



The process of addressing fundamental needs by nursing students during internship: A qualitative study

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ABSTRACT

Aim: This study explores how nursing students address patients' fundamental needs during their internships, identifying key processes and challenges.

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Person-centered care
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Background: The Fundamentals of Care framework emphasizes a holistic, person-centered approach to nursing by addressing patients' physical, psychosocial and relational needs. However, its integration into nursing education remains limited, with a stronger focus on technical competencies rather than fundamental care.

Design: Qualitative descriptive study.

Methods: The study was conducted within the FoC-Form project in northern Italy. Semi-structured interviews were carried out with first- and second-year nursing students following their internships. Thematic analysis was applied to identify emerging themes and patterns.

Results: Four themes emerged: personal resources, care dynamics, contextual features and characteristics of the internship program. Students highlighted the importance of time management, relational aspects and mentoring in delivering fundamental care. Differences between first- and second-year students were observed in their clinical reasoning and approach to patient-centered care. Organizational factors such as workload and staffing also influenced their ability to meet fundamental needs.

Conclusion: This study highlighted the critical role of mentorship and organizational support in fostering the integration of the Fundamentals of Care framework in nursing practice. Findings suggest the need for curriculum enhancements that balance technical training with the relational and holistic aspects of patient care. Nursing leadership should prioritize creating supportive environments that facilitate fundamental care practices.

1. Introduction

The Fundamentals of Care (FoC) Framework is a conceptual model that addresses patients' physical, psychosocial and relational needs through holistic, person-centered care grounded in meaningful caregiver–patient relationships (Feo et al., 2018). It emphasizes the importance of trustful relationships and a holistic approach that integrates physical, psychological and relational dimensions of care (Kitson, 2023a). The framework also highlights the influence of the care environment on patient outcomes, showing how context affects care quality, safety, dignity and overall well-being (Kitson, 2023).

Despite its significance, the implementation of the FoC framework in nursing education is often overlooked (MacMillan, 2016). Nursing curricula tend to prioritize technical and procedural skills over the relational aspects of care, which are central to the FoC model (Conroy et al., 2016). This imbalance may lead to an undervaluation of fundamental care needs among nursing students, who are more likely to focus on specialized and task-oriented activities (Feo et al., 2019). The disconnection between theory and practice in addressing fundamental needs during clinical practice further complicates this issue (Palese et al., 2019). Missed care, particularly in areas such as hygiene, nutrition and mobility, is frequently reported in both educational and clinical settings, compromising patient outcomes (Bagnasco et al., 2017).

2. Background

Clinical internships serve as a pivotal component of nursing education, providing students with hands-on experiences that are essential for translating theoretical knowledge into practice. Internships offer a unique opportunity to reinforce the principles of the FoC framework by fostering student engagement with the holistic aspects of patient care (Siri Lygum Voldbjerg et al., 2018). Given the importance of the FoC integration in the educational pathways of nursing students, the FoC-Form Project was initiated in northern Italy to examine how the integration of the FoC framework during internships influences nursing students' approach to meeting fundamental care needs (Bagnasco et al., 2024).

The project underscores the role of clinical internships in cultivating a deeper understanding of the comprehensive nature of patient care, bridging the gap between theoretical learning and real-world practice (Alderman et al., 2018). Within the broader FoC-Form project, this study does not aim to evaluate curriculum integration, but to understand how students address patients' fundamental needs in daily practice. In this sense, the FoC Framework served as a conceptual lens that guided data interpretation.

2.1. Aim

The FoC-Form project includes several interconnected strands aimed at integrating the FoC Framework into the nursing curriculum. The present study represents a component of this broader initiative. Importantly, it does not evaluate the learning outcomes of students exposed to the newly integrated curriculum. Rather, it aims to explore how students who followed the standard, pre-implementation curriculum, serving as a baseline cohort, address fundamental care needs during their clinical internships.

3. Methods

3.1. Study design

This study used a qualitative design to investigate participants' experiences and perspectives through semi-structured interviews. Thematic analysis (Braun and Clarke, 2021) was employed to systematically identify, analyze and report patterns within the data.

3.2. Participants

The study was conducted within the broader context of the FoC-Form project (Bagnasco et al., 2024). Participants were selected using purposive sampling. The sample included first- and second-year students who had not received formal training in the FoC Framework during the study. Recruitment took place after the participants had completed their internship and all students provided informed consent. There were no other specific inclusion criteria to report. The inclusion of participants was contingent on receiving detailed information about the study and each participant voluntarily signed an informed consent form prior to their involvement.

