Child with stoma in Nursing post-graduation studies: epistemological aspects

ABSTRACT

Objective: to examine postgraduate Nursing dissertations and theses defended in Brazil on the subject of children with stoma, highlighting their epistemological aspects. Method: this descriptive study considered studies published between 2009 and 2019 using the Epistemological Categorization methodology for research in Nursing. Results: twelve studies were selected: ten master’s dissertations and two doctoral theses. The predominant epistemic area/field was “care”, in the research line: “care process in health, and nursing”. Studies were found to show greater interest in the home and outpatient context. The qualitative approach and data collection by interview predominated. Conclusion: from the epistemological aspects highlighted, it can be said that the dissertations and theses on the subject of children with stomata were predominantly oriented towards an epistemological pragmatism in nursing care for children with stoma and their families, with scientific objects delimited to achieve an understanding of this phenomenon.

Descriptors: Research; Graduate; Pediatric Nursing; Surgical Stomas; Education.

INTRODUCTION

The production of knowledge about stoma management in the nursing care context is presented as a priority, since several health conditions may require the construction of a stoma, requiring knowledge and skills from the nurse for an adequate care management. Thus, the training of specialists, Masters, and PhDs with expertise in the subject is necessary to promote safe and effective nursing care practices.
In the context of the professional practice, stomatherapy is a nursing specialty whose teaching, research, and assistance activities are oriented towards the care of people with stomas, wounds, fistulas, drains, catheters, and incontinences\(^1\). It is booming, offering job opportunities in the field of care, administration, sales, teaching, research, advisory, and consultancy\(^2\)\(^\text{-}^3\). 

In the context of Stomatherapy Nursing, this study addresses the stoma, which can be understood as the externalization of an internal organ to the body surface. Depending on its purpose, it is subdivided into groups such as elimination stomas that can be urinary (urostomy) or intestinal (colostomy and ileostomy); feeding stomas (gastrostomy and jejunostomy); ventilation stomas (tracheostomy); and special stomas (esophagostomy, pleurostomy, peritoneostomy, etc.)\(^4\). 

In children’s health, among the main conditions that can lead to the construction of a stoma, are\(^5\)\(^\text{-}\)\(^6\) congenital megacolon, anal imperforation, acute respiratory failure, gastroesophageal reflux disease, intestinal perforation, esophageal atresia, neurogenic bladder, urethral stenosis, laryngotracheomalacia, acute peritonitis, and subglottic stenosis, among others.

In the meantime, the vulnerability of children with stomas in all care contexts is emphasized, given that their health condition demands social services and public health policies, and a support network of various kinds, in addition to specialized monitoring and assistance\(^5\), even for the family.

Given the complexity involved in caring for children with stomas, the relevance of research on the theme in the context of the Lato Sensu and Stricto Sensu Post-Graduate Studies in Nursing is notorious. In this regard, there is a significant growth in the number of Lato Sensu Post-Graduate courses in Nursing, in Stomatherapy, in Brazil\(^7\).

In this sense, research has revealed an increase in the number of studies on stomas in the sphere of Stricto Sensu Post-Graduate Programs in Nursing, in Brazil\(^8\). However, the authors\(^6\)\(^\text{-}^9\) add the need to further research on the topic when it comes to the pediatric context. Thus, the question is the following: How are the dissertations and theses defended in Post-Graduate Nursing courses in Brazil, related to the theme of children with a stoma characterized? What epistemological aspects of this scientific production can be highlighted?

The relevance of this study lies on the possibility of pointing out trends, gaps, and new directions for strengthening knowledge on the topic at hand. Furthermore, from the Epistemological Categorization Methodology for Nursing Research, it will be possible to understand the epistemological internality of Nursing in terms of the production of knowledge on the subject.

Therefore, the objective was to analyze the dissertations and theses defended in Post-Graduate Nursing courses in Brazil, related to the theme of the child with a stoma, highlighting the epistemological aspects.

