







Entrepreneurial Education in Nursing: analysis in Undergraduate Courses of Public Institutions

Educação empreendedora em enfermagem: análise em cursos de graduação de instituições públicas

Educación emprendedora en enfermería: análisis en carreras de grado de instituciones públicas

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ABSTRACT

Objective: to analyze the entrepreneurship courses in nursing programs at Brazilian public higher education institutions. **Method:** a qualitative documentary research conducted on the websites of 130 undergraduate nursing programs at public higher education institutions that had either the course's pedagogical project or curriculum matrix available in the public domain. Out of the total, 14 programs offered a specific entrepreneurship these. **Results:** 10.8% (n=14) of the nursing programs had a specific entrepreneurship subject in their curriculum, with 78.6% of these being theoretical and 57.1% mandatory, averaging 40.43 hours of course load. Based on the qualitative analysis of the course syllabi, three main categories related to entrepreneurship education in nursing programs were identified: structural elements, procedural elements, and outcome elements of entrepreneurship. **Conclusion:** despite the adherence of the content to the literary recommendations on entrepreneurial education, the number of specific courses remains low, with a greater focus on theoretical modalities.

Descriptors: Nursing; Education, Nursing; Education, Nursing, Baccalaureate; Entrepreneurship; Innovation and Development Policy.

RESUMO

Objetivo: analisar as disciplinas de empreendedorismo em cursos de enfermagem de instituições públicas de ensino superior brasileiras. **Método:** pesquisa documental, de abordagem qualitativa, realizada em *websites* de 130 cursos de graduação em enfermagem das instituições públicas de ensino superior e que possuíam projeto pedagógico do curso ou matriz curricular disponíveis em domínio público. Desse total, 14 cursos ofertavam disciplina específica de empreendedorismo. **Resultados:** 10,8% (n=14) dos cursos de enfermagem tinham no currículo disciplina específica de empreendedorismo, sendo 78,6% delas teóricas e 57,1% obrigatórias, com média de carga horária de 40,43 horas. Com base na análise qualitativa das ementas, foram elencadas três categorias principais relacionadas ao ensino do empreendedorismo nos cursos em enfermagem: elementos estruturais, elementos processuais e elementos de resultados do empreendedorismo. **Conclusão:** Apesar da aderência dos conteúdos às recomendações literárias sobre educação empreendedora, o número de disciplinas específicas permanece baixo, com maior enfoque em modalidades teóricas.

Descritores: Enfermagem; Educação em Enfermagem; Bacharelado em Enfermagem; Empreendedorismo; Política de Inovação e Desenvolvimento.

RESUMEN

Objetivo: analizar asignaturas de emprendimiento en carreras de enfermería de instituciones públicas de educación superior brasileñas. **Método:** investigación documental, cualitativa, realizada en sitios *web* de carreras de grado en enfermería de instituciones públicas de educación superior cuyo proyecto pedagógico de carrera o matriz curricular sea de dominio público, con 14 con una asignatura específica de emprendimiento. **Resultados:** el 10,8% (n=14) de las carreras de enfermería tenía en su plan de estudios una asignatura específica de emprendimiento, siendo 78,6% teóricas y 57,1% obligatorias, con una carga horaria promedio de 40,43 horas. A partir del análisis cualitativo de los programas de las asignaturas se enumeraron tres categorías principales relacionadas con la enseñanza del emprendimiento en las carreras de enfermería: elementos estructurales, elementos procesales y elementos de resultados del emprendimiento. **Conclusión:** A pesar de que los contenidos adhieren a las recomendaciones presentes en la literatura sobre educación emprendedora, el número de asignaturas específicas sigue siendo bajo y se enfocan mayormente en las modalidades teóricas.

Descriptores: Enfermería; Educación en Enfermería; Bachillerato en Enfermería; Emprendimiento; Política de Innovación y Desarrollo.

INTRODUCTION

Entrepreneurship is generally understood as the development of something new and different from the status quo, through the identification of opportunities and unmet needs¹. It is worth noting that the concept of entrepreneurship can be considered polysemic and multidisciplinary, as over the years, various scholars have incorporated specificities into this concept according to their contributions and interpretations².

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Editor in Chief: Cristiane Helena Gallasch; Scientific Editor: Thelma Spíndola

In nursing, entrepreneurship can occur within a market niche, being then referred to as business entrepreneurship, or involve an employee of a company, which characterizes it as intrapreneurship; when aimed at social transformation, it is defined as social entrepreneurship². Regardless of the typology, entrepreneurship represents a significant potential for the development of the role and identity of the nursing profession, especially in contemporary times, when society's health needs increasingly demand new ways of thinking and acting³.

