



EXPERIMENTAL STUDIES DEVELOPED BY BRAZILIAN NURSES: INTEGRATIVE REVIEW

ESTUDOS EXPERIMENTAIS DESENVOLVIDOS POR ENFERMEIROS BRASILEIROS: REVISÃO INTEGRATIVA

ESTUDIOS EXPERIMENTALES DESARROLLADOS POR ENFERMEROS BRASILEÑOS: REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to describe the national production of Brazilian Nursing experimental studies published in the last five years. **Method:** integrative review conducted in the MEDLINE, Embase, CINAHL and Scopus databases and in the Virtual Health Library. For the search strategy, the following descriptors were used: "Controlled Clinical Trial", "Clinical Trial", "Randomized Controlled Clinical Trial" and "Nursing Research". Included were: original articles published between the years 2015 and 2020, in Portuguese, English and/or Spanish, with nurses as first author and with a score of five in the Jadad. **Results:** a total of 16 articles were analyzed, with a score of five on the Jadad scale, which contemplate three premises: randomization, blinding, and adequate description of losses. Four major areas of knowledge were identified: integrative practices, adult and elderly health, maternal and child health, and stoma therapy. In the theme of integrative practices, the studies demonstrated the effectiveness of these practices, while in the area of adult-elderly and maternal-infant health, studies of educational interventions prevailed; stoma therapy studies addressed topical therapies that assist in the process of tissue healing/prevention of skin lesions. **Conclusion:** it was identified that the main focus of studies with the experimental method by Brazilian nurses belonged to four major areas of health knowledge and addressed educational issues and clinical interventions in Nursing practice.

Descriptors: Controlled Clinical Trial; Clinical Trial; Nursing Research; Review; Nursing.

RESUMO

Objetivo: descrever a produção nacional da Enfermagem brasileira de estudos experimentais publicados nos últimos cinco anos. **Método:** revisão integrativa realizada nas bases de dados MEDLINE, Embase, CINAHL e Scopus e na Biblioteca Virtual em Saúde. Para a estratégia de busca, utilizaram-se os descritores: “Ensaio Clínico Controlado”, “Ensaio Clínico”, “Ensaio Clínico Controlado Aleatório” e “Pesquisa em Enfermagem”. Incluíram-se: artigos originais publicados entre os anos de 2015 e 2020, em português, inglês e/ou espanhol, tendo enfermeiros como primeiro autor e com pontuação cinco no escore de Jadad. **Resultados:** foram analisados 16 artigos, com escore cinco na escala de Jadad, que contemplam três premissas: randomização, cegamento e descrição de perdas adequadamente. Identificaram-se quatro grandes áreas de conhecimento: práticas integrativas, saúde do adulto-idoso, saúde materno-infantil e estomatoterapia. Na temática de práticas integrativas, os estudos demonstraram a eficácia dessas práticas, enquanto, na área de saúde adulto-idoso e materno-infantil, prevaleceram estudos de intervenções educativas; estudos de estomatoterapia abordaram terapias tópicas que auxiliam no processo de cicatrização tecidual/prevenção de lesões de pele. **Conclusão:** identificou-se que o principal enfoque dos estudos com o método experimental por enfermeiros brasileiros pertencia a quatro grandes áreas de conhecimento da saúde e abordaram questões educativas e intervenções clínicas da prática da Enfermagem.

Descritores: Ensaio Clínico Controlado; Ensaio Clínico; Pesquisa em Enfermagem; Revisão; Enfermagem.

RESUMEN

Objetivo: describir la producción nacional de Enfermería brasileña de estudios experimentales publicados en los últimos cinco años. **Método:** revisión integradora realizada en las bases de datos MEDLINE, Embase, CINAHL y Scopus y en la Biblioteca Virtual en Salud. Para la estrategia de búsqueda se utilizaron los siguientes descriptores: “Ensayo Clínico Controlado”, “Ensayo Clínico”, “Ensayo Clínico Controlado Aleatorio” e “Investigación en Enfermería”. Se incluyeron: artículos originales publicados entre 2015 y 2020, en portugués, inglés y/o español, con enfermeros como primer autor y con puntuación de cinco en la escala de Jadad. **Resultados:** se analizaron 16 artículos, con puntaje de cinco en la escala de Jadad, que incluyen tres premisas: aleatorización, cegamiento y descripción de las pérdidas adecuadamente. Se identificaron cuatro grandes áreas de conocimiento: prácticas integradoras, salud adulto-anciano, salud

