


## EMPIRICAL STUDIES

# Appropriation and application of caring science theory: Experiences of master education alumni in three Nordic countries

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**Abstract**

**Background:** A theoretical foundation in caring science is invaluable for nursing care because it enriches practice by providing explanations, clarity and direction. However, after graduation, students experience the frustration of not being able to sufficiently intertwine caring science theories in practice. Consequently, the integration of caring science theories in nursing education and practice is considered an essential focus area to reduce this theory–practice gap.

**Aim:** This study aims to elucidate master alumni's experiences of appropriation and application of caring science after completing a master's education.

**Methods:** The data were collected by semi-structured interviews with 21 alumni from Finland, Sweden and Norway who had recently completed a master's degree with caring science as the major subject. A thematic analysis was used.

**Findings:** The analysis resulted in two main themes, both with three subthemes. Educator's bearing and a learning community are important for students' appropriation of caring science theories. Learning through reflection and the response of others evoke new paths of thought, and practice-related teaching promotes the intertwining and application of caring science theory in practice. The appropriated theory has significance to alumni by providing a guiding basis that strengthens alumni's professional bearing and way of being. The caring science theory guides alumni in providing nursing care with an increased ethical awareness and questioning approach that enables good patient care. Their professional identity and confidence in caring are also strengthened.

**Conclusion:** Educators' bearing is of outermost importance for appropriation and application of caring science theory. It has a key function in facilitating students' understanding and intertwining of caring science theory and practice. Appropriated caring science theory provides authority and courage to practice nursing care. The appropriated theory promotes alumni's ethical awareness, confidence and a sense of pride in the profession.

**KEYWORDS**

application, appropriation, caring science theory, master education, qualitative, thematic analysis

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## INTRODUCTION

Theoretical foundations are essential for preparing students for nursing practice [1], and thus, theories in nursing and caring science are invaluable because they conceptualise the care given in practice [2–4]. According to Treloar et al. [5], a theoretical framework enriches practice by providing explanations, predictions and clarity and direction to education, practice and research. True caring is not possible without that foundation [4]. Theories facilitate caregivers' understanding of what they are doing, why and what the consequences are and how to evaluate—and thereby know—when, why and how to change practices.

According to Ross et al. [6], after graduation, students experience the frustration of not being sufficiently prepared for encountering patients in practice; they also experience problems in intertwining nursing and caring theories with practice [7]. Similar challenges have been reported among master education alumni [8]. Consequently, it is important to further develop education to reduce this gap between theoretical concepts and nursing practice [9], helping students understand theoretical knowledge on a deeper level [10] and, hence, contributing to the feeling of being prepared to face practice [11]. Lindberg et al. [12] highlight the need for research on the intertwining of caring science theories in education and practice. Watkins [13] calls for research on alumni's perception of the impact of master education on patient care. Thus, it is relevant to clarify how newly graduated master's students in caring science intertwine caring science with praxis. This research relies on appropriation and application [14] as key concepts and processes in transferring caring science theories according to the Nordic tradition [15] to praxis [16]. Consequently, appropriation and application of caring science theories in practice is an essential focus area to explore further.

## AIM

This study aims to elucidate master alumni's experiences of appropriation and application of caring science after completing a master's education.

## THEORETICAL BACKGROUND

The current study has a pronounced theoretical background. The view of the human being is a fundamental starting point, which implies an esteem and reverence for human dignity and a belief in students' ability to development and formation in learning. Students are seen as unique and situated in a context of meaning, where they construct and shape what they know and can do in a

process of becoming [17]. Education and learning are seen as ongoing, never-ending processes of becoming through formation (*Bildung*). According to Gadamer, (14, c.f. 18) discovering meaning and how to apply it in a particular instance are not two separate actions but one unitary process in two steps: appropriation and concrete application in action. Appropriation is the inner part of the application, that is, what happens when one understands [14, 18]. According to Lindström [19], this entails incorporating the subject matter so that it begins to reside within, becoming one's own and personal bearing. When the new knowledge has been appropriated, it turns into understanding, altering oneself, thus changing one's thinking and action, doing and being [20]; here, a theoretical basis can be applied in patient care. Through appropriation, a new understanding is incorporated into oneself and in the outer application, and the understanding is then made visible in action.

