REVIEW

Scientific production about prenatal care in Brazilian nursing dissertations and theses

Produção científica acerca do pré-natal em dissertações e teses da enfermagem brasileira
Producción científica sobre cuidado prenatal en disertaciones y tesis de enfermería brasileñas

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ABSTRACT
Objective: To characterize the scientific production on prenatal care in Brazilian nursing dissertations and theses. **Methods:** A descriptive, documentary and quantitative study, carried out from March to April 2021, through virtual access to the Theses and Dissertations Portal of the Higher Education Personnel Improvement Coordination. **Results:** We analyzed 320 dissertations and 75 theses, of which there was a predominance of studies from the Southeast (34.9%) and the Northeast (32.9%), guided by nurses (63.8%) linked to public universities (77.9%), from nursing departments (49.3%) and public health (18.7%), who investigated assistance during prenatal care (34.7%), based on cross-sectional (77.5%), quantitative (54.7%) studies, carried out with pregnant women (55.6%) and in a Basic Unit of Health (58.0%). **Conclusions:** The study allowed us to understand how prenatal care has been researched in nursing dissertations and theses and the gaps that may be the target of future studies.
Descriptors: Prenatal Care. Nursing Research. Graduate Nursing Education. Nurses. Academic Dissertation.

RESUMO
Objetivo: Caracterizar a produção científica acerca do pré-natal em dissertações e teses da enfermagem brasileira. **Métodos:** Estudo descritivo, documental, com abordagem quantitativa, realizado no período de março a abril de 2021, mediante acesso virtual ao Portal de Teses e Dissertações da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior. **Resultados:** Foram analisadas 320 dissertações e 75 teses, das quais observou-se predominância de estudos das regiões Sudeste (34,9%) e Nordeste (32,9%), orientados por enfermeiros (63,8%) vinculados a universidades públicas (77,9%), de departamentos de enfermagem (49,3%) e saúde coletiva (18,7%), que investigaram a assistência durante o pré-natal (34,7%), a partir de estudos transversais (77,5%), quantitativos (54,7%), realizados com gestantes (55,6%) e em Unidade Básica de Saúde (58,0%). **Conclusões:** O estudo permitiu compreender como o pré-natal tem sido pesquisado nas dissertações e teses de enfermeiros e as lacunas que podem ser alvo de futuros estudos.
Descritores: Cuidado Pré-Natal. Pesquisa em Enfermagem. Educação de Pós-Graduação em Enfermagem. Enfermeiras e Enfermeiros. Dissertação Acadêmica.

RESUMÉN
Objetivo: Caracterizar la producción científica sobre la atención prenatal en las disertaciones y tesis de enfermería brasileñas. **Métodos:** Estudio descriptivo, documental, con enfoque cuantitativo, realizado de marzo a abril de 2021, a través del acceso virtual al Portal de Tesis y Disertaciones de la Coordinación de Perfeccionamiento del Personal de Educación Superior. **Resultados:** Se analizaron 320 disertaciones y 75 tesis, de los cuales hubo predominio de estudios de las regiones Sudeste (34,9%) y Nordeste (32,9%), orientados por enfermeros (63,8%) vinculados a universidades públicas (77,9%), de departamentos de enfermería (49,3%) y de salud pública (18,7%), que investigaron la asistencia durante el prenatal (34,7%), a partir de estudios transversales (77,5%), cuantitativos (54,7%), realizados con gestantes (55,6%) y en una Unidad Básica de Salud (58,0%). **Conclusiones:** El estudio permitió comprender cómo el cuidado prenatal ha sido investigado en las disertaciones y tesis de enfermería y los vacíos que pueden ser objeto de futuros estudios.
Descriptores: Cuidado Prenatal. Investigación en Enfermería. Educación de Postgrado en Enfermería. Enfermeras y Enfermeras. Disertación Académica.

INTRODUCTION

The care offered to pregnant women during prenatal care aims to monitor the development of the gestational process, aspects related to maternal health and fetal well-being. Preventing, identifying early and correcting abnormalities and health problems of the mother-child dyad are the main objectives of prenatal care, which also presents itself as the most opportune time for guidance on the pregnancy-parturitive-puerperal cycle and care for newborns.[1]

Inadequate prenatal care, either due to lack of access to services, trained professionals, complementary exams or other resources, increases the risk of maternal and infant morbidity and mortality. Thus, offering quality prenatal care, based on scientifically based and updated conducts, is a relevant premise for reducing maternal and child morbidity and mortality rates, which justifies the need for further studies that consolidate these evidence.[2]

When considering the need for scientific support in the conducts adopted during prenatal care, the development of research in the area of nursing is envisaged.[2] In this sense, it becomes relevant to characterize and analyze the knowledge already produced, with a view to knowing the profile of nurses' scientific production on prenatal care.