materno-infantil y estomaterapia. En el área de prácticas integradoras, los estudios demostraron la efectividad de estas prácticas, mientras que, en el área de salud adulto-anciano y materno-infantil, prevalecieron los estudios de intervenciones educativas; Los estudios de estomaterapia han abordado terapias tópicas que ayudan en el proceso de curación de tejidos/prevenición de lesiones en la piel. **Conclusión:** se identificó que el foco principal de los estudios con el método experimental de los enfermeros brasileños pertenecía a cuatro grandes áreas del conocimiento en salud y abordaron cuestiones educativas e intervenciones clínicas en la práctica de Enfermería.

Descriptores: Ensayo Clínico Controlado; Ensayo Clínico; Investigación en Enfermería; Revisión; Enfermería.

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INTRODUCTION

Research in Nursing comes from the 1930s with the dissemination of the category through reflections and experiences in congresses and the first national journal "*Annaes de Enfermagem*". From the 1960s, with the university reform, graduate courses were instituted with the objective of articulating teaching and research and promoting, disseminating, and encouraging research since graduation. The support of the Brazilian Association of Nursing (ABEn) was fundamental for the diffusion of scientific production in its congresses and scientific meetings.¹

In the trajectory of Nursing research, it is observed that the first studies presented descriptive methodologies, experience reports, and expert opinions. As of the 1980s, studies related to Nursing care and standardization of techniques were incorporated, mostly quantitative studies.² Only in the 1990s, research with other methodological approaches was added.¹

Nurses are expected to develop research methods that enable effective nursing and make it possible to apply the results directly to health care.³ Clinical trials promote

outcome-based clinical practice with an impact on the quality of intervention-based nursing care.⁴

The area of clinical research for nurses has great potential for development,⁵ however, changes are still needed in the qualification of this professional to act, as well as the understanding of his participation in clinical studies. The development of this knowledge projects the profession and contributes to the development of different fields of action.⁶

The growth of scientific production in Brazilian Nursing in the last three decades has impacted the development of knowledge in its area of activity, which, in turn, has followed global trends, reflecting advances related to the actions of care, teaching and, consequently, the demands for research in the area.⁷ Nursing emerges with greater visibility, recognition and consolidation as a science.⁶

A recent scoping review presented data of randomized clinical trials from 2009 to 2016 in Nursing journals worldwide, with the description of a production of approximately 40 studies per year, with emphasis on the increase in the production of clinical and quasi-experimental studies in Asia and Europe, with 118 and 112 publications, respectively. In the Americas, 92 studies were produced, with only ten identified as originating from Brazilian Nursing.⁸

The development of experimental research in Nursing is not common, unlike observational studies, especially descriptive ones, which are conducted more prevalently. The use of clinical research is challenging to evaluate care practices, besides strengthening evidence-based practice in national Nursing, which is still incipient.⁹⁻¹⁰

Currently, there are no guidelines or consensus around the ideal path that should be followed to develop a robust methodological framework. The authors believe that future frameworks will be developed, providing best practices.¹¹

Another concern, present in developed countries, is to measure and measure the impact of research. It is an essential exercise to direct the allocation of limited research resources, to maximize benefit, and to help minimize waste.¹¹

When experimental studies aim to improve clinical practice, the benefits are extended to patients and society, supporting an improvement in clinical care and health promotion policies.¹²

Nursing research is advancing, presenting well-designed clinical trials with more reliable evidence for health interventions¹³, but still far from the scenario presented in other countries. It becomes relevant to present a study to identify and describe the national Nursing production that addresses experimental studies.

OBJECTIVE

To describe the national production of Brazilian Nursing experimental studies published in the last five years.

METHOD

This is a bibliographic, descriptive, integrative literature review study, which aims to synthesize research results on a given subject and point out existing gaps that can be filled with new research.¹⁴⁻¹⁵

To prepare this study, an integrative review was conducted and the following steps were followed: identification of the theme and formulation of the research question; selection of criteria for inclusion and exclusion of studies; definition of the information to be extracted from the selected research; categorization and analysis of the studies; interpretation of results and synthesis and exposure of data.¹⁶

In the first stage, the research question was established: "What studies with the experimental method have been conducted by Brazilian nurses in the last five years?" After defining the guiding question, the other stages were initiated.

