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This is the **accepted version** of the journal article:

Fernández-Cano, María Isabel; Arreciado Marañón, Antonia; Feijoo Cid, Maria.  
«The Bachelor's thesis in nursing : Characteristics and students' approach and  
satisfaction». *Nurse Education in Practice*, Vol. 53 (May 2021), art. 103067 DOI  
10.1016/j.nepr.2021.103067

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## **The Bachelor's thesis in nursing: characteristics and students' approach and satisfaction**

### **Abstract**

**Aim:** The aim of the study was to describe the characteristics of the Bachelor's thesis of fourth-year nursing students at a Spanish public university, the criteria that students used to choose a topic, and students' degree of satisfaction after completing the Bachelor's thesis.

**Design:** Quantitative study.

**Methods:** We examined 420 Bachelor's theses carried out from 2013 to 2018 and conducted an online survey among fourth-year students in the 2017-18 and 2018-19 academic years (81 completed questionnaires).

**Results:** The Bachelor's thesis took the form of a research proposal. The most frequent proposal type was a qualitative hospital-based study whose objective was to understand the experiences of adult or adolescent patients, close family members, or nurses. Students chose topics for personal reasons. Most participants reported feeling satisfied with the knowledge and skills acquired.

**Conclusions:** Students completing a Bachelor's thesis in the form of a research proposal have the potential to transfer their research skills to their nursing practice.

**Keywords:** *Bachelor's Thesis; Clinical Nursing; Nursing Education Research; Quantitative Research.*

## **Highlights**

- The most frequent Bachelor's thesis was a qualitative research proposal.
- Participants chose topics based on personal reasons or internship experiences.
- Participants were satisfied with the research competencies obtained.
- Students who write a thesis can transfer research skills to practice.

## **Introduction**

Undergraduate nursing programs use a variety of strategies to improve students' interest in and attitudes about research (Lindo et al., 2013; Tsai et al., 2014). The Bachelor's thesis (BT) (Lundgren and Robertsson, 2013; Uysal et al., 2017) aids students in acquiring knowledge and skills that they can transfer to nursing practice (Aiken et al., 2014; Lundgren and Robertsson, 2013). However, the use of the BT in nursing has not been sufficiently studied.

### **Background literature**

Several studies have described how and to what degree nursing research is carried out in different contexts (Comet-Cortés et al., 2010; Bassalobre et al., 2015; Grundy et al., 2009; Khalaf, 2013; Spies et al., 2015). Numerous obstacles still exist internationally for carrying out research in clinical practice (Patterson et al., 2016; Timmins, 2015). Additionally, evidence-based practice is recognized as the standard of care, but many nurses and advanced practice nurses (APNs) still do not practice in this way (Melnik et al., 2014). The masters-level APN has become consolidated in countries such as Canada, the United States, Great Britain and Australia, but not in Spain, where all nurses, except certified nurse-midwives, are legally considered generalists (Sevilla and Zabalegui; 2016; Sevilla, 2018; Gutiérrez-Rodríguez et al., 2019). The absence of the APN and the lack of training in research competencies among Spanish academic nurses prior to 2007 (Ministerio de Educación, Cultura y Deporte, 2007; Zabalegui and Cabrera, 2009) have meant that Spain lacks a research tradition (Corchon et al., 2010). Such a tradition is now emerging, both among nurse generalists in clinical practice and among academic nurses.

Basic research competencies and the passion for research begin to develop at the undergraduate level (American Association of Colleges of Nursing, 2006).

Undergraduate education can offer students positive research experiences and increase their involvement in research after graduation (Gerçek et al., 2016). However, negative attitudes persist, including attributing little value to research, showing no interest in research, or perceiving difficulties in applying research results in nursing practice (Kennel et al., 2009; McCurry and Martins, 2010). Nursing faculty have tried several approaches to combat these attitudes through dynamic teaching methods, including action research (Lindo et al., 2013), the “cookie experiment” used as an experiential learning strategy (Tsai et al., 2014), and the BT (Lundgren and Robertsson, 2013; Uysal et al., 2017).