In the Brazilian scenario, when it comes to nursing scientific production, the relevant role of *strictu sensu* Graduate Programs as powerful generators of scientific evidence stands out. The studies developed in these programs have the important role of critically reviewing, questioning and discussing nursing knowledge and practices.[3] Research reports presented in the form of dissertations and theses of these programs are reflected as foundations for constructing the nursing scientific *corpus*, presenting themselves as valuable sources for document analysis.[4]

Despite the existence of review studies on nursing care in prenatal care,[5-6] the scientific literature does not have evidence to analyze nurses' studies, from dissertations and theses, about prenatal care.

In this context, the analysis of nurses' Brazilian scientific production on prenatal care, disseminated through dissertations and theses, is considered relevant. This analysis will allow describing the evolution of studies over the years and knowing the most studied themes and methodological paths adopted. It will also be possible to identify the gaps of knowledge about prenatal care, contributing to the direction of future research by nursing professionals.

According to this scenario mentioned above, the present study aimed to characterize the scientific production about prenatal care in Brazilian nursing dissertations and theses.

METHODS

This is a descriptive, documentary study, with quantitative approach. Documentary research is widely used, constituting an important source of data for the most diverse types of research. [7] The study was prepared in accordance with the Reporting of OBservational studies in Epidemiology (STROBE).

The research was carried out through online access to the website of the Coordination for the Improvement of Higher Education Personnel (CAPES) Portal of Theses and Dissertations, to consult the studies cataloged in that portal.[8] The population was composed of dissertations and theses available in the CAPES theses and dissertations database.

No time limit was established; however, full texts were available from 2013. Thesis or dissertation produced by nurses regarding prenatal care were included. Dissertations and theses that were duplicated were excluded.

Two researchers conducted the search simultaneously and separately from March to April 2021, through online virtual access to the CAPES Portal and Theses and Dissertations website, and compared the results obtained in study selection. For this search, as a controlled descriptor, "Prenatal Care" was used, belonging to the vocabulary of Health Sciences Descriptors (DeCS). Furthermore, the uncontrolled descriptors "Pre-Natal" and "Pre-Natal Assistance" were used separately in other searches, synonymous with the controlled descriptor mentioned above.

The initial search identified a total of 2,144 studies. After reading the titles and abstracts, 434 were excluded because they were duplicates, 846 because they did not address the prenatal topic and 469 because they did not have nurses as authors, so that 395 studies were included in the sample. Of these, 106 (26.8%) were located from the descriptor "Prenatal Care", 78 (19.8%) and 211 (53.4%), from the synonyms "Prenatal Care" and "Prenatal Care", respectively.

The information collected were: academic level (master's or doctoral degree) and year of study; department, institution and geographical location of the tenderer; mentor training; topic and audience investigated; place where the investigation took place; method/level of evidence; technology and intervention investigated; descriptors; and keywords. It is noteworthy that the search for the professional category of authors and advisors occurred through access to *Plataforma Lattes* (website with professionals' resumes).

For analysis and characterization of the level of evidence, meta-analyses and systematic reviews were considered level 1; randomized controlled trials, level 2; non-randomized trials, level 3; cohorts and case-controls, level 4; systematic reviews of descriptive and qualitative studies, level 5; descriptive or qualitative studies, level 6; and expert opinion, level 7.[8]

Data were tabulated in Microsoft Excel 2010® spreadsheets and then imported into Statistical Package for the Social Sciences (SPSS), version 21.0. For analysis, descriptive statistics were adopted, with absolute and relative frequencies.

Since this is a study with data of public access, there was no need for approval by a Research Ethics Committee. However, the ethical principles in research were respected.

RESULTS

The sample consisted of 395 scientific studies by nurses, of which 320 (81.0%) were dissertations and 75 (19.0%) were theses. **Figure 1** presents the number of studies per year. A peak in productivity was observed in 2018 and a decrease in 2019.

Table 1 presents the 77 institutions from which the dissertations and theses came. It was observed that 60 (77.9%) were public and 17 (22.1%) were private. As for geographic location, 138 (34.9%) studies came from institutions in the Southeast, 130 (32.9%), from the Northeast, 87 (22.1%), from the South, 29 (7.3 %), from the Midwest and 11 (2.8%), from the North.

Graduate Programs, from which the dissertations and theses originated, belonged to 28 institutional departments. Of these, the highest number of studies, 195 (49.3%), were from nursing departments, followed by 74 (18.7%), collective health, 21 (5.3%), health sciences, 13 (3.3%), public health, 12 (3.0%), maternal-infant and 11 (2.8%), family health. The remaining 69 (17.6%) studies came from 22 different departments, from different areas of health specialty, such as women's health, tocogynecology, child and adolescent health, health management, physical education, epidemiology and care intensive.

Table 2 presents the synthesis of the profile of dissertations and theses, according to the methodological approach, study design, data collection setting, intervention and use of technology. Based on study design of dissertations and theses, it was observed that 322 (81.5%) studies had evidence level 6, 47 (11.9%), level 4, 11 (2.8%), level 2, nine (2.3%), level 3, five (1.3%), level 1 and only one (0.2%), level 5.