In the second stage of the review, the criteria for inclusion and exclusion were established and represented requirements for inclusion: publications from the period 2015 to 2020; articles published in Portuguese, English and Spanish originating in Brazil, in their entirety, addressing the conduct of experimental studies, which were published by nurses as first author and scored five in the Jadad score.

Jadad's instrument, used to ensure rigor in the analysis of experimental studies, assesses three aspects of clinical trials: randomization, blinding, and description of losses to follow-up. It is composed of five questions and results in a score ranging from zero to five.¹⁷ Studies with a score below three are considered to be at high risk of bias.¹⁷ Studies that scored five on the Jadad score were included.

The exclusion criteria were: 1) theses and dissertations, book chapters, literature reviews and editorials; 2) articles with only abstracts available.

In the third phase of the study, the primary source databases MEDLINE, Embase, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Scopus, and the VHL electronic portal were consulted. A combination of descriptors was used to maximize the search. The descriptors used, extracted from the Health Sciences Descriptors (DeCS/Bireme) and Medical Subject Headings (MeSH), and the combinations were: "Controlled Clinical Trial OR Randomized Controlled Clinical Trial AND Nursing Research"

and their respective synonyms (Figure 1). Synonymous terms, suggested by Embase at the time of the search, were also searched.

PubMed	"Controlled Clinical Trial"	"Clinical Trial"	"Randomized Controlled Trial"	"Nursing Research"
Scopus	"Controlled Clinical Trial "	"Clinical Trial"	"Randomized Controlled Trial"	"Nursing Research"
CINAHL – The Cumulative Index to Nursing and Allied Health Literature	"Controlled Clinical Trial"	"clinical trial"	"Randomized Controlled Trials"	"Nursing Research"
EMBASE	'controlled clinical trial topic'	'clinical trial'	'randomized controlled trial (topic)'	'nursing research'
BVS	"Controlled Clinical Trial" OR "Ensayo Clínico Controlado" OR "Ensaio Clínico Controlado"	"Clinical Trial" OR "Ensayo Clínico" OR "Ensaio Clínico"	"Randomized Controlled Trial" OR "Ensayo Clínico Controlado Aleatorio" OR "Ensaio Clínico Controlado Aleatório"	"Nursing Research" OR "Investigación en Enfermería" OR "Pesquisa em Enfermagem"

Figure 1. Sources consulted and respective search strategies. Campinas (SP), Brazil, 2022.

The strategies adopted for locating the articles were adapted from the PRISMA recommendations¹⁸ and represented in the flowchart of the steps developed in this review in order to answer the research question.

