Integration of Palliative Care Learning Outcomes into Norwegian Nursing Education, and Students' Perspectives on Learning Palliative Care through Simulation and Transferring Learning Outcomes to Clinical Placement

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Spring 2023

OsloMet Avhandling 2023 nr 18

ISSN 2535-471X (trykt)
ISSN 2535-5414 (online)

ISBN 978-82-8364-485-2 (trykt)
ISBN 978-82-8364-501-9 (online)

OsloMet – storbyuniversitetet
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St. Olavs plass 4,
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Postadresse:
Postboks 4, St. Olavs plass
0130 Oslo

Trykket hos Byråservice

Trykket på Scandia 2000 white, 80 gram på materiesider/200 gram på coveret

Acknowledgements

Fulfilling my PhD has been an interesting and instructive journey. I would like to express my gratitude to those who have followed me on the road.

First and foremost, my supervisors. Thank you, Ellen Karine Grov, for introducing me to nursing science during my master's thesis, and then inspiring me to do the PhD some years later. Thank you for believing in me as a scientist. Your always quick and knowledgeable responses to my questions have been of significance, and the invitation to join you on a research stay in Australia is a memory for life.

Thank you, Kari Toverud Jensen and Anne Lise Holm, for sharing your perspectives and experiences, and Morten Simonsen for statistical support. To all my supervisors; your engagement, patience, motivation, and interaction in guiding my development as a researcher has been of great importance to me.

Without my “dream team” of facilitators in simulation, and the students who participated in studies 1 and 2, this project would never have been anything but an idea. My gratitude to the students, your thoughts about attaining learning outcomes in palliative care have been a great inspiration to complete the dissertation. Thank you to my colleagues Karen Johanne Vae, Lotte Pannekoeke, Ingrid Lindaas, Siv Anita Knudsen, and Bente Haug for your professional contribution to the simulation intervention, and for supporting me in the research. Bente, thank you for your contribution as a fellow author on one of the papers.

Support and facilitation from leaders and colleagues at the Department of Health and Caring Sciences at Western Norway University of Applied Sciences have been of great importance. Thank you all for listening to my ideas, presentations, and frustrations, and Elin Salemonsen for our walks and talks.

I would like to give thanks to the European Academy of Nursing Sciences, in which I had the pleasure to take part in summer school for PhD fellows, and especially to the Norwegian fellows who have cheered me to the finish line.

Thanks to my friends and family who support me in my work and fill my life with joy. Special thanks to Erling, Hallvard and Nora, my supportive and inspiring children who have started their studies and adult life outside our home during this PhD period. And last but not least Sveinung, thank you for your pulling and pushing, for your admiring patience, and for giving me the time and space to complete this project.

Haugesund, April 2023

Kristin Valen

Abstract

Background

The palliative approach includes optimising quality of life and relieving troublesome symptoms in people with life-limiting diseases regardless of diagnosis or age. Nursing students globally report that they feel unprepared for palliative care. The great variation in how palliative care has been integrated around the world into nursing education is identified as a barrier to enhancing palliative care for the people affected. It is therefore important how nursing students understand palliative care and how well trained they are. Simulation is recommended as a learning method, and a knowledge gap has been identified in the transfer of learning outcomes from simulation to clinical placement.

Aim

The overall aim of this thesis is to explore nursing students' experience of participation in a palliative care simulation intervention. It furthermore examines the students' perspectives on attaining learning outcomes through simulation and transferring these to clinical placement and, additionally, identifies and outlines whether palliative care learning outcomes have been integrated into bachelor's degree nursing programmes in Norway following the implementation of the Regulations on National Guidelines for Nursing Education.

Design and Method

Study 1 (Paper 1) is a longitudinal intervention study in which second-year bachelor's degree students (n=55) from a specific university of applied sciences in Norway voluntarily participated. The students were on a medical or surgical placement. Data were collected in a pretest, a postsimulation test and a postplacement test by way of a self-reported survey. The data were analysed by way of the Wilcoxon signed-rank test to determine whether there had been a significant change in the participants' scores as a result of the simulation and whether the simulation learning outcomes had been practised on the hospital placement. The Kruskal-Wallis test was used to test for differences between the groups.

Study 2 (Papers 2 and 3) has a qualitative explorative design. In-depth interviews were conducted with eleven bachelor's degree nursing students. Inclusion criteria were

participation as described in Paper 1 and experience in palliative care situations in the current placement. Qualitative content analysis was used to analyse the answers.

Study 3 (Paper 4) has a qualitative descriptive design and takes a document-analysis approach. Programme descriptions and course plans were collected from the websites of nine universities in Norway offering bachelor’s degree nursing programmes. Summative qualitative content analysis was used to analyse the documents.

Results

The nursing students participating in the simulation reported positive differences between the pretest and postsimulation tests, indicating the attainment of learning outcomes through simulation. However, negative differences between the scores on the postplacement test and postsimulation test give the impression that the participants had practised the learning outcomes from the simulation only to a small degree during their placement (Study 1, Paper 1). Study 2 may explain the results in Paper 1 to an extent. The in-depth interviews indicate that simulation is a preferred method for gathering knowledge, skills and competence in palliative care. The participants’ courage grew as a result of their active participation and debriefing and influenced their self-confidence. The debriefing seemed to alter the situation from one of chaos to one of control. It was their perception that their experience from the simulation intervention transferred to practice, served as a sound basis for clinical judgement and enabled communication with patients and their relatives (Study 2, Paper 2). However, the participants emphasised that a prerequisite to further learning was the active choice of palliative care situations. Relationships with nurses, patients and relatives as well as factors in themselves served as a gatekeeping function with regard to attending learning situations. The process of becoming a nurse capable of providing palliative care was described as an emotionally challenging experience. Elements that promoted palliative care learning outcomes included simulation experience, clarified expectations, support and good dialogue with the nurse before and after the learning situations in a placement (Study 2, Paper 3).

The findings of Study 3, which are presented in Paper 4, indicate that palliative care is among the learning outcomes of the Regulations on National Guidelines for Nursing Education in Norway (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019). However, the topic received differing emphasis in different universities. In particular, selected learning outcome descriptors, related subjects and presence on the academic trajectory did not necessarily correspond with the regulations. In addition, variation in terminology use was revealed.

Conclusion

The results indicate that factors such as personal engagement, interaction within communities of practice and programme coherence are important in nursing students' attainment of palliative care learning outcomes. These factors mutually influence each other, and the students' learning outcomes are affected to the extent that the factors are strengthened or weakened.

Bakgrunn

Den palliative tilnærmingen handler om å optimalisere livskvalitet og lindre plagsomme symptomer hos personer med livsbegrensende sykdommer, uavhengig av diagnose og alder. Sykepleiestudenter over hele verden beskriver at de er uforberedt på palliativ omsorg.
Store variasjoner i hvordan palliativ omsorg er integrert i sykepleieutdanningen globalt er identifisert som en barriere for å forbedre palliativ omsorg for mennesker med uhelbredelig sykdom. Hvordan sykepleierstudenter forstår palliasjon, og hvor godt trent de er, er derfor av betydning. Simulering anbefales som læringsmetode, og overføring av læringsutbytte fra simulering til klinisk praksis er identifisert som et felt der det mangler forskning.

Mål

Det overordnede målet med denne avhandlingen var å utforske sykepleierstudenters erfaringer med å delta i en simuleringsintervensjon med palliativ omsorg. Videre å undersøke studentenes perspektiv på å oppnå læringsutbytte gjennom simulering og overføre det til klinisk praksis. I tillegg var målet å identifisere og skissere om læringsutbytte i palliasjon er integrert i sykepleierutdanningene i Norge etter implementering av Forskrift om nasjonale retningslinjer for sykepleierutdanning.

Design og metode

Studie 1 (artikkel 1) er en longitudinell intervensjonsstudie der andreårs bachelorstudenter i sykepleie, n = 55, fra en bestemt høgskole i Norge deltok frivillig. Studentene var i sin medisinske eller kirurgiske praksis. Data ble samlet inn i en pretest, en postsimuleringstest og en postpraksistest ved hjelp av en selvrapportert undersøkelse. Dataene ble analysert ved hjelp av *Wilcoxon signed-rank test* for å avgjøre om deltakernes poengsum endret seg signifikant som et resultat av simuleringen, og om læringsutbyttet fra simuleringen ble praktisert under sykehuspraksis. Forskjellene mellom gruppene ble testet ved hjelp av *Kruskal-Wallis-testen.*
Studie 2 (artikkel 2 og 3) har et kvalitativt utforskende design. Det ble utført dybdeintervjuer med elleve bachelorstudenter i sykepleie. Inklusjonskriteriet var deltagelse som beskrevet i studie 1, og erfaringer med palliative situasjoner i tilhørende sykehuspraksis. Svarene ble analysert ved hjelp av kvalitativ innholdsanalyse.