3.3. Data collection

Data were gathered between 2022 and 2023, through semi-structured interviews conducted based on the participants' preferences concerning location, time and mode of communication, with in-person interviews prioritized where feasible. The interviews were conducted in two subsequent rounds, first involving first-year students, followed by second-year students. The first round included first-year undergraduate students and was guided by an initial semi-structured interview schedule (Table 1). The questions were developed by the research team, which included nurse educators and researchers with expertise in FoC and qualitative methods and were informed by the existing literature on fundamental care and on nursing students' learning in clinical placements. The guide was designed to elicit students' lived experiences in addressing patients' fundamental needs, with prompts organized to

Table 1
Interview guides for first- and second-year students.

1st Year	2nd Year
<p>Is there an episode when attending to the person's needs during your internship that you remember in particular and would like to share?</p> <ul style="list-style-type: none"> • How did you feel during the episode you shared? • What facilitated the care for basic needs? • What hindered your care for basic needs? • What facilitated decision making? • What hindered decision making? • What were the consequences? (For the person you cared for; for you) • What did you learn from this experience? 	<p>Considering the second-year internship, we are interested in exploring the following aspects of your experience:</p> <ul style="list-style-type: none"> • Thinking about a specific case, how did you identify the patient's basic needs? • Thinking about one of your cases of patient care, how did you prioritize the needs you identified? • Thinking about a nursing case, if there were any, how did you address the factors that hindered nursing care? • Thinking about a nursing case, if any, how did you address the factors that favoured nursing care? • Thinking about a nursing case, how did you choose the nursing interventions to be delivered to patients in relation to their needs? • Could you describe a nursing episode where the time variable influenced nursing care? • Thinking of a nursing case, what do you think were the impacts of the nursing care you provided? • In your experience when receiving feedback from patients, caregivers, family members internship guides, or other health care personnel how did it subsequently affect your nursing care? • Could you describe a moment in the internship that was a turning point in the nursing care you provided?

reflect the core dimensions of the FoC Framework (relationship with the patient, integration of care and care context), while leaving space for unanticipated issues to emerge. Before data collection, the interview guide was discussed within the research team to ensure content relevance and clarity. Minor wording changes were introduced after these discussions to enhance the accessibility of questions for first-year students. Interviews with first-year students continued until data saturation was reached, that is, when no new relevant themes or insights emerged from subsequent interviews. Following a preliminary thematic analysis of the first set of interviews, the guide was refined to better suit second-year students (Table 1). Additional prompts were included to explore how students integrated fundamental care with more complex clinical reasoning, prioritization and interprofessional collaboration. The same core areas were maintained to preserve comparability between the two groups, but examples and follow-up questions were adapted to the more advanced level of training. The second round of interviews also continued until data saturation was reached (Braun and Clarke, 2021). All interviews were conducted by members of the research team expert in qualitative interviewing. A short training session was organized to standardize the use of the interview guide and to ensure that all interviewers adopted an open, non-judgmental stance and used probing techniques consistently. After each interview, field notes were taken to document contextual elements and initial impressions that could inform the subsequent analysis. All interviews were audio-recorded with participant consent and transcribed verbatim for subsequent analysis.

3.4. Data analysis

Data were analyzed using thematic analysis (Braun and Clarke, 2021). The analysis followed a comprehensive thematic approach aimed at identifying meaningful patterns within the interviews. Initially, the transcripts were thoroughly read and re-read to fully familiarize with the data. During this phase, preliminary notes were taken to capture initial insights and observations.

Following this, the dataset was systematically coded. Features of the data that appeared particularly relevant or insightful were marked, allowing for a detailed exploration of the entire dataset. This coding process ensured that all significant aspects of the data were identified and categorized.

Attention was paid to how the emerging codes and themes reflected, extended or problematized the core dimensions of the FoC Framework. In practice, this meant that, during coding and theme development, the analysts repeatedly asked how students described their relationships with patients, how they integrated different aspects of care (physical, psychosocial, relational) and how contextual and organizational features enabled or constrained fundamental care. This abductive movement between the empirical material and the conceptual framework allowed us to maintain a close connection between the themes and the

theoretical lens guiding the study.

Codes were grouped into potential themes by collating relevant data to identify recurring patterns across participants' experiences. Themes were then reviewed against the original data and coding extracts to ensure coherence and faithful representation of participants' perspectives. Following refinement for clarity and distinctiveness, themes were defined, named and analyzed in depth to capture their core meaning and the aspects of the data they represented.

Finally, the results were written up into a cohesive and insightful report. Quotes from the dataset were used to illustrate the themes and bring the analysis to life, resulting in a clear, logical and engaging account of the participants' experiences, within and across the identified themes.