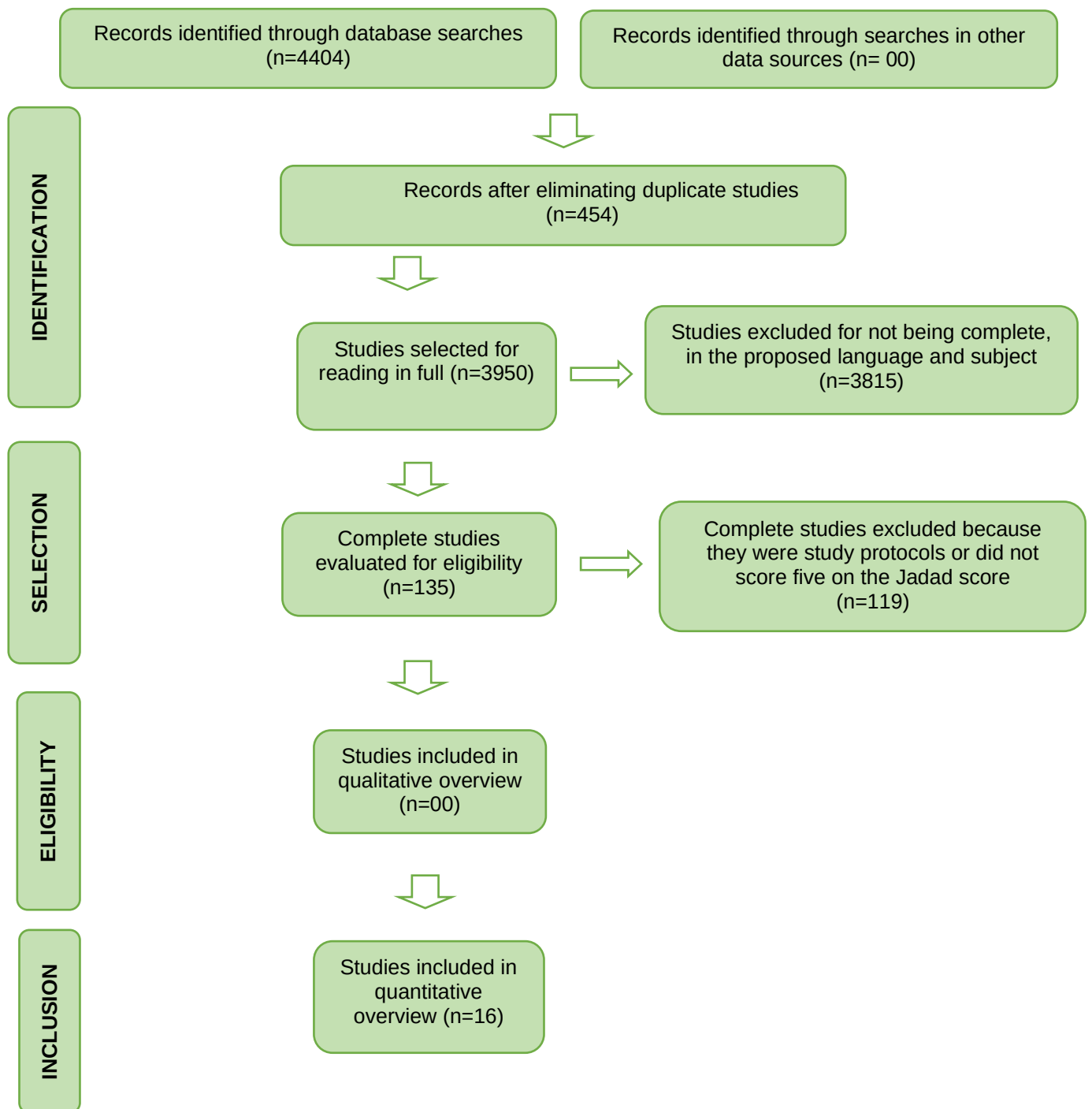


Figure 2: guiding flowchart for study selection adapted from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2009).¹⁸ Campinas (SP), Brazil, 2022.

In the next step, corresponding to the phase of identification of the information to be extracted, the following variables were collected: first author; year of publication; title;

population; study development setting; intervention; recommendations/conclusions; category.

In the penultimate phase, the interpretation and compilation of the main findings was carried out and, finally, the results were presented in four categories.

RESULTS

A total of 4404 articles were identified in the databases, 2737 in VHL, 945 in Embase, 370 in MEDLINE, 177 in Scopus, and 175 in CINAHL. Duplicates were removed and the reference managers EndNote and Rayyan were used to help in the selection.¹⁹ The EndNote manager was used in the first stage of selection, in which all selected articles were grouped in a single file and duplicates were searched for. The Rayyan manager was used for the blind selection of articles, carried out independently by two researchers.

A total of 454 studies were excluded for duplicity, resulting in 3950 documents. Then, the titles and abstracts were read, and 3815 were excluded because they did not meet the inclusion criteria. Subsequently, after a complete and thorough reading and analysis using the Jadad instrument, 119 more studies were excluded for scoring below five on the scale, resulting in a final sample of 16 articles.

For the characterization, the studies were organized in Excel[®] spreadsheet in descending order, considering year of publication, first author, title, intervention studied, results, recommendations and conclusions, presented in figure 3.

The results were categorized according to the research focus and the following study themes were found for the analysis of the results: 1 - adult and elderly health; 2 - maternal and child health; 3 - integrative practices; 4 - stoma therapy.