Studie 3 (artikkel 4) bruker et kvalitativt deskriptivt design med en dokumentanalyse-tilnærming. Programbeskrivelser og emneplaner fra ni universitet/høgskoler som tilbyr bachelorutdanning i sykepleie i Norge, ble samlet inn fra nettsidene deres. Dokumentene ble analysert ved hjelp av summativ kvalitativ innholdsanalyse.

Resultater

Sykepleierstudentene som deltok i simuleringsintervensjonen, rapporterte positive forskjeller mellom pretest og postsimuleringstest, noe som indikerer at de oppnådde læringsutbytte gjennom simulering. Negative forskjeller mellom postpraksistesten og postsimuleringstesten ga imidlertid inntrykk av at deltakerne i liten grad hadde anvendt læringsutbytte fra simuleringsintervensjonen i praksisperioden (artikkel 1). Studie 2 kan gi noen forklaringer for å forstå resultatene i studie 1. Dybdeintervjuene indikerer at simulering er en foretrukket metode for å samle kunnskap, ferdigheter og kompetanse i palliasjon. Motet vokste gjennom aktiv deltakelse og debrifing, og påvirket deltakernes selvtillit. Debrifing så ut til å endre situasjonen fra kaos til kontroll. Studentene uttrykte at erfaringer fra simuleringen ble overført til praksis, og tjente som et godt grunnlag for klinisk vurdering og muliggjorde kommunikasjon med pasienter og pårørende (studie 2, artikkel 2). Deltakerne understreket at en forutsetning for videre læring var å aktivt velge palliative situasjoner. Relasjoner til sykepleiere, pasienter og pårørende og faktorer i studentene selv fungerte som portvoktere for å delta i palliativ pleie og behandling. Det å bli en sykepleier som kan utøve palliativ omsorg, ble beskrevet som en følelsesmessig utfordrende opplevelse. Elementer som fremmet læringsutbytte i palliasjon, var simuleringserfaring, avklarte forventninger, støtte og god dialog med sykepleier før og etter læringssituasjoner i praksis (studie 2, artikkel 3).
Funn i studie 3, presentert i artikkel 4, viser at palliasjon er inkludert som læringsutbytte i forskrift om nasjonal retningslinje for sykepleierutdanning i Norge. Til tross for dette ble fagfeltet forskjellig vektlagt av universitetene/høgskolene. Spesielt utvalgte læringsutbyttebeskrivelser, relaterte emner og tilstedeværelse gjennom studiet var ikke nødvendigvis samsvarende med forskriften. I tillegg ble det avdekket en variasjon i terminologien som brukes.

Konklusjon

Resultatene indikerer at faktorer som personlig engasjement, samhandling i praksisfellesskap og programsammenheng er av betydning for studentenes oppnåelse av læringsutbytte i palliasjon. Faktorene påvirker hverandre gjensidig, og studentenes læringsutbytte påvirkes av i hvilken grad faktorene styrkes eller svekkes.

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List of Papers

The thesis is based on the following original papers:

Paper 1: Valen, K., Simonsen, M., Holm, A. L., Jensen, K. T., & Grov, E. K. (2021). Impact of palliative care simulation on nursing students' learning outcomes and reported use in hospital placement. *Nursing Open, 9*(6), 2847-2857. https://doi.org/10.1002/nop2.991

Paper 2: Valen, K., Holm, A. L., Jensen, K. T., & Grov, E. K. (2019). Nursing students' perception on transferring experiences in palliative care simulation to practice. *Nurse Education Today*, *77*, 53-58. https://doi.org/10.1016/j.nedt.2019.03.007

Paper 3: Valen, K., Haug, B., Holm, A. L., Jensen, K. T., & Grov, E. K. (2020). From palliative care developed during simulation, to performance in clinical practice – Descriptions from nursing students. *Journal of Hospice and Palliative Nursing*, *22*(3), 204-213. https://doi.org/10.1097/NJH.0000000000000644

Paper 4: Valen, K., Jensen, K. T., Holm, A. L., & Grov, E. K. (2022). Palliative care in Norwegian nursing education: A document analysis of the integration of learning outcomes. *Journal of Nursing Research, 0*(0). https://doi.org/10.1177/20571585221098387

Introduction

The palliative care approach aims to improve the quality of life for seriously ill and dying patients and their families (Radbruch et al., 2020). When I teach the subject to students, I often hear them say, *‘I do not know what to say, and I do not know what to do*.’ The students describe feelings of emotional distress and inadequacy when meeting with this patient group. These students’ descriptions are consistent with the reports of nursing students worldwide that the complexity of palliative care is challenging to endure, perform and learn (Hall-Lord et al., 2017; Malone et al., 2016). Few students are knowledgeable about this subject, as they are young and rarely have experience of impending death. The students want to contribute, but they may have complex feelings and thoughts regarding their own fears and reactions when confronted with a patient who is seriously ill and dying (Ek et al., 2014; Gillett et al., 2016). Thus, they often dread palliative care situations (Dimoula et al., 2019; Strang et al., 2014).

Although factors such as prior experience, age and education add nuance to the picture, it has been reported that nursing students do not feel adequately prepared for palliative care in clinical placement (Hall-Lord et al., 2017; Henoch et al., 2017; Malone et al., 2016). In order to be prepared, students need core competencies in palliative care to relieve pain and troublesome symptoms as well as to create mental, social and existential security in relation to the transition to death (Ferrell et al., 2016; Gamondi et al., 2013). The care should be tailored to the individual needs of the patients and their families. Rapid change in patients’ symptoms and needs is common, and it is often necessary to have a multidisciplinary environment across service levels (Radbruch et al., 2020). In addition, the student needs to develop self-care strategies to cope with suffering, loss, moral distress and compassion fatigue (Ferrell et al., 2016; Gamondi et al., 2013; Griffith, 2018).

Palliative care services have primarily involved care for people with cancer, and approximately 95% of patients on palliative wards at hospitals in Norway have a cancer diagnosis (Helsedirektoratet, 2019). This perception is changing. An aging population with a high prevalence of non-communicable diseases combined with better treatment will increase comorbidity and complexity and the need for palliative care (Arias-Casais et al., 2019). There is increased recognition that all life-limiting conditions, such as heart failure, chronic respiratory diseases and dementia, can benefit from palliative care, both for children and for old people (Radbruch et al., 2020). Murtagh et al. (2014) estimate that as much as 70% to 80% of all patients need palliative care during their last years or months of life.

Different words are used to describe the condition of, and care for, the seriously sick and dying patient, including ‘end-of-life’, ‘terminally ill’, ‘terminal care’, ‘elevation’, ‘hospice care’ and ‘palliative care’ (Hui et al., 2014; Tuhus et al 2021). While end-of-life care often refers to care for a patient during the late stage of life, including the terminal condition, palliative care is an approach that is recommended from the time of diagnosis up to the end of life (Radbruch et al., 2020). However, there is a lack of clarity surrounding these concepts in the literature and in clinical practice and the terms are sometimes used as synonyms (Hui et al., 2014; Radbruch et al., 2020; Tuhus et al., 2021). I have used the term ‘palliative care’ in my papers, and some of the studies that the thesis refers to use the term ‘end-of-life care’.

With regard to ensuring provision of palliative care for all people affected by life-limiting diseases, palliative care education has repeatedly been identified as a challenge (Knaul et al., 2018; Mason et al., 2020; Rosa et al., 2022). The rationale for this thesis is that today’s students are tomorrow’s nurses. The better nursing students understand palliative care and the better they are trained can contribute to promoting palliative care and the development of the field in the nursing profession. In Norway, an important step towards increasing this focus has been the inclusion of palliative care learning outcomes in nursing education in the Regulations on National Guidelines for Nursing Education (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019). Therefore, this thesis focuses on whether palliative care learning outcomes have been integrated into bachelor’s degree nursing programmes in Norway following the implementation of the Regulations on National Guidelines for Nursing Education (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019), henceforth referred to as the national regulations, in the 2020-2021academic year. It further explores nursing students’ experience of participating in a palliative care simulation intervention and examines whether learning outcomes were attained through the simulation and transferred to a hospital placement.