Application implies internalising theoretical knowledge, here being caring science theories, and translating them into situations in practice for the benefit of patients. Understanding provides readiness for action, and one's understanding can be applied in specific, concrete caring situations [20]. Without appropriation, one risks getting caught up in repetitive action, imitation and only becoming a good 'technician' and 'craftsperson' (20, c.f. 21). In summary, application refers to the ability to use caring science theory in caring activities. This presupposes that one has understood the theory in depth. For application to be possible, the caregiver should understand the basic message in caring science and, in accordance, do what is good for the patient.

## PARTICIPANTS AND METHODS

Emanating from a hermeneutical approach [14], individual interviews based on Kvale and Brinkmann [22] were used for the data collection. The interview format was semi-structured, and a theme guide, prepared by the research group, was used to ensure consistency in the conduct of the interviews. Thematic issues included, for example, alumni's experiences of studies in caring science and the impact that studies in caring science theory have had on alumni's work.

A total of 21 master's students who had recently completed a master's degree in caring science (alumni) participated in the interviews. In order to get a broader picture of the research object, alumni from different countries with different master programmes were included. An inclusion criterion was that the alumni had studied caring science theories developed by theorists in a Nordic tradition [15]. Ten alumni were from Finland, six from Sweden and five from Norway. Seventeen participants were women and four men. The alumni were between 30 and 55 years old.

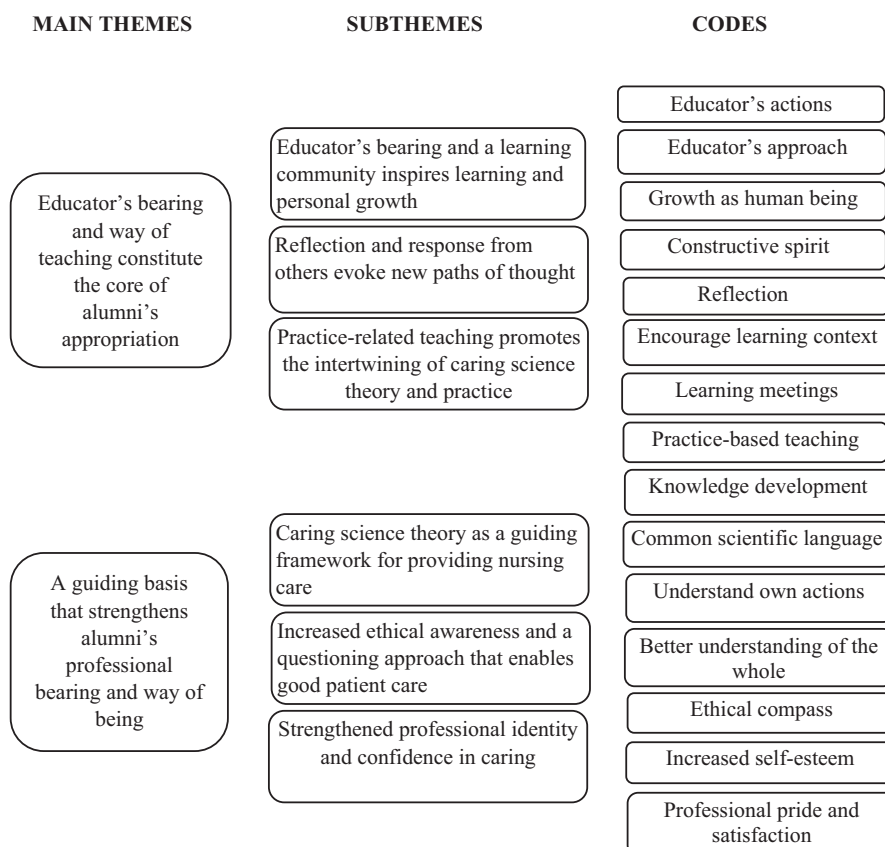
The alumni were recruited by e-mail during the years 2018–2019 by researchers from one university in Finland, two in Sweden and one in Norway. The e-mail contained information about the study, which was repeated before the interview began. Participant selection strived to maximise variations, meaning finding alumni working in clinical care, as department heads, care developers, clinical experts or lecturers in nursing education and care practice. The alumni had work experience from being nurses in internal medicine and surgical care, in psychiatric care, specialist nurses in different contexts, emergency nurses, public health nurses or as midwives. In addition to a nursing degree, some of the alumni had studied and graduated as spa therapists, deaconess or psychotherapists or had studied the humanities. The data were collected at a time and location of participant's choosing; at the university ( $n = 14$ ), at the participant's workplace ( $n = 4$ ), digitally ( $n = 2$ ) or on the phone ( $n = 1$ ). Six researchers individually conducted the interviews; five were experienced researchers and one was a doctoral student. The interviews were audio recorded and lasted for 12–62 min. The differences in the length of the interviews were not due to interviewers, but to some participants being more talkative, others more concise in their answers. The interviews were transcribed verbatim by two of the researchers.