However, for this potential to be harnessed, it is necessary to promote this activity, with entrepreneurial education being one of the means to achieve this. Just like the concept of entrepreneurship, the term "*entrepreneurial education*" has various meanings and nuances and is connected to underlying pedagogical theories.⁴ One possible definition is that entrepreneurial education is the one that provides the mindset and competencies necessary for entrepreneurship.

It is worth mentioning that the development of entrepreneurial competencies should occur from the initial training, aiming at building an entrepreneurial profile, which involves characteristics such as self-confidence, critical thinking, proactivity, creativity, willingness to innovate, negotiation skills, among others⁵. Although the National Curriculum Guidelines do not specifically address entrepreneurship as a required competency in nursing education, it is noteworthy that these professionals—in terms of general administration and management competencies—should be capable of being entrepreneurs, managers, employers, or leaders within the health care team⁶.

For the Commission responsible for promoting and implementing the policies of the European Union, it is relevant to adopt a theoretical framework capable of supporting learning programs and opportunities, as well as assisting teachers in promoting entrepreneurial education, proposing three areas of competencies: ideas and opportunities, resources, and action⁷. According to research with professors from public universities, however, promoting an entrepreneurial culture has been a challenge in nursing education. One way to address the development of entrepreneurial competencies involves proposing curricular (courses) and extracurricular initiatives, such as research projects, extension activities, partnerships with companies, and the creation of junior enterprises⁸.

In relation to the scientific literature, there is a noticeable lack of evidence on the teaching of entrepreneurship in nursing. Furthermore, the few available references highlight the incipient nature of the topic, as well as the predominant focus on traditional teaching models.⁹ To date, there has been no scientific research analyzing entrepreneurship courses in undergraduate nursing programs at Brazilian public institutions. Thus, the question arises: do undergraduate nursing programs in this context develop entrepreneurial education?

Entrepreneurial education in nursing programs can contribute to a culture of training new entrepreneurial nurses and professionals who are critical, flexible, and proactive towards the new and different, challenging the status quo. Considering the important role of Brazilian public higher education institutions in training professionals connected to the contemporary job market, it is believed that this study will foster reflections that can support the updating of professional training curricula based on innovation in health care, as well as contribute to the visibility of the profession within the health care system and society.

In this context, the present study aimed to analyze entrepreneurship courses in nursing programs at Brazilian public higher education institutions.

METHOD

This is a descriptive, qualitative documentary research study, guided by the Consolidated criteria for Reporting Qualitative Research (COREQ) guidelines¹⁰.

The study population consisted of active, in-person undergraduate nursing programs within the Health Sciences field at higher education institutions in Brazil, accredited on the Ministry of Education's portal for higher education institutions and programs (e-MEC)¹¹.

Included were bachelor's and teaching programs in nursing that had the Pedagogical Course Project (PCP) and/or the curriculum matrix publicly available on the official institutional pages, as listed in the aforementioned portal (e-MEC) on December 12, 2020, as shown in Figure 1.