**Method**

A descriptive and documentary study, using as sources for data collection the Bank of Theses of the Coordination for the Improvement of Higher Level Personnel (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior, CAPES) and the Catalog of Theses and Dissertations of the Center for Studies and Research in Nursing (Centro de Estudos e Pesquisas em Enfermagem, CEPEn) of the Brazilian Association of Nursing (Associação Brasileira de Enfermagem, ABEn Nacional).

The search for data was carried out in January and February 2020, considering the following inclusion criteria: dissertations and theses defended in Post-Graduate Nursing courses whose theme contemplates the child with a stoma, between 2009 and 2019, with abstracts and/or material texts available in full in the databases. Duplicate studies were excluded, as well as those from Stricto Sensu Post-Graduate Programs in related areas.

The year of publication of Ordinance No. 400, published on November 16\(^\text{th}\), 2009, was used as an initial milestone, in which the National Guidelines for the Health Care of Ostomized People are outlined, within the scope of the Unified Health System (Sistema Único de Saúde, SUS), a fact that reinforced in the country the need to offer comprehensive and specialized health care to the ostomized person.

To guide the search in the CAPES Thesis Bank, the following keywords were used: criança, estoma, estomia, and ostoma. The following combination strategies were adopted: Criança [AND] ostomy, Criança [AND] Estomia, Criança [AND] Ostomia, and Criança [AND] Ostoma.

The “Criança [AND] ostomy” search strategy enabled the identification of 14 studies. Of these, six did not deal with Post-Graduate Nursing courses and one did not present the text available on the Sucupira Platform, leaving seven studies for this research. The combination “Child [AND] ostomy” culminated in 13 studies, of which six were duplicated and three did not deal with Post-Graduate Nursing courses, culminating in four studies for this research. The “Child [AND] Ostomy” search strategy resulted in three studies, all belonging to Post-Graduate courses in other health areas.
Finally, the “Child [AND] Ostoma” combination did not yield any scientific production. Thus, the search in the CAPES Thesis Bank made it possible to select 11 studies that met the defined inclusion criteria.

The search in the CEPEn Thesis and Dissertations Catalog did not follow the same search strategy used in the CAPES Thesis Bank, given that this database organizes its content by volume and year, so it does not have the tool for searching with keywords. Therefore, the defined strategy was to download the volumes, considering the established time frame and then proceed to read the titles and abstracts.

Therefore, the search started with volume number 28, which contains studies for the year 2009. In this volume, only one study was selected. In volume 29, two studies on stomas were found, which did not meet the inclusion criteria. In volume 30, five studies on the theme were identified, but four related to adult health and one from the *Stricto Sensu* Post-Graduate course in related areas. In volume 31, five studies on the topic were also identified, four referring to adult health and one to the health of older adults. In volume 32, a total of four studies were identified, two met the defined inclusion criteria; however, they were excluded when considering the duplication criterion; the other two were developed in the field of adult health. In volume 33, the six studies on stoma addressed adult health. Finally, in volume 34, three studies on the topic were identified, all of which refer to adult health. Therefore, in the CEPEn Catalog of Theses and Dissertations, only one study was selected.

Thus, for the constitution of the corpus of this study, 12 scientific productions were selected that met the defined inclusion criteria. An instrument of the authors’ own elaboration was prepared to capture the following data: area/field; research line; affected human body system; context of data collection; research participants; theoretical framework/conceptual basis; methodological framework/analysis technique; data collection technique; type of approach; and main results. The data were categorized based on the Epistemological Categorization Methodology for Nursing Research, which is anchored in concepts of Bachelardian epistemology and is structured based on elements of an epistemological focus.

It is highlighted that the epistemological aspects presented in this research reveal not only the resources used by the authors in the geometry of their data, but also their abstraction in the study of the subject in question. This fact is important, as it values the epistemological evidence brought by the authors from the perspective of Bachelard’s scientific thinking.

As this is a documentary study whose sources are public domain databases, this article did not need to be submitted for analysis by an Ethics in Research Committee. However, it was notable for its ethical aspect when guaranteeing the authorship of the dissertations and theses selected for analysis, according to Law No. 9,610/1998.