As for the professional category of the dissertations and theses advisors, it was identified that 252 (63.8%) studies were guided by nurses, 83 (21.0%), by doctors, 14 (3.5%), by dentists, eight (2.0%), by physiotherapists, seven (1.8%), by psychologists, six (1.5%), by nutritionists, six (1.5%), by pharmacists, five (1.3%), by biologists, three (0.7%), by statisticians, three (0.7%), by physical educators, two (0.5%), for biomedical and two (0.5%), by social scientists. The remaining four studies were guided by chemist, electrical engineer, anthropologist and speech therapist. Of the 276 advisors identified, 205 (74.2%) guided only one study, 42 (15.2%), two, 18 (6.5%), three, eight (2.9%), four, one (0.4%), five, one (0.4%), seven, and one (0.4%), eight studies.

Regarding the themes and population studied, it was observed that most of the research was carried out with pregnant women (55.6%) about assistance during prenatal care (34.7%) and sexually transmitted infections (STIs) (14.9%). The information is presented in **Table 3**.

Regarding the descriptors used in dissertations and theses, 593 were identified. **Chart 1** shows the frequency of those most used in studies.

DISCUSSION

When mapping the scientific studies on prenatal care by nurses, master's dissertations were the most prevalent. Similar frequencies were found in a documentary study, which analyzed nursing dissertations and theses about women's health in the prison system, in which 60% of the studies were carried out in master's dissertations.[9] This result may be associated with the highest number of *stricto sensu* Graduate Programs at master's level in the country. Even in view of these already consolidated programs, there is an increasing increase in doctoral courses in health and nursing, which points to the possibility of increasing the study of theses, with the chances of changes in future bibliometric indicators.

As for the geographic region of the institutions, the Southeast and Northeast regions stood out, with the highest number of studies produced. Documentary indicators about studies on the history of nursing had similar findings, in which the Southeast region represented 69.7% of the results and the Northeast, 18%.[10] This trend in nursing studies can be justified, because the Southeast was a pioneer in graduate studies and, consequently, in the quantity of dissertations and theses defended. The Northeast, in turn, according to CAPES, shows a growth in Graduate Nursing Programs, with 18 registered and in operation.[11-12] The state of Ceará stands out, with five active nursing programs, which leverage the Northeast region.
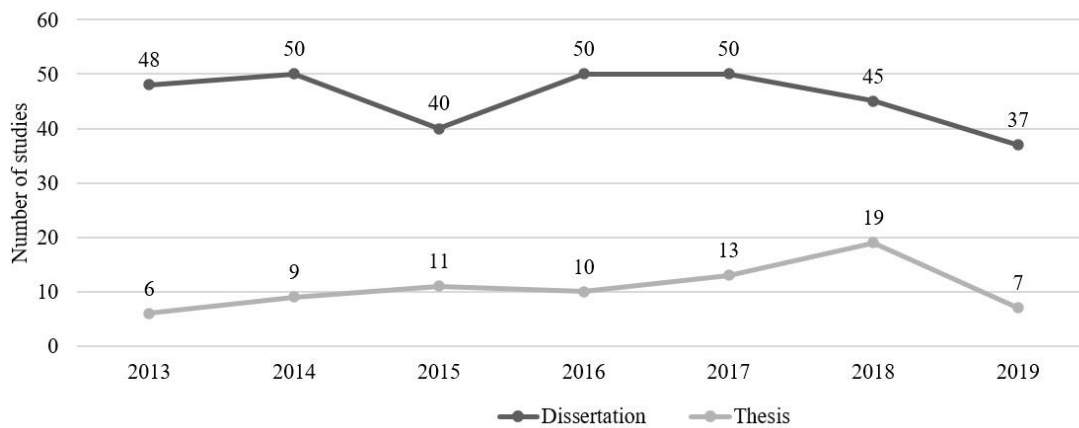
There was a higher number of public educational institutions to the detriment of private ones. A bibliometric study on patient safety in the Intensive Care Unit found similar results.[13] Most public institutions, universities, act allied to the inseparability of triad teaching, research and extension. Because they hold more Graduate Programs, they are expected to have greater study of dissertations and theses. These public universities are part of health care settings, including prenatal care, enabling the study of studies by these institutions in relation to prenatal care in master's and doctoral programs.

