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## **Title**

Exploring nursing students' use of the Fundamentals of Care framework in case-based work

## **Short running title**

Fundamentals of Care in case-based work

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Article type : Special Issue Article

**Title**

Exploring nursing students' use of the Fundamentals of Care framework in case-based work

**Short running title**

Fundamentals of Care in case-based work

**What does this paper contribute in a wider global community?**

- It indicates that integrating the Fundamentals of Care framework in case-based work is one way to teach nursing students the complexities of fundamental nursing care
- It highlights the need for awareness of how role models and curricular planning influence nursing students' articulation and understanding of fundamental nursing care

- It calls for clarity as to how the Fundamentals of Care framework is understood and can be used in nursing education

## **Abstract**

### *Aims and Objectives*

The aim was to explore how nursing students perceive and use the conceptual Fundamentals of Care framework in case-based work in nursing education. Furthermore, to describe influencing factors on perceptions and use of the framework.

### *Background*

The Fundamentals of Care framework has been integrated in core courses in two schools of nursing in Region North Denmark in response to studies reporting that nursing students and newly graduated nurses lack the knowledge, skills and competencies to meet the challenges of delivering fundamental care in clinical practice. An integration of the framework in case-based work in nursing education has not previously been studied.

### *Design and Methods*

The study design was focused ethnography. Data was collected using participant observations, focus group interviews and individual interviews. Four groups of four to five nursing students participating in case-based work sessions and three faculty members from two Schools of Nursing were included.

The study adhered to COREQ.

### *Results*

The results show an uncertainty among the students about how to understand and use the conceptual framework in case-based work. The uncertainties derive from diversities in faculty members' perceptions and curricular planning among others. However, the framework appears to support the students' learning about what nursing is and requires.

### *Conclusions*

The study indicates that integrating Fundamentals of Care framework in case-based work may be one way of teaching nursing students the complexities of integrated fundamental nursing care. However, there is a need to consider how to support students in articulating Fundamentals of Care, and to draw attention to the influence of role models and curricular planning.

### *Relevance to educational practice*

The study provides knowledge relevant when customizing future educational interventions regarding the integration of Fundamentals of Care in nursing education and may provide valuable knowledge of evaluation strategies.

## Key words

Fundamentals of Care, Nursing education, Nursing students, Case-based work, Curricular planning, Critical thinking, Evidence-based practice

## INTRODUCTION

Meeting patients' fundamental care needs is essential for optimal safety, recovery, and positive experiences within healthcare systems (Aiken et al., 2012; Feo & Kitson, 2016). Due to the focus on task completion, reducing cost and increasing productivity in health care practices, the performances of healthcare professionals tend to be standardised and assessed on objective activities, while fundamental care tends to be devalued (Feo & Kitson, 2016; McCormack & McCance, 2006) . Therefore, the delivery of safe, person-centred care is challenged (Feo & Kitson, 2016; McCormack & McCance, 2006). Nursing education plays a vital role in responding to the challenges in nursing care by preparing future nurses to work in a highly specialized health care system while meeting the patients' fundamental care needs (Feo et al., 2019). To regain focus on fundamental nursing care, the faculty and leadership at the School of Nursing at University College Nordjylland decided in 2016 to integrate the conceptual Fundamentals of Care framework (FoC) (figure 1 and figure 2) (Kitson et al., 2013) in lectures, case-based work and simulation laboratories (Voldbjerg et al., 2018).

## BACKGROUND

The integration of the FoC framework in core courses was a response to studies reporting that nursing students and newly graduated nurses lack the knowledge, skills and competencies to meet the challenges of delivering fundamental care in clinical practice (MacMillan, 2016; Voldbjerg et al., 2016; Voldbjerg, 2016; Voldbjerg et al., 2017; Halpin et al., 2017). Studies underline that newly graduated nurses use evidence and involve patients to a limited extent in their clinical decision-making (Forsman et al., 2010; Wangensteen et al., 2011; Forsman et al., 2012; Voldbjerg et al., 2016) and are reluctant to question and reflect on clinical practice (Voldbjerg, 2016). Furthermore, newly graduated nurses report that they experience an education-clinical practice gap, in the sense that what they have been taught in theories, methods and models, they do not recognise in clinical practice and have a hard time seeing the relevance of (Whitehead, 2001; Pellico et al., 2009; Voldbjerg et al., 2016). Use of evidence and patient involvement are two key elements in meeting the patients' needs of fundamental care where decisions are derived from an evidence-based practice. Evidence-based practice requires critical thinking and inquiry into clinical practice (Melnyk et al., 2014). In the planning of the course content on fundamental nursing care at a baccalaureate nursing education at the School of Nursing, it was therefore considered crucial to focus on enhancing the nursing students' understanding of what fundamental nursing care is and requires, and to increase their competencies in involving patients and evidence in clinical decision-making. To support this process, the conceptual FoC framework was chosen because it aims to improve delivery of high quality nursing care (Kitson et al., 2013; Kitson et al., 2014; Feo & Kitson, 2016). The FoC framework comprises three dimensions required for the delivery of FoC (figure 1 and figure 2). The inner circle displays the nurse-patient relationship, which is the base of FoC. The second circle presents the integration of physical, psychosocial and relational aspects of nursing care, and the third and outer circle focuses on how the health care system and/or context can influence the delivery of fundamental care (Kitson et al. 2013, Kitson et al. 2014). The framework was generated on the base of a narrative review of nursing texts and subsequently validated and tested (Kitson et al. 2010, Kitson et al. 2013, Kitson et al. 2014). The framework was developed to give nurses a shared framework for discussing and reflecting on nursing and to put nursing and its complexity back on the agenda in order to meet patients' needs (Kitson et al., 2013). The framework has been integrated in case-based work in nursing education as a tool to support nursing students' reflexivity and ability to analyze, investigate and reflect on nursing care and develop their understanding of fundamental nursing care (Voldbjerg et al., 2018). Case-based work as pedagogical method has shown to stimulate student reflexivity (Thistle Thwaite et al., 2012), and offers a patient-centered frame where the FoC framework can draw attention to nursing issues related to fundamental care. The framework is concurrently integrated in clinical nursing practices at the local University Hospital