Background

The background presents the emphasis that palliative care receives in nursing education internationally. This is followed by sections describing the organisation of nursing education in Norway, the role of learning outcomes and the qualification framework within higher education. Different learning methods and learning arenas are used in nursing education to facilitate the attainment of learning outcomes. This study focuses on simulation and practice, the characteristics of which will be presented at the end of the chapter.

Palliative Care in Nursing Education

Significant variation in palliative care education has been identified across and within countries, and in nursing undergraduate curricula in particular (Arias-Casais et al., 2019; Pereira et al., 2021). The subject is poorly addressed in syllabus and curricula. It is rarely taught as a mandatory subject and is often included as a part of other modules. A variety of pedagogical methods are used, the most common being lectures and group discussions, and students are seldom offered clinical placements in specific palliative care units (Arias-Casais et al., 2019; Gillan et al., 2014a; Hagelin et al., 2021). Recommendations from the Salzburg Global Seminar on Rethinking Care Toward the End of life (Bangerter et al., 2018) reveal that all healthcare workers should be better educated and trained in palliative care so as to promote quality of life for the people affected.

Internationally, the complexity of palliative care is being increasingly recognised within health policy frameworks. However, there is still a lack of policy guidance on the provision of training to meet this health-care challenge (Mason et al., 2020). Although there is a consensus-based guide for the development of nursing education programmes across Europe (De Vlieger et al., 2004), the number of hours and the structure of levels associated with this educational preparation are left to each country to decide. Hence, palliative care in nursing education is diverse; it is based on culture and politics and affected by whether the educational programme is at the diploma or bachelor's degree level.

In Norway, which provides the source for this thesis's data material, the terms 'palliative care' and 'learning outcomes' were not used in the National Curriculum Regulations for Nursing Programmes (Forskrift til rammeplan for sykepleierutdanning 2008) in force at the time this PhD project was begun. The wording it did use stated that nursing students should be trained to alleviate suffering and help patients to a peaceful death. In the 2020–2021 academic year, the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019) were implemented in Norway. These regulations include the term 'palliative care' as a learning outcome and state that the graduate should have knowledge about palliative care and be able to carry out nursing for people in the palliative phase. The national regulations stress that the graduate must be able to provide nursing care for people in the palliative phase in primary health care and specialist health services, and the structure of the eucation must ensure coherence, progression and integration between theory and practice in a manner that supports the learning outcome descriptions (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019).

Organisation of Nursing Education in Norway

Nursing education in Norway is a three-year bachelor's degree programme, with the option of continuing to the master's or doctoral level. Fifty percent of the bachelor's degree consists of integrated clinical placement (Råholm et al., 2010), and Article 31of EU Directive 2005/36/EC sets out the principle requirements for the training of general nurses (European Parliament Council, 2005). This nursing education is based on the Qualification Framework for Lifelong Learning (Kunnskapsdepartementet, 2011) and is governed by the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019), which steer the expected learning outcomes. Although the term 'learning outcome' was first included in the national regulations in 2020, it has been used in the previous decade in national white papers on higher education and incorporated into study programmes and course plans for nursing education (Meld.St.13 (2011-2012), 2012; Meld.St.16 (2016-2017), 2017). Therefore, in this PhD thesis and the associated papers, the term 'learning outcome', together with the descriptors 'knowledge', 'skills' and 'competence', are used so as to be in accordance with the ratified qualification framework for higher education.

Learning Outcomes and the Qualification Framework

In an attempt to make educational systems more transparent, outcome-based curricula are common in Europe, the United States and Australia, among others (Lejonqvist et al., 2016). The qualification framework that guides the expected learning outcomes in nursing education in Norway is based on the European Qualifications Framework for lifelong learning (Kunnskapsdepartementet, 2011). The European framework resulted from the Bologna Declaration in 1999, wherein the ministers of education of 29 European countries agreed on a qualification framework to make academic educational programmes comparable throughout Europe (Secretariat, 1999). The intention was to have a uniform educational structure so as to enable student mobility within Europe (Lejonqvist et al., 2016). The qualification framework shifts the focus from input (duration of a learning experience, type of curriculum) to learning outcomes, or what a person with a particular qualification knows, understands and is able to do at the end of the educational period (Prøitz, 2015). The European Qualifications Framework defines learning outcome in terms of 'knowledge', 'skills' and 'competence', also referred to as learning outcome descriptors (European Parliament Council, 2008). 'Knowledge' is the body of facts, principles, theories and practices that relate to a field of work or study. 'Skills' are defined as the ability to apply knowledge and use know-how to complete tasks and solve problems and are described as cognitive or practical. ‘Competence’ means proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. Learning outcome descriptors address competence in terms of responsibility and autonomy (European Parliament Council, 2008). In other words, a learning outcome consist of three separate yet interdependent components. Students are introduced to learning outcomes in their education through programme and course descriptions. Learning outcome descriptors are described in slightly different terms in outcome-based educational and training programme. In Australia, for example, learning outcomes are expressed in terms of knowledge, skills and the application of knowledge and skills (Australian Qualifications Framework Council, 2013). In simulation-based programmes in the United States, expected outcomes should encompass knowledge, skills and attitude (INACSL Standards Committee, 2016a). ‘Knowledge’, ‘skills’ and ‘attitude’ are the terms used to express the necessary professional qualifications in palliative care (Helsedirektoratet, 2019). The terms ‘knowledge’, ‘skills’ and ‘general competence’ are used in the Norwegian qualification framework. ‘General competence’ is described as the ability to apply knowledge and skills independently in different situations in educational and professional contexts by showing the ability to cooperate, responsibility, ability for reflection and critical thinking (Kunnskapsdepartementet, 2011). Even though the wording for the learning outcome descriptors differs, there seems to be a common understanding that a learning outcome consists of what a learner knows, understands and is able to do on completion of a learning process. To avoid confusing the international reader, the term ‘competence’ is used instead of ‘general competence’ in this thesis and its associated papers. Nursing education uses several methods to help students attain the expected learning outcomes. This thesis focuses on simulation and clinical placement.

Simulation as a Learning Method

Simulation is a recommended and increasingly popular method of active student learning used for the attainment of learning outcomes (Daley & Campbell, 2017; Hayden et al., 2014; Meld.St.16 (2016-2017), 2017). Jeffries (2005) gives the following definition: ‘Simulation is activities that mimic a clinical environment where you can train procedures, decision-making and conduct critical thinking using role play, games, video or simulators’ (p. 97). Today, we often think of hi-tech simulators when referring to simulation, but the level of realism of simulators has always paralleled new technology. The use of models and simulators has roots going back centuries and even millennia in healthcare education, and nursing education has a long tradition of using models for clinical skills development and role play with different scenarios (Owen, 2012). The term ‘simulation’ is used to describe a variety of methods ranging from learning skills on models, often described as low-fidelity simulation, to high-fidelity simulation involving advanced digitalised manikins.

The simulation intervention that is built upon in Papers 1, 2 and 3 is a high-fidelity simulation based on the National League for Nursing (NLN) Jeffries simulation theory (Jeffries et al., 2016). The theory identifies significant components of simulation and the relationships among them. The simulation experience is described as experiential, interactive, collaborative and learner-centred and as a place wherein mutual trust must be established (Jeffries et al., 2016).

A high-fidelity simulation consists of a scenario, also known as a case, deliberately designed to provide the participants with an opportunity to meet identified learning outcomes. The scenario provides a context for the simulation and can vary in length and complexity (INACSL Standards Committee, 2016b). Some scenarios use a standardised patient. This is when students, teachers or actors portray individuals with health conditions (Rutherford-Hemming et al., 2019). In other scenarios, a high-fidelity manikin provides proper realism. This is a digitalised manikin controlled by an operator and allows the students to, among other things, register breathing and heart rate and give medication.

A person involved in the implementation and/or delivery of simulation activities is referred to as a facilitator (Lioce et al., 2020). He or she is in dynamic interaction with the participants and prepares them by way of a briefing immediately prior to commencement of a simulation activity. The participants receive essential information about the simulation scenario, such as background information, vital signs, instructions and guidelines (Lioce et al., 2020). Briefing has received relatively scant attention in the literature, but the way in which this element of the simulation is facilitated is of the essence to the learning experience and has consequences for the debriefing (Nestel & Kelly, 2018). Throughout the simulation, the participants receive immediate feedback on their actions through the active participation and debriefing. The debriefing consists of planned reflection wherein the situation and learning outcomes are reflected upon to improve further performance (Jeffries et al., 2016). In simulation-based pedagogy, debriefing is emphasised as a cornerstone of learning (Husebø et al., 2015; Jeffries et al., 2016). The goal of any simulation experience is transformative learning (Clapper, 2010).