Formal member checking with participants was not conducted due to time constraints and the dispersion of students across different clinical settings and academic commitments at the end of the internship periods. However, credibility was reinforced by presenting and discussing the emerging themes with the wider research team, including clinical educators involved in the FoC-Form project and by integrating illustrative quotations that reflected a range of participants and perspectives.

3.5. Rigour and trustworthiness

To enhance the rigor and trustworthiness of the research, several strategies were implemented throughout the study. Peer debriefing sessions were conducted to review and discuss emerging findings, ensuring consistency and credibility during data interpretation. The research team regularly engaged in collaborative discussions to reach consensus on the development of themes and sub-themes. In addition, the consistency between the themes and the FoC Framework was repeatedly examined during team meetings, to ensure that the interpretation of the data remained grounded in participants' accounts while being conceptually coherent. Taken together, these strategies enhanced the dependability and confirmability of the findings. Verbatim quotes from participants were integrated into the analysis to support the reliability and confirmability of the findings. Finally, external methodological experts reviewed the entire analysis process, along with the manuscript, to ensure robustness and credibility.

3.6. Ethical considerations

Ethical approval for this study was obtained from the Regional Ethics Committee of Liguria, with a positive opinion (591/2021). Participants were fully informed about the study's aims, procedures and their rights, including confidentiality and anonymity, which were ensured using pseudonyms. Participation was voluntary, with the option to withdraw at any time without consequences. Interview questions were designed to be appropriate and respectful and data were securely stored and used

solely for research purposes in accordance with data protection regulations. Written informed consent was obtained prior to participation and opportunities for questions were provided throughout the study. The research was conducted in compliance with the Declaration of Helsinki and relevant national ethical guidelines.

4. Results

The sample included seven first-year and eight second-year students enrolled in a Bachelor of Nursing programme, who were interviewed at the end of their internship period. Through the thematic analysis of the interviews, 4 themes were identified, common to the students of the two

years of study, describing the phenomenon of taking care of patients' basic needs. These are personal resources, caring dynamics, characteristics of the context and characteristics of the internship course. Table 2 shows respectively the themes, sub-themes and codes that were identified from the interviews of the students of the two academic years.

4.1. Theme 1: personal resources

This theme encapsulates several subthemes that identify the resources that each individual, regardless of whether student nurse or qualified nurse, can make available to patients to take care of their basic needs. The resources that were identified from both the first and the

Table 2
Details of themes and subthemes identified during the analysis of interviews with first- and second-year students.

THEMES	Subthemes		Description	
	1st Year	2nd Year	1st Year	2nd Year
Resources - Personal	Time		Necessary for a caring relationship that ensures continuity - Dialogue, Welcoming, Listening "Dedicated Presence" - Professionals' choice to devote time to patients	
	Person-Centered Approach		Allows a broad care focus and well-rounded uptake Identification of specific needs for each patient	Clinical Reasoning-in consideration of patient characteristics including personal (Vulnerability, Dependence) and clinical ones Clinical Evaluation and Re-evaluation, which also involves assessing the outcome of a given intervention (Safety, Quality, Relationship, Satisfaction, Timing, Empowerment)
	Student-patient Relationship		Reasoning about the nature of needs and thus their priority, including consideration of patient preferences and the priority each patient assigns to various needs Mediation, Treatment, Advocacy, Active Listening, Involvement, Respect, Communication, Observation, Proximity, Understanding, Dialogue, Empathy, Immersion, Trust, Sharing "Evasive Dialogue"- allowing venting, distraction, and exploration of the patient's psychological and social aspects	"Educational Relationship"-allowing for patient information, including informal information, and creating the conditions for seeking consent and permission before proceeding with care interventions
	Little Gestures	Formal Tools	Perceived as such by students/professionals, but critical for the patient and the relationship because they often allow for insights into needs that would otherwise remain unexplored	Medical history Theoretical approaches Theoretical training Assessment Individual Care Planning Coded diagnosis
Care Dynamics	Emotional Feedback		Satisfaction Gratification Embarrassment Empathy Melancholy Trust Relief	
	Team Relationships		"Teamwork" - confrontation with all health care professionals on the health care team as a resource	Conflict - Recognition, Assessment and Management
	Subjectivity		Characteristics of patients (character) and professionals (character, lack of confidence, limitations, preconceptions, motivation) perceived as influencing caregiving - Need for Adaptation Contrasting perceptions of professionals and patients regarding the meaning of a given act of care	
Contextual Features	General Perceptions		Organizational Climate Roles and Dynamics	
	Organization		Staffing Levels Workload Inadequate Time Discrepancy between "how it is" and "how it should be"	Healthcare model
Characteristics of the Internship Pathway	Value of Mentoring		Emotional Feedback - Validation, Positive Reinforcement, Enthusiasm, Tranquility, Support Learning through examples	
	Role of the Trainee		Increased Time Available Different Relationship with Patients Need to find one's place in the care setting	"Educational development" - greater confidence as time goes by, value of the training course Value of the presence of other students in Internship
	Formal Aspects		Organization of the internship - Objectives to be achieved, Activities carried out because "to be done within the internship"	
	Educational Context		Value of the training course as a whole - importance of theoretical training Lack of consistency between classroom content and clinical internship	

second-year students are:

Time: for both years, the time factor was key for taking care of patients' essential needs. In fact, having enough time was described as essential to establish a caring relationship between nurses and patients and ensure continuity of care. Dedicating adequate time to patient care facilitates welcoming, dialogue and listening:

"So, I spent the majority of my time trying to actually understand his necessity, his need..." (I - 06)

"In my opinion, time is really also presence, talking, bringing out patients' fears and doubts definitely brings better management..." (II - 06)

A crucial aspect in this subtopic is the professionals' willingness to take care of patients' essential needs and their conscious choice to devote time to activities that enable to fully meet those needs:

"Times when there are breaks or times when there is little to do, that is... I ask myself: 'what is there actually to do, what can I do?' and very often, precisely, it's talking to patients, taking a little bit more care of them and hearing how it's going" (II - 03)

Person-Centered Approach: This subtheme encompassed strategies that enabled students from both years to deliver individualized care by continuously reflecting on patients' needs, preferences and the priorities they assign to different activities and interventions:

"A person was in a certain way with certain habits with his or her past and all this I learned just by observing person by person and understanding the needs of one person compared to another" (I-02)

"Definitely (the provision of care) needs to be changed according to the person in front of you. Not all of us are the same, not all of us live it the same way, so definitely while with her it's a certain relationship with others, maybe I have to be a little more detached, a little more..." (I - 06)

Interviews with first-year students revealed the importance of maintaining a broad care focus that allows for "well-rounded" patient needs to be taken care of, considering that each time they interact with a patient, they are relating to an individual characterized by their own referrals and values:

"And from her point of view I think I've brought her some comfort, right? There is some relief from the spiritual point of view, because rightly nursing care is not just from the point of view of being there for her or seeing the illness itself. You also need to see the person from the social point of view, from the spiritual point of view, with what surrounds them, what they feel" (I-01)

Interviews with second-year students revealed a stronger focus on clinical reasoning, with greater attention to patient individuality while maintaining consideration of the clinical context. Meeting patients' essential needs therefore emerged as a process grounded in continuous clinical assessment and reassessment, informed by the evaluation of outcomes resulting from nursing interventions:

"So, I planned both educational interventions with regard to, for example, drains, because he was going to go home with two drains out of four anyway [...] and then all the interventions, that is, that served to avoid the complications of surgery." (II - 07)

Student-patient Relationship: This theme emerged among students from both years, who identified relationships as fundamental to meeting patients' essential needs by creating an effective and humane care context. Physical and emotional proximity fosters trust and enables attention to nonverbal cues often overlooked in verbal communication. This relational communication operates at multiple levels, supporting empathic understanding beyond spoken words. Through respect, mediation, dialogue and empathy, nurses promote advocacy and ensure that patients' needs and wishes would remain central to the care process:

"Maybe when, just exactly, she was screaming maybe I would come up to her and touch her even just her arm and say: 'What is it? What is it?' She would look at me with big eyes and maybe she didn't even know she was screaming; however, I would make myself understood somehow and still manage to calm this person down." (I-02).

"Talking, observing especially perhaps the movements. The expressions of the.... So it was very important communication both. Verbal as well as nonverbal." (II - 02)

It was only from the interviews with second-year students that a

special focus on "educational relationship" emerged, which implies, along with the above, an informational activity on the part of professionals, an activity that is necessary to reach a consensus with patients before proceeding with any intervention aimed at meeting one of their needs:

"So it took a little bit of time to convince her and to make her understand that it was important to take that blood sample and then to convince her and then to establish that confidence..." (II - 03)

"Explaining the situation, so the situation is clinical by going to, in short, do a kind of education, so provide information that could give her a full picture of the situation." (II - 06)

Moreover, from the interviews of the second-year students, the "conflict" factor emerged and the importance of its assessment and management to facilitate the taking care of patients' fundamental needs:

"Comes to mind maybe the presence of family members [...] in some things they were not really in tune with the nursing team [...] we talked directly with the family," (II - 06)

Little Gestures: this subtopic includes those aspects that in practice have been indicated as small details and small attentions perceived as such by students and professionals, but they are critical when taking care of patients' essential needs because they enable to delve into needs that would otherwise remain unexplored:

"In my opinion it made him happy even just when we greet patients, maybe precisely you enter the room not really for that patient but for the other one, anyway just saying 'Good morning Good morning' and 'how are you?' (I - 02)

"He didn't want anything from.... that is, like medication to be um let's say.... to manage his pain, but he was just asking for ice to put on the back of his neck. And when we brought it to him he still was serene, happy in the, in his.... in let's say in his being in pain" (II - 07)

Formal Tools: this subtopic emerged only from the interviews of second-year students. These included various tools available to them during clinical practice and, in part, learned during their theoretical training:

"It was very helpful to me all the study done so. Also thinking back to what was done, maybe in the workshops before the internship." (II - 02)

"Based on what I studied, I tried to identify priorities, that is, there was a time, for example, when one of my patients she couldn't breathe, I certainly prioritize that over everything else." (II - 05)

4.2. Theme 2: care dynamics

This theme includes several aspects that were identified mainly in the interviews of both first- and second-year students, which characterize nursing care as generally understood, regardless of whether it is delivered by nurses who are already working or still trainees. These nursing dynamics were indicated as influencing the care of patients' basic needs.

Emotional Feedback: emotional feedback was shared as a key aspect capable not only of providing a return to the professionals of the interventions delivered, but also of motivating and guiding the care provided:

"You imagine the pain she's going through, [...] treat her as best you can, avoid the trauma at least possible." (I-01)

"I felt good because I helped her. I listened to her. It was good, seriously." (I - 05)

"A satisfaction on their part. Mine than that of the patient, because obviously I was able to meet their needs and they were happy that maybe I had met them in the time and manner they, they requested." (II - 02)

Team Relationships: this subtopic includes all relationships that occur in care settings and during care dynamics. These occur primarily between colleagues and the rest of the team and emerged as a key resource for effective care of patients' basic needs:

"Feeling involved in their, in their team. Because feeling like a fish out of water makes you do a lot worse because it makes you feel uncomfortable." (II - 04)

"By also comparing myself with physicians, so also teamwork on the part of the physician-nurse practitioner. Still asking, informing myself both with colleagues and with the patient himself." (II - 05)

Subjectivity: this subtheme includes all aspects that personally characterize care actors and as such may influence the act of care and the taking care of patients' basic needs. These included, for example, personal characteristics and traits of professionals and patients and self-perceived limitations of professionals:

"We will have our character and so character is something that maybe can block you." (I-01)

"The patient had turned out to be very open and I could talk to him very calmly. And so it was also easy to be able to identify his issues" (II - 07)

4.3. Theme 3: contextual features

This theme includes two subtopics common to first- and second-year students, which were related to the care settings where nursing care is delivered and influence nursing students' care of patients' basic needs.

General Perceptions: includes factors such as organizational climate, which as identified through the interviews of first-year students, was also influenced by the nurses' roles and the dynamics between various professionals:

"It's a nice environment. Then nurses, all the healthcare assistants workers that is, there is a nice environment there." (I-01)

"There is good communication between nurses and doctors, so collaboration and teamwork, from that I don't notice it much" (II - 05)

Organization: the organizational factors that strongly influenced the care of patients' basic needs were "staffing levels," "workload," "discrepancy between reality and expectation," and "time."

"There are many who do (miss the "patient care"). There are those who maybe forget it or because they have their own problems or because they have to run and they don't have ... that little detail that much" (I-10)

"There will also be situations where I might be stressed because there will be a lot. There will be a lot of activity in a department because there's never a day when you are calm." (II - 07)

"Since there are really so many patients and the nurse has to take care of many of them... sometimes interventions can't be done at a certain moment because there are several... um, several tasks to be completed and maybe the patient suffers because of it, but because they are, let's say, neglected by nursing care when all of them should have priority." (II - 07)

From the interviews with second-year students, the concept of 'care model' in the departments where the internship was carried out emerged and how the adoption of one model rather than another can strongly influence the way patients' fundamental needs are addressed by nursing students:

"When tasks are divided like this, withdrawal therapy becomes more, in my opinion it becomes more difficult. Because everyone has a task, maybe given to them, even with a time limit, so let's do it within the hours and then it becomes more difficult to be able to extend maybe the time with the patient who needs it. Here." (II - 02)

4.4. Theme 4: characteristics of the internship program

This theme encompasses aspects that emerged from interviews related to the internship program and the students in their roles as trainees, which influenced the way patients' fundamental needs were addressed by nursing students. From the interviews with first and second-year students, two subthemes were identified:

Value of Mentorship: this lies in the direct learning of managing new situations, receiving positive reinforcement and reassurance through the support of the tutor and acquiring skills by observing and collaborating with experienced professionals. This emotional and practical support is crucial for developing confidence and competence in patient care. Indeed, from the interviews with first-year students, we identified the important role of learning through the example of educational tutors:

"You have more communication; you see what other nurses are doing and you observe and if you have any concerns you talk to them" (I - 07)

"I was simply reassured by the nursing staff as far as the... Let's say getting it done, doing one thing at a time, slowly, first start one, bring it to completion and then start with the other." (II - 02)

Role of the Intern: The role of the intern in taking care of patients' essential needs involves having more time to spend with patients and establishing a special relationship with them for the very reason of being a student:

"As a student I was always immediately very helpful, then at first I wanted to meet everyone's needs." (I-02)

"I was able to manage the relationship with the patient, much better, being more careful and lighter, without having other thoughts. Here, without thinking I must go and do this thing..." (II - 02)

Interviews of first-year students revealed the need expressed by participants to find their own space in the care environment:

"A little bit like this because it was the first times, so a little bit I didn't know how to behave" (I-02)

Interviews with second-year students, on the other hand, revealed the value of the educational growth that over the course of their internships the students gained and made available to patients in identifying and taking care of their essential needs. In addition, an appreciation for the presence of other students during the internship experience emerged from this population:

"A little bit based on all the experiences we had in internships, because by now anyway, we had many internships and so...[...] based on that I was able to determine what was the most important thing to do at that time" (II - 01)

From the interviews with first-year students alone, two additional sub-themes emerged:

Formal aspects: which encapsulate several aspects that influenced students when caring for patients' essential needs and that are specific to the internship training pathway:

"There are close to her when for example I have to go for breakfast, breakfast in bed also as the goal (of the internship)" (I-01)

Educational context: which contextualizes the internship training in the broader training course including, for example, lectures and simulations and which also influenced students during their internship:

"Maybe they go in contrast concerning the theoretical aspect, the training aspect" (I - 03)

5. Discussion

The study FoC-Form represents one of the first structured initiatives aiming to integrate the FoC Framework into the Italian nursing curriculum. Within this broader context, the present qualitative study does not evaluate the curriculum integration itself but explores how nursing students address patients' fundamental needs during internships. In fact, previous studies have shown that nursing students, when placed in clinical scenarios, do not correctly identify patients' basic needs, especially those related to the psychosocial sphere (Jangland et al., 2018). However, there is no evidence of the strategies they put in place to take care of needs in all situations.

The four themes identified in this study – personal resources, care dynamics, contextual features and characteristics of the internship programme – can be mapped onto the three core dimensions of the FoC Framework (Conroy et al., 2016). Personal resources and care dynamics are closely related to the establishment and maintenance of the nurse–patient relationship; contextual features reflect how the care environment shapes the possibilities for delivering fundamental care; and the characteristics of the internship programme influence how students learn to integrate different aspects of care in practice. This alignment suggests that, even in the absence of formal training in the framework, students' experiences can be meaningfully interpreted through its lens.

An important aspect of this study is the involvement of both first- and second-year nursing students, which allowed differences in their approach to the trainee role and to the FoC to emerge, in line with

previous findings (Bagnasco et al., 2022). While common themes were identified across both years, differences were evident in subtopics and coding. Time emerged as a key resource for addressing patients' fundamental needs, while its lack was identified as a contextual factor undermining care, confirming previous evidence (Conroy, 2018). Time also holds a strong ethical dimension in nursing practice, being, together with space, a core component of the slow ethics framework that supports quality, respectful and equitable care (Gallagher, 2020). The availability of adequate time and space further emerged as a prerequisite for building meaningful relationships with patients.

As confirmed by this study and previous research, relationship building requires active engagement from all individuals involved and is characterized by active listening, identification, validation and involvement (Feo et al., 2023). Relationships within the multidisciplinary team, including students, also emerged as central. The involvement of educational tutors and internship supervisors was identified as critical for integrating the FoC Framework into education programs, confirming previous findings (S. L. Voldbjerg et al., 2018). Overall, students emphasized the importance of mentoring and appropriate care settings in supporting the integration of the FoC Framework into clinical practice.

Moreover, this reasoning should be extended to general care settings. Interview findings confirmed the crucial role of departments, hospitals, staffing levels and organizational characteristics in ensuring that patients' fundamental care needs are met (Conroy, 2018). These results are consistent with previous evidence highlighting how the implementation of the FoC Framework depends on educational and clinical contexts that foster its understanding and application at all levels (S. L. Voldbjerg et al., 2018). In this regard, nursing leadership plays a key role in safeguarding patients' fundamental needs and in actively promoting care settings where the principles of the FoC Framework are prioritized and validated at an interdisciplinary level (Kitson, 2023).