as well as the regional hospitals lending the possibility of having a shared framework for clinical practice, education and research (Voldbjerg et al., 2018). This may support a shared understanding of what nursing is and requires and ultimately reduces the students and newly graduated nurses' perception of a theory-practice gap.

A focus on fundamental care in nursing education has previously been reflected upon (Kagan, 2014), however, an integration of the conceptual FoC framework in nursing education has not been studied and evaluated. It is therefore unknown if and how the integration of the framework influences nursing students' understanding of what fundamental nursing care is and requires, and if and how it influences their competencies regarding the involvement of patients and integration of evidence in clinical decision-making. It is therefore relevant to explore nursing students' use of the conceptual FoC framework in nursing education. As this has not previously been explored the context of interest was restricted to case-based work.

## **AIM**

To explore how nursing students perceive and use the conceptual Fundamentals of Care framework in case-based work in nursing education. Furthermore, to describe influencing factors on perceptions and use of the framework.

## **METHODS**

### **Methodology**

Focused ethnography was used as the methodology. Focused ethnography is a niche within traditional ethnography and allows for research questions to be problem-focused and context specific (Roper & Shapira, 2000; Knoblauch, 2005; Roper JM, Higginbottom, G. et al. 2013,). In this study focused ethnography was chosen due to a pre-selection of the focus and context of the study and the researchers' thorough insight into the field (Roper & Shapira, 2000; Knoblauch, 2005; Higginbottom, et al.,2013). A combination of participant observations, focus group (FG) interviews and individual interviews were conducted to qualify and validate the research process (Roper & Shapira, 2000, Knoblauch, 2005, Higginbottom, et al., 2013). Four researchers participated in the study and were teamed in two. Within each team one researcher was an insider into nursing education, whereas the other was an outsider to the field (Knoblauch, 2005). The study adhered to the consolidated criteria for reporting qualitative research (Supplementary File 1).

### **Participants and settings**

The participants were purposefully sampled. In accordance with focused ethnography, participants had specific knowledge and experience in relation to the research aim (Higginbottom et al., 2013).

Two groups of five students and two groups of four students participating in case-based work sessions on 5<sup>th</sup> semester and three faculty members who supervised the case-based work at a baccalaureate nursing education at two Schools of Nursing in Denmark were asked to participate in the study. They all accepted.

The baccalaureate nursing education program consists of three-and-a-half year bachelor's degree based on 120 theoretical credits and 90 clinical credits divided into seven semesters (Ministry of Education, 2016). Each theoretical semester includes two to four case-based work sessions. The School of Nursing organises the students' clinical internship in close collaboration with the Regional Hospitals.

### **Description of case-based work**

The students work intensively with a case. Twenty scheduled lessons of 45 minutes are distributed over a two week period. Ongoing guidance and supervision from a faculty member is available in ten out of the twenty lessons. The case-based work is finalized by submitting a written assignment, which is followed by a short oral presentation. The case describes an acute critical care situation where a 59-year-old male is admitted to an acute cardiology department with chest pain and severe shortness of breath. Furthermore, he is pale, restless and tired. Abnormal blood pressure, high pulse rate and saturation of 88% is registered. The electrocardiogram and blood samples indicate acute myocardial infarct. The patient is married and has two children. He owns a company and lives a busy life. He is overweight, smokes and does not exercise.

In the requirements to the case-based work, the students are asked to identify problems that relate to nursing care and to prioritize the problems by using the Airway, Breathing, Circulation, Disability, Exposure (ABCDE) algorithm which is a systematic approach to the assessment and treatment of critically ill patients (Thim et al., 2012). The relevance of identified problems must be justified in theory and research-based literature. Next, the students are asked to describe and justify relevant interventions. Reflections on clinical decision-making and clinical leadership have to be incorporated. The students are throughout the process asked to incorporate the conceptual FoC framework. The researchers handed out an illustration of the FoC framework to the students at the beginning of the case-based work. The FoC framework presented to the students has subsequently been revised on the base of a Delphi study (Feo et al., 2017). As the students had been introduced to the 2013 framework in 2016, the research team chose to present them to the 2013 framework rather than the updated framework. Furthermore, the framework from 2013 included a specification of the

inner circle which was used to support the students' reflective process on establishing a relationship with the patient.

(Insert figure 1 and figure 2 here)

### **Data collection**

*Participant observations* were conducted to observe the activities, behaviors and interactions in the case-based work sessions in relation to the conceptual FoC framework (Knoblauch, 2005; Roper & Shapira, 2000; Higginbottom G., et al., 2013). In total, this included participant observations of three of each of the four study group sessions of case-based work. The participant observations lasted between 60 and 120 minutes and all members of the research group were involved in collecting the data. The "observer-as-participant role" was used given the limitations to active participation in the case-based work sessions (Knoblauch, 2005; Roper & Shapira 2000). The researchers took notes and observed the activities during the case-based work sessions. The notes were transcribed, compared and discussed in the research team.