In Europe, 32% of nursing programs do not include a BT (Lahtinen et al., 2014) and of those that include a BT, the literature review is the most common format (Johansson and Silén, 2018), which is also true for the United States (Dobratz et al., 2012). Some universities are increasingly opting for literature reviews or systematic reviews (López, 2017). Unlike other universities in Spain and abroad, to bring about a qualitative change in the research competencies of graduates, our faculty opted for a BT in the format of a research proposal similar to a grant proposal. In Spain, only 30% of Bachelor of Nursing programs offer the research proposal as a possible format for the BT (Roca et al., 2018). When the BT consists of a research proposal (Fernández-Cano, 2019) students take on greater protagonism in and responsibility for their learning, one of the goals of the European Higher Education Area (1999).

Literature on the characteristics of the BT in nursing internationally is scarce. Only Sweden has published studies describing the characteristics of nursing BTs. These studies reveal students’ difficulty in choosing a topic. Moreover, research shows that topics mostly centered on the experiences of patients suffering from an illness or of nurses that care for them (Silén and Johansson, 2016).

In Spain, the Bachelor of Nursing is a four-year program, and the BT has been an obligatory part of it since 2009. Therefore, the first BTs were submitted in 2013 (Arrogante, 2017). Spanish legislation states that the BT is a graduation requirement and is to be written and defended during the last year of the degree. At the Universitat Autònoma de Barcelona (UAB), a public university, the BT accounts for nine credits in the European Credit Transfer and Accumulation System (225 hours). Before undertaking the BT, students receive theoretical training in research methods. All first-year students are required to take the course “Scientific Method and Biostatistics,” which covers the phases of a research project, the literature search and quantitative methods. In the fourth year, about 80% of students take the optional course “Qualitative Research Methods in Health Sciences.” Throughout their training, students undertake 2300 practicum hours in which they provide direct care to patients. The practicum begins in the second semester of the second year and finishes in the second semester of the fourth year. Of these hours, 1800 are spent in the hospital setting (second, third and fourth years) and 500 in primary care (second and third years).

The BT is a supervised course, which a student carries out autonomously with the support of a supervisor. The learning objective is for the student to demonstrate his or her research competencies (Table 1) by designing a research proposal about nursing care (Table 2). The timeline of activities and due dates throughout the year are shown in Figure 1 (supplemental material Figure 1).

Through a web application, the areas of research offered by potential thesis supervisors is published. Students submit an application in which they rank all available supervisors according to their preference. Each year 22 to 24 professors supervise between one and seven BTs, depending on their teaching load. The

application automatically assigns a supervisor to the students according to their preferences, and in case of a tie, grade point average is used to make a determination. Between 60 and 70% of students receive one of their top three choices of supervisor, meaning that grades are not a major factor in determining whether a student works with one of his or her chosen supervisors. The student chooses a topic, which must be approved by the BT committee (composed of nursing faculty members). The BT course does not involve classroom teaching, and most activities are conducted by the student individually. Students meet with their supervisor at least four times over the academic year. Forty percent of supervisors hold a Ph.D. and 60% hold an M.Sc. Evaluation is ongoing and constructive and is guided by rubrics that the student receives at the beginning. Supervisors use the rubrics to evaluate the content and formal aspects of the proposal (including the literature search process and the proposal itself) and students' participation in supervisory meetings. Finally, students defend their BT before a panel of faculty members that does not include their supervisor. All of the BTs are stored by the university in a password-protected virtual space.

Publications describing submitted BTs are scarce given their recent introduction. The 1999 Bologna declaration aimed to unify higher education in Europe (European Higher Education Area, 1999). With our analysis from Spain, we hope to contribute to constructing a Europe-wide view of the characteristics and outcomes of BTs in nursing and work toward establishing best practices. Therefore, the aim of the study was to describe the characteristics of the BT of fourth-year nursing students at a Spanish public university, the criteria that students used to choose a topic, and students' degree of satisfaction after completing the BT.

## **Methods**

This is a quantitative study in which we reviewed the types of research proposed in the BTs carried out between 2013 and 2018 and administered a survey to students who had completed a BT in the previous two years. The study took place at a Spanish public university that has offered the four-year Bachelor of Nursing since 2009 and which graduates 80 students per year on average.

#### Data collection

From July 2018 to January 2019, two researchers (MIF and AA) manually extracted data from the BTs submitted from 2013-2014 to 2017-2018. They reviewed the first 30 BTs together to agree on a set of data extraction criteria. Each reviewed half of the remaining BTs, and they resolved unclear cases together. The review included sociodemographic variables (sex and year of graduation) and the research approach proposed in the BT (research methods, setting, population group and discipline), including a description of the literature search process (search engines and databases, number and types of references, and number of references from nursing journals).

