et al.* Avaliação da cultura de segurança do paciente na atenção primária à saúde. *Rev baiana enferm.*, v. 34, e34849, 2020. Available at: <https://doi.org/10.18471/rbe.v34.34849>. Access on: 12 Nov. 2023.

ELLEGAARD, O.; WALLIN, J. A. The bibliometric analysis of scholarly production: How great is the impact? *Scientometrics*, v. 105, n. 3, p. 1809-1831, 2015. Available at: <https://link.springer.com/article/10.1007/s11192-015-1645-z>. Acesso: 12 Nov. 2023.

GALHARDI, N. M. *et al.* Avaliação da cultura de segurança do paciente na atenção primária à saúde. *Acta Paul Enferm.*, v. 31, n. 4, p. 409-16, 2018. Available at: <https://doi.org/10.1590/1982-0194201800057>. Access on: 10 Oct. 2023.

MARCHON, S. G.; MENDES JUNIOR, W. V. Tradução e adaptação de um questionário elaborado para avaliar a segurança do paciente na atenção primária em saúde. *Cadernos de Saúde Pública*, v. 31, n. 7, p. 1395-1402, jul. 2015. Available at: <https://doi.org/10.1590/0102-311X00157214>. Access on: 10 Oct. 2023.

NASCIMENTO, R. C. R. M. *et al.* Polifarmácia: uma realidade na atenção primária do Sistema Único de Saúde. *Rev Saude Publica*, v. 51, supl. 2, 19s, 2017. Available at: <https://doi.org/10.11606/S1518-8787.2017051007136>. Access on: 12 Nov. 2023.

RIBEIRO, H. C. *et al.* Segurança do doente na atenção primária: percepção de profissionais de equipes de saúde da família. *Revista de Enfermagem Referência*, v. 5, n. 6, e20082, 2021. Available at: <https://doi.org/10.12707/RV20082>. Acesso: 12 Nov. 2023.

SILVA, A. P. F. *et al.* Segurança do paciente na atenção primária: concepções de enfermeiras da estratégia de saúde da família. *Rev Gaúcha Enferm.*, v. 40, n. esp., e20180164, 2019. Available at: <https://doi.org/10.1590/1983-1447.2019.20180164>. Access on: 11 Nov. 2023.

SIMPLÍCIO, E. A. *et al.* Segurança do paciente assistido na atenção primária. *Global Clinical Research Journal*, [S. l.], v. 3, n. 1, p. e42, 2023. Available at: <https://globalclinicalresearchj.com/index.php/globclinres/article/view/55>. Access on: 11 Nov. 2023.

SOUZA, M. M. *et al.* Patient safety culture in the Primary. Health Care. *Rev Bras Enferm.*, v. 71, n. 1, p. 27-34, 2019. Available at: <http://dx.doi.org/10.1590/0034-7167-2017-0647>. Access on: 11 Nov. 2023.

TEIXEIRA, T. B. C. *et al.* Avaliação da segurança do paciente na sala de vacinação. *Texto Contexto Enferm.*, v. 30, e20200126, 2021. Available at: <https://doi.org/10.1590/1980-265X-TCE-2020-0126>. Access on: 12 Nov. 2023.

TIMM, M.; RODRIGUES, M. C. S. Adaptação transcultural de instrumento de cultura de segurança para a atenção primária. *Acta Paul Enferm.*, v. 29, n. 1, p. 26-37, 2016. Available at: <https://doi.org/10.1590/1982-01942016000005>. Access on: 10 Nov. 2023.

ZANGIROLAMI-RAIMUNDO, J.; ECHEIMBERG, J. O.; LEONE, C. Tópicos de metodologia de pesquisa: Estudos de corte transversal. *J. Hum. Growth Dev.*, São Paulo, v. 28, n. 3, p. 356-360, 2018. Available at: <http://dx.doi.org/10.7322/jhgd.152198>. Access on: 10 Nov. 2023.

## Note

<sup>1</sup> R. S. Barreto: definition, writing and textual review of the study design; data analysis, construction of graphic elements, tables and illustrations. M. L. S. Servo: textual and methodological review, data analysis. The main author is a doctoral student and receives a scholarship from the Bahia Research Foundation (Fundação de Amparo à Pesquisa do Estado da Bahia - FAPESB).

## Resumo

### *Segurança do paciente na Atenção Primária à Saúde: um estudo bibliométrico da produção científica brasileira*

Estudo do tipo revisão bibliométrica, que objetivou mapear as produções científicas sobre segurança do paciente na Atenção Primária à Saúde no contexto brasileiro, realizado nas bases de dados SCIELO, LILACS, BDENF, IBECs, no período de 2013 a 2022. O corpo amostral integrou 23 artigos. O ano com maior publicação foi 2019 (30,4%); as regiões com maior representatividade de estudos foram Sudeste (43,5%) e Sul (34,8%); grande parte dos estudos estava vinculada às instituições públicas, e os autores principais tinham a formação de enfermeiro (74%). A abordagem metodológica mais adotada foi a quantitativa (48%), o maior quantitativo de publicações em revistas com Qualis/Capes A1, e a temática principal tratou sobre cultura de segurança do paciente (30,5%). A análise das palavras-chave identificou os termos “saúde e qualidade” como elementos centrais à segurança do paciente. Foram encontrados três artigos com títulos homônimos que utilizaram o mesmo instrumento de coleta. Conclui-se que a produção científica nesse campo foi pouco expressiva nas regiões Norte, Nordeste e Centro-Oeste. Houve predominância de autores de uma única categoria profissional e maior representatividade de um objeto de estudo, a cultura de segurança. Observou-se baixo fomento à produção científica voltada para o envolvimento do usuário em sua própria segurança.

► **Palavras-chave:** Segurança do paciente. Atenção Primária à Saúde. Estudos bibliométricos.