*Focus group interviews* with each of the four groups were conducted to gain further insight into how the students perceive using the FoC framework. Observing the discussions and interactions of each group of nursing students was in focus (Morgan, 1997; Halkier, 2010). The FG interviews with a total of 18 students were conducted within one week following the final case-based work session. Two members of the research group moderated the FG interviews and initiated and guided the discussions by using a theme guide. The theme guide was developed based on the initial analysis of the observations. The FG interviews took place in a meeting room at the Schools of Nursing and were audio-recorded and verbatim transcribed.

*Semi-structured individual interviews* with faculty members who supervised the students' case-based work were conducted to elaborate on and obtain deeper insight into the situations observed (LeCompte & Schensul, 1999; Hammersley & Atkinson 2007; Bazeley 2013). Two members of the research group conducted each interview based on a semi-structured interview-guide. However, each interview differed as the questions were based on what was observed in the observations. The interviews took place in a meeting room at the Schools of Nursing. The interviews were audio-recorded and verbatim transcribed.

### **Data analysis**

The data analysis was iterative and inspired by LeCompte and Schensul's approach to data analysis and interpretation of ethnographic data (LeCompte & Schensul, 1999). This involved a non-linear process with the four steps: In-field analysis; Analysis from the Bottom-Up; Identifying patterns and structures; Fine-tuning results (LeCompte & Schensul, 1999).

In the first step the data collection and analysis progressed in a parallel and iterative process with an ongoing analysis and preliminary interpretation of data from participant observations which influenced and guided the following participant observations, the FG interviews and the individual interviews (LeCompte & Schensul, 1999; Hammersley & Atkinson, 2007).

In the second step transcriptions of participant observations, FG interviews and individual interviews were read and reread by the research team several times to develop familiarity, overview and insight into the collected data. To attain validity, passages of the transcripts were discussed by the research team (LeCompte & Schensul, 1999; Hammersley & Atkinson, 2007; Bazeley, 2013).

Reflective notes and questions of the data were noted and incorporated in the analysis to guide the development of patterns and structures (LeCompte & Schensul, 1999). Further analysis was performed by two researchers and discussed with the research team. Initially, the data obtained from the participant observations, FG interview of the students and the data from the supervisors were coded and analysed separately with two different sets of analytical questions (table 1). Initially, descriptive codes were assigned to segments of the text. This formed the base for developing a set of codes which were agreed upon in the research team and assigned to the whole set of data. With respect to the analysis of the student data, the data from participant observations and FG interviews from each group of students were analysed separately; secondly, this analysis was followed by cross-cutting analysis of data from all groups. In the analysis of FG interviews, a special attention was given to the impact of the social interaction, which is the hallmark of FG research (Halkier, 2010; Grønkjær, 2011). Therefore, elements of social interaction dynamics in the FG interviews were analysed regarding the impact on the content of the interviews and eventually on the findings of this study. Examples of how interactions led to new insights among the students are presented in the results section.

(Insert table 1 here)

In the third step codes retrieved from step 2 were organized into meaningful groups. Patterns and structures of the data were identified by searching for similarities, relationships and differences across the data (LeCompte & Schensul, 1999). The groups of data were eventually clustered systematically into four candidate main themes each accompanied by sub themes and codes

representing the aim of the study. Table 2 provides an example of the relationship between main theme, sub themes and codes in theme one.

In the fourth step final interpretation of the results, meaning and significance of patterns and structures were discussed within the context of previous research and theory and put into a larger perspective within health care and nursing education (LeCompte & Schensul, 1999).

(Insert table 2 here)

### **Ethics**

The study was carried out in accordance with The Code of Ethics of the World Medical Association (WMA Declaration of Helsinki, 2013). Ethical approval for the study was obtained from the Scientific Ethical Committee of the North Denmark Region and registered according to rules and regulations on the EU General Data Protection Regulation (GDPR, 2019). The management at University College Nordjylland were informed and queried as to sending a request for informants. Informants received written and verbal information about the study. The informants signed a consent form stating that written and verbal information about the study was given and that they at any time could withdraw from the project without further explanation or consequence. Transcripts and other data on informants were anonymised.

### **RESULTS**

The analysis resulted in four intertwined themes presenting how the students perceive and use the FoC framework in case-based work in nursing education: *Getting a grasp of Fundamentals of Care; Searching for the relevance of FoC in case-based work; Perceiving FoC differently; Welcoming consistency and clarity in curricular planning*. Furthermore, the themes describe how contextual influences such as diversities in understanding the framework among supervisors and curricular planning influence the students' understanding and use of the FoC framework. The themes are unfolded in the following supported by citations from interviews and observations (FG = Focus Group; OB= Observation; II= Individual Interview; NS= Nursing Students; FM= Faculty Members. A1 and A2= groups from location A; B1 and B2= groups from location B).