**RESULTS**

The selected data reveal that, between 2009 and 2019, ten master's dissertations and two doctoral theses addressed the topic of children with a stoma. The epistemological highlights of the selected scientific productions will be presented in three categories: epistemological aspects related to the theme or research problem; epistemological aspects related to the theoretical-methodological framework; and epistemological aspects related to the data and/or results.

**Epistemological aspects related to the theme or research problem**

In this category, the epistemological questions related to the theme or research problem are presented. The framing of studies in the categorical scheme (*gnoseological proposition*) of the Nursing research studies grouping (professional, assistance, organizational), the lines of research, the system of the human body affected by the stoma, the context of data collection, and the research participants were considered. It is a category that presents in which epistemic field of knowledge (subject - image - object) the studies are predominantly situated, as well as the epistemological contours in the delimitation of the thematic approaches.

There was a predominance of studies in the epistemic care area/field with nine studies, all linked to the following line of research: Care process in Health and in Nursing. Three studies are located in the epistemic professional area/field, all linked to the following research line: Theoretical-Philosophical Fundamentals of Health and Nursing Care.

As for the organic system affected by the stoma, it was observed that few studies defined the research for a specific type of stoma. When delimited, there was greater interest in the stomas that affect the digestive system, with five studies. In one study, it was found that the stoma of interest affected the respiratory system.

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Regarding the context of data collection, there was a predominance of studies in the following contexts: home and outpatient. Family members were present as research participants in nine studies. Studies were also observed with research participants being the child/adolescent, the teacher of basic education, and health professionals.

The epistemological aspects related to the research theme or problem are presented in Figure 1.

<table>
<thead>
<tr>
<th>Code</th>
<th>Epistem area/field</th>
<th>Research Line</th>
<th>System affected by the stoma</th>
<th>Data collection context</th>
<th>Research participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Not specified</td>
<td>Home</td>
<td>Relatives</td>
</tr>
<tr>
<td>02</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Digestive system</td>
<td>Hospital/Outpatient</td>
<td>Relatives</td>
</tr>
<tr>
<td>03</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Not specified</td>
<td>Outpatient</td>
<td>Nurses/Children</td>
</tr>
<tr>
<td>04</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Not specified</td>
<td>Hospital</td>
<td>Relatives</td>
</tr>
<tr>
<td>05</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Digestive system</td>
<td>Outpatient</td>
<td>Relatives</td>
</tr>
<tr>
<td>06</td>
<td>Professional</td>
<td>Theoretical-Philosophical Fundamentals of Health and Nursing Care</td>
<td>Respiratory system</td>
<td>Home</td>
<td>Relatives</td>
</tr>
<tr>
<td>07</td>
<td>Professional</td>
<td>Theoretical-Philosophical Fundamentals of Health and Nursing Care</td>
<td>Digestive system</td>
<td>Home</td>
<td>Relatives</td>
</tr>
<tr>
<td>08</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Not specified</td>
<td>Home/School</td>
<td>Relatives/Teachers</td>
</tr>
<tr>
<td>09</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Not specified</td>
<td>Does not apply</td>
<td>Children/Adolescents/Relatives</td>
</tr>
<tr>
<td>10</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Not specified</td>
<td>Outpatient</td>
<td>Caregivers/Health professionals</td>
</tr>
<tr>
<td>11</td>
<td>Professional</td>
<td>Theoretical-Philosophical Fundamentals of Health and Nursing Care</td>
<td>Digestive system</td>
<td>Home/Hospital</td>
<td>Relatives</td>
</tr>
<tr>
<td>12</td>
<td>Assistance</td>
<td>Care process in Health and in Nursing</td>
<td>Digestive system</td>
<td>Home/Hospital</td>
<td>Relatives</td>
</tr>
</tbody>
</table>

**FIGURE 1:** Epistemological aspects related to the theme or research problem. Rio de Janeiro, Brazil, 2020.

**Epistemological aspects related to the theoretical-methodological framework**

In this category, the epistemological questions related to the theoretical framework or conceptual basis and the methodological framework or analysis technique of the studies are presented. Knowing the theoretical and methodological framework of the dissertations and theses that deal with the child with a stoma makes it possible to understand the various lenses and structures of analysis under which the theme's epistemology is based.