First author, year	Title	Study population and development setting	Intervention studied	Results	Recommendations /conclusions	Category
Toledo 2020 ²⁰	Effects of dry and traditional bed bath on respiratory parameters: a randomized pilot study	Patients admitted to the ICU of a teaching hospital, aged 18 years or older, who presented the indication of performing the procedure of bathing in bed for the purpose of promoting comfort and/or body hygiene.	Compare the execution time of dry and traditional bed bath and the effects on transcutaneous arterial oxygen saturation and respiratory rate in critically ill patients.	The dry bath was faster (20.0 minutes) than the traditional bath (30.0 minutes) ($p < 0.001$). There was no significant difference between the mean saturation of patients between the baths ($p = 0.381$), being 94.7% in the dry bath and 95.2% in the traditional bath.	The dry bath had a shorter duration than the traditional one, resulting in less exposure of the patients. The traditional bed bath had a negative effect on the patients' respiratory rate, increasing it.	Adult health
Costa 2019 ²¹	Resting Net and Nest in Premature Infants: Randomized Clinical Trial	Premature infants between 32 and 37 weeks of corrected gestational age, with spontaneous breathing in room air, using a heated incubator, weight between 1300g and	Compare the physiological variables and the sleep-wake pattern of premature newborns, when placed in a net and in a nest, after diaper changing.	There was no statistically significant difference between the nest and net conditions for the variables studied. In comparisons between research phases for the net condition,	No differences were identified between hammock and nest; however, the use of the hammock favored the sleep of preemies compared to not	Maternal and Child

		2000g, with more than 72 hours of postnatal life, admitted for at least 24 hours in the Neonatal ICU of a Hospital in Brasília - DF. These patients were admitted for at least 24 hours in the Neonatal ICU of a Hospital in Brasília - DF.		there were differences between baseline and immediate recovery, baseline and late recovery, response and immediate recovery, response and late recovery.	using it.	
Mata 2019 ²²	Effectiveness of a teaching program for home care of prostatectomized patients: randomized controlled trial	Patients undergoing Radical Prostatectomy (RP), older than 18 years, with cognitive, locomotor, visual, hearing, and self-care abilities, and who had a telephone (landline or cell phone) to follow up on the teaching program. Twenty individuals were selected for each block of the control group (CG) and the intervention group (IG) in surgical units of	To evaluate the effectiveness of a teaching program for hospital discharge of patients submitted to RP based on the self-efficacy construct of Social Cognitive Theory.	There was a significant intragroup difference for satisfaction and knowledge from the pre-test and post-test. In the intervention group, there were significant changes between times for anxiety and knowledge.	The teaching program with a combination of oral and written orientation and telephone follow-up proved to be effective in improving the knowledge of home care and satisfaction of the individuals.	Adult health

Ruela 2018 ²³		three hospital institutions in the interior of Minas Gerais, Brazil.				Integrative Practices
	Effectiveness of auricular acupuncture in the treatment oncologic pain: randomized clinical trial	Participated in the study approximately 1,070 people under chemotherapy treatment and mentally oriented, presenting: pain $\geq$ four on the Numerical Pain Scale (NBS); follow-up by the High Complexity Assistance Unit; aged 18 years or older; in the municipality of Alfenas, located in the state of Minas Gerais.	To evaluate the effectiveness of auricular acupuncture on pain in cancer patients and possible changes in analgesic consumption after the application of the intervention.	After the eight sessions of auricular acupuncture, there was a significant difference between the groups in the reduction of pain intensity ($p < 0.001$) and in the consumption of medications ($p < 0.05$).	Ear acupuncture was effective in reducing pain in patients undergoing chemotherapy.	
Martins 2018 ²⁴	Effect of educational technology board game on schoolchildren's knowledge about breastfeeding	Children enrolled in the third year of elementary school in the public school system of Sanitary District IV of Recife (PE).	Assess children's knowledge about breastfeeding using the board game method.	Comparing the groups, higher means were found in the intervention group on the seventh (19.68 $\pm$ 1.788) and thirtieth days (20.16 $\pm$ 1.260), with a statistically significant	The educational intervention contributed significantly to increasing the children's knowledge scores about breastfeeding in	Maternal and Child