#### **Getting a grasp of Fundamentals of Care**

The theme reflects uncertainty among the students as to what FoC is and how they try to get a grasp of FoC and how to use the framework. The uncertainty of what FoC is was reflected through several terms being used to describe the FoC framework. The students used terms such as: 'a list which inspires' (OB, NS, A2), 'a new tool' (OB, NS, B1), 'a guideline' (OB, NS, B1 2), 'a to-do-list' (OB, NS,

A1), 'a guiding principal for how to be a nurse' (FG, NS, A1), 'a rule of thumb' (FG, NS, B2), 'a guide to inform you what to focus on' (FG, NS, A2)'. Through interactions and reflections during the FG discussions, the students generated new understandings of what FoC is as well as a variety of ways to use the framework:

*"Actually it could be a kind of a guideline to prioritise."* (FG, NS, B1)

*"Yes, it could be a really good tool - a kind of a check-list..."* (FG, NS, B1)

Although the students used different terms and did not establish consensus on which terms best describe the framework, their discussions revolved around considering the FoC framework as a guiding tool supporting them in understanding and articulating the requirements of nursing and how to prioritise elements in nursing:

*"It is actually what I can (as a nurse). I have often been in doubt of what it is that I can  
when I*

*become a nurse. However, it is all that has to do with the psychosocial, physical and  
relational and about establishing relations with patients."* (FG, NS, A1)

As such, it seemed that they identify their role as future nurses with the elements in the conceptual framework and consider it relevant and supportive in describing what nursing is. Yet, the FG discussions revealed contradictions as the students on one hand recurrently talked about the FoC framework being with them implicitly in how they think and practice nursing:

*"I kind of have it (FoC) in the back of my mind when I'm in clinical setting, however  
not consciously."* (FG, NS, B2)

The students talked about FoC being common sense and something they practiced before they knew about FoC. The FoC framework did not necessarily call for an increased attention on fundamental care. On the other hand, the students agreed that having a framework can support their understanding of what nursing is and help justify their nursing:

*"We have always done it, we have always known that we should take care of the  
patients.....You just haven't focused on dividing it into the psychosocial, physical and  
relational. You have just done it. But it is nice to be able to put a term on it, so that you  
have kind of a frame that you can work within."* (FG, NS, B2)

In the case-based work, the students spoke about FoC being ... *just like professional judgment, Virginia Henderson or Kari Martinsen* (OB, NS, B1). Distinguishing the FoC framework in relation to other theories, models and frameworks was a challenge for the students:

*"FoC is just a model, where we can put theories into."* (OB, NS, A1)

The view of FoC being a framework you 'put' theories into was recurrent in the data, yet the students found it challenging when and how to use the framework. An aspect which became clear in the students' use of the framework in case-based work.

### **Searching for the relevance of FoC in case-based work**

The theme reflects that the students were unsure of the relevance of using the FoC framework in case-based work. Furthermore, the theme reflects considerations as to how the FoC framework and other theories eventually can supplement one another. The students were unsure about how to incorporate the FoC framework into their case-based work:

*"Are we supposed to consider all elements (of FoC) in relation to Kaj (the patient in the case) or is it more relevant in the presentation?"* (OB, NS, B2)

*"One informant explains how she previously used the framework from the inner to the outer circle to describe nursing problems and interventions. This viewpoint was challenged by the other students and they decided to 'present interventions and then 'put FoC on them.'"*(OB, NS, A2).

The discussions and interactions in FGs showed that the students had diverse perceptions of what made sense and at what stage they were expected to incorporate the FoC framework. By observing the students it became clear that they often chose to relate elements within FoC to their defined interventions. It seemed that most students followed the structure of the requirements to the case-based work. They initially used the ABCDE algorithm to identify problem areas and nursing interventions. Subsequently, these interventions were connected to FoC. *'I really think we mean the same – we have to present interventions and discuss them in relation to FoC'*" (OB, NS, A2). The framework was used to justify and discuss the interventions. Furthermore, as the FG interviews progressed it became apparent that the students perceived the framework to be relevant to identify problem areas, yet they felt uncertain of how to do so.

The students talked about the framework as being an overall foundation where elements could be elaborated on using theories (FG, NS, A1).

*“We have used Hiim and Hippe (a theory on relational didactics) to support FoC. I always believe that it (FoC) needs to be supported. It cannot stand-alone: It needs training wheels because it is not enough in itself.” (FG, NS, A1)*

In some situations the framework drew attention to using theories to elaborate theoretically on the elements within the FoC framework. This was particularly evident in their final presentations of the case-based work where other models and frameworks were used alongside FoC for further reflection. When the students used the FoC framework in case-based work, they primarily referred to the inner circle of FoC regarding the establishment of a relation with the patient. One group started their presentation based on the inner circle of FoC and incorporated the didactic relational model to gain further focus on nurse-patient relation. Although the students’ primary attention was on the patients’ acute critical situation, the framework appeared to remind the students of the importance of the nurse-patient relation for the patient to feel safe.

### **Perceiving FoC differently**

This theme reflects diversities in the supervisors’ understanding of what FoC is and how to integrate FoC in case-based work. The diversities were perceived by the students and caused frustration. As one student expressed:

*“It is all very new and we do not know what is right or wrong. We are introduced to this model and think, yes it is very good, we can use it, even for exams and then the teacher and a censor say arghhh. I think that is why I sometimes have been a little nervous about it, because you do not know how valid it is to include in an assignment.” (FG, NS, A1)*

Not being supported by the supervisors was confusing and demotivating for further use of the FoC framework in for instance case-based work, even though the students perceived the framework as relevant in exploring and discussing nursing care.