Among the theoretical frameworks used by the researchers are Symbolic Interactionism, Theory of Probability/Mathematical Inferences, Vigotsky's Social Learning and Geertz's Interpretative Anthropology. Among the conceptual bases used, Nursing care from the perspective of Colliére, Family-Centered Care, and Child, Family, Hospitalization and Therapeutic Toy. The following theoretical frameworks were used: Grounded Theory, Systematic Review, and Ethnographic Method. The analysis techniques include Thematic Content Analysis, Statistical Analysis, and Narrative Analysis.

The epistemological aspects related to the theoretical-methodological framework are presented in Figure 2.
Epistemological aspects related to the data and/or results

In this category, the epistemological issues related to data collection, the type of approach, and the main results of the selected studies are presented. In this regard, a predominance of studies with a qualitative approach was observed, with the interview as the main data collection technique. The main results of the studies are shown in Figure 3, which also reveals epistemological aspects related to the data.

DISCUSSION

The analysis of the dissertations and theses defended in the Stricto Sensu Post-Graduate Courses in Nursing in Brazil allowed highlighting epistemological issues related to the theme of the child with a stoma. Of the 12 selected studies, ten were developed in the Academic Master’s degree in Nursing and two, in the Academic Doctorate in Nursing.

It should be noted that scientific nursing productions are combined in lines of research, organized into three epistemic areas/fields, namely: professional, in which we find the lines of research linked to the progress of the profession, concentrating more substantive content and experiences of the nursing knowledge; assistance, in which we include the lines of research linked to the effects of nursing care on the clientele; and organizational, with the lines of research linked to models of organization and functioning of nursing in health services, through methodological and pedagogical arrangements.12

Regarding the above, the results of this study show a concentration of the scientific productions selected in the epistemic care area/field, in the following line of research: Care process in Health and in Nursing, as well as the scarcity of studies on children with a stoma in the epistemic organizational area/field.

In general, the selected studies showed a tendency to not delimit a specific type of stoma. However, when specified, it was observed that the stomas that affect the digestive system are the most investigated, followed by those that affect the respiratory system.

In this regard, a survey conducted at a Public Hospital in Teresina, Piauí, found that, regarding the type of stoma in the child, 84.74% (n = 50) affected the digestive system (33 colostomies, 11 gastrostomies, five ileostomies, and one esophagostomy), 13.55% (n = 8) the respiratory system (tracheostomy), and 11.86% (n = 7) the urinary system (cystostomy).6

Similarly, another study carried out in a Public Hospital in the Federal District showed that 68% (n = 39) of the children and adolescents had a colostomy, and that 23% (n = 13) had ileostomies.13 Regarding pediatric intestinal stomas, an epidemiological study14 revealed that 88.2% of the children and adolescents hospitalized in a reference institution in Maranhão had colostomies and that 11.8% had ileostomies, all temporary stomas. Among the causes, trauma (42.7%), congenital anomalies (38.2%), obstructive (5.4%) and inflammatory (4.5%) causes are mentioned in the study.

As for the stomas that affect the respiratory system, tracheostomy stands out as the most frequent. A study carried out with tracheostomized children in southern Brazil between January 2006 and November 2015 identified that the...
mortality rate was 31%, considered high. In the same study, glossoptosis was the most common indication for performing a tracheostomy (30%), followed by subglottic stenosis (16%) and by pharyngomalacia (11%)\(^\text{15}\).