Melo 2018 ²⁶	Musical intervention on anxiety and vital parameters in chronic renal failure patients: randomized clinical trial	A total of 66 premature babies admitted to the Neonatal Unit of a public hospital in Fortaleza were considered (CE).	To evaluate the effect of music on anxiety in chronic renal failure patients.	There was a statistically significant difference between the groups regarding anxiety during the hemodialysis session. The experimental group presented a reduction in anxiety scores, as well as in systolic blood pressure, diastolic blood pressure, heart rate, and respiratory rate.	Music is a potential nursing intervention to reduce state anxiety during hemodialysis sessions.	Integrative Practices
Pereira 2018 ²⁷	Laser-acupuncture protocol for primary hypertension: randomized clinical trial	102 participants seen at Family Health Units in Maricá (RJ) and Vitória (ES) with Systemic Arterial Hypertension (SAH), of both sexes, between 30 and 75 years of age, on medication treatment for SAH for a year or more, with difficulty in controlling their blood pressure and with measurements	To evaluate the efficacy of a laser-acupuncture protocol developed and applied by nurses in patients with hypertension.	A significant reduction in systolic ($p<0.001$) and diastolic ($p<0.001$) blood pressure was observed in participants in the intervention arm, an event not seen in the simulated arm.	There was significant acute reduction and control of blood pressure in all participants in arm A (intervention group). Further studies are recommended to further evaluate the long-term effect of the intervention.	Integrative Practices

Oliveira 2018 ²⁸	Effect of an educational intervention in pregnancy: cluster randomized clinical trial	greater than 140x90mmHg. Pregnant women over the age of 18 who had prenatal care in the health units of Recife and who had a mobile or residential phone health units in Recife and who had mobile or residential phones; 294 pregnant women were eligible.	To measure the effect of the booklet on knowledge, attitude and practice for healthy eating using regional foods.	Adequate assessment of knowledge, attitude and practice in the intervention group on days 7 and 30 post-intervention compared to the control group, with increased odds for adequate knowledge on day 7 for the IG and on day 30, and adequate practice for the IG on days 7 and 30.	The educational booklet was an effective intervention to improve the knowledge, attitude and practice of pregnant women regarding the use of regional foods.	Maternal and Child
Felix 2018 ²⁹	Image guided relaxation therapy on preoperative anxiety: randomized clinical trial	A total of 24 patients submitted to laparoscopic bariatric surgery were selected, divided into a control group and an experimental group, in a large teaching hospital in the interior of Brazil. experimental group, in a large teaching hospital in the interior of Minas Gerais.	To evaluate the effect of image-guided relaxation therapy on anxiety state and cortisol levels in the immediate preoperative period in patients undergoing laparoscopic bariatric surgery.	The experimental group showed statistically significant reduction in state anxiety scores (p=0.005), as well as in cortisol levels (p<0.001), after the intervention.	Image guided relaxation therapy is an effective nursing intervention to reduce state anxiety and blood cortisol levels in the preoperative period in patients undergoing laparoscopic bariatric surgery.	Integrative Practices

Prado 2017 ³⁰	True and placebo auriculotherapy for stressed nurses: randomized clinical trial	The study included 257 nurses from the Hospital Beneficência Portuguesa Hospital in São Paulo (SP).	Comparing the effectiveness of auriculotherapy with placebo in nurses with stress.	Group 1 achieved 43% reduction and Cohen's index of 1.81 (high effect). Group 2 achieved a 26% reduction, with Cohen's index of 0.86 (large effect), and group 3 showed no reduction in stress.	Experimental auriculotherapy achieved greater stress reduction among nurses, but there was no difference between the two intervention groups.	Integrative Practices
Garbin 2017 ³¹	<i>Serum Cyclosporine Levels- The Influence of the Time Interval Between Interrupting the Infusion and Obtaining the Samples: A Randomized Clinical Trial</i>	A total of 32 patients aged 18 years or older were selected, divided into blocks of control group and experimental group, who received an allogeneic hematopoietic stem cell transplant in a transplant unit of a general hospital in the State of São Paulo, Brazil.	To verify the effect of the time elapsed between stopping the continuous intravenous cyclosporin A (CsA) infusion and taking blood samples on serum cyclosporin A (CsA) levels.	No influence of the time elapsed between the interruption of the infusion and the collection of samples was observed, regardless of the form of collection and the volume discarded (P 9.05).	The cyclosporine-free central venous catheter can be safely used to collect blood. The procedure can be performed immediately after stopping the cyclosporine infusion.	Adult health
Teles 2017 ³²	Effectiveness of an educational manual for birth attendants: pilot randomized clinical trial	Participated 65 companions and puerperae of normal childbirth (intervention=21 and control=44) with	To evaluate the effectiveness of the educational manual in instrumentalizing the caregiver to	Intervention group attendants performed more supportive actions (p:0.001) and had higher scores of satisfaction with	The manual was effective in instrumentalizing the caregiver, contributed to support actions for	Maternal and Child