We also conducted a survey among fourth-year students of the 2017-2018 and 2018-2019 academic years (Table 3) in May-June of 2018 and 2019, respectively. All students had finished their BT when we invited them to participate. Students received the survey link at their institutional email address, which remains active for a few months after graduation. After reviewing the literature, no relevant questionnaire about student experiences of the BT was found. For this reason we decided to use an ad-hoc questionnaire. Through the survey, we collected sociodemographic information (age, sex and year of graduation) and asked three closed questions focused on the criteria that students used to choose their BT topic and their satisfaction with their learning. Responses were on a Likert-like scale with four options ranging from

“strongly agree” to “strongly disagree.” No neutral option was offered, because we wanted participants to provide a positive or negative response. The survey was designed to take no more than 10 minutes to complete. To evaluate its validity, we invited three professors who were experts in qualitative or quantitative methodology to evaluate it. We piloted the questionnaire with ten participants before distributing it to the wider sample.

We conducted a descriptive analysis for the quantitative data using the SPSS statistics package for Windows, version 22.0. (SPSS Inc., Chicago, EE. UU.).

#### Ethical considerations

This study was approved by the Ethics Committee on Animal and Human Experimentation of the UAB (CEEAH 5533). We analyzed BTs that had already been finished and evaluated. The invitation to former students to participate in the online survey included information about the study and a paragraph in which the respondent voluntarily agreed to participate and gave his or her consent when responding to the survey. We also highlighted that the data collected was anonymous and that a student's decision to participate would not change his or her final grade. The participants' anonymity and confidentiality were preserved by identifying the BTs with a numerical code. Only the authors have access to the questionnaire data, which is stored in encrypted files.

#### **Results**

Our sample consisted of 420 BTs (Table 4). Only 234 (55.7%) of the BTs had information about the literature search, because this information was required starting in 2015-16. A total of 81 students completed the survey, 55/89 (61.8%) of the BT students from the 2017-18 and 26/71 (36.6%) of the BT students from the 2018-19.

Proposals using qualitative methods accounted for 247 of the BTs (58.8%), and 93.3% of these had a phenomenological approach. The topics were associated with clinical nursing (77.3%) and psychology (11.3%), mostly in hospital settings (65.2%). The proposed populations were mostly adults (62.3%). Proposals using quantitative methods accounted for 167 of the BTs (39.8%). In 62.2% of these, the design was a randomized controlled study or a quasi-experimental study to evaluate the effectiveness of nursing interventions in clinical nursing (77.2%) and community nursing (16.25%). The hospital setting was again the most common (53.3%). Adults (58.1%) and children (13.8%) were the most frequently proposed populations (Table 5).

The average number of references cited was 17.6 (SD 6.7), with a minimum of five and a maximum of 50. Fifty percent of students cited 15 texts, of which three were from nursing journals. More than 80% of the BTs cited original articles and literature reviews, while clinical guidelines and proposals were the least cited (33%). Nearly half of students chose their BT topic mainly for personal reasons (47%), and over a third chose a topic related to their internship (38%). Seventy percent of students reported feeling satisfied with what they had learned about research in preparing the BT (“agree” and “strongly agree”), and 74% reported that they would recommend the BT for acquiring research competencies (“agree” and “strongly agree”).

## **Discussion**

This is the first study in Spain that describes the characteristics of nursing BTs submitted at a public university. The most common BT in our study was a research proposal for qualitative research whose objective was to analyze the experiences of patients, immediate family members or nurses. This predominant use of qualitative methodology coincides with findings in a recent Swedish study (Johansson and Silén,

2018). The researchers attributed this preference to the difficulties of conducting a quantitative project in a short period of time, including participant recruitment and data collection. In our case, students did not have to actually conduct the research (but rather merely propose it), so this could not have been the reason. Instead, a possible reason may be the fact that students had studied qualitative methods much more recently than quantitative methods (in the fourth year vs. the first year). Another factor could be the training of our nursing faculty members. Most of those holding a Ph.D. conducted doctoral research using qualitative methods. The training and experience of faculty members influences how they teach (Kuivila et al., 2020) and therefore could affect students' choice of method. A recent review about priorities in research nursing signals that controlled trials, meta-syntheses, and experimental and intervention studies are needed in nursing research (Hopia & Heikkilä, 2019). Nonetheless, the preference for qualitative methods offers new approaches to old problems and is in line with the worldwide trend toward qualitative nursing research, as shown by Smith et al. (2018). A recent search in the Cumulative Index of Nursing and Allied Health (February 4, 2021) with the MeSH terms *quantitative research* and *qualitative research* limited to the last five years, obtained slightly more than twice as many results for qualitative as for quantitative publications. However, we must remember that the choice of methods should be determined by the study objective and not by the predilections or training of the researcher.