A thematic analysis in accordance with Braun and Clarke [23] was used for data analysis, which comprised

six phases. In the first phase, the text was read through several times. In this phase, 195 statements emerged for further analysis. In the second phase, statements were coded, emerging 15 codes. In the third phase, themes were formed based on the coding. The analysis resulted in two main themes with three subthemes each. In the fourth phase, a thematic map was designed, and in phase five, each theme was highlighted by combining text and quotes in relation to each theme. In the sixth and final phase, the findings were written out. All authors read the interviews, and a first analysis was performed. This formed the basis for the preliminary analysis that was conducted by two of the authors (PD and CK). Then, all authors convened to discuss the patterns until a unanimous interpretation was agreed upon. To improve trustworthiness and enable readers to follow the research process, the authors strived to describe it as clearly as possible. Quotes from the interviews were used to strengthen the credibility of the themes and enable readers to evaluate the transferability of the findings [23].

## FINDINGS

The analysis resulted in two main themes, both with three subthemes (Figure 1).



**FIGURE 1** Overview of the main themes, subthemes and codes

## Educator's bearing and way of teaching constitute the core of alumni's appropriation

The findings highlight that an educator's bearing is very important for a student's appropriation of caring science theories. Educator's bearing, but also a learning community, inspires learning and personal growth. Learning through reflection and the response of others evoke new paths of thought, and practice-related teaching promotes the intertwining and application of caring science theory in practice.

### Educator's bearing and a learning community inspires learning and personal growth

Mutual interactions between educators and students, as well as the educator's ability to live out the message of caring science theories in education, are critical for learning. Here, the educators' bearing, attitude and ability to create a learning culture are decisive for whether caring science theories become interesting and, hence, can stimulate learning. Educators' bearing means that s/he is personal and present and has the ability to confirm the students individually and see each student's opportunities and resources to evolve in their thinking and their individual becoming and growth. The educator's bearing affects the motivation and evokes feelings of commitment, while the feeling that the educator only performs teaching and is not wholeheartedly involved in the teaching situation can lead to a loss of commitment in learning and the appropriation of caring science theories. 'Caring science theories is not just something that the educator teaches; they are the core of everything and become visible every time the educator enters a classroom'.

According to the alumni, the atmosphere and spirit in the learning situation are key for learning. It is important to be in a learning community that is safe, permissive, inclusive and confirming, no matter what thoughts and opinions are expressed. This requires that the educator shows openness to different points of view and respect for different perspectives. When the educator can highlight the 'grains of gold' in what the student has said, students experience being confirmed and treated with respect and dignity. '... it feels like a deep confirmation and that there is something wise in what I was thinking, and that stimulates me to think further and to develop'. Thus, caring science theories come alive and become a common strength through the way of being, meeting and thinking together in the learning situation.

## Reflection and response from others evoke new paths of thought

Varying forms of teaching challenge students' thinking from a broader perspective. An alumni describes that '... feeling involved is important for learning, which is created by sharing your thoughts with others and familiarising oneself with other students' assignments. Being in dialogue and getting feedback on one's own thoughts evokes new ways of thinking'. Thus, the way of teaching provides a broader view and understanding that answers are not always simple. Caring situations and actions can consist of several dimensions, and learning is not only a technical accomplishment but rather a deeper understanding that happens when one's inner thoughts and feelings are touched. Therefore, it is also important to stop and reflect on 'why one does as one does' and relate the caring actions to caring science theories.

Reflection gives students insights into the fact that others do not always experience situations and actions in the same way as themselves. Therefore, it is important that different perspectives are expressed and set against each other; thereby, students can choose their own position and way of acting. Through the dialogue, the alumni felt that their perspective and experiences were confirmed. Reflection and dialogues that are more in depth also evoke emotions on a deeper level. Therefore, dialogue, participation and response from educators and fellow students were important for learning but also for individual growth. Getting feedback also makes one take a step back and reflect on alternative ways of thinking and acting. According to the alumni, active and continuous reflection, dialogue and education are important for how caring science theories can live and become lasting.