An important finding emerging from second-year students concerned care models, highlighting how the type of model adopted in each setting directly affects the ability to address patients' fundamental needs. This finding is supported by previous evidence showing that task-oriented care models are misaligned with key principles of the FoC Framework, including relationships, participation and patient-centeredness (Parreira et al., 2021). Students emphasized the need to place the person—rather than the clinical case—at the center of nursing care, considering individual priorities, beliefs and values, in line with previous findings reported by Tieu et al. (2022).

6. Conclusion

This study provides insight into how nursing students address patients' fundamental needs during clinical internships, highlighting the relevance of integrating the FoC Framework into nursing education. Differences between first- and second-year students underline the importance of time, space and relationships in delivering holistic care. The findings emphasize the key role of mentoring and supportive organizational contexts in enabling the practical application of the Framework. Moreover, they show that task-oriented care models hinder students' ability to meet fundamental needs, whereas patient-centered and relational approaches better align with the FoC principles. These results call for nursing leadership to promote care settings and educational environments that support comprehensive, patient-centered care.

Future research directions and limitations

Future research should examine the long-term impact of integrating the FoC Framework on nursing practice and patient outcomes, as well as how care models and organizational factors influence its application across clinical settings. However, the study's limitations must be considered in future research. This study was conducted within a single Bachelor of Nursing programme in northern Italy with a relatively

homogeneous student population, which may limit transferability to other educational and clinical contexts. Limited demographic information was collected to protect student confidentiality. Future research should include more diverse educational settings and consider the influence of programme structure, clinical placement types and student characteristics on fundamental care learning.

Ethical considerations

Ethical approval for this study was obtained from the Territorial Ethics Committee of the Liguria Region, with a positive opinion (591/2021). Participants were thoroughly informed about the study's purpose, procedures, and their rights, including confidentiality and anonymity, which were ensured by using pseudonyms in the transcriptions. Participation was entirely voluntary, with the option to withdraw at any time without any consequences.

To minimize potential risks, measures were implemented to ensure that interview questions were appropriate and respectful. Data were securely stored and used exclusively for research purposes, in compliance with data protection regulations. Participants' informed consent was obtained in writing before their involvement, and they were given opportunities to ask questions and seek clarification throughout the study.

The study adhered to the principles outlined in the Declaration of Helsinki and relevant national ethical guidelines to uphold the highest standards of research integrity.

CRedit authorship contribution statement

Sasso Loredana: Resources, Methodology, Conceptualization. **Mignone Manuela:** Investigation. **Catania Gianluca:** Writing – review & editing, Supervision, Resources, Methodology, Conceptualization. **Bassi Erika:** Investigation. **Mazzoleni Beatrice:** Supervision, Resources, Methodology. **Sanvito Paola:** Investigation. **Barbieri Martina:** Writing – original draft, Formal analysis, Data curation. **Dal Molin Alberto:** Supervision, Resources, Methodology. **Montani Doriana:** Investigation. **Bagnasco Annamaria:** Supervision, Resources, Methodology, Conceptualization. **Arcadi Paola:** Investigation. **Cosmai Simone:** Investigation, Formal analysis. **Zanini Milko:** Supervision. **Mansi Laura:** Investigation. **Aloia Vincenza:** Investigation. **Cattani Daniela:** Writing – original draft, Investigation, Formal analysis, Data curation. **Falbo Sara:** Investigation. **Pagnucci Nicola:** Methodology, Investigation, Formal analysis, Data curation. **Trentin Gianluigi:** Investigation. **Lusignani Maura:** Supervision, Resources, Methodology.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