Throughout the simulation and debriefing, the facilitator must have a student-centred attitude and provide support. The facilitator must acknowledge that some students will find simulation stressful and emphasise that mistakes are an accepted part of the learning process. The participants' attitude towards and preparedness for the simulation will also affect the learning experience, and motivation plays an essential role (Jeffries et al., 2016).

Clinical Placement

The 50% of the nursing education in Norway that is represented by integrated clinical placement includes pre-clinical studies in skills labs and clinical training in different parts of the healthcare services. Learning outcomes for specific fields are described in the course plans. The clinical nurse in placement is a significant figure who helps students to deal with the way in which theoretical knowledge and practical skills are applied in patient situations. Through the student's inclusion in the work environment, the inside experience that they need to assess and evaluate what is happening in placement will emerge (Raaen, 2017). Various clinical education models are used to guide students in clinical placements, such as faculty-supervised practicums, education units and, most commonly, clinical nursing staff acting as preceptors (Jayasekara et al., 2018). One challenge is that nurses' primary task is patient follow-up, not student follow-up, which can lead to a barrier to supervision. In contrast with the nurses, the students can move in and out of patient situations and are expected to use their placement to read, plan and reflect in relation to the different learning situations. Through reflection groups and essay writing, faculty members follow the students' development. A placement is a continuous formative learning arena and a place for assessment consisting of normative expectations, requirements and criteria that clarify what the students should work on. In addition, a final collaborative assessment is conducted by the teacher, the student and the nurses to evaluate whether the learning outcomes have been achieved (Christiansen, 2019).

Previous Research

When this PhD project was begun in 2016, the reviews of palliative care in nursing education revealed a dearth of palliative and end-of-life care content in textbooks and curricula (Cavaye & Watts, 2014; Gillan et al., 2014a; Lippe & Carter, 2015). Although Cavaye and Watts (2014) identified a global effort to raise the level of palliative care in undergraduate curricula, they described the limited allocation of teaching time to this topic as varied in content and duration. The difficulty of finding appropriately qualified teaching staff, the subject's provision as elective or mandatory courses and resources were seen as barriers. All three reviews emphasise the limited evaluation of palliative care teaching strategies. Research on student learning outcomes and the transfer of these to the clinical setting was recommended. The literature reviews found a wide range of teaching methods being used, the most common being lectures and classroom activities, followed by group discussions. All of the teaching methods had positive learning outcomes for attitude, self-confidence and awareness of palliative care. However, simulation was recommended in particular as a powerful teaching and learning method that can provide meaningful experience.

A central literature review focusing on simulation as a method for teaching nursing students palliative care came in 2014 (Gillan et al., 2014b). Simulation of palliative cases was at that time in its infancy, which is reflected in the fact that of the 16 reviewed articles presented, only 6 were research articles, the remainder being descriptive articles reporting on projects undertaken in palliative care simulation. However, the findings indicated that palliative care simulation had a positive impact on critical thinking and improved participants' communication skills, self-confidence and satisfaction with the learning method. Debriefing was highlighted as an essential element of simulation-based learning, and inclusion of the family perspective increased realism. Similar findings have been reported by others (Fabro et al., 2014; Lippe & Becker, 2015; Stroup, 2014). However, different methods and small samples made it difficult to compare results (Gillan et al., 2014b; Stroup, 2014). None of the reviewed articles included outcomes in a clinical setting. Stroup (2014) stressed that the student does not benefit from the potential gains in critical thinking and confidence if these occur only in the laboratory. The literature identified a knowledge gap with regard to how students transfer learning outcomes from simulation to clinical practice (Gillan et al., 2014b; Stroup, 2014). A research article reporting on outcomes in a clinical setting based on palliative care simulation was published by Venkatasalu et al. (2015). This study compared high-fidelity simulation versus classroom-based end-of-life care education. The findings were based on 12 in-depth interviews conducted after a first clinical placement with experience of end-of-life situations. Both the classroom-based education and the simulation improved the students' knowledge of and ability to recognise death and dying. However, the simulation-based education was perceived as better than the classroom-based education in terms of utilising end-of-life skills and preparing students emotionally for their first placement (Venkatasalu et al., 2015). Another study reporting the outcomes of clinical placement was conducted by Gillan et al. (2016). The study describes Australian nursing students' stories about end-of-life care. Its narratives from 18 participants suggest that end-of-life care simulation is an important means of preparing students for the experience of clinical end-of-life care. The findings revealed that end-of-life care was a privilege. Witnessing death was seen as surreal, and providing after-death care was seen as an honour (Gillan et al., 2016).

For a detailed presentation of the previous research from the start of this PhD project, please see Table 1.

Table 1

Overview of Previous Research at Commencement of PhD Project in 2016

Author, year	Aim	Method	Sample	Results
Cavaye & Watts (2014)	To contribute to the knowledge about the nature and extent of death education (palliative and end-of-life care) in pre-registration curricula	Literature review	41 papers published between 1990 and 2013	The level and content of death education in undergraduate curricula have increased over recent decades. The use of technology and simulation is highlighted as effective for developing clinical skills. There remain deficits in key areas such as knowledge, skills, organisation of care, and teamwork. Where death education is not integrated into the curriculum, students are ill-prepared to care for dying patients, which has implications for the quality of future care provision.
Gilland et al. (2014a)	To examine how end-of-life care education has been delivered to undergraduate nursing students and to critically discuss the research on modes of delivery and teaching strategies	Literature review	18 papers published between 1984 and 2012	There is a lack of end-of-life content in textbooks and in undergraduate nursing curricula. Simulation appears to be an attractive option for providing meaningful experience with end-of-life care and preparing students to provide quality end-of-life care in clinical practice. When implementing teaching strategies for end-of-life care, the level of the undergraduate nursing student, the characteristics and demographics of the cohort and their experience with death and dying (whether personal or professional) need careful consideration. An identified gap is the lack of qualitative research that effectively assesses learning strategies for depth of learning experiences in end-of-life care education.
Lippe & Carter (2015)	To critically evaluate teaching strategies found effective for improving student learning outcomes associated with providing care to patients at the end of life	Literature review	14 papers published between 1998 and 2013	The most common teaching strategies were found to be lecture/didactic strategies. All teaching strategies resulted in positive learning outcomes for attitude, knowledge, self-confidence/self-efficacy and awareness of end-of-life care.

				Recommendations for future research include measurement of students’ learning outcomes relative to knowledge and competence rather than attitudes and opinions, measurement of outcomes directly from learning and the transfer from classroom to clinical setting, as well as assessment of patient outcomes within education research.
Gillan et al. (2014b)	To examine the extensive literature on end-of-life care simulation	Literature review	16 papers published between 2009 and 2013	Simulation provided increased self-confidence and knowledge about palliative care and communication skills. There was satisfaction with the learning method. Debriefing is essential in simulation-based learning. It is significant that the family perspective was included. Different methods and small samples made it difficult to compare. Research investigating transfer to placement is recommended.
Fabro et al. (2014)	To provide an example of a high-fidelity end-of-life simulation used in an elective bachelor’s nursing programme	Qualitative analysis of student perceptions in a reflective journal submitted postsimulation Quantitative analysis of learner satisfaction, self-confidence and educational practices	Undergraduate nursing students n = 18 n = 21	The simulation created an opportunity for students to absorb principles of palliative care in a safe learning environment. Feelings and thoughts were experienced as real, even if the patient situation was not real. The evaluations indicated that the students were satisfied with their learning experiences and reported increased confidence in their ability to care for dying patients. Simulation is an effective strategy for giving all students learning experiences similar to clinical placements to meet expected learning outcomes.

Lippe & Becker (2015)	To assess changes in bachelor's degree nursing students' attitudes and perceived competence following exposure to an end-of-life care simulation	Quantitative pre-test, post-test	Undergraduate nursing students n = 118	Increased perceptions of competence and improved attitudes in caring for the dying patient, which may translate to improved attitudes and perceptions of competence in students' future nursing practice.
Hjelmfors et al. (2016)	To increase knowledge about end-of-life care simulation in nursing education by describing and evaluating the delivery of simulation when teaching third-year nursing students about end-of-life care	Ethnographic observations	Undergraduate nursing students n=60	
Stroup (2014)	To explore faculty perspectives, application strategies, implementation processes and the overall effectiveness of simulation usage in foundational nursing courses	Literature review	15 papers published between 2003 and 2013	Simulation had a positive impact on critical thinking development. Simulation resulted in increased levels of faculty and student satisfaction. Simulation is as effective as traditional methods for cognitive gains, skills development and self-confidence ratings. Transfer from the laboratory to the actual patient care setting must be researched.
Venkatasalu et al. (2015)	To design, use and assess the effectiveness of high-fidelity simulation versus classroom-based end-of-life care	12 in-depth qualitative interviews: 7 from the simulation group and 5 from the classroom group	First-year nursing students n = 187 randomised to classroom-based n = 139 and simulation-based education n = 48	Both classroom-based and simulation-based education improved students' knowledge of and ability to recognise death and dying. Simulation-based education was perceived as better in terms of utilising end-of-life skills and as better emotional preparation for students' first placement. Simulation made it easier to talk with the supervisor.