The department with the highest number of studies was nursing, and the advisors were mostly nurses. In Brazil, Graduate Nursing Programs are expanding and account for 11.8% of *stricto sensu* courses in health sciences. In the period from 2011 to 2016, professional masters represented a relative growth of 156%. Doctoral education in nursing is also a priority in the area, which reflects a 77% increase in scientific production in the period 2013-2016 compared to the previous triennium, demonstrating the important role of nurses as researchers.[11]

Themes about "quality, adequacy and prenatal evaluation", followed by "STIs", were the most studied by nurses in dissertations and theses. Although Brazil has good coverage of prenatal care, quality and adequacy are still insufficient.[14] A prenatal care quality study conducted in Peru identified that four out of ten women did not receive quality care. Insufficient number of consultations and few guidelines were the main problems identified.[15] Regarding STIs among pregnant women, these have a high prevalence, being a public health problem. In the United States, in relation to STIs, adolescence pregnancy and beliefs about sex and use of contraceptive methods were associated with increased infections.[16] Therefore, it is relevant that

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such sub-themes have been investigated in master's and doctoral programs. However, it is necessary that other aspects and sub-themes related to prenatal nursing are also investigated, such as the prenatal nursing process and care with morphophysiological changes during pregnancy.

Figure 1. Distribution of dissertations and theses on prenatal care, produced by nurses, according to year of study. Recife, Pernambuco, Brazil, 2021 (n=395).

Source: Prepared by the authors (2022).

Table 1. Distribution of dissertations and theses on prenatal care, produced by nurses, according to region and institution. Recife, Pernambuco, Brazil, 2021 (n=395).

Region/institution	Dissertations n	Theses n	Total n (%)
North			
Universidade do Estado do Pará*	3	0	3 (0.8)
Universidade Federal do Acre*	3	0	3 (0.8)
Fiocruz (Centro de Pesquisa Leônidas e Maria Deane)*	2	0	2 (0.5)
Universidade Federal do Pará*	2	0	2 (0.5)
Universidade do Estado do Amazonas*	1	0	1 (0.3)
Northeast			
Universidade Federal do Ceará*	13	6	19 (4.8)
Universidade de Fortaleza†	15	0	15 (3.8)
Universidade Federal do Rio Grande do Norte*	9	3	12 (3.0)
Universidade Federal do Maranhão*	8	4	12 (3.0)
Fiocruz (Fundação Oswaldo Cruz)*	9	0	9 (2.3)
Universidade Estadual do Ceará*	7	2	9 (2.3)
Universidade Federal da Bahia*	6	2	8 (2.0)
Universidade Estadual de Feira de Santana*	7	0	7 (1.8)
Universidade Federal de Pernambuco*	6	1	7 (1.8)
Universidade Federal do Piauí*	5	1	6 (1.5)
Instituto de Medicina Integral Prof Fernando Figueira†	4	2	6 (1.5)
Instituto de Ensino Superior do Piauí Ltda†	3	0	3 (0.8)
Fiocruz (Centro de Pesquisa Aggeu Magalhães)*	3	0	3 (0.8)
Universidade do Estado do Rio Grande do Norte*	3	0	3 (0.8)
Universidade de Pernambuco*	2	0	2 (0.5)
Universidade Federal de Alagoas*	2	0	2 (0.5)
Universidade Regional do Cariri*	2	0	2 (0.5)
Universidade Federal de Sergipe*	1	1	2 (0.5)
Universidade Estadual do Sudoeste da Bahia*	1	0	1 (0.2)
Universidade Estadual da Paraíba*	1	0	1 (0.2)
Universidade Federal da Paraíba*	1	0	1 (0.2)
Midwest			
Universidade Federal de Goiás*	8	1	9 (2.3)
Universidade Federal de Mato Grosso*	7	1	8 (2.0)
Universidade Federal de Mato Grosso do Sul*	4	0	4 (1.0)
Universidade de Brasília*	3	1	4 (1.0)
Universidade Federal da Grande Dourados*	2	0	2 (0.5)
Universidade Católica de Brasília†	1	0	1 (0.3)
Fundação de Ensino e Pesquisa em Ciências da Saúde†	1	0	1 (0.3)
Southeast			
Universidade de São Paulo (Ribeirão Preto)*	11	7	18 (4.5)
Universidade Estadual de Campinas*	9	5	14 (3.5)
Fiocruz (Fundação Oswaldo Cruz)*	9	3	12 (3.0)
Universidade de São Paulo*	7	4	11 (2.8)
Universidade Federal Fluminense*	10	0	10 (2.5)
Universidade Estadual Paulista Júlio de Mesquita Filho*	6	2	8 (2.0)
Universidade Federal de São Paulo*	4	4	8 (2.0)
Universidade Federal de Minas Gerais*	4	3	7 (1.8)
Universidade Federal do Espírito Santo*	6	0	6 (1.5)
Universidade Federal de Juiz de Fora*	5	0	5 (1.3)
Universidade Federal de São Carlos*	5	0	5 (1.3)
Universidade Federal do Rio de Janeiro*	3	2	5 (1.3)
Centro Universitário Saúde Abc†	2	2	4 (1.0)
Universidade do Estado do Rio de Janeiro*	3	1	4 (1.0)
Universidade Federal de Alfenas*	2	1	3 (0.8)
Universidade Federal do Estado do Rio de Janeiro*	3	0	3 (0.8)
Centro Universitário São Camilo†	2	0	2 (0.5)