- Alderman, J., Kastelein, C., Feo, R., Frensham, L., Salamon, Y., Kitson, A., 2018. Prioritizing the Fundamentals of Care Within the Prelicensure Nursing Curriculum. *J. Nurs. Educ.* 57 (8), 498–501. <https://doi.org/10.3928/01484834-20180720-09>.
- Bagnasco, A., Rossi, S., Lanna, S., Dasso, N., Ottonello, G., Catania, G., Zanini, M., Aleo, G., Timmins, F., Sasso, L., 2022. How do undergraduate nursing students learn about the fundamentals of care? A pilot cross-sectional attitudinal study. *J. Prev. Med Hyg.* 63 (3), E448–e455. <https://doi.org/10.15167/2421-4248/jpmh2022.63.3.2153>.
- Bagnasco, A., Timmins, F., de Vries, J.M.A., Aleo, G., Zanini, M., Catania, G., Sasso, L., 2017. Understanding and addressing missed care in clinical placements - Implications for nursing students and nurse educators. *Nurse Educ. Today* 56, 1–5. <https://doi.org/10.1016/j.nedt.2017.05.015>.
- Bagnasco, A., Catania, G.; Zanini, M.; Pagnucci, N; Lusignani, M.; Dal Molin, A.; Mazzoleni, B.; Sasso, L. (2024). Integrazione del Fundamental of Care Framework nella formazione infermieristica: protocollo dello studio FoC-FORM. *L'Infermiere* (61:2), 86-98. <https://doi.org/10.57659/SSI.2024.07>.
- Braun, V., Clarke, V., 2021. Thematic Analysis: A Practical Guide. SAGE Publications. (<https://books.google.it/books?id=mToqEAAAQBAJ>).
- Conroy, T., 2018. Factors influencing the delivery of the fundamentals of care: Perceptions of nurses, nursing leaders and healthcare consumers. *J. Clin. Nurs.* 27 (11-12), 2373–2386. <https://doi.org/10.1111/jocn.14183>.
- Conroy, T., Feo, R., Alderman, J., Kitson, A., 2016. In. *Build. Nurs. Pract. Fundam. Care Framew.* 15–29.
- Feo, R., Conroy, T., Jangland, E., Muntlin Athlin, Å., Brovall, M., Parr, J., Blomberg, K., Kitson, A., 2018. Towards a standardised definition for fundamental care: A modified Delphi study. *J. Clin. Nurs.* 27 (11-12), 2285–2299. <https://doi.org/10.1111/jocn.14247>.
- Feo, R., Frensham, L.J., Conroy, T., Kitson, A., 2019. "It's just common sense": Preconceptions and myths regarding fundamental care. *Nurse Educ. Pr.* 36, 82–84. <https://doi.org/10.1016/j.nepr.2019.03.006>.
- Feo, R., Young, J.A., Urry, K., Lawless, M., Hunter, S.C., Kitson, A., Conroy, T., 2023. I wasn't made to feel like a nut case after all: A qualitative story completion study exploring healthcare recipient and carer perceptions of good professional caregiving relationships. *Health Expect.* 27 (1). <https://doi.org/10.1111/hex.13871>.
- Gallagher, A., 2020. Space: Moral Reflection, Cíúnas and the Art of Care. In *Slow Ethics and the Art of Care*. Emerald Publishing Limited, pp. 75–95. <https://doi.org/10.1108/978-1-83909-195-720201004>.
- Jangland, E., Mirza, N., Conroy, T., Merriman, C., Suzui, E., Nishimura, A., Ewens, A., 2018. Nursing students' understanding of the Fundamentals of Care: A cross-sectional study in five countries. *J. Clin. Nurs.* 27 (11-12), 2460–2472. <https://doi.org/10.1111/jocn.14352>.
- Kitson, A., 2023. Leadership for fundamental care: The whole is greater than the sum of the parts. *J. Adv. Nurs.* 79 (3), e16–e17. <https://doi.org/10.1111/jan.15604>.
- Kitson, A., 2023a. There is no cure without care. *J. Adv. Nurs.* 79 (10), 3643–3645. <https://doi.org/10.1111/jan.15623>.
- MacMillan, K., 2016. The Hidden Curriculum: What Are We Actually Teaching about the Fundamentals of Care? *Nurs. Lead. (Tor. Ont.* 29 (1), 37–46. <https://doi.org/10.12927/cjnl.2016.24644>.
- Palese, A., Mattiussi, E., Fabris, S., Caruzzo, D., Achil, I., 2019. Il Movimento 'Back to the Basics': un ritorno al passato o indicatore di un'infermieristica 'matura'? *Assist. Inferm. e Ric.* 38 (1), 49–52. <https://doi.org/10.1702/3129.31110>.
- Parreira, P., Santos-Costa, P., Neri, M., Marques, A., Queirós, P., Salgueiro-Oliveira, A., 2021. Work Methods for Nursing Care Delivery. *Int J. Environ. Res Public Health* 18 (4). <https://doi.org/10.3390/ijerph18042088>.
- Tieu, M., Mudd, A., Conroy, T., Pinero de Plaza, A., Kitson, A., 2022. The trouble with personhood and person-centred care. *Nurs. Philos.* 23 (3), e12381. <https://doi.org/10.1111/nup.12381>.
- Voldbjerg, S.L., Laugesen, B., Bahnsen, I.B., Jørgensen, L., Sørensen, I.M., Grønkrjaer, M., Sørensen, E.E., 2018. Integrating the fundamentals of care framework in baccalaureate nursing education: An example from a nursing school in Denmark. *J. Clin. Nurs.* 27 (11-12), 2506–2515. <https://doi.org/10.1111/jocn.14354>.