Gillan et al. (2016)	To explore undergraduate nursing students' experiences of end-of-life care simulation	Qualitative study Video recording, observation and field notes during simulation and debriefing Semi-structured interviews after final clinical placement, six to eight months after the simulation	Bachelor's degree nursing students in their final year n =18	Participants' narratives suggest that end-of-life care simulation is an important means of preparing students for clinical end-of-life care experiences. The findings revealed three distinct plotlines along a time continuum and specifically surrounding time of death: 'the privilege of end-of-life care', 'witnessing death as surreal' and 'the honour of providing after-death care'.

The number of papers reporting on palliative care simulation has grown since this project began. The review by Kirckpatrick et al. (2017) found that palliative care simulation supports the development of competence in palliative care by providing the care with meaning and context. The positive outcomes included improved self-confidence, communication and understanding of palliative care principles. Smith et al. (2018) in their review focused on palliative and end-of-life communications skills. They indicate that simulation-based learning supports the development of communication competencies for nursing students and nurses, but that its true impact is elusive. The authors recommend clearly reporting the goals and objectives to be attained, using externally validated scenarios and applying feasible, rigorous and appropriate evaluation methods. The review by Condry and Kirkpatrick (2021) found, in line with Kirckpatrick et al. (2017), that end-of-life care simulation increases competence and self-confidence. Objective measurements, a focus on performance, and multi-site and longitudinal studies are still lacking. The scoping review by Hoang et al. (2022) includes 42 research studies from 2009 to 2021. The paper visualises the development of the scope of studies in this field over the previous decade and reports findings on student learning outcomes and simulation components. Students felt more clinically prepared to care for dying patients and more able to recognise changes in a patient's condition. Simulation of palliative care cases helped students acquire a positive attitude and a deeper understanding that changed their view of caring for a dying patient. Communication skills were improved, and self-confidence increased. Regarding student stress and anxiety, some of the studies identified decreased anxiety as a result of the mental preparedness that the simulation provided, while others described higher levels of stress and anxiety related to caring for a dying patient. Important simulation components to be considered when designing and facilitating a palliative care simulation included the influence of the pre-brief to prepare students for the simulation. The presence of family members helped students to be emotionally prepared. The facilitator's skills and the method used in the de-brief were of crucial importance given that the simulation may be one of the student's first hands-on palliative care experiences.

The reviews mentioned emphasise the continued existence of a gap in the knowledge about the relationship between student outcomes from simulation and the effect on students' clinical performance in palliative care. However, the study by Gillan et al. (2021) provides examples of knowledge and skills attained in palliative care simulation that were found to be transferred to clinical placement.

The transfer of nursing students' learning from simulation-based experiences to clinical placement within subjects other than palliative care has been synthesised in the scoping review by El Hussein and Cuncannon (2022). The included studies generally support the value of simulation in bridging theory and practice. However, there is great complexity underlying the transfer process connecting simulation-based learning to clinical placement. Barriers described include differences in nursing scope and practice, regulatory requirements and healthcare contexts. Factors facilitating the transfer process are described by Tan et al. (2022). The authors emphasise that fidelity in the simulation helped the students to draw parallels between their simulation and clinical experiences. Self-efficacy in clinical placement was gained through deliberate practice. Application of cognitive tools, such as ISBAR and ABCDE, provided mental frameworks to guide clinical performance. Hustad et al. (2019) draw attention to the way in which nursing education organises simulation-based training and its integration in the curriculum, which seems to be of great importance to students' learning outcomes and their experience of the transfer to clinical placement.

In recent years, the focus at the front of research on palliative care in nursing education has increasingly been on how palliative care is integrated into nursing education. There is great variation in the integration of the subject as reported from Sweden, New Zealand, Italy and the United Kingdom (Hagelin et al., 2021; Heath et al., 2021; Mastroianni et al., 2019; White et al., 2019). Finnish nursing students report that palliative care education in undergraduate nursing curricula needs to be developed in terms of extent, content, methods and integration into educational programmes (Hökkä et al., 2022).

To sum up the literature review, there seems to be international variation in the integration of palliative care into nursing educational programmes. Thus far, we have not found documentation of how palliative care and the national standards are incorporated into the nursing education curricula in Norway. The research on students' palliative care learning outcomes in terms of knowledge, skills and competence was limited when this project started. Simulation is recommended as a learning method, and transfer of learning outcomes to clinical placement has been identified as a knowledge gap. Research on students' learning outcomes in terms of knowledge, skills and competence and their transfer from simulation to clinical settings is recommended. This thesis has sought to follow these recommendations in order to contribute to this field of knowledge.

Theoretical Perspectives

The theoretical perspectives used to interpret and understand the results of this thesis are based on theories of transformative learning and situated learning and on theory of the transfer of learning. The following chapter will describe the selected theoretical perspectives on learning and the argument for their use in the thesis to achieve the overall aim.

Transformative Learning

The work of Piaget (1952) describes how people base their learning on previous knowledge and organise their thought processes into cognitive structures. Piaget (1952) uses the psychological metaphor 'mental schemes' to explain the process. A connection between existing schemes and new impulses can be established through different types of learning. Cumulative learning is most frequent in childhood and refers to learning something completely new. Assimilative learning links new knowledge or skills to already established knowledge or skills, while accommodative learning implies breaking down elements of mental schemes and reconstructing them to fit into a new understanding. Sometimes, learning involves changing perceptions and seeing things in a new way, which is described as transformative learning. Transformative learning is an overall goal in higher education and simulation-based learning which enables learners to attain expected learning outcomes (Clapper, 2010; Meld.St.16 (2016-2017), 2017). Thus, transformative learning theory has been selected in order to discuss nursing students' experience of attaining palliative care learning outcomes in simulation and placement. According to Hatlevik (2018), Mezirow occupies a central role in the description of the concept and his view has been used in this thesis.

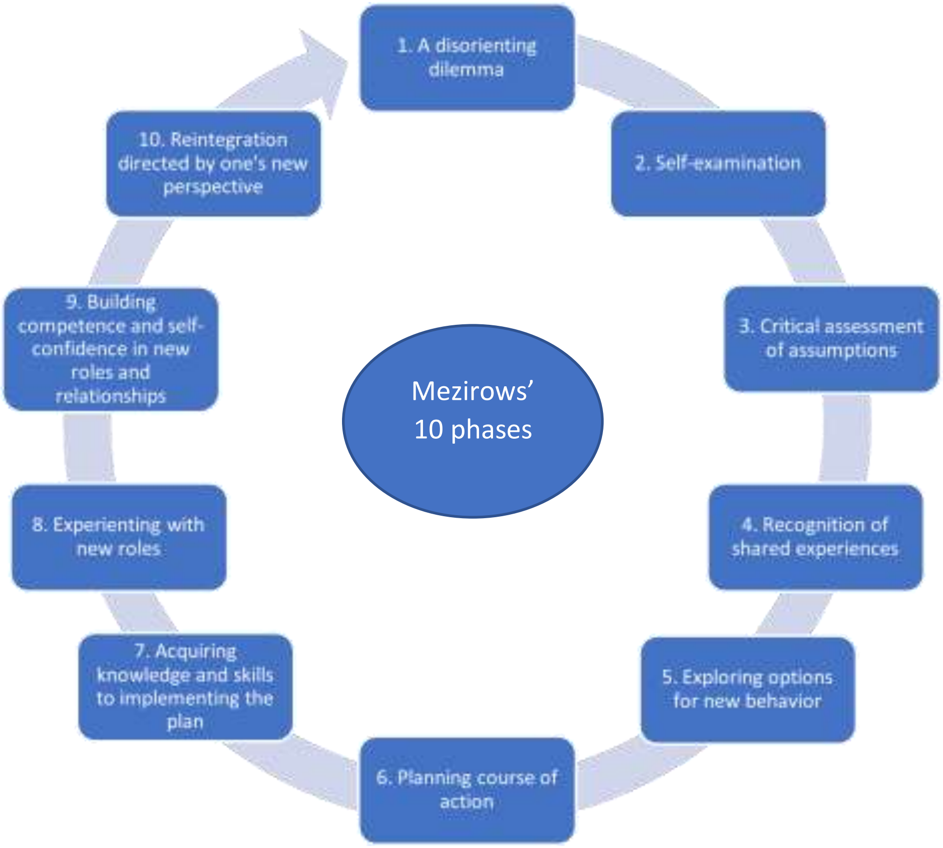
According to Mezirow (2000), a learner possesses a set of meaning schemes, or rules, that have been learned by heart and govern their interpretations and the perceptions that guide them. Transformative learning focuses on 'the process of using a prior interpretation to construe a new or revised interpretation of one's experience in order to guide future action' (p. 5). With regard to subject matter such as palliative care, students may have little knowledge or experience and may have complex feelings and thoughts about their own fears of and reactions to death (Ek et al., 2014; Gillett et al., 2016). Mezirow (2003) describes this as habits of mind, or *frames of reference*, that can be both conscious and unconscious. He defines transformative learning as:

> *learning that transforms problematic frames of references – sets of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets) – to make them more inclusive, discriminating, open, reflective, and emotionally able to change. Such frames of reference are better than others because they are more likely to generate beliefs and opinions that will prove more true or justified to guide action* (Mezirow, 2003, s.58).

When a frame of reference does not match a new experience, Mezirow (2003) describes this as a *disorienting dilemma*. A frame of reference is transformed when one becomes critically reflective about the premise of the problem, redefines it and lets it guide further tasks. Feelings are often included in the process. Transformative learning can occur as the result of a sudden major reorientation of one's habits of mind, such as in a personal crisis, or as the result of a progressive sequence of insights resulting in changes in one's point of view (Mezirow, 2009), such as learning about palliative care in education. Mezirow has identified ten phases of learning involved in transformative learning. These are: a disorienting dilemma; self-examination; critical assessment of assumptions; recognition of shared experiences; exploring options for new behaviour; planning a course of action; acquiring knowledge and skills to implement the plan; experimenting with new roles; building competence and self-confidence in new roles and relationships; and, finally, reintegration directed by one's new perspective (Mezirow, 2009). I have created Figure 1 to illustrate these ten phases.

Figure 1

Ten Phases of Learning in Transformative Learning According to Mezirow (2009)



To develop frames of reference, validation through a broader range of insights than the individual possesses is required (Mezirow, 2009). In simulation as well as in placement, students have opportunities to recognise shared experiences and validate their experiences as they learn alongside peers and mentors in specific situations. Situated learning theory can therefore shed light on how the transformative learning process can be enhanced.

Situated Learning

According to Lave and Wenger (1991), learning always takes place in a specific social situation through action, communication and collaboration, and it is affected by context and culture. In simulation and clinical placement, the learners' self-knowledge, or understanding of their own weaknesses and strengths, interacts with their cultural and social contexts. Lave and Wenger (1991) describe the social context as a *community of practice*, understood as groups of people who share a concern or a passion for something they do and learn to do better as they interact regularly. A newcomer to a community of practice, such as a student, acts with what Lave and Wenger (1991) describe as *legitimate peripheral participation*. This is described as the learner's first step in situating themselves and understanding the underlying rules. To master knowledge and skill, newcomers need to move towards full participation in the community of practice. According to Wenger (1998), the interaction component of learning builds up sociality in the learner, understood as their ability to engage and work in interaction with others. Factors that are important for learning develop within the learner, such as reflection, critical thinking and formation.

Learning a profession can, according to Wenger et al. (2015), be seen as a trajectory that forms an identity across *landscapes of practice*. In their words, 'a landscape of practice consists of a complex system of communities of practice and the boundaries between them' (Wenger et al., 2015), p. 13). Transferred to the context of this thesis, simulation and placement can both be seen as communities of practice that form the total landscape of the practices in which the students interact and learn. Identifying with the landscape requires engagement, imagination and alignment (Wenger et al., 2015). Engagement refers to acquiring experience, such as by doing things, working on issues and debating. Imagination can involve exploring new possibilities. Alignment within a context involves ensuring that activities are coordinated, laws are followed, and intentions are implemented. Wenger et al. (2015) elaborate on their perspective by saying that boundaries arise in the landscape on the basis of competence, culture and history. They are unavoidable, necessary and both formal and informal. When learning about palliative care, students need to make sense of different landscapes and their position within those landscapes. Wenger et al. (2015) label learners as 'tourists' or 'sojourners', with their labels depending on whether the level of participation is low or high, and they associate the labels with surface or deep approaches to learning. Learning in a landscape of practice is most effective when a combination of engagement, imagination and alignment is present. If reflection is part of the interaction, a culture of learning ensues (Wenger et al., 2015).

According to Boud et al. (1985), reflection can be understood as a process that involves intellectual and affective activities to explore experiences in order to reach new understandings. As mentioned in the introduction, students may have complex feelings and thoughts about their own fears and reactions when confronted with a patient who is seriously ill and dying (Ek et al., 2014; Gillett et al., 2016). Reflection is seen as a cornerstone of learning in simulation and in placement (Dahl & Eriksen, 2016; Jeffries et al., 2016) and may pave the way for understanding palliative care principles and one's own reactions. According to Schön (1983), people reflect in action and on action. Reflection in action refers to thinking of what we are doing while we are doing it. Reflection on action is a retrospective assessment of practices, accomplished by analysing and interpreting the recalled information, to discover the choices made in a particular situation. Exploring how one can meet new challenges with comfort and tenacity is part of the process and is necessary in both simulation and placement.

The term ‘critical reflection’, or ‘critical thinking’, is often used in education. Brookfield (2015) pointed out that critical reflection means to reflect on one’s own and others’ assumptions about choices made and the consequences of one’s actions in the light of theoretical, research-based and experience-based knowledge. According to Mezirow (1990), critical reflection can lead to transformative learning. Hence, the facilitation of critical reflection on simulations and placements may foster transformative learning processes.

Transfer of Learning

Perkins and Salomon (2012) framework for analysing whether learning transfers from one situation to another was chosen as a theoretical perspective in order to discuss the results for the transfer of learning outcomes from palliative care simulation to hospital placement. According to , the ‘transfer of learning occurs when learning in one context or with one set of materials impacts on performance in another context or with other related materials’ (p. 3). Learning can have a positive impact on performance in a new situation, referred to as positive transfer, or it can undermine a related performance in another context, referred to as negative transfer. In addition, transfer of learning may include near transfer to closely related contexts and performances and far transfer to rather different contexts and performances (Perkins & Salomon, 1992). As previously mentioned, nursing students learn about palliative care in different learning environments, or communities of practice. According to Perkins and Salomon (2012) analytical framework, the learner needs to detect a potential relationship with prior learning, elect to pursue this relationship and identify a fruitful connection between previous learning and the current situation. The connections between previous learning and the new situation are described as mental bridges. Included in the process are motivational and dispositional factors, understood as the individual characteristics that influence a person’s behaviour and actions. Each mental bridge in Perkins and Salomon (2012) framework is individually necessary and mutually dependent on transferring learning from one situation to another.

Aims and Research Questions

The overall aim of this thesis is to explore nursing students' experience of participation in a palliative care simulation intervention. It furthermore examines the students' perspectives on attaining learning outcomes through simulation and transferring these to clinical placement and, additionally, identifies and outlines whether palliative care learning outcomes have been integrated into bachelor's degree nursing programmes in Norway following the implementation of the Regulations on National Guidelines for Nursing Education

Table 2 gives an overview of the studies' aims, research questions, designs and methods.