Our results contrast with those for graduate students, who, according to two recent studies (McCusker and Gunaydin, 2015; Sun et al., 2018), tend toward quantitative methods because they learn these techniques during their undergraduate education, because quantitative studies have clear objectives defined a priori, and because collecting quantifiable data is relatively simple compared to collecting

qualitative data. Moreover, these students consider qualitative methods to be more complex because they haven't received qualitative training during their undergraduate education, they perceive the objectives to be less well defined, they find the design of qualitative data collection tools to be complicated, and qualitative analysis takes more time.

A recurring theme in our study was the experiences of patients, care providers and nurses. These results are congruent with those by Silén and Johansson (2016) in Sweden. The preference for understanding the experience of health and illness aligns with the priority given to providing person-centered care in Spain's Catalonia region, in Spain overall, and in Europe (Generalitat de Catalunya. Departament de Salut, 2016). Person-centered care requires nurses to know and understand the suffering caused by an illness and how patients perceive the care that they receive (Santana et al., 2018), while also basing care on data (Melnyk et al., 2018). In terms of the experiences and knowledge of nurses, a recent review (Hopia and Heikkilä, 2020) signals that studying the development of professional competencies and skills rather than specific knowledge should be a global priority.

The predominance of proposals based in the hospital setting can likely be explained by the greater number of practice hours that students carry out in hospitals as opposed to primary care (1800 hours vs. to 500). Another explanation is that the hospital setting is the focus of most published nursing studies (Díaz-Membrives et al., 2012; Dupin et al., 2013). At the First International Conference on Health Promotion held in Ottawa in 1986 (World Health Organization, 1986), experts recommended changes in the way health problems are addressed. These changes require improvements both in health professionals' academic training and in community health research (Ministerio de Sanidad, Consumo y Bienestar Social, Gobierno de España,

2019). Following international recommendations, Spain is facing a paradigm shift in the organization of its health system that involves modernizing primary care. The National Institute of Nursing Research (NINR, 2016) highlights as research priorities a) engaging in symptom science to develop personalized strategies, b) promoting health and preventing illness, c) improving self-management strategies for people with chronic diseases and people at the end of life and d) providing palliative care linked more to primary care than to the hospital setting. This body's European counterpart, the European Nursing Research Foundation, highlights cross-cutting research priorities, such as positive nursing practice environment, self-care management, technological health innovations and nursing education. This suggests the need to contemplate, at an international scale, changes in the BT so that students can design and carry out research proposals in line with these priorities.

Participants chose their BT topic based on personal interests and their experiences during clinical internships. Lundgren and Halvarsson (2009) report that, because of the time and effort a BT requires, students prefer topics to which they have a previous connection. Orbeago (2016) shows that when students are able to choose their research topic and be responsible for their learning (as in the case of the BTs we studied, where students worked autonomously with supervision) their internal motivation and intrinsic interest in academic activities increase. Other authors highlight that internal motivation is an efficient way of achieving good performance (Sulca, 2016). In fact, the greater students' intrinsic motivation, the greater their perception of learning (Valenzuela, 2019). Therefore, it is probable that the ability to choose a topic of interest favors the student's perception that he or she will be able to succeed.

Nonetheless, this choice of topic based on individual preference could also reveal a lack of leadership in nursing research, both in the academic setting and the

clinical setting (Harvey et al., 2019), a situation that doesn't occur in other health sciences. This difference may be due to the fact that in other fields, students are not free to choose a topic, but rather are directed to the research lines of the faculty. It is also possible that in countries in which a research tradition is still emerging (as in Spain), research priorities are not yet clearly defined. This interpretation is supported by the fact that in Spain there are recent reports and Delphi studies geared toward establishing national and regional research lines (Comet-Cortés et al., 2010; Generalitat de Catalunya. Departament de Salut, 2016).