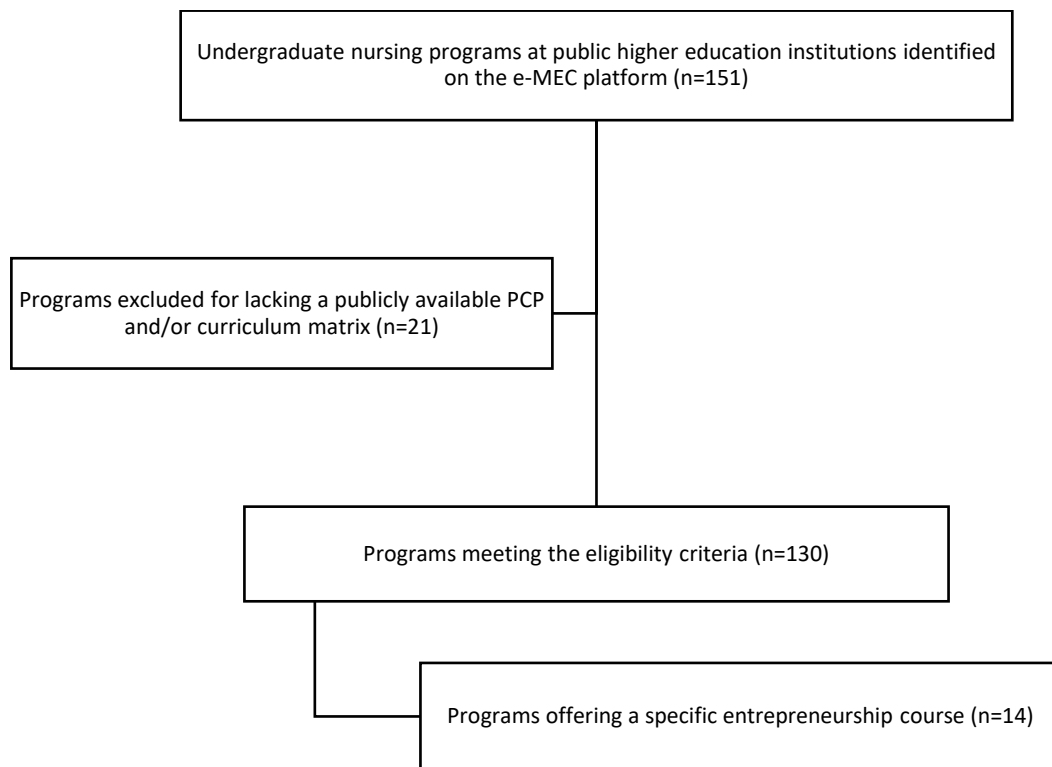


Figure 1: Flowchart of the identification of undergraduate nursing programs at higher education institutions in Brazil registered in the e-MEC system. Brazil, 2020.

A total of 151 active nursing programs at public higher education institutions in Brazil were identified. Of this total, 21 did not meet the eligibility criteria, as they did not provide the PCP or curriculum matrix publicly on their official websites. Therefore, 130 undergraduate nursing programs participated in the study, of which 14 included a specific course on entrepreneurship, meaning the word "entrepreneurship" appeared in the course title.

Data collection occurred from March to July 2021, using data obtained from the e-MEC platform, as well as curricular components (PCP and/or curriculum matrix, publicly available). For quantitative data collection, a tool was developed with the variables of interest for this research, namely: institution name, region of the country, administrative category, course level (licentiate degree and bachelor's degree), availability of the PCP and/or curriculum matrix in the public domain, year of the PCP and curriculum matrix, whether there is a specific course on entrepreneurship, course name and syllabus, course modality (mandatory or elective, theoretical/theoretical-practical), and course load. A specific entrepreneurship course was considered to be one that included the word "entrepreneurship" in the title.

Upon identifying nursing programs with a specific entrepreneurship course in their curriculum, the text from the syllabus of this course was extracted for qualitative analysis, which will be described next.

The documentary analysis of pedagogical projects for undergraduate nursing programs at Brazilian public institutions involved reviewing and evaluating organizational and institutional documents as a data source in qualitative research. These documents can be collected from various sources, such as public domain records, websites, personal documents, and physical evidence¹². Quantitative data were analyzed using descriptive statistics, through the calculation of absolute and relative frequencies of the quantitative data with IBM SPSS® Statistics for Windows, version 24.0.

Inductive thematic analysis was used as the framework, in six stages: (1) Data collection - initial contact with the material; (2) Creation of a list of initial ideas (codes), during which the researcher seeks the existence of themes; (3) Classification and grouping of codes into categories; (4) Creation of themes, where each theme's independence was ensured and the principles of internal homogeneity and external heterogeneity were observed, which is a process that

eliminates ambiguity in thematic distribution; (5) Assignment of a name to each identified theme; and, finally, (6) Writing of the final report¹³.

This thematic analysis process enabled the integration of topics related to entrepreneurship. Donabedian triad was used as the inductive framework¹⁴, which is based on quality management in health to achieve the greatest benefits with the least risks, and this logic can be applied to entrepreneurship in nursing.

As this study was based on secondary data and publicly available information, it was not necessary to submit it to the Research Ethics Committee or the National Research Ethics Committee, as stipulated by current legislation.

RESULTS AND DISCUSSION

The characterization data for the 130 programs analyzed are presented in Table 1.

Table 1: Characterization of nursing programs at public institutions in Brazil (n=130). Brasília, DF, Brazil, 2021.