### Practice-related teaching promotes the intertwining of caring science theory and practice

According to the alumni, an educator's ability to inspire and apply caring science theories in relation to practice is important. When the educator makes the theoretical content visible by intertwining caring science theories with practice, the subject becomes more personal. According to the alumni, it is through teaching that they understand the importance and usefulness of caring science theories in clinical contexts, and it is here that theories get their penetrating power. They also emphasised the importance of letting caring science theories and concepts run as a common thread through all courses. By having appropriated caring concepts, one can verbalise and find solutions in challenging clinical situations

and contexts. Caring science theories also makes it easier to articulate and argue for one's own theoretical positions. Sometimes, understanding and awareness of this connection between theory and practice increase step by step; eventually, at one point after the master's studies, when the alumni face challenges, it falls into place: 'You can understand theories and concepts based on teaching on a theoretical level, but true understanding happens only when you have some clinical experience in your backpack'.

### **A guiding basis that strengthens alumni's professional bearing and way of being**

According to the alumni, the significance of appropriating caring science theory is that it serves as a guiding basis for providing nursing care; it contributes to an increased ethical awareness and questioning approach that enables good patient care. It also strengthens their professional identity and confidence in caring.

### **Caring science theory as a guiding framework for providing nursing care**

Appropriating caring science theory provides a theoretical and value basis, a language and a conceptual apparatus that serve as a guiding basis for alumni in their provision of nursing care. By exploring what the caring science concepts mean, 'aha'-experiences happen and a new understanding is formed. Caring science theory is a foundation that provides an understanding or clues to an answer, providing support in the decisions and actions alumni make. 'I feel that caring science is a working tool for me in encountering patients. One better understands why one does what one does. One asks questions instead of sticking to routines, one asks oneself what one is really doing'. Thus, the appropriation of caring science theory strengthens thinking, enabling alumni to go outside the 'box'.

According to the alumni, the appropriation of caring science theory has provided a better understanding of the overall picture in patient care, improving their ability to see larger wholes, providing them with a better basis on which to build caring values and actions and, thus, allowing them to grow in their caring decisions. '[It provides] a deeper understanding of our occupation and what one is actually doing, what one is dedicated for'. The alumni emphasised that they have a desire to work based on the holistic idea concordant in the values of caring science. When caring science theory is linked to practice, it has a greater impact, comes alive in clinical contexts and permeates the entire workplace culture. For caring science to

live, a permissive atmosphere in the workplace and leadership that enables the development of caring science in practice are required. However, a possible lack of a pronounced theoretical basis in caring science at the organisational level and of resources and time can be obstacles. This leads to the idea that caring science theory is applied individually in encountering the patient. Consequently, alumni may feel alone in their application of caring science theory and find it challenging to work and fight for it alone.

### **Increased ethical awareness and a questioning approach that enables good patient care**

The appropriation of caring science theories made the alumni reflect more on ethical issues, and ethics has become a conscious compass guiding them. Through the appropriation, an understanding of and sensitivity for the patient experiences has been founded, and they act more from the heart. '... I feel that I have to do what I feel here, in my heart.. and that I can add something, that the whole system should start; heart and brain. That I really want to [care for the patients]'. Ethical reflection based on caring science theory provides insights into what good care means, helping alumni verbalise their understanding of what is good for the patient. The appropriation of caring science theory also awakens their conscience and awareness that caring for patients is a trust one has been given, and it must be managed wisely. This means that as a caregiver, one no longer takes the easiest ways of caring but gives more of oneself in doing good for the patient. The appropriation of caring science theory also helps alumni see more clearly from the patient's perspective and stand up for the patient. 'It has given depth to the view of man. The answers are not so simple anymore, one understands that everything has many dimensions... That it is the wholeness one is supposed to see'.

Appropriating caring science theory gives alumni a critical eye and the courage to question conditions in practice; it also means questioning oneself and one's actions and constantly seeking new answers, other alternatives and solving problems based on the theoretical knowledge they have. 'I sometimes put on the hat of shame... Oh Good, I did that before, and I thought it was good! How did I think there? So it [appropriation of caring science theory] does something with one as a person, when it is related to vulnerable persons, it really does'. Thus, the appropriation of caring science theories has also helped alumni in daring to make suggestions based on a caring science perspective, which strengthens practice. As such, the alumni noted that appropriated caring science theories give weight and



authority to their work. The appropriation gives students the insight that caring is much more than just doing. Caring science has made alumni change from just providing care to actually daring to care, which increases satisfaction and joy in working. '... it felt so good, almost like a religious experience. The caring became valuable and my body became completely warm'.