The diversity in how FoC is understood was known to the supervisors:

*“I have discussed with another faculty member about the concept ‘evaluate’. I have understood the concept in a context of ‘evaluating’ the establishment of a relationship. However my colleague had understood that it was about evaluating the care given, evaluating the nursing process.” (II, FM 1)*

There was not consensus among the supervisors when it came to understanding the concepts

within the framework. Furthermore, the supervisors differentiated in the perception of the relevance of

drawing on the FoC framework in case-based work. On one hand they approved and saw the relevance of

FoC:

*“I think it would be interesting for the students to work with (the framework). It would make the case more alive and may help reduce the gap they experience between clinical setting and the school.” (II, FM 3)*

On the other hand they were sceptical and did not find that FoC brings any new dimensions to learning about what nursing is and requires. There was a perception that the philosophy behind FoC is already rooted within the students. The framework was not perceived to elaborate on their understanding on what nursing is and requires:

*“I do not think that they use the framework. I think it is such a big part of them, it is integrated within them. They know that when they as a nurse or student meet patients, it is primarily about finding out what care needs the patient has.” (II, FM 2)*

The supervisors did not necessarily draw on the framework in their lectures or supervision. They expect that the students have been introduced to the framework and do not feel compelled to relate their own teaching to the FoC framework:

*“They (the students) know it (the framework). So, when preparing my lectures, I do not consider structuring it around the Fundamentals of Care framework.” (II, FM 2)*

It was observed that there was a great variety and diversity as to when and how the faculty member supervised the integration of FoC in case-based work. Broadly, it was very much up to the students themselves how and where to include FoC in case-based work.

### **Welcoming consistency and clarity in curricular planning**

The understanding and use of the FoC framework is influenced by how the framework is integrated in the curricular planning of nursing education. When presented in the clinical setting, the framework seemed relevant to the students:

*“In clinical setting it works really well, because I can have a look at it (the framework) and think that I have to remember to focus on the patient, collect information, and evaluate on the establishment of the relation to the patient. It works really well in*

*clinical setting. That is what we are supposed to do, that is our primary task.” (FG, NS, A1)*

The students could relate to and draw on the framework in the clinical setting because patient situations were anchored in a clinical context and portrayed the elements within FoC more evidently. However, in school settings the students required faculty members to relate their topics and theories more explicitly for the framework to become relevant to learning about what nursing is and requires:

*“We miss situations, where they (the faculty members) integrate and relate theories to the elements of the framework.” (FG, NS, A2)*

The students expressed that they had a feeling that most faculty members mentioned the framework because they had to, but without necessarily engaging in where and how their topic relates to the elements within the FoC framework:

*“It is as if the faculty members have been told to mention the framework. However, if you choose to mention the framework then show us how it relates instead of just showing us a slide with the framework and nothing more.” (FG, NS, A2)*

When it came to how the framework was introduced to the students, their preferences differed. The students welcomed the fact that the framework was continuously presented and related to throughout their education as they obtain new perspectives every time (FG, NS, B2).

Interaction among students in FG showed that they prefer being introduced to the whole framework at once and not split up into three separate circles. Dividing the framework into several parts resulted in an unintentional understanding of the framework where some students interpreted the division as if some circles were superior to others:

*“The first semester we focused a lot on the inner circle, then the second and third semester we moved towards the circle in the middle and now we have moved toward the organisational part (the outer circle). So, that means that we start off with the*

*fundamental, the most important and then we move outwards towards the less important, if one could call it that.” (FG, NS, A1)*

Furthermore, the fractioned presentation of FoC resulted in a lack of awareness of the displayed interaction between the three circles, which mirrors the complexity of nursing. On the other hand, other students preferred that the concentric circles were introduced separately because having it 'bit by bit' (FG, NS, B2) would culminate in an understanding of the framework as a whole.

The students emphasised the importance of having a supervisor who reminds and asks them to draw on the framework in their case-based work. However, the students also made it clear that they needed a much clearer description and guidance of how to work with the Fundamentals of Care framework:

*“We should have been told what we could use it for and how we could use it (the framework). We were just introduced. Here it is and it looks like this. Nothing about how and what it could be used for.” (FG, NS, B1)*

A clarity as to when and where to draw on the framework is also required in the description of the requirements for the case-based work. Having the framework visually displayed in front of them while working with the case reminded them of the elements of nursing care:

*“I believe it makes sense the way the framework is structured. It gives you a better understanding. Having one page with a whole lot of concepts wouldn't have the same effect. Just the fact that it is visual works well. The elements are divided but then again they are connected.” (FG, NS, B2)*

The framework with its elements and structure drew attention to the importance of understanding how elements within nursing are intertwined and affect one another.

## **DISCUSSION**

This study explored how nursing students perceive and use the conceptual FoC framework in case-based work in nursing education. Furthermore, the aim was to describe influencing factors on perceptions and use of the framework. The results show that there is an uncertainty among the students about how to understand and use the conceptual FoC framework in case-based work. The

uncertainties derive from diversities in perceptions among faculty members and curricular planning among others. However, the framework appears to support the students' learning about what nursing is and requires. This argues for a discussion on what is needed to integrate the FoC framework further into case-based work. The discussion outlines three aspects that arose from the results: (1) articulating FoC, (2) role models, and (3) curricular challenges.

### **Articulating Fundamentals of Care**

In this study students reported that the concepts within the FoC framework were with them implicitly and seldom articulated. A study by Feo et al 2018 also found that nursing students perceived fundamental care as common sense and innate (Feo et al., 2018). The students do not necessarily see a need for being explicit about FoC and articulating it. However, articulating thoughts and ideas orally deepens and develops students' cognition (Murph, 2004; Ritchhart & Perkins, 2008). A cognition which in this case is important in understanding the complexity of nursing and what nursing requires. Furthermore, articulating ideas and reflections, makes it possible to share knowledge and critically reflect and thereby develop students' ability of critical thinking and reasoning (Rycroft-Malone et al., 2004).