Variables		n	f (%)
Brazilian region	North	16	12.3
	Northeast	47	36.2
	Midwest	18	13.8
	Southeast	28	21.5
	South	21	16.2
Administrative Category	Federal	75	57.7
	State	54	41.5
	Municipal	1	0.8
Course Level	Bachelor's degree	125	96.2
	Licentiate	5	3.8
Year Range of the PCP	2003 to 2007	5	3.8
	2008 to 2012	19	14.6
	2013 to 2017	36	27.7
	2018 to 2021	27	20.8
	Not specified	2	1.5
	Document Not Available	41	31.5
Year Range of the Curriculum Matrix	2006 to 2007	4	3.1
	2008 to 2012	10	7.7
	2013 to 2017	34	26.2
	2018 to 2021	24	18.5
	Not specified	36	27.7
	Not available	22	16.9
Offers a Specific Entrepreneurship Subject	Yes	14	10.8
	No	116	89.2

Note: PCP = Pedagogical Course Project

It was observed that the highest percentage of undergraduate nursing programs (n=130) were in the Northeast Region (36.2%), followed by the Southeast (16.2%). Furthermore, most were offered at federal public institutions (57.7%) and were bachelor's degree programs (96.2%).

The higher percentage of nursing programs at public higher education institutions in the Northeast Region aligned with the country's educational policies, which encouraged the expansion of universities into the interior through the Program to Support Restructuring and Expansion Plans of Federal Universities (REUNI), established by the Federal Government through Decree 6096, of April 24, 2007. The aim was to allow regions with a low number of available vacancies at the time to be covered with new programs capable of addressing social and labor market shortages^{15,16}.

The year of publication of the Pedagogical Course Project (PCP) ranged from 2003 to 2021, with the highest percentage distributed between the years 2013 and 2017 (27.7%); while the curriculum matrix ranged from 2006 to 2021 and showed a higher percentage in the same category (26.2%). It is worth noting that 31.5% and 16.9% of institutions did not have, respectively, PCP and curriculum matrix available for access.

These results demonstrated a significant percentage of outdated or unavailable PCPs and curriculum matrices in the public domain. Nursing education is materialized through the PCP¹⁷, which includes the curriculum matrix. These documents contribute to shaping the social and historical construction of the educational institution, linked to the set

of knowledge, practices, objectives, methodological processes, and evaluative processes, among others, necessary for the training of health professionals^{17,18}. The National Curriculum Guidelines for undergraduate nursing education establish the need to develop a PCP aligned with the local reality, as well as the broader political, economic, and social context^{6,17}. Therefore, to meet social demands, it is necessary to frequently rethink the curriculum structure of undergraduate nursing programs in order to expand the possibilities of teaching-learning processes that are compatible with the realities and specificities emerging in each context¹⁹.

In the current study, it was found that only 10.8% of nursing programs had a specific entrepreneurship course in their curricula. These data partially align with the 2020 Global Entrepreneurship Monitor report,²⁰ which indicated that this is a reality in higher education in the country. Specifically in nursing, it is considered that entrepreneurial education helps address social and health needs of the population — particularly through the creation of innovative practices — and therefore increases the visibility of the profession within the health care system and in society⁵.

However, in common sense, entrepreneurship in nursing has been exclusively associated with business⁽⁵⁾, which may represent a barrier to incorporating this theme into the education of public institutions, as it is argued that there is no convergence with the advocacy of the Unified Health System. Thus, it is essential to demystify the restrictive aspects of entrepreneurship in nursing and broaden the discussions on this theme, as it is known that entrepreneurship in nursing can help alter the *status quo*, that is, consolidate the guiding principles of the health system and advocate for better working conditions for nursing professionals, as well as contribute to the country's economic development^{5,9}.

The characterization of specific entrepreneurship courses offered in undergraduate nursing programs at Brazilian public institutions is presented in Table 2, as follows.

Table 2: Characterization of Specific Entrepreneurship Courses (n=14). Brasília, DF, Brazil, 2021.

Variables		n	f (%)	max-min	Mean (SD)
Brazilian region	North	3	21.4		
	Northeast	3	21.4		
	Midwest	1	7.2		
	Southeast	7	50.0		
	South	0	0		
Offering	Mandatory	8	57.1		
	Elective	6	42.9		
Modality	Theoretical	11	78.6		
	Theoretical-Practical	3	21.4		
Hour load	In Hours			30-90	40.43(±15.60)

Note: max-min: maximum and minimum values; SD: standard deviation.