Instituto Sírio-Libanês de Ensino e Pesquisa†	2	0	2 (0.5)
Universidade Católica de Santos†	2	0	2 (0.5)
Centro de Pesquisas Odontológicas São Leopoldo Mandic†	1	0	1 (0.3)
Faculdade de Medicina de São José do Rio Preto†	1	0	1 (0.3)
Instituto de Assistência Médica ao Servidor Público Estadual†	1	0	1 (0.3)
*Universidade Estadual de Campinas (Piracicaba)**	1	0	1 (0.3)
*Universidade Federal de Ouro Preto**	1	0	1 (0.3)
*Universidade Federal de Uberlândia**	1	0	1 (0.3)
*Universidade Federal do Triângulo Mineiro**	1	0	1 (0.3)
*Universidade Federal dos Vales do Jequitinhonha e Mucuri**	1	0	1 (0.3)
Universidade Metodista de Piracicaba†	1	0	1 (0.3)
South			
*Universidade Federal de Santa Catarina**	8	6	14 (3.5)
*Universidade Federal do Rio Grande do Sul**	11	0	11 (2.8)
*Universidade Estadual de Maringá**	7	4	11 (2.8)
*Universidade Federal de Pelotas**	5	4	9 (2.3)
*Universidade Federal de Santa Maria**	8	1	9 (2.3)
Universidade Franciscana†	9	0	9 (2.3)
*Universidade Federal do Rio Grande**	6	1	7 (1.8)
*Universidade Federal do Paraná**	5	0	5 (1.3)
*Universidade Estadual de Londrina**	4	0	4 (1.0)
*Universidade Estadual do Oeste do Paraná**	2	0	2 (0.5)
*Universidade Federal de Ciências da Saúde de Porto Alegre**	1	0	1 (0.3)
Universidade Católica de Pelotas†	1	0	1 (0.3)
*Universidade do Sul de Santa Catarina**	1	0	1 (0.3)
Universidade do Vale do Rio dos Sinos†	1	0	1 (0.3)
Universidade Luterana do Brasil†	1	0	1 (0.3)
*Universidade Regional de Blumenau**	1	0	1 (0.3)

*Public institution; †Private institution.
Source: Prepared by the authors (2022).

Table 2. Distribution of dissertations and theses on prenatal care, produced by nurses, according to methodological approach, study design, data collection setting, applied intervention and use of technology. Recife, Pernambuco, Brazil, 2021 (n=395)

Variable	Dissertations n (%)	Theses n (%)	Total n (%)
Methodological approach			
Quantitative	171 (79.2)	45 (20.8)	216 (54.7)
Qualitative	126 (88.1)	17 (11.9)	143 (36.2)
Mixed	23 (63.9)	13 (36.1)	36 (9.1)
Study design			
Cross-sectional	254 (83.0)	52 (17.0)	306 (77.5)
Cohort	21 (70.0)	9 (30.0)	30 (7.6)
Methodological	19 (90.5)	2 (9.5)	21 (5.3)
Case-control study	14 (82.4)	3 (17.6)	17 (4.3)
Experimental	4 (44.4)	5 (55.6)	9 (2.3)
Quasi-experimental	4 (57.1)	3 (42.9)	7 (1.7)
Literature review	4 (80.0)	1 (20.0)	5 (1.3)
Data collection setting			
Basic Health Unit	188 (82.1)	41 (17.9)	229 (58.0)
Hospital services	104 (78.8)	28 (21.2)	132 (33.4)
Public domain information systems	21 (80.8)	5 (19.2)	26 (6.5)
Universities	2 (100.0)	0	2 (0.5)
Psychosocial Care Center	0	1 (100.0)	1 (0.3)
Prison	2 (100.0)	0	2 (0.5)
Nursing vocational school	1 (100.0)	0	1 (0.3)
Not specified	2 (100.0)	0	2 (0.5)
Applied intervention			
No intervention	298 (81.9)	66 (18.1)	364 (92.2)
Group health education action	10 (76.9)	3 (23.1)	13 (3.3)
Instrument/protocol application	10 (83.3)	2 (16.7)	12 (3.0)
Individual health education action	1 (20.0)	4 (80.0)	5 (1.3)
Realistic simulation	1 (100.0)	0	1 (0.2)
Technology use			
No technology	303 (81.7)	68 (18.3)	371 (93.9)
Educational booklet	7 (70.0)	3 (30.0)	10 (2.5)
Application	6 (75.0)	2 (25.0)	8 (2.1)
Educational video	4 (66.7)	2 (33.3)	6 (1.5)

Source: Prepared by the authors (2022).

Table 3. Themes and population studied in dissertations and theses on prenatal care, produced by nurses. Recife, Pernambuco, Brazil, 2021 (n=395).