Table 2

Overview of Study Aims, Research Questions, Designs and Methods

Overall aim:	The overall aim of this thesis is to explore nursing students' experience of participation in a palliative care simulation intervention. It furthermore examines the students' perspectives on attaining learning outcomes through simulation and transferring these to clinical placement and, additionally, identifies and outlines whether palliative care learning outcomes have been integrated into bachelor's degree nursing programmes in Norway following the implementation of the Regulations on National Guidelines for Nursing Education		
	Study 1 **Paper 1**	**Study 2** **Papers 2 & 3**	**Study 3** **Paper 4**
Aims and research questions	Aim: To examine nursing students' self-reported development of knowledge, skills and competence in palliative care in the following learning trajectory: baseline, after simulation and after hospital placement Research questions: 1. How do nursing students self-report knowledge, skills and competence in palliative care before and after simulation? 2. How do nursing students self-report their opportunities to practise the learning outcomes from palliative care simulation during hospital placement?	Paper 2 Aim: To explore nursing students' experiences of participating in a palliative care simulation and examine how they describe the perceived transfer of knowledge, skills and competence into clinical practice Research questions: 1. What do nursing students describe as their experiences from simulation of palliative cases? 2. What are their perceptions of the transition of knowledge, skills, and competence from simulation into practice?	Aim: To identify and outline whether learning outcomes in palliative care were integrated into programme descriptions and course plans in nursing education in Norway as described in the national regulation. Research question: 1. What are described as learning outcomes in palliative care in programme descriptions and course plans

		Paper 3 Aim: To examine whether learning outcomes from palliative care simulation stagnate or further develop during hospital placement. Research question: How do nursing students describe their experience with the opportunity to develop further learning outcomes attained in simulation with palliative cases during clinical placement?	in Norwegian bachelor's nursing programme?
Design	Longitudinal intervention study	Qualitative explorative design	Qualitative descriptive design
Sample	n=55 second-year bachelor's degree students Student Group 1: n=30 Student Group 2: n=25	n=11 second-year bachelor's degree students Student Group 1: n=6 Student Group 2: n=5	Programme descriptions and course plans from nine universities in Norway
Data collection	Self-reported survey	In-depth interviews	Documents are collected from the universities' websites
Data analysis	Descriptive statistics Non-parametric Wilcoxon signed-rank test and Kruskal-Wallis test	Qualitative content analysis	Summative qualitative content analysis

Methods

This thesis's aims and research questions give rise to the use of different methods. As there are different ideas about the nature of reality (i.e., ontology) and how we can acquire knowledge about it (i.e. epistemology) (Polit & Beck, 2017), the following chapter will present the methods used in the light of the philosophy of science. This will be followed by a section describing the design, sample, data collection and data analysis. A short outline of research ethics closes the chapter. As the thesis consists of three studies and four papers, the studies are hereafter referred to by the number of the corresponding paper.

The Studies in the Light of the Philosophy of Science

Paper 1 builds on the quantitative research tradition, an approach that is described as being based on objective, observable and quantifiable facts (Chalmers, 2013; Polit & Beck, 2017). An important principle in the quantitative research tradition is that studies should be value-free, and objective and that the researcher should be independent of the research object; hence, statistical analysis is used to measure the results. We therefore had the participants complete a survey in which knowledge, skills and competence were the chosen outcome measures in order to get an overview of their self-reported development of learning outcomes over time. As using exclusively objective means to quantify and evaluate the student perspective on attaining palliative care learning outcomes can be difficult, we took advantage of the qualitative research approach used in Papers 2 and 3. The goal here was to explore experiences and by means of reflection to gain knowledge about the shared view of a group of individuals, and reveal the contrasts in their perceptions (Polit & Beck, 2017). Rich descriptive data of the students' experiences were collected through in-depth interviews.

Previous research, together with the results presented in Papers 1, 2 and 3, gave rise to our interest in conducting a document analysis to identify and outline how palliative care learning outcomes have been integrated into bachelor's degree nursing programmes in Norway following the implementation of the Regulations on National Guidelines for Nursing Education , which is the subject of Paper 4. Document analysis can be viewed as a qualitative method when text and content are analysed (Bowen, 2009).

Qualitative methodology comes from the research tradition of phenomenology and hermeneutics (Polit & Beck, 2017). We selected the hermeneutic approach. Hermeneutics focuses on interpreting descriptions of people's experiences, and uses interpretations to better understand the context in which the experiences occur and how the experiences have been interpreted by those involved (Polit & Beck, 2017). The analyses in Papers 2, 3 and 4 have been influenced by Gadamer (2003) theory of the hermeneutic circle, the goal of which is to understand a whole by way of back-and-forth dialogue between the parts and the whole of the text. Our understanding of the whole gradually expanded as we worked on the individual papers and as we discovered the connections between them.

In Papers 2 and 3, we used an inductive, or data-driven, approach, meaning that we searched for patterns and for shifts from the specific data to a general and theoretical understanding (Graneheim et al., 2017). Papers 1 and 4 take a deductive, or concept-driven, approach (Polit & Beck, 2017). In Paper 1, we sought to reject a null hypothesis, and in Paper 4, we used the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019) to understand the collected data.

As mentioned, this thesis uses methods from the philosophy of science that are based on differing views of knowledge. Despite the significant differences in the various research traditions, the study of a topic can take multiple approaches and choice of methods should thus be determined by the questions being asked (Risjord, 2010). Thus, my own epistemological stance is that the strength and limitations of different methods can be complementary, and that nursing knowledge can benefit from the use of a rich array of methods. My view of learning is sociocultural, and I believe, as discussed by Vygotskij (2001), that learning is a fundamental social process that occurs through interaction in cultural settings wherein cultural tools or artefacts are elements of learning.

Pre-understanding and Research in Own Field

While objectivity is recommended in quantitative research, reflexivity and insightful interpretation are seen as resources in qualitative projects. However, the researcher’s background can lead to bias, as preferences and preconceptions can affect data collection and interpretation (Polit & Beck, 2017). Hence, it is considered necessary for me to present my background. I have been educated as a palliative nurse and have worked with COPD and cancer patients on medical wards for nearly two decades. For the past 14 years, I have been an educator of nursing students in palliative care, which has included the use of simulation pedagogy, and I have developed course plans for the bachelor’s degree programme. As part of my master’s thesis, I investigated the development of nurses’ competence in palliative care through a learning network (Valen et al., 2011). In addition, I have personal experience of palliative care as next of kin. This experience has influenced both my values and my professional identity, and it also influences how I understand and interpret data in this thesis.

Research in one's own workplace can be controversial, as it creates a challenge in respect of how the workplace may affect data collection and results presented (Balsnes, 2009). As the researcher needs to be aware of their role as an insider, I sought to take the necessary view of an outsider. For this reason, it is important that the processes of collecting, analysing, interpreting and presenting data be transparent so that the reader can decide for themselves whether the results are transferable to their own setting. The research for Papers 1, 2 and 3 was conducted at the university where I work, and Paper 4 focuses on palliative care within the Norwegian nursing education system of which I am part. My role will be discussed under methodological considerations.

Research Design

Design of Paper 1

For Paper 1, a longitudinal intervention study with two independent implementations was conducted (Polit & Beck, 2017). The simulation intervention was administered as a voluntary supplement during two consecutive eight-week hospital placement periods in which palliative care was one of the learning outcomes. The participants are referred to as Student Groups 1 and 2, depending on whether they participated in the first or the second placement period. Three waves of assessment were performed: (1) the pretest, (2) the postsimulation test and (3) the postplacement test upon completion of the placement.

The development and implementation of the intervention are considered to be part of the study design and are therefore presented.

Designing the Simulation Intervention (Paper 1). The intervention is based on the NLF Jeffries simulation theory (Jeffries et al., 2016) and specifically designed for use in the studies on which Papers 1, 2 and 3 are based. Firstly, we selected learning outcomes for the intervention. These are essential for they reflect the intended outcomes of the experience (Kelly & Guinea, 2018). Student demographics, time and resources available were also considered. The learning outcomes chosen were consistent with the palliative care learning outcomes of the current placement and were constructed to implement the main elements of the definition of palliative care (Worldwide Palliative Care Alliance WHO, 2014) and the core competencies of palliative care as described by Gamondi et al. (2013); O'Connor (2016).

To assess change over the course of the learning trajectory – before and after the simulation and after eight weeks of hospital placement – learning outcome descriptors related to knowledge, skills and competence were used as outcome measures.

We wanted the scenarios to be as student-centred and clinically relevant as possible. Therefore, two focus group interviews were conducted: one included five third-year students and the other included four nurses, and two teachers, who supervised students on hospital placements. The aim of the focus group interviews was to explore topics within palliative care the participants thought second year nursing students need knowledge, skills and competence in, and to obtain ideas for simulation cases. In their interview, the students recommended bringing up nutrition in the simulation case, which they found could be difficult to discuss with relatives and patients at the end of life. In the interview with the nurses and teachers, they emphasised the need for a simulation case that included the clinical signs of a dying patient. The findings were used as background information together with the learning outcomes for the specific placement when we developed simulation cases focusing on relational skills and clinical signs in a dying patient. The simulation cases were assessed by a nurse from the palliative care team and two nurses with responsibility for students on placement. From their point of view, the cases were realistic, and the nurses provided information about the simulated patient's medication and healthcare condition. See Table 3 for a description of the learning outcomes and cases.