Regarding the characterization of the specific entrepreneurship courses identified, a higher percentage of educational institutions were located in the Southeast (n=7; 50.0%), followed by the North (n=3; 21.4%) and Northeast (n=3; 21.4%).

The higher concentration of institutions in the Southeast may be associated with the fact that this region has the highest Gross Domestic Product, underwent industrialization before other regions, has a significant technological arsenal, and represents the largest labor market for all professions, necessitating a university education more responsive to innovation and entrepreneurship²¹.

A study conducted in the state of São Paulo found a significant increase in businesses led by nurse entrepreneurs from 2001 to 2011 compared to the previous decade (1990 to 2000). In addition to individual factors that motivated business entrepreneurship (job dissatisfaction and the pursuit of better earning prospects and professional development), the authors believe that this demand may be related to the high concentration of professionals in the region and the health market, as 80% of the population consumes health products and services monthly²².

Regarding the course modality, most of the subjects were classified as mandatory (57.1%) and theoretical (78.6%). Additionally, the total course load ranged from 30 to 90 hours, with an average of 40.43 (±15.60).

The fact that most of the specific entrepreneurship subjects identified in this study are theoretical contrasts with the recommendations of experts in entrepreneurial education in higher education, who argue that theoretical classes combined with practical activities provide students with problem-based learning and real-life experiences⁸. In a quantitative study conducted with professors from public universities offering undergraduate nursing programs in the country, it was found that most (75.0%) addressed practical subjects as a way to foster entrepreneurial skills⁸. Additionally, all of them acknowledged that the ideal course load depends on other course offerings and the organization of the program⁸.

The qualitative analysis of the entrepreneurship subject syllabi is presented in Figure 2.

ENTREPRENEURSHIP IN NURSING PROGRAMS	
Codes	Categories
Historical and Conceptual Aspects Innovation Regulation Entrepreneurial Behavior Cognitive and Attitudinal Skills	Structural Elements of Entrepreneurship
Project Management Situational Diagnosis <i>Networking</i> <i>Marketing</i> Resources Tools Health and Nursing Technologies Creativity Planning Time Management	Processual Elements of Entrepreneurship
Social Responsibility Innovative Solutions (assistive, managerial, educational, and research)	Outcome Elements of Entrepreneurship

Figure 2: Qualitative Analysis of the Syllabi of Specific Entrepreneurship Courses in Undergraduate Nursing Programs at Public Institutions in Brazil. Brasília, DF, Brazil, 2021.

Based on this analysis, the data were grouped into three categories: a) Structural Elements, which include historical and conceptual aspects, innovation, regulation, entrepreneurial behavior, and cognitive and attitudinal skills; b) Processual Elements, which encompass project management, situational diagnosis, networking, marketing, resources and tools, health and nursing technologies, creativity, planning, and time management; and c) Outcome Elements, which include social responsibility and innovative solutions.

The structural elements are foundations for understanding entrepreneurship broadly in nursing, including typologies, and are relevant as a starting point. However, it is the analysis of processual and outcome elements that provides the most valuable points for discussion.

Regarding processual elements, project management includes situational diagnosis, networking, marketing, and resources; and tools are subdivided into health and nursing technologies, creativity, planning, and time management. According to the literature, these items are crucial and highly expected in the knowledge of nurse entrepreneurs, as they increase productivity, control, and quality of services provided, and consequently, affect the long-term survival of the venture²³. The social context and the increasing competitiveness that health professionals face throughout their careers require new career planning approaches and strategies to handle adversities. This is essential for creating business ideas that generate innovative, attractive, and viable services and products that interest users and, above all, add social value to the profession.^{24,25}

Scientific literature shows that entrepreneurial behavior can be developed in undergraduate students across several fields of knowledge through entrepreneurial education²⁶. This perspective underscores the importance of universities investing in innovative pedagogical projects to encourage the training of new entrepreneurs and critical professionals. However, promoting a culture of entrepreneurship in nursing is a challenge. Among the ways to address this issue, curricular initiatives (subjects) and extracurricular activities

(research projects, extensions, partnerships with companies, creation of junior enterprises)⁽⁸⁾ are highlighted as methods for developing entrepreneurial behavior.

Thus, the role of the university can be expanded by appropriately including entrepreneurship courses in the nursing curriculum to align with market realities⁹. This can be facilitated through the use of active learning methodologies, such as design thinking, gamification, project-based learning (PBL), realistic simulations, among others. The creation and/or expansion of Scientific, Technological, or Research Parks allows for the incorporation of various mechanisms for generating new ventures and provides a space for discussions and reflections on the daily practices of the involved institution and the active participation of students in seeking positive changes in health care²⁷.