Participants were satisfied with what they had learned while working on the BT and reported that doing so was useful for acquiring research competencies. This outcome contrasts with those for clinical nursing: Clinical nurses value nursing research linked to patient care and the image of nursing, but this assessment does not translate into an increase in scientific production in nursing (Leão et al., 2013). Studies at the national (Cidoncha-Morenoa and Ruíz de Alegría-Fernández de Retana, 2017) and international (Patterson et al., 2016) levels show that the main obstacles to carrying out research in the clinical setting are related to organization (lack of time and collaboration from other professionals) and training (lack of critical reading skills). The lack of scientific production in nursing reveals that nurses often fail to put into practice research competencies acquired during undergraduate training once they enter the workforce. In this sense, the BT in the form of a research proposal becomes a bridge for transferring these competencies into practice. However, health organizations must make an effort to help nurses implement and develop them.

Our research has several practical implications: a) As Europe works toward unifying higher education under the European Higher Education Area, the BT in the form of the research proposal may be a useful model for other European schools of

nursing; b) Knowing how students choose a BT topic allows instructors to (re-)orient that choice toward the priorities of clinical practice. Teaching innovation strategies such as service-learning—which we have recently implemented—could be useful; c) Students who carry out a BT in the format of a research proposal may be more likely to participate in research when they join the work force; d) The research proposal BT maximizes student learning in relation to the commitment of time and effort required by faculty. Next steps would be to study this question empirically and to describe the characteristics of submitted nursing BTs in other European countries.

### **Limitations**

The main limitation of our study is that we developed survey questions ad hoc based on the existing literature, because there is no validated survey available in Spanish to evaluate the attitude of students toward research. Nevertheless, survey design and data extraction were conducted by researchers with multiple years of experience supervising and evaluating theses conducted by undergraduate and graduate nursing students. The low survey response rate in one of our groups of students and the difference in response rate between the two groups of students could raise questions about the representativeness of the data. However, since we combined data from the two groups rather than comparing them, effects on the overall outcome are likely negligible. Furthermore, the overall response rate we observed was similar to the 41.7% obtained in a study by Sánchez-García et al. (2019), which also used online surveys. Another limitation is that the study was conducted at a single site. Finally, we were not able to carry out an exhaustive comparison with other studies, given the lack of previous studies focused on the characteristics of submitted BTs. Still, our research offers an overview of the main characteristics of BTs at our university, which can provide a comparative baseline for future research.

## **Conclusions**

Participants chose a BT topic based on their personal and clinical experiences and tended to propose research about illness experiences, from the point of view of patients, care providers and nurses, mostly from a qualitative perspective. Having the opportunity to choose a topic and method increases students' internal motivation and perception that they will be able to complete the BT successfully. Our research suggests that the BT in the form of a research proposal is a promising way to inspire in students a passion for research.

Students completing a BT in the form of a research proposal have the potential to transfer research skills to nursing practice. Socio-political commitment and changes in the health system are necessary to take advantage of the research competencies that nurses acquire during their undergraduate education.

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Competencies

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Acquire and use the necessary tools to develop a critical and reflective attitude

Analyze and synthesize complex phenomena

Base nursing interventions on scientific evidence and according to the available resources

Search for, evaluate, organize and maintain information systems

Demonstrate knowledge of Spain's ethics norms and code of conduct and demonstrate comprehension of the ethical implications of health in a changing global context

Develop autonomous learning strategies

Develop critical thinking and reasoning and know how to communicate them effectively, both in one's own languages and in a third language

Express oneself fluently, coherently and appropriately, both orally and in writing

Generate innovative, competitive proposals in research and in professional life

Use scientific methodology in one's nursing practice

**Table 1.** BT competencies

<p>Title</p> <p>Table of Contents</p> <p>Summary</p> <p>Introduction/Background</p> <p>Justification</p>	
<b>Quantitative research proposal</b>	<b>Qualitative research proposal</b>
<p>Hypothesis</p> <p>Objectives</p> <p>Methods</p> <ul style="list-style-type: none"> <li>- Design</li> <li>- Scope</li> <li>- Population and sample</li> <li>- Variables</li> <li>- Data collection</li> <li>- Data cleaning and data analysis</li> </ul>	<p>Research questions</p> <p>Objectives</p> <p>Methods</p> <ul style="list-style-type: none"> <li>- Design</li> <li>- Scope</li> <li>- Participants and contexts</li> <li>- Access to the field and participants</li> <li>- Data collection</li> <li>- Analysis process</li> </ul> <p>Research team and reflexivity</p> <p>Rigor and quality of data</p>
<p>Limitations and difficulties</p> <p>Ethical aspects</p> <p>Utility/Applicability of results</p> <p>Work plan/timeline</p> <p>Bibliography</p> <p>Appendices (informed consent, literature search)</p>	