Although the students talked about fundamental care as 'common sense' they expressed that the framework supports them to articulate the elements entailed in nursing and display the complexity. According to Feo and colleagues the complexity of fundamental care needs to be put forward (Feo et al., 2019). Integrating the framework in case-based work may be one way to challenge the notion of fundamental care being 'common sense'.

The framework was developed to give nurses a shared language for discussing and reflecting on nursing and to put nursing and its complexity back on the agenda in order to meet patients' needs (Kitson et al., 2013). Even though the students are unsure of how to use the FoC framework in case-based work, there is an indication that the framework can support the students in being attentive to and articulate elements of nursing. Such an articulation is needed for clinical decisions based on critical thinking (Benner et al., 2008).

### **Role models**

Faculty members and clinical supervisors understood, valued and used the FoC framework in different ways. This caused frustration among the students and left them in doubt of the relevance of the framework. Faculty members and supervisors often act as role models. Role modelling is part

of the so-called 'hidden curriculum' and an inherent part of the educational process (Ettinger, 1991; Mac Millan, 2016). Role models play a central role in the professional socialisation of nursing students into the nursing profession (Roberts, 2008; Baldwin et al., 2014) and influence the integration of new methods, models and frameworks into the curriculum. For nursing students to understand how to use the newly integrated FoC framework in case-based work, there is a need for faculty members to heighten their awareness of their position as a role model and agree on how to perceive and incorporate FoC in nursing education. To a certain extent faculty members facilitate learning in an unconscious way (Jack et al., 2017) through their prioritisation, reflections and questions to the students. There is a call for faculty members to be aware of the impact of covert teaching practices such as role modelling (Cruess et al., 2008; Baldwin et al., 2014) and the impact this may have, positively or negatively, on the students learning of what FoC is and how it can be used (Cruess et al., 2008; MacMillan, 2016).

Having students welcome the framework lends the faculty members an opportunity to use the framework to integrate theoretical, practical and ethical knowledge explicitly in teaching and supervision sessions. Three types of knowledge Benner et al. highlight that the academic setting needs to focus on and integrate explicitly in nursing education in order for the knowledge and skills taught in school setting to become relevant to the students' clinical practice (2009). A study by Huisman-de Waal et al. conclude that fundamental care may best learned within clinical setting as opposed to theoretical education (Huisman-de Wall, 2018), which to some extent complements some of the results in this study. A study underlines that students do not necessarily perceive the academic staff as role models (Felstead, 2013), due to their distance from practical clinical nursing. However, in this study the students expect faculty members to role model how theories can be linked to case-based work and clinical practice. A study by Jack et al. highlights that it is essential that faculty members are aware of this differing role in role modelling (Jack et al., 2017) and draw on this knowledge in their practice. Baldwin et al. report that the nurse academic has a greater role than just to convey theories (Baldwin et al., 2014). In this study students express that they would like faculty members in school setting to support them in understanding how theories, philosophies and evidence can be related to concepts within the framework and support and qualify clinical decisions concerning basic nursing care. This request from the students requires that faculty members in corporation with supervisors within clinical settings discuss and clarify their particular roles, diversities and contribution in relation to teaching the students to use the FoC framework to support reflections on what nursing is and requires. Unlike studies on clinical supervisors' influence on educating nursing students the number of studies on the impact faculty members in school setting have on the professional development of nursing students is limited (Baldwin et al., 2014). Results

from this study may be a starting point and opportunity to have this discussion. Students in this study highlight the importance of a concurrence in how FoC is used and articulated across school and clinical setting. This is in line with a study by Feo et al. underlining the significance of explicit consistent use of terminology for helping students to develop a vocabulary for fundamental care (Feo et al., 2018).

### **Curricular planning**

The students emphasised the importance of having a supervisor who continuously reminds and asks them to draw on the framework in their case-based work. The importance of a continuous articulated and explicit reinforcement of the importance of fundamental care in order for the students not to default to a task-based approach has previously been described by Feo et al (Feo et al., 2018). Continuous articulation of the framework through exercises, reflections and teaching sessions may be one way to meet this requirement.

Dividing the framework into several parts for teaching purposes resulted in an unintentional understanding of the framework as some students interpreted that some circles were valued more than others. Furthermore, the complexity of nursing care displayed through the integration of the three concentric circles failed to appear. This is unfortunate as the intention of using the FoC framework is to improve the understanding of the complexity of nursing care and not focus on a few selected needs as previously reported in a study by Jangland et al. (Jangland et al., 2018).

Additionally, the findings highlight the relevance of being continuously introduced to the framework from day one which complement findings of Feo et al (Feo et al., 2018). These notions have to be taken into consideration when planning curriculum and teaching sessions along with clear descriptions of where and how the students are expected to work with the FoC framework in case-based work. Furthermore, a visual display of the framework may remind them of the complexity of nursing care.

### **METHODOLOGICAL CONSIDERATIONS**

This is the first study exploring how the conceptual FoC framework is perceived and used by nursing students in case-based work, and factors influencing perceptions of and use of the framework.

Having an ethnographic approach enabled explorations of the perspectives of both nursing students and faculty members and allowed for the use of participant observations, FG interviews and individual interviews (Roper & Shapira, 2000; Knoblauch, 2005; Higginbottom et al., 2013).

Nevertheless, conducting this study posed some limitations. Only three faculty members participated in the study which is in contrast to the 18 participating nursing students. Therefore, the faculty members' perceptions may not mirror the general perceptions of faculty members. Also, conducting FG interviews with nursing students and individual interviews with faculty members was a challenge as the results of the FG interviews are based on interactions among the students (Morgan, 1997; Halkier, 2010), which is in contrast to the results of the individual interviews (Bazeley, 2013). These diversities were taken into account while analysing the data and discussed in the research group.