### Strengthened professional identity and confidence in caring

According to the alumni, caring science theory often felt powerful and abstract at the beginning of their master's education. Understanding concepts and starting to use them in everyday practice did not happen immediately. Using a caring science language to bring theory and practice together took time. Therefore, a will to understand and a certain degree of maturity are needed to understand the usefulness of caring science theory. However, with time, the appropriated caring science becomes integrated into the alumni's approach: '... caring science is a basic and natural thing that I always carry with me... it exists in the back of the head... it is in the spinal cord... it is inside... it has to come from within, it has to be real, genuine. And it lasts a lifetime, despite weather or wind, and anywhere'. The appropriation of caring science theory anchored the alumni's way of being and made them grow and develop as persons; they related to and relied on caring science. '...concepts are really part of my being now and through them I understand what I do. It is part of my work, part of what I speak for and dedicate to the patient'. The alumni expressed that appropriated caring science theories contribute to a strengthened professional identity. As such, one feels proud of the profession, daring to stand up for the profession. This strengthened professional identity, giving both the will and courage to emphasise the profession and the caring science perspective in encounters with other professions. They were proud of being nurses and of their 'own' science. Confidence also benefits the creation of relationships with and care for patients. '...[it] has also given courage to stand up for oneself and that one dares to say what one thinks and thus can influence the care or stand up for the patient'. As such, appropriation made the alumni feel more confident in themselves and that they were doing a good job.

## DISCUSSION

The findings show that educators' bearing and way of teaching is the core of the alumni's appropriation of caring science theories. Educators' bearing can be seen as a

manner to respond, be present, communicate, listen, take an interest in and provide space for students, but also as a firmness and setting boundaries (c.f. 24). Educators' qualities involve a positive bearing of forward thinking and seeing students' potential. As such, their ability to live out the message of caring science theories in education is critical for learning. This is in line with Matilainen and Eriksson's [25] statement that shaping students' learning and formation is tied to the educator. Educators are role models for students because their perception and understanding of reality and view of science is reflected in their thought, language, bearing and actions.

The alumni described the importance of educators' own motivation and commitment for students learning and how educator engagement comes visible in their bearing. How educators value their work and the enthusiasm and joy they feel in their work are of significance (c.f. 24). The educator sets the tone in forming the culture of the learning space [26]. Thus, an open atmosphere and culture where students have the possibility to reflect and intertwine theory and practice are prerequisites and promote students' appropriation. The alumni expressed how important it is that the education is characterised by an open atmosphere and value base where everyone is seen and heard and where everyone's perspective is equally important. Truthfulness in teaching means treating everyone equally and honestly, as well as having high demands and expectations. Additionally, a good educator-student relationship is characterised by openness and respect for different opinions, protection of students' integrity, good interactions, listening and support and encouragement for learning and actions in practice [27–29]. Consequently, educators bearing is more important than how and what they teach. This needs to be highlighted and emphasised in teacher education, especially when education and teaching is increasingly conducted digitally.

An interesting finding is that caring science theory challenges thinking on a higher level of abstraction. This implies a deeper understanding of the meaning of the concepts, thus reaching a deeper meaning for caring and developing as caregivers in practice. Here, learning from each other in discussions and reflections is important for appropriation. Through reflection, when caring science theories and different experiences and points of view of practice are interwoven, new meanings are processed and created. This contributes to the students' ability to articulate and argue for their theoretical positions. Thus, reflection as a learning process gives students the potential to integrate caring science theory with practice and, thereby, is more than a technological function [30]. Consequently, it is important to enable students to reflect on different expressions of caring science theory in practice (c.f. 31).

The findings show that the effect of appropriating caring science theory is very much about growing as persons, both professionally and personally. The alumni expressed that through reflection, they met their inner feelings and thoughts. These findings are in agreement with Sandvik [32] and Ekebergh [30], showing that reflection sets students' inner processes in motion. This inner dialogue, where they stop to scrutinise their thoughts, feelings, experiences and actions, is crucial for an awareness and understanding of the ultimate intention of caring. According to the alumni, reflection facilitates understanding oneself, attaining new understanding and insights in relation to previous experiences and theoretical knowledge. This leads to formation (*Bildung*) and is the result of an ongoing internal process, where appropriated knowledge is integrated with the personality, that is, is incorporated and made one's own, thus changing them as human beings [14]. Professional becoming is an ongoing development of the professional self [17]. It is a hermeneutical movement altering one's thinking, actions, doing and being [20]. When the alumni internalised caring science theory, the theories could be translated into clinical situations in practice to benefit the patients, that is, applied. Simultaneously, with appropriation, the development of a caring identity and process of becoming happen [33]. This can be compared with a process of professional maturation that affects abilities such as flexibility, commitment, self-confidence and committing to something [34].