<table>
<thead>
<tr>
<th>Code</th>
<th>Type of approach</th>
<th>Data collection technique</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Qualitative</td>
<td>Interview and participant observation</td>
<td>The disease presents itself to the family as a reformulator of roles. There is a division of tasks of the parents related to hygiene, exchange of collection equipment, food and school life. Communication with parents must be rethought.</td>
</tr>
<tr>
<td>02</td>
<td>Qualitative</td>
<td>Interview and consultation of medical records</td>
<td>Gastrostomy proved to be the most frequent type of stoma in the gastrointestinal tract of children in the investigated context, being made mainly by swallowing disorders due to neuropathy. The child with a stoma requests special attention from health professionals, especially nurses.</td>
</tr>
<tr>
<td>03</td>
<td>Quantitative</td>
<td>Consultation of medical records and direct observation</td>
<td>The most frequent complication in stomas in children was contact dermatitis. Risk factors identified: age, poor adaptation or non-use of the collector and the absence of demarcation of the stoma site.</td>
</tr>
<tr>
<td>04</td>
<td>Quantitative</td>
<td>Interview and observation</td>
<td>Congenital malformations (69.1%) were presented as the main indications for performing the stoma. The gastrointestinal system was the most affected (68%). There was a predominance of temporary stomas (43.6%). Accidental exit from the gastrostomy tube was the most common complication (50%).</td>
</tr>
<tr>
<td>05</td>
<td>Qualitative</td>
<td>Interview</td>
<td>Progressive parental acceptance of gastrointestinal ostomy is observed. Fear, insecurity, and denial are initial feelings when faced with the need to have an ostomy. There is maternal overload and a reduction in the support network.</td>
</tr>
<tr>
<td>06</td>
<td>Qualitative</td>
<td>Interview</td>
<td>The challenges of tracheostomy are related to a new condition, management of tracheostomy, lack of structure for the development of care, frequent presence of tracheal secretion, fear of obstruction of the cannula, and decannulation.</td>
</tr>
<tr>
<td>07</td>
<td>Qualitative</td>
<td>Interview</td>
<td>The main places of learning for family caregivers were the following: outpatient, hospital, home. Family caregivers experience subjective, social, and economic challenges in the practice of child care.</td>
</tr>
<tr>
<td>08</td>
<td>Qualitative</td>
<td>Group discussion; participant observation; dynamics of creativity and sensitivity</td>
<td>There is little knowledge and unpreparedness of family members to deal with the child with an ostomy. The family members reported support received mainly from the nursing team. Teachers revealed the importance of nurses in the school context.</td>
</tr>
<tr>
<td>09</td>
<td>Mixed</td>
<td>Bibliographic survey</td>
<td>Among the evidences identified in defense of the use of therapeutic toys, there are the following: high levels of satisfaction of the participants and their families and/or professionals; increasing the child’s ability to deal effectively with his clinical condition; reducing the child’s stress, distress, and anxiety; adherence to treatment; children’s motivation to understand their situation due to the use of playful activities; improving the child’s well-being; facilitating self-care; promoting greater independence; applicability of the approach at any level of development; and the opportunity to assess the child’s current level of knowledge and willingness to cope with the clinical situation.</td>
</tr>
<tr>
<td>10</td>
<td>Quantitative</td>
<td>Consultation of medical records and Interview</td>
<td>Ostomized children and adolescents showed independence, social isolation, emotional involvement, and difficulty in accepting the treatment. On the other hand, their parents identified their children’s dependence and did not perceive the social exclusion resulting from overprotection.</td>
</tr>
<tr>
<td>11</td>
<td>Qualitative and Quantitative</td>
<td>Interview and bibliographic survey</td>
<td>The educational booklet proved to be a valid educational material and can be used to assist the caregiver in the most effective care for children with a gastrostomy.</td>
</tr>
<tr>
<td>12</td>
<td>Qualitative</td>
<td>Interview and participant observation</td>
<td>For the couple, the experience presents a double challenge: learning to be parents in this condition and needing to provide specialized care for their child. Specialized care is a new event for parents who start to feel weak because they do not have a social reference to base their interactions on.</td>
</tr>
</tbody>
</table>

FIGURE 3: Epistemological aspects related to the data and/or results. Rio de Janeiro, Brazil, 2020.
Regardless of the cause and the organic system affected by the stoma, it is important to emphasize the need for care planning that includes the prevention of immediate and late complications, the proper management of the stoma by parents and/or other caregivers, as well as a discharge plan that meets the real needs of the children and their families\textsuperscript{16-18}.