Two of the researchers are employed at the School of Nursing and teach FoC to the students. This may influence the researchers being open-minded towards new insights regarding the phenomena of interest (Gerrish, 2003). To counteract this concern the researchers' inside/outside role was reflected upon and challenged continuously within the research team (Labaree, 2002). The researchers may have influenced the students' use of FoC in case-based work by giving information about the study and by showing the framework to the students. However, the results disclose that the students were uncertain of how to use the FoC framework and did not perceive that they were guided despite participating in the study. The study was conducted in Danish, which is in line with most studies with participants and researchers having the same non-English native language (Van Nes et al., 2010). In this study, we used late translation as we discussed and interpreted the meaning in Danish prior to translating the themes and quotations of the participants (Van Nes et al., 2010). The researchers acknowledge that translation is a challenging process, which also involves interpretation. To compensate for this concern the team of researchers had ongoing discussions and reflections on which terms and descriptions corresponded the best.

## **CONCLUSION**

This study indicates that integrating the FoC framework in case-based work is one way to teach nursing students the complexities of integrated fundamental nursing care. However, for students to use the framework there is a need for a clarification as to how the conceptual framework can be used and differs from and supplements theories, philosophies and evidence in nursing care.

Furthermore, there is a call for more attention to how role models and curricular planning influence nursing students' articulation and understanding of fundamental nursing care.

## **RELEVANCE TO CLINICAL PRACTICE AND NURSING RESEARCH**

This is the first study to explore the integration of the conceptual FoC framework in case-based work. The results underpin the importance of clarity to how the FoC framework is understood and

how it can be used in nursing education. The study is of relevance in customising future educational interventions regarding the integration of FoC in nursing education and may provide valuable knowledge on research and evaluation strategies. Further research is needed to evaluate the integration of the FoC framework in educational practice and influence on patient care.

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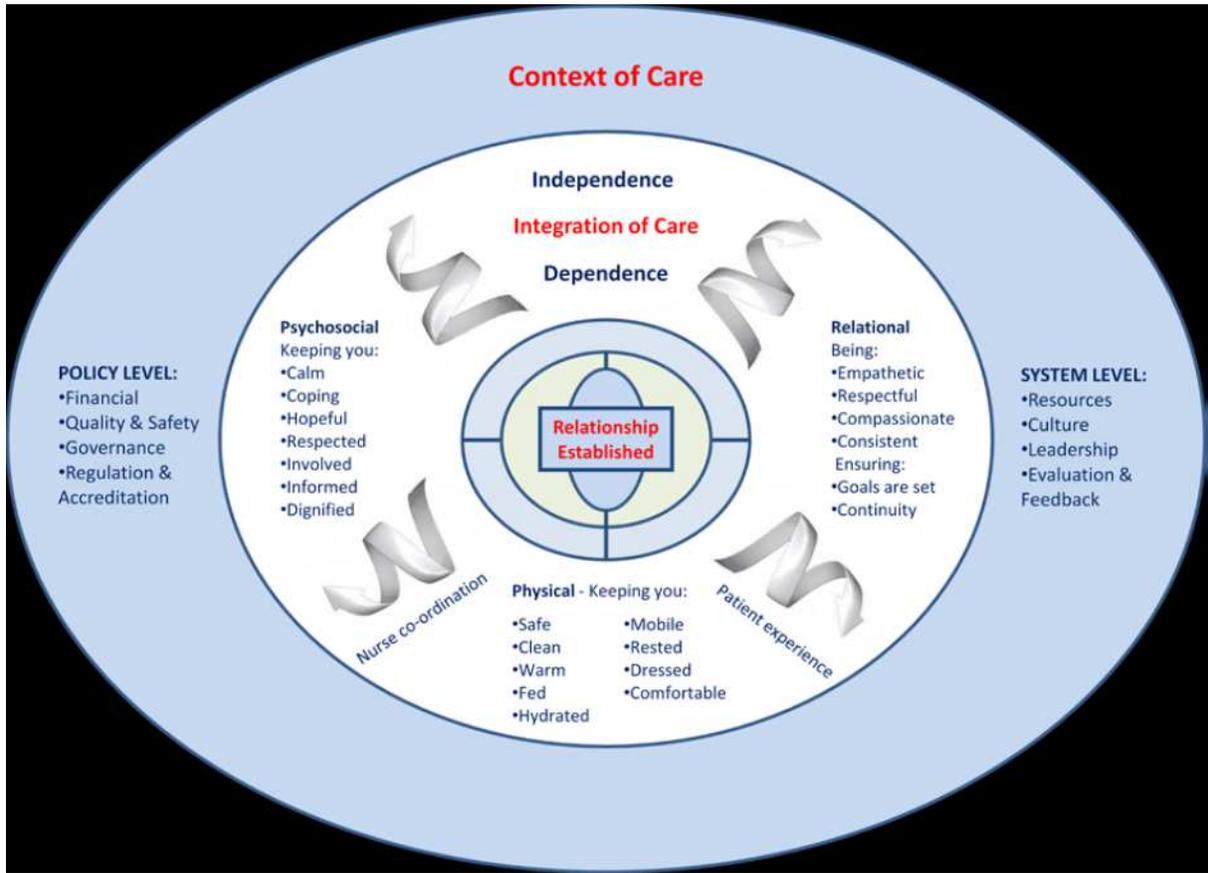
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Table 1 Analytical questions