According to the alumni the appropriation of caring science theory entailed a deepening of their ethical awareness, changing both their being and action. This led to a focus on wholes and sensitivity for each unique patient's needs. As such, the alumni deviated from taking the easy way, instead feeling that caring science theory gave them the will and authority to stand up for the patient and ensure the best possible nursing care. They develop a sense of salience [35], that is, an ability to recognise the significant in clinical situations and the ways to respond, relate and perform according to the situation; this provides readiness to change and develop practice. Another interesting finding is that alumni feel that appropriated caring science theories give weight and authority to their work. It gives alumni confidence in caring and they have changed from just providing care to actually *daring* to care, which increases satisfaction and joy in working. Thus, alumni expressed having a feeling of security and the courage to act with the patient's best interests in focus. By combining their appropriation of caring science theory with adopting a questioning approach and critical eye, they can develop a 'mastery of seeing' (c.f. 36) and act accordingly. This gives them confidence in caring and strengthens their professional identity, employing a feeling of proudness of the profession and being the nurse they want to be.

## METHODOLOGICAL CONSIDERATIONS AND STUDY LIMITATIONS

The study had a qualitative, retrospective design employing a thematic analysis [23], which was assessed as suitable for the explorative character of the research object. Individual interviews were performed at four universities in three countries involving 21 recently graduated master's students in caring science. The number of participants was quite small but still sufficient for obtaining saturation [37] because the findings were concordant, which strengthens the trustworthiness. That the participants came from different universities and countries can be seen as a strength. Although the master programmes had a clear caring science profile, they differed in focus and emphasis on caring science, which may be considered a weakness. Yet, this may also be a strength. As findings were very consistent, these factors apparently did not affect alumni's experiences of appropriation and application. The interviews were performed by six researchers. The numerous interviewers can be seen as a weakness. Some interviews were conducted digitally or by phone, which might have affected the interviews. The use of a semi-structured interviews guided by a theme guide strengthens the conformity of the study, even though the interviewers may have focused on what was said slightly differently. Still, this can be seen as a strength in producing more nuanced and richer data.

The current study presents the experiences of alumni in a Nordic context, which may affect the transferability of the findings. However, appropriation and application are universal phenomenon, so the findings could probably be applied in other countries as well. Nevertheless, the findings do contribute to a deeper understanding of what facilitates the appropriation of caring science theory and how the appropriated theory benefits alumni in practice.

## CONCLUSION

The nurse educators' bearing is of outermost importance for appropriation and application of caring science theory. It has a key function in facilitating students' understanding and intertwining of caring science theory and practice. Appropriated caring science theory provides authority and courage to practice nursing care. Caring science theory provides a foundation for the alumni's ethical awareness, sense of professional pride and confidence in professional practice. Appropriation of caring science theory has great importance for professional and personal becoming.

## ACKNOWLEDGEMENTS

The authors would like to thank the alumni who participated in the study. We also would like to thank the project team that contributed to the collection of the data.

## CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

## FUNDING INFORMATION

The authors received no financial support for their search, authorship and/or publication of this article.

## AUTHOR CONTRIBUTIONS

All authors have been responsible for and contributed to the research design, data collection and writing of the article. PD and CK were responsible for the data analysis and A-HS for the completion of the manuscript.

## ETHICAL APPROVAL

Ethical approval for the current study was obtained from the NSD (Norwegian Centre for Research Data). The study followed the guidelines for good ethical conduct [38]. The participants obtained both oral and written information about the background, purpose and conduction of the study. The participants were informed that the data material would be treated confidentially and that personal information would be stored securely to guarantee confidentiality. The participants received information about the future publication of the research results. The voluntary nature of participation and right to end the interview at any time was emphasised. The interviewers obtained written consent from the participants. The confidentiality requirement was met by respecting personal integrity and data protection by arranging the interview situation in a secluded place, and the duty of confidentiality was observed. The data material was anonymised and stored securely according to data privacy regulations. The participants were informed that the interviews would only be used by researchers connected to the project. The study adheres to the consolidated criteria for reporting qualitative research (COREQ) [39].

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**How to cite this article:** Sandvik A-H, Dahlström P, Koskinen C. Appropriation and application of caring science theory: Experiences of master education alumni in three Nordic countries. *Scand J Caring Sci.* 2021;00:1–9. <https://doi.org/10.1111/scs.13030>