Variables	Dissertations n	Theses n	Total n (%)
Themes			
Care (quality/adequacy/assessment)	112	25	137 (34.7)
Sexually transmitted infections	53	6	59 (14.9)
Childbirth	22	6	28 (7.1)
Adolescence pregnancy	21	4	25 (6.3)
Risk to maternal health	19	3	22 (5.6)
Chronic disease (DM/hypertension/hypothyroidism/anemia/hepatitis)	15	7	22 (5.6)
Infection/infectious disease	13	3	16 (4.0)
Child (fetus/infant/newborn)	13	1	14 (3.5)
Alcohol and other drugs	9	2	11 (2.8)

Violence against pregnant women/mothers	7	4	11 (2.8)
Father, companion and family	5	5	10 (2.5)
Pregnant women's health	5	2	7 (1.8)
Breastfeeding	7	0	7 (1.8)
Arbovirus (Zika, dengue, Chikungunya)	4	2	6 (1.5)
Nutrition and food (overweight and obesity, vitamin, BMI)	3	2	5 (1.3)
Sexuality in pregnancy/postpartum	2	1	3 (0.8)
Congenital disorder	3	0	3 (0.8)
Pharmacological treatment	3	0	3 (0.8)
Cancer	1	1	2 (0.5)
Exercise (lifestyle)	2	0	2 (0.5)
Oral and digestive health	1	0	1 (0.2)
Laboratory and imaging exams	0	1	1 (0.2)
Studied population			
Pregnant women	151	32	183 (46.3)
Mothers (puerperal/postpuerperium women)	52	14	66 (16.7)
Multidisciplinary team	52	4	56 (14.2)
Mother and child	21	5	26 (6.5)
Pregnant women and professionals	16	9	25 (6.3)
Pregnant and postpartum women	9	3	12 (3.0)
Child (newborn/child)	6	2	8 (2.0)
Companion/partner/companion	5	3	8 (2.0)
Managers and professionals	2	1	3 (0.7)
Midwives	2	0	2 (0.5)
Mother, son and nurse	1	0	1 (0.3)
Stillbirths	1	0	1 (0.3)
Partners and professionals	0	1	1 (0.3)
Managers and pregnant women	0	1	1 (0.3)
Health students	1	0	1 (0.3)
Puerperal woman and companion	1	0	1 (0.3)

DM - Diabetes Mellitus; BMI - Body Mass Index.
Source: Prepared by the authors (2022).

Chart 1. Descriptors most used in dissertations and theses about prenatal care, produced by nurses. Recife, Pernambuco, Brazil, 2021 (n=395).

Descriptor	f	Descriptor	f
Prenatal Care	128	Obstetric Nursing	21
Nursing	78	Risk factors	20
Pregnant Women	57	Health Assessment	19
Pregnancy	54	High-Risk Pregnancy	17
Women's Health	48	Maternal and Child Health	16
Primary Health Care	35	Health Care Quality	15
Prenatal Care	30	Infection Transmission, Vertical	14
Congenital Syphilis	27	Childbirth	14
Pregnancy	27	HIV	13
Pregnancy in Adolescence	26	Newborn	10
Syphilis	24	Health Promotion	10
Health Education	24	Family Health Strategy	10
Prenatal Care	24	Social Support	10

f - frequency of jobs that used the descriptor.
Source: Prepared by the authors (2022).

When it comes to the research's target audience, most studies addressed pregnant women. It is important to emphasize that the pregnancy-puerperal cycle, in addition to pregnant women, also involves their children, as well as the mother-father-child triad, whose interaction can promote advantages during the prenatal, childbirth and puerperium cycles.[17] However, there are few prenatal studies that investigated phenomena of children and parents/partners as well as health professionals who are part of the care network. Thus, it is necessary to develop studies that include, in addition to pregnant women, the other actors involved in prenatal care.

The most predominant data collection setting in the studies was the Basic Health Unit (BHU). This is the preferential gateway for pregnant women to the Unified Health System (SUS - *Sistema Único de Saúde*), and nurses, in turn, act comprehensively in prenatal care at the BHU, from the identification of

pregnancy to the referral of high-risk cases to reference units.[18] However, there is a need for research that investigates other settings, such as reference hospitals for prenatal care and regional managements, where nursing works and where prenatal care takes place.

Regarding the methodological approach, quantitative research was highlighted. A similar result was evidenced in an integrative review on prenatal care.[19] Even if quantitative research determines the strength of association between variables and can infer health phenomena, it is important that nurses develop qualitative research on prenatal care that contribute to subject interpretation of the phenomenon.

Regarding study design, the descriptive (level of evidence 6) stood out. The opposite result was evidenced in a descriptive study, which identified and characterized 100 most cited articles on prenatal diagnosis in the Web of Science database, whose

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predominance was clinical trials.[20] This frequency highlights the need for Brazilian nurse researchers to develop studies, in master's and doctoral degrees, with a higher level of evidence, which provide data on cause-effect and analyze interventions in the prenatal area.