It was noted in the results that the home and outpatient contexts were the most researched, as well as a predominance of the family member as a research participant. This finding may be associated with the fact that, in the outpatient context, the family member appears as the main caregiver of the child with a stoma, mainly the father and/or mother, which can impact on the family dynamics and structure.

Regarding the above, almost half of the caregivers of children with a stoma in Uganda said that their spouse left their family, and 93% of the caregivers had to leave work to care for the child at home. In that same study, 86% of the caregivers were mothers, while 13% were fathers\textsuperscript{19}. In addition, family members of children with a gastrostomy tend to decrease or avoid going out, they face difficulties in transportation, in obtaining necessary and financial materials, as well as prejudice and abandonment of work, culminating in possible overload and family imbalance\textsuperscript{20}.

It is known that the choice of a theoretical and methodological framework must occur through an epistemological awareness consistent with the object and objective(s) of the study. Among the theoretical references used in the selected studies are Vigotsky's Social Learning, Geertz's Interpretative Anthropology, Symbolic Interactionism, and the Theory of Probability/Mathematical Inferences. Conceptual bases related to Care were also identified in the perspective of Collière; Family-Centered Care; Child, Family, Hospitalization and Therapeutic Play.

A study carried out with the aim of analyzing the dissertations and theses of the Post-Graduate program in Nursing at a federal university in Northeastern Brazil identified that the Theory of Basic Human Needs was used in 37% of the studies, followed by Moscovici’s Theory of Social Representations (32.6\%\textsuperscript{21}).

Regarding the methodological references or analysis techniques found in the studies, there are the following: Grounded Theory, Ethnographic Method, Content Analysis, Narrative Analysis, Systematic Review, and Statistical Analysis. There is a predominance of research methods that favor the understanding of research phenomena.

Likewise, a study developed in order to analyze the training of PhDs in Brazil identified that, in the 2010-2012 triennium, the predominant approach in doctoral theses was qualitative (330-66.1\%), followed by quantitative (139-27.9\%) and by quali-quantitative (30-6.0\%)\textsuperscript{22}. With regard to the qualitative approach, it is understood that, when using it in the field of health, the researcher works with a multitude of information, which needs to be organized and analyzed in order to achieve an understanding of the phenomenon, requiring the same reflexivity and positionality in the production of knowledge\textsuperscript{23}.

In the selected qualitative approach studies, it was verified that the interview was the data collection technique most used by the researchers. From the interview, immersion in the data is possible, which is obtained through a dialogical interaction between the interviewer and the interviewee\textsuperscript{24}. Conducting an interview allows the researcher to deepen on the issues under study through face-to-face interaction, retaking unclear points and perception of gestures and physiognomy of the participants\textsuperscript{25}. Therefore, the interview presents itself as a very appropriate data collection technique for studies with a qualitative approach.

**Conclusion**

The results obtained from this research made it possible to understand that the production of knowledge related to the child with a stoma in the \textit{Stricto Sensu} Post-Graduate Courses in Nursing in Brazil is predominantly guided by the epistemology of the understanding that involves care and caring for children with a stoma and their families. The researchers’ interest in the care action was noted, proved by a greater concentration of studies in the epistemic care area/field, in the following research line: Care Process in Health and in Nursing. This fact reveals a pragmatic perspective of the researchers on the topic at hand.

There is a trend in research for the home and outpatient contexts, with family members being the most investigated research participants. The limitation of this study is the analysis of research studies from \textit{Stricto Sensu} Post-Graduate Nursing courses. Thus, deepening this analysis is signaled as the direction for the \textit{Stricto Sensu} and \textit{Lato Sensu} Post-Graduate courses in areas related to the field of Nursing knowledge.
REFERENCES