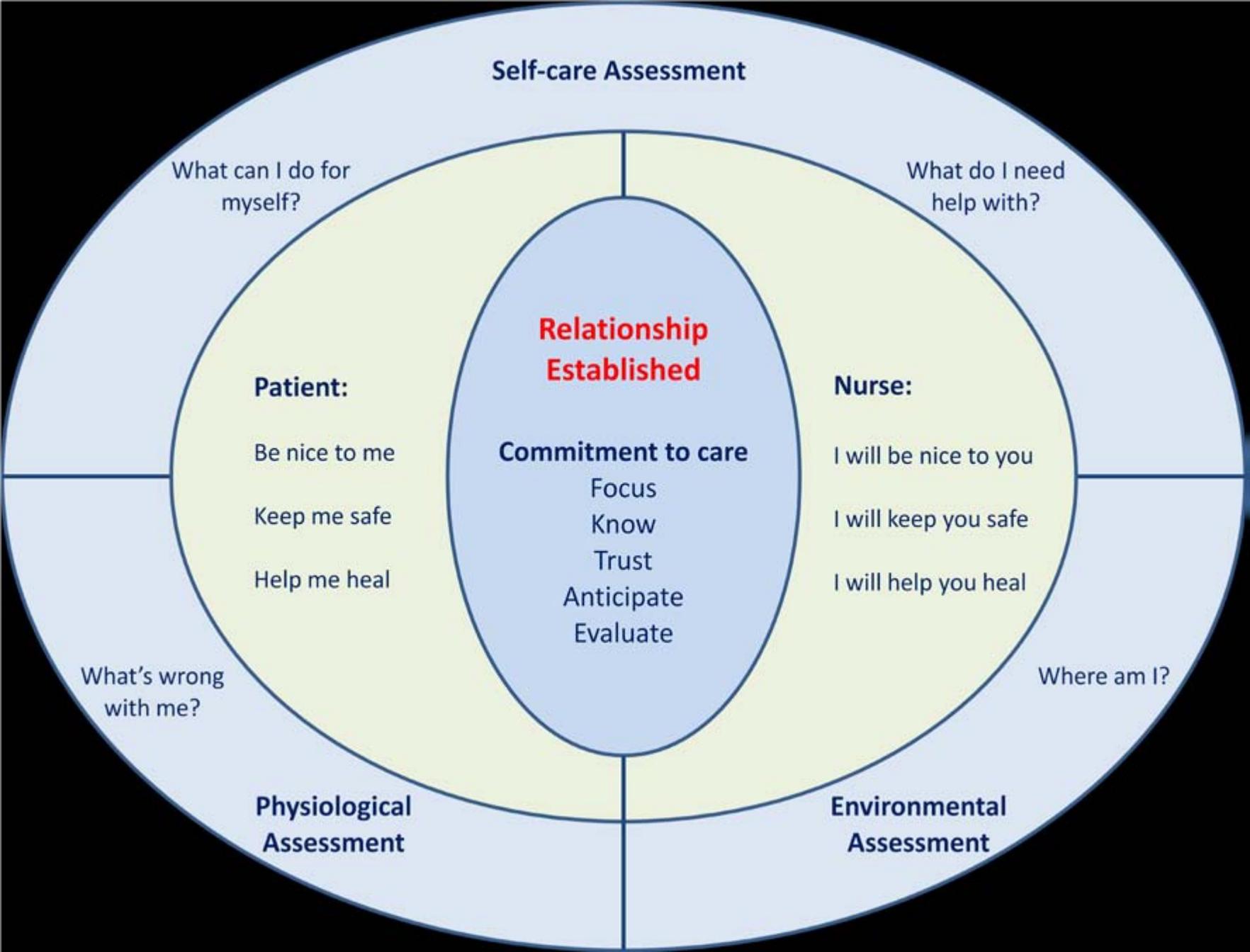
Analytical questions	
Questions used on data from students	Questions used on data from faculty members
How do the nursing students incorporate the FoC framework in case based work?	How and when do the faculty members supervise towards the use of the FoC framework in case based work?
What are the nursing students' perception of the relevance of the FoC framework in the understanding of what nursing care is?	What are the faculty members' perspectives on the integration of FoC in nursing education?
What are the nursing students' articulation of the FoC framework?	What are the faculty members' perception of nursing students' learning and understanding of nursing when using the FoC framework in case based work?
When and how do the nursing students use the FoC framework?	
What are the nursing students' activities in relation to the FoC framework?	

Table 2 Example of the relationship between main theme, sub themes and codes in theme 1

Main theme	Sub themes	Codes
Getting a grasp of Fundamentals of Care	<p>The elements of the FoC are implicit in nursing</p> <p>FoC supports the understanding of nursing</p> <p>FoC is something you put theories into</p>	<p>Uncertainty towards FoC</p> <p>FoC is something we already do</p> <p>FoC is implicit</p> <p>FoC as a guiding tool</p> <p>When and how to use the framework</p> <p>From scepticism to relevance</p> <p>FoC initiates reflections and conversations</p> <p>FoC and other theories and models</p>



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**Self-care Assessment**

What can I do for myself?

What do I need help with?

**Relationship Established**

**Patient:**

Be nice to me  
Keep me safe  
Help me heal

**Nurse:**

I will be nice to you  
I will keep you safe  
I will help you heal

**Commitment to care**  
Focus  
Know  
Trust  
Anticipate  
Evaluate

What's wrong with me?

Where am I?

**Physiological Assessment**

**Environmental Assessment**