		a study developed in two institutions of Primary Health Care in Fortaleza (CE).	support the parturient woman and the influence on the caregiver's satisfaction with the vaginal delivery process.	childbirth (p:0.00). Intervention group puerperae had higher satisfaction with childbirth (p:0.000).	the woman in labor, and had an impact on the satisfaction of the caregiver and the woman with the childbirth process.	
Matte 2016 ³³	Reduced rest from five to three hours does not increase complications after cardiac catheterization: THREE CATH Clinical Trial	This study was conducted in the Hemodynamic Laboratory (HL) of a public and university hospital located in the Metropolitan Region of the State of Rio Grande do Sul, Brazil. The study sample was composed of adult outpatients who underwent elective transfemoral CAT elective diagnosis, by transfemoral approach, with a 6-French introducer.	Compare the reduction in bed rest to three hours in the intervention group (IG) compared to five hours' bed rest in the control group (CG) to the increase in arterial puncture-related complications after elective diagnostic catheterization.	As a result of reducing the rest period from five to three hours, with multiple operators with different learning curves for puncture and local hemostasis, there was no increase in the frequency of hematomas, bleeding, pseudoaneurysms, or other puncture-related complications during the catheterization stay.	Reducing the rest time to three hours in patients undergoing catheterization did not increase the occurrence of arterial puncture-related complications during the patients' stay in the catheterization laboratory observation room and during telephone monitoring at 24-, 48- and 72-hour follow-up.	Adult health
Kurebayashi 2016 ³⁴	Chinese herbal medicine for stress reduction, anxiety and quality of life:	A total of 89 volunteers who presented medium and high stress levels, according to	To evaluate the effect of Chinese herbal medicine in reducing stress levels, anxiety, and	There was a difference (p = 0.025) in post-treatment stress and the difference was	The GMDZ formula reduced stress levels, but further studies are needed, with	Integrative Practices

	randomized clinical trial	the List of Stress Symptoms, were selected and divided into three groups: Control (no intervention), Placebo and Phytotherapy at the Integrated Center and Oriental Therapy Institute, in São Paulo, Brazil.	improving quality of life.	between the Control and Phytotherapy groups according to Tukey's post hoc. There was no difference in the levels of anxiety-state and physical and mental domains of the SF12v2.	reevaluation of dosage, and a longer treatment period to confirm and extend the results.	
Schneider 2015 ³⁵	Use of Calendula officinalis in the prevention and treatment of radiodermatitis: double-blind randomized clinical trial	Oncology patients over 18 years of age, of both sexes, in radiotherapy follow-up in a hospital in Curitiba (PR).	Evaluate the effectiveness of using a substance called calendula in skin treatment.	The study showed statistically significant evidence (p-value = 0.0120) that the proportion of grade 2 radiodermatitis in the essential fatty acid group is higher than in the marigold group.	The use of calendula showed better therapeutic response than the use of essential fatty acids in the prevention and treatment of radiodermatitis.	Stomatherapy

Figure 3. characterization of studies regarding first author, year of publication, title, population, study development setting, intervention, recommendations/conclusions, category. Campinas (SP), Brazil, 2022.

DISCUSSION

True experimental studies are those in which the sample is randomized, the variables are controlled, and there is a control group and an intervention group, including manipulation of a variable to examine the direct cause or predictive relationship between the variables, excellent for demonstrating cause-effect.³⁶

Despite the requirements of an experimental study, there are variables regarding its wording, method, and demonstration of results. It is important to analyze the quality of the published papers, among the requirements for a quality experimental study, which must contain a description of the randomization, the follow-up of groups and losses of follow-up, in addition to the blinding of the researcher and participants.¹⁷

In the review, among the 135 articles entitled experimental, only 16 demonstrated optimal quality according to the instrument built by Jadad (maximum score equal to five), that is, studies with adequate randomization and blinding and description of dropouts or losses. Thus, it becomes evident the difficulty of a study, in health, to cover all the requirements to achieve maximum quality and, consequently, better evidence.¹⁷

Among the main causes pointed out as difficulties in the execution of an experimental study are adequate randomization and blinding of interventions. Many interventions permeate ethical issues, because often the participant and/or the researcher cannot be blinded, that is, they cannot obtain knowledge about which group the intervention is in. This occurs mainly when the effectiveness of some intervention is tested, especially when the literature already demonstrates some benefit in its application, and it is not ethical to offer it to only some individuals.³⁷