**Table 2.** Research proposal: overall structure

Closed questions
Sex
Age
<p>Select the criteria that helped you chose your BT topic:</p> <p>I did an internship in a unit where the health situation I chose occurred frequently.</p> <p>My internship supervisor influenced me in choosing my BT topic.</p> <p>I took a course whose content inspired my interest in my BT topic.</p> <p>A faculty member influenced my choice of a BT topic.</p> <p>I work in a care facility in which I have contact with the topic I chose.</p> <p>My reason is personal and not related to the options listed above.</p>
<p>I am satisfied with what I have learned about research through completing a BT:</p> <p>Strongly agree</p> <p>Agree</p> <p>Disagree</p> <p>Strongly disagree</p>
<p>I would recommend completing a BT to acquire research skills:</p> <p>Strongly agree</p> <p>Agree</p> <p>Disagree</p> <p>Strongly disagree</p>

**Table 3.** Questions from the online survey

Variable	Frequency	Percentage
<b>Author sex</b>		
Male	70	16.7
Female	350	83.3
<b>Academic year</b>		
2013-14	66	15.7
2014-15	82	19.5
2015-16	90	21.4
2016-17	94	22.4
2017-18	88	21.0
<b>Research Methods</b>		
Quantitative	167	39.8
Randomized Clinical Trial	53	31.7
Quasi-experimental	51	30.5
Cohort	13	7.8
Cases and controls	10	6.0
Cross-sectional	40	24.0
Qualitative	247	58.8
Phenomenology	232	93.9
Ethnography	6	2.4
Grounded theory	4	1.6
Action research	3	1.2
Other	2	0.8
Mixed	6	1.4
<b>Setting</b>		
Hospital	254	60.5
Primary care	117	27.9
Intermediate care	19	4.5
Patient's home	12	2.9
Community	16	3.8
Mental health center	2	0.5
<b>Population group</b>		
Children	45	10.7
Adolescents	40	9.5
Adults	257	61.2
Geriatric patients	37	8.8
Health professionals	41	9.8
<b>Discipline</b>		
Psychology	31	3.3
Sociology	6	0.9
Communication	2	0.4
Nursing foundations	19	4.1
Clinical nursing	324	80.6
Community nursing	38	10.8
<b>TOTAL</b>	<b>420</b>	<b>100</b>

**Table 4.** Characteristics of the BT

Variable	Quantitative Research Methods Frequency (%)	Qualitative Research Methods Frequency (%)
<b>Author sex</b>		
Male	37 (22.2)	32 (13.0)
Female	130 (77.8)	215 (87.0)
<b>Academic year</b>		
2013-14	24 (14.4)	40 (16.2)
2014-15	35 (21.0)	45 (18.2)
2015-16	37 (22.2)	52 (21.1)
2016-17	42 (25.1)	51 (20.6)
2017-18	29 (17.4)	59 (23.9)
<b>Setting</b>		
Hospital	89 (53.3)	161 (65.2)
Primary care	52 (31.1)	64 (25.9)
Intermediate care	10 (6.0)	8 (3.2)
Patient's home	8 (4.8)	4 (1.6)
Community	6 (3.6)	10 (4.0)
Mental health center	2 (1.2)	0 (0)
<b>Population group</b>		
Children	23 (13.8)	22 (8.9)
Adolescents	13 (7.8)	27 (10.9)
Adults	97 (58.1)	154 (62.3)
Geriatric patients	19 (11.4)	18 (7.3)
Health professionals	15 (9.0)	26 (10.5)
<b>Discipline</b>		
Psychology	3 (1.8)	28 (11.3)
Sociology	1 (0.6)	4 (1.6)
Communication	1 (0.6)	1 (0.4)
Nursing foundations	6 (3.6)	13 (5.3)
Clinical nursing	129 (77.2)	191 (77.3)
Community nursing	27 (16.2)	10 (4.0)
<b>TOTAL</b>	<b>167 (100)</b>	<b>247 (100)</b>

**Table 5.** Characteristics according to the research method proposed

**Funding sources:** This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.