It was observed that few studies have researched the effect of interventions. Among those implemented, health education actions stood out. This action is an essential tool for health promotion and prevention of diseases and injuries in Primary Health Care.[21] Health education should occur with the nursing team's active participation, with guidance on pregnancy, physiological changes in pregnant women, labor and postnatal care. Thus, when considering the relevance of health education for prenatal care quality, and that this must occur based on evidence-based practice, the relevance of health education is highlighted as having been the target of research by nurses in dissertations and theses.

Among the technologies investigated in the studies, educational ones predominated. In a narrative review conducted by researchers from Iran, educational technologies stood out among the strategies most used by nursing educators. These technologies were considered more attractive to students and made their participation more active in the learning process.[22] It is pointed out, therefore, that the fact that these types of technologies have been the most researched can be justified, as nurses stand out in research related to health education and also in the use of technological resources.

In the analyzed studies, the highest frequency of keywords was related to prenatal care, in addition to those related to nursing, pregnancy and health problems during pregnancy. The choice of these terms can facilitate or hinder access to readers' information, since the process of searching for studies requires using words that ensure the recovery of the largest number of studies.[23] Thus, the importance of judicious decision of academic work's keywords is pointed out.

Therefore, these results contribute to the direction of research in the area of prenatal care, which address the gaps identified in this study. Moreover, pointing out the institutions with the highest study can enable inter-institutional partnerships, as well as multicentric research on the subject.

This work has as a limitation the loss of eligible studies in the CAPES Theses and Dissertations Portal. This can be attributed to the time between the defense and registration of research, which depend on bureaucratic procedures in educational institutions for online availability on the portal.

CONCLUSION

The research showed that, of the 320 dissertations and 75 theses, there was a predominance of studies from the Southeast and Northeast regions, guided by nurses linked to public universities, from departments of nursing and public health, who investigated assistance during prenatal care, based on cross-sectional, quantitative studies carried out with pregnant women in BHU. Most studies did not research the development or effectiveness of technological resources.

It is pertinent that future studies be conducted in the South, Midwest and North regions, that the qualitative approach is more present in research, that more studies aim at the development and analysis of the effectiveness of technologies and that investigate, in addition to pregnant women, aspects related to other actors related to prenatal care, such as the intrauterine fetus, health professionals, the partner and the family.

REFERENCES

1. Lima KMSG, Santos HJ, Pereira J, Barbosa LP, Cabral MCAM, Silva P, et al. Nursing Care at High Risk Prenatal Care. Braz. J. Hea. Rev [Internet]. 2019;2(4):3183-3197. Available from: http://www.brazilianjournals.com/index.php/BJHR/article/view/2173

2. Silva MJS, Silva TS, Souza DRS, Souza AMG, Ferreira TLS, Andrade FB. Quality of care the childbirth and postpartum on the user's perception of primary health care. Rev. Ciênc. Plur. [Internet]. 2020;6(1):1-17. Available from: https://doi.org/10.21680/2446-7286.2020v6n1ID16292

3. Agra MAC, Freitas TCS, Caetano JA, Alexandre ACS, Sá GGM, Galindo Neto NM. Nursing dissertations and theses on the mobile emergency care services: a bibliometric study. Texto & contexto enferm. [Internet]. 2018;27(1):1-10. Available from: http://dx.doi.org/10.1590/010407072018003500016

4. Santos MAB, Sá GGM, Caetano JÁ, Costa AB, Muniz MLC, Galindo Neto NM. Brazilian nursing dissertations and theses conducted in intensive care units. Rev Rene [Internet]. 2017; 18(4):521-7. Available from: http://dx.doi.org/10.15253/2175-6783.2017000400014

5. Ferreira CTA, Tobias GC, Texeira CC. Pré-natal realizado por enfermeiros nas unidades básicas de saúde: uma revisão narrativa da literatura. Rev Uningá [Internet]. 2019; 56(2):194-203. Available from: http://revista.uninga.br/index.php/uninga/article/view/2410

6. Tavares DS, Souza M, Zamberlan C, Stein Backes D, Correia AMG, Rocha LDM, et al. Sistematização da assistência de enfermagem no pré-natal: revisão integrativa. REAS [Internet]. 2019;31(1):e1255. Available from: http://dx.doi.org/10.25248/reas.e1255.2019

7. Aires LCP, Koch C, Santos EKA, Costa R, Mendes JS, Medeiros GMS. Kangaroo-mother care method: a documentary study of theses and dissertations of the brazilian nurse (2000-2017). Rev. Bras. Enferm. [Internet]. 2020;73(2):e20180598. Available from: http://dx.doi.org/10.1590/0034-7167-2018-0598

8. Melnyk BM, Fineout-Overholt E. Making the case for evidence-based practice. In: Melnyk BM, FineoutOverholt E. Evidence-based practice in nursing & healthcare: a guide to best practice. Philadelphia (US): Lippincott Williams & Wilkins; 2005:3-24.