In addition, the complete description of the methodology employed must be rigorously followed, and the use of some instrument or protocol that evaluates the quality of the type of study developed, assisting in its planning, execution and description is indicated.¹⁷

In this study, four major areas of knowledge were identified, among them, integrative practices (six studies),^{23,26-27,29-30,34} health of the older adult (four studies),^{20,22,31,33} maternal and child health (four studies)^{21,28,32} and stoma therapy (two studies).^{25,35}

This result ^{23,26-27,29-30,34} can be justified by the increased use of integrative and complementary health practices, which were included in the National Policy of Integrative and Complementary Practices of the Ministry of Health (PNPIC/MH) in 2006. From this inclusion, their use has been increasing and, consequently, studies that prove their efficacy, through methods capable of demonstrating the cause and effect relationship, should be encouraged. Thus, Nursing can justify the importance and applicability of integrative practices through studies that result in better evidence.³⁸

Acupuncture and auricular acupuncture were used as a method of pain control,²³ blood pressure²⁷ and stress³⁰ and, in this study, have proven to be effective and, within Traditional Chinese Medicine, are the most applied, highlighting the positive results of this Nursing intervention for several objectives as a complementary therapy. The identification of these studies becomes relevant, confirming the findings of previous studies.³⁹⁻⁴¹

Music therapy, herbal therapy, and relaxation therapy were effective in reducing stress and anxiety. Acupuncture, music therapy, Reiki, Yoga, and auriculotherapy are the most used practices for treatment and coping for reducing stress, anxiety, depression, hypertension, reducing blood glucose, weight, and promoting well-being. The findings of this study corroborate the literature and reinforce the benefits of each practice through studies with high scientific rigor, reinforcing evidence-based Nursing interventions.⁴²

Adult and maternal and child health had eight studies in total. Both offer educational interventions for specific populations,^{22,24,28,32} reinforcing the role of nurses as educators, highlighting the effectiveness of their educational interventions, being carried out through various approaches, such as pedagogical guidance during the nursing consultation, home care, counseling with motivational dynamics and educational sessions with playful strategies.⁴³

Evidence shows that most studies involving educational strategies in nursing need greater methodological rigor, however, there is a growing tendency for controlled and randomized studies. The nurse plays a relevant role in health education, thus, studies that demonstrate accurate results may allow the establishment of the cause-effect relationship in nursing educational actions.⁴³

As for the area of stoma therapy ^{25,35} addressed the use of topical products for treatment/prevention of skin lesions (radiodermatitis and chronic foot ulcer), however, the management of this type of injury is not exclusive to nurses with specialization in stoma therapy, and these studies are extremely relevant for nurses from various areas. In addition, they can be used as a methodological reference for other studies.⁴⁴

Thus, from this study, studies with high methodological rigor were identified, allowing the scientific validation of Nursing interventions. In addition, they can be used as a theoretical reference for other studies and, probably, may help to improve the quality of care offered.

As a limitation of this work, we observed the absence of previous research on the theme and the scarcity of Brazilian articles that address experimental studies. In addition, some of the studies found did not present detailed methodological design or did not comply with ideal blinding methods.

CONCLUSION

It is concluded that in the last five years, 16 articles were published with the complete experimental method (randomization, blinding and description of losses) by Brazilian nurses, focusing on four major areas of health knowledge, being identified the integrative practices, health of the adult-elderly, maternal and child health and stoma therapy.

This study demonstrates the need to expand experimental research with adequate methodological rigor in Nursing. In addition, only four major areas that used this methodology were identified, highlighting the need for this study design in other areas of Nursing knowledge.

The community can use the articles included in this work as a methodological example for future research, as well as the applicability and importance of an instrument that evaluates the quality of randomized clinical trials.

It is believed that, with the expansion of experimental studies, it will be possible to obtain decision making through evidence with high methodological rigor, strengthening the care practice of nurses and promoting greater quality in care.

CONTRIBUTIONS

All authors contributed equally in the conception of the research project, data collection, analysis and discussion, as well as in the writing and critical review of the content with intellectual contribution and approval of the final version of the study.

CONFLICTS OF INTERESTS

Not applicable.

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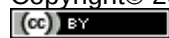
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