Considering this analysis, along with the fact that the identified subjects in the pedagogical projects are offered in a theoretical modality and have a small workload compared to, for example, subjects related to the development of clinical competencies, it appears there is limited space for developing competencies related to the processual elements of entrepreneurship, which are vital for the success of any entrepreneurial initiative.

Not only knowledge but also the development of entrepreneurial competencies should be a primary goal of entrepreneurial education. This involves a set of behaviors, thoughts, and strategies crucial for analyzing the market where the professional wishes to operate, enabling them to establish their own business^{24,28}. There are three types of entrepreneurial competencies: administrative, which involve skills and knowledge for managing functions; conceptual, which encompass observational skills for both external opportunities and internal aspects of the organization; and relational, which include social skills for interacting with and influencing others, such as social perception, negotiation, and persuasion²⁹.

Lastly, the category of entrepreneurial outcome elements includes assessing whether the goal was achieved and, if so, to what extent. The results are described through indicators, which objectively describe how effective the innovative solutions in the areas of care, management, education, and research were in achieving their goals. Thus, nurses, through humanized care, have the responsibility to enhance practices that contribute to human and social development.

Furthermore, based on the categorized outcome elements, it is likely that the entrepreneurial education offered at public universities aligns significantly with intra-entrepreneurship and social entrepreneurship. This contrasts with the common perception that associates entrepreneurship solely with business ventures. It is evident because even the content related to business entrepreneurship appears to be in its early stages, particularly regarding legal frameworks and regulatory guidelines listed in the syllabi.

For a long time, nurses have had the prerogative to venture into owning their own businesses. However, nascent knowledge in this area constitutes one of the barriers to business entrepreneurship in nursing, as observed in a literature review study⁹. That said, the inclusion of this content in the syllabi of the identified subjects in this study demonstrates alignment with the need to equip nursing students with the competencies to also handle the bureaucratic complexities of an enterprise, which goes beyond the specific knowledge of nursing.

The findings presented in this study highlight how essential it is to dispel restrictive understandings of entrepreneurship in nursing and to broaden discussions on historical and conceptual aspects, including innovation, as well as regulatory issues and entrepreneurial competencies, as addressed in the structural elements of entrepreneurial education initiatives evidenced in this study.

Aligned with this, researchers argue that entrepreneurship in nursing, regardless of its typology, is crucial for achieving the third Sustainable Development Goal (SDG 3), which relates to Health and Well-Being. The goals of SDG 3 aim to ensure access to quality health care and promote well-being for all, at all ages. These goals are directly interconnected with nursing practices, both in the care and educational fields as well as in research. However, investments are needed to promote lifelong learning, especially concerning entrepreneurial education, in its technical, practical, and behavioral aspects³⁰.

In summary, the findings of this study underscore the need to advance entrepreneurial education to better train new entrepreneurial nurses and develop critical professionals. To establish entrepreneurship as a subject, it is necessary to consider that entrepreneurial behavior can be taught, worked on, and developed through education. It is important for universities and various educational settings to invest in the development of

entrepreneurial pedagogical projects, which include innovative teaching strategies based on practical learning with real-life experiences, in order to stimulate students' creativity and leadership.

Study limitations

One of the main limitations of the study was the lack and scarcity of information about nursing undergraduate programs on the public universities' websites. Additionally, the analysis was limited to course syllabi rather than full teaching plans, which might obscure important details such as teaching methods and content organization. It is recommended to conduct further research on entrepreneurial education that includes teaching plans, incorporates non-participant observation, and expands the scope to analyze entrepreneurship education in nursing at private institutions. Furthermore, it is pertinent to evaluate other curricular initiatives, such as extension projects, research, and junior enterprises.

CONCLUSION

It was found that specific entrepreneurship courses are scarce in the curriculum of nursing programs at public higher education institutions in Brazil. When present, most of these courses were theoretical, with an average workload of 40.43 hours (SD = 15.60). The qualitative analysis of the syllabi identified three main categories related to teaching entrepreneurship in nursing programs: structural elements of entrepreneurship, process elements of entrepreneurship, and outcome elements of entrepreneurship. The content covered demonstrates adherence to the literature on entrepreneurial education in nursing.

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