9. Medeiros AB, Oliveira LV, Silva GWS, Lopes TRG, Carvalho JBL, Miranda FAN. Theses and dissertations of Brazilian nursing addressing women's health in the prison system. Rev Rene [Internet]. 2019;20:e41752. Available from: http://dx.doi.org/10.15253/2175-6783.20192041752

10. Taffner VBM, Pimentel RRS, Valóta IAC, Ribeiro AAA, Silva LH da,Piber RS, et al. Theses and dissertations about nursing history. Rev enferm UFPE on line [Internet]. 2019;13:e242905. Available from: http://dx.doi.org/10.5205/1981-8963.2019.242905

11. Coordenação de Aperfeiçoamento de Pessoal de Nível Superior. Relatório de avaliação enfermagem: quadrienal 2017 [Internet]. Ministério da Educação; 2017. Available from: https://capes.gov.br/images/stories/download/avaliacao/relatorios-finais-quadrienal-2017/20122017-ENFERMAGEM-quadrienal.pdf

12. Plataforma Sucupira. Dados cadastrais do programa [Internet]. Ministério da Educação; 2021. Available from: https://sucupira.capes.gov.br/sucupira/public/consultas/coleta/programa/listaPrograma.jsf

13. Oliveira BKF, Silva MA, Carvalho AS, Santos FF. Patient safety in intensive therapy unit: bibliometric study. REAEenf [Internet]. 2020;3:1-8. Available from: http://dx.doi.org/10.25248/reaenf.e2724.2020

14. Mendes RB, Santos JMJ, Prado DS, Gurgel RQ, Bezerra FD, Gurgel RQ. Evaluation of the quality of prenatal care based on the recommendations Prenatal and Birth Humanization Program. Ciênc. Saúde Colet. [Internet]. 2020;25(3):793-804. Available from: http://dx.doi.org/10.1590/1413-81232020253.13182018

15. Hernández-Vásquez A, Vargas-Fernández R, Bendezu-Quispe G. Factores asociados a la calidad de la atención prenatal en Perú. Rev. peru. med. exp. salud publica. [Internet]. 2019;36(2):178-87. Available from: http://dx.doi.org/10.17843/rpmesp.2019.362.4482

16. Jiskrovaa GK, Vazsonyi AT. Multi-contextual influences on adolescent pregnancy and sexually transmitted infections in the United States. Soc. sci. med. [Internet]. 2019;224:28–36. Available from: http://dx.doi.org/10.1016/j.socscimed.2019.01.024

17. Silva MC, França AMB, Pedrosa AK, Rodrigues APRA. A participação do homem/pai no acompanhamento da assistência no período gravídico puerperal. Caderno de graduação -Ciências Biológicas e de Saúde - Unit [Internet]. 2019;5(3):105-116. Available from: https://periodicos.set.edu.br/fitsbiosaude/article/view/6467

18. Ximenes AS, Silva JM, Rodrigues GMM. Nursing performance in prenatal care at the basic health unit. ReBIS [Internet]. 2020;2(4):6-10. Available from: https://revista.rebis.com.br/index.php/rebis/article/viewFile/391/151

19. Cruz GC, Ruiz PC, Ribeiro Junior OC, Sousa AD, Pereira RMO, Barroso CO, et al. Methods of evaluating the quality of prenatal care in Brasil: integrative literature review. REAS [Internet]. 2019;27:e521. Available from: http://dx.doi.org/10.25248/reas.e521.2019

20. Zhang M, Zhou Y, Lu Y, He S, Liu M. The 100 most-cited articles on prenatal diagnosis a bibliometric analysis. Medicine (Baltimore) [Internet]. 2019;98(38):e17236. Available from: 10.1097/MD.0000000000017236

21. Gonçalves RS, Carvalho MB, Fernandes TC, Veloso LSL, Santos LF, Sousa TR, et al. Health education as a strategy for the prevention and promotion of health in a basic health unit. Braz. J. Hea. Rev [Internet]. 2020;3(3):5811-5817. Available from: http://dx.doi.org/10.34119/bjhrv3n3-144

22. Ghasemi MR, Moonaghi HK, Heydari A. Strategies for sustaining and enhancing nursing students engagement in academic and clinical settings: a narrative review. Korean J Med Educ [Internet]. 2020;32(2):103-117. Available from: http://dx.doi.org/10.3946/kjme.2020.159

23. Lucena PLC, Costa SFG, Batista JBV, Lucena CMF, Morais GSN, Costa BHS. Scientific production on workplace bullying and nursing: a bibliometric study. Rev Esc Enferm USP [Internet]. 2018;52:e03354. Available from: http://dx.doi.org/10.1590/s1980-220x2017029103354

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