Table 3

Description of Simulation Cases and Learning Outcomes

Simulation cases and learning outcomes
Patient: Jesper Jensen, 69 years old. Metastatic lung cancer. Hospitalised with poor general condition, pneumonia and pain. Treated with antibiotics and analgesics. No longer interested in food. Informed by the doctor of short life expectancy.
Case 1: Relational skills. The students simulated that the nurse was taking away the antibiotic infusion and offering the patient some food. Jensen was tired. He had expressed that he had realised that he was going to die soon and was no longer interested in eating. Jensen's wife had a different view of the situation and requested tube feeding for her husband. A teacher acted as the standardised patient.

Learning outcomes:

Knowledge: knowledge of nutrition, relevant to the dying patient and relatives.

Skills: communicate about the patient’s situation with the patient and relatives; safeguard patient and wife’s autonomy and integrity according to ethical and legal guidelines.

General competence: show respect and understanding and take other people’s situations and experiences seriously.

Case 2: Clinical assessment.

This case focused on clinical assessment when Jensen was diagnosed as in terminal phase. The wife was present. A high-fidelity simulator was used.

Learning outcomes:

Knowledge: observe and evaluate the clinical signs of a dying patient using the Edmonton Symptom Assessment System (ESAS-r assessment tool).

Skills: initiate symptomatic relief in a dying patient.

General competence: ensure the dying patient and his relative’s integrity and dignity in accordance with ethical and legal guidelines.

For the scenario in Case 1, a standardised patient was used, which means that a teacher in the case portrayed the patient. In Case 2, a high-fidelity manikin provided realism. Fidelity is an essential element of the design and refers to the extent to which a case scenario mimics reality (Jeffries et al., 2016). The digitised manikin provided the students with an opportunity to register breathing and heart rate. The operator used a microphone to give the manikin a voice.

The complexity of a scenario must be consistent with the level of the learners, and it is recommended that scenarios be rehearsed and timed (Kelly & Guinea, 2018). Hence, we decided to let third-year students and teachers pilot the cases in the autumn of 2016. Case 1 was piloted with a group of six students and Case 2 with a group of four students. In addition, Case 1 was piloted with ten teachers and Case 2 by six teachers. In the latter instance, the teachers enacted the roles of nurses, patient and observers. The facilitators who ran the simulation intervention on which Papers 1, 2 and 3 are based also took part in the piloting. The piloting gave us valuable information about timeframes and the emotional reactions that the case provoked. Furthermore, we saw that we needed to develop a simulation manual for the briefing and debriefing to enhance the similarity of the groups (Appendix 1). The students participating in the pilot provided feedback on the questions as well as on the measurement scale in the survey. Information thus acquired related to the clarity of the questions and the need for open spaces for comments. The students preferred an evaluation scale of 0 to 10 as it is easy to relate to the other scales, they are familiar with, such as the ESAS-r (Edmonton Symptom Assessment System-revised).

Implementing the Simulation Intervention (Paper 1). The simulation intervention was conducted by four facilitators. To ensure that they had the necessary insight into palliative care, I held a ‘crash course’. Those who signed up to participate in the simulation intervention received information about the cases in an information letter. They were divided up into nine groups of six students each and switched between observing and action roles over the course of a three-hour simulation session. It is essential to provide students with support before, during and after a simulation (Jeffries et al., 2016). The briefing manual ensured that participants had the same introduction to the scenario. The facilitator vocalised the learning outcomes and gave participants instructions for their roles as nurses, relatives or observers. The equipment was introduced, and the timeframe given. The participants were informed that the patient would not die during the simulation. Cues, such as the ability to call a ‘doctor’ or the planned reactions of the patient, were communicated. These are referred to as strategies and information provided to facilitate participants’ progression through a simulation (Nestel & Kelly, 2018).

At the end of the simulation session, the facilitators used the debriefing manual, which is based on the Diamond model (Jaye et al., 2015). A debriefing starts with a description phase where the participants summarise the case’s content. This is followed by an analysis phase, where what went well and what can be done differently are discussed. The debriefing concludes with the application phase, in which the participants describe what they can take away that will help them in the future. The facilitators undertook to conduct the debriefing in the recommended environment of trust, open communication and self-analysis (Dreifuerst, 2012; Jeffries et al., 2016). After the debriefing, the participants returned to the case and conducted it once more to make the learning experience more significant (Daley & Campbell, 2017). The participants were accustomed to simulation as a learning method in their education and had attended lectures in palliative care during their first and third semesters. The facilitators were experienced, trained facilitators.

Design of Papers 2 and 3

For Papers 2 and 3, a qualitative explorative design was used in an attempt to shed light on how the descriptions of experiences are manifested and the underlying processes described by Polit and Beck (2017). We wanted to explore the information acquired for Paper 1 from the group of students that had participated in the simulation intervention and obtained experience in palliative care in their current placement. On the basis of previous research, our experience of the pilots and the answers to the open-ended questions in our survey, the research group developed a semi-structured interview guide for use in the interviews. This guide consisted of a list of thematic issues and questions relating to the area we wanted to cover. We focused both on exploring participants' experience of the palliative care simulation and on examining their perception of the perceived transfer of knowledge, skills and competence to clinical practice (Paper 2). We furthermore wanted to examine whether the learning outcomes from the palliative care simulation stagnated or further developed during the hospital placement (Paper 3).

Design of Paper 4

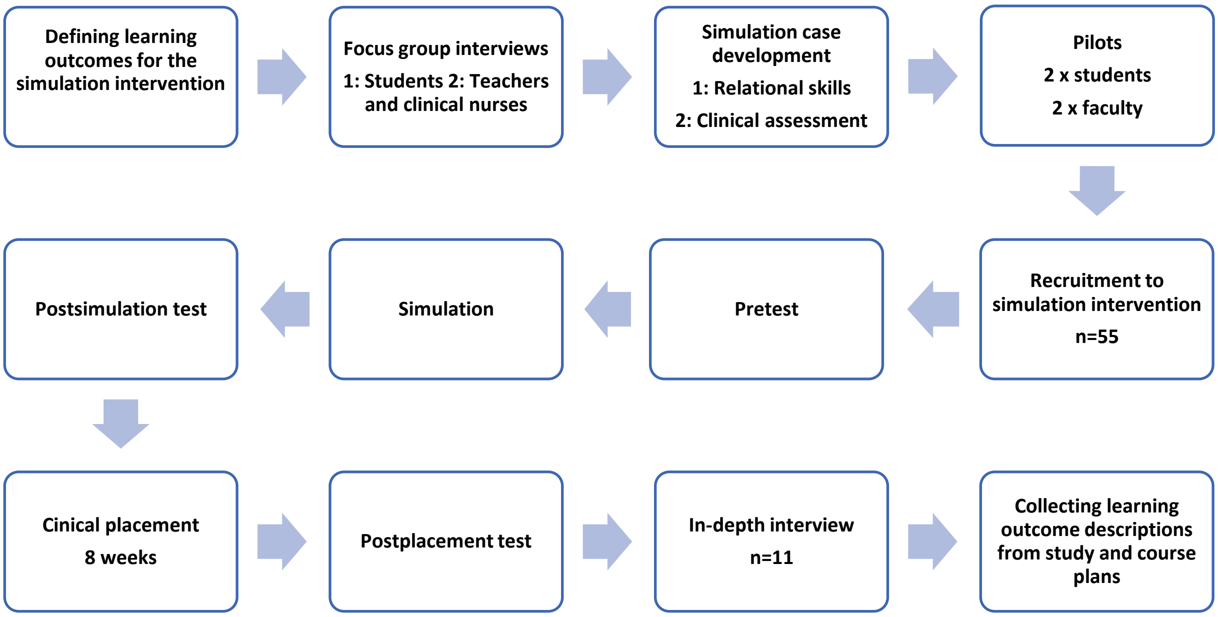
Paper 4 has a qualitative descriptive design and takes a document-analysis approach. Document analysis can be described as a systematic procedure for reviewing or evaluating printed or electronic materials to gain an understanding and empirical knowledge of a topic's essential dimensions and characteristics (Polit & Beck, 2017). The design was considered appropriate as our intent was to identify and outline whether palliative care learning outcomes had been integrated into programme descriptions and course plans in nursing education in Norway as set out in the national regulations.

Overview of Development Steps and Data Sources

Figure 2 gives an overview of the project's key development steps and data collection sources.

Figure 2

Overall View of Project Development Steps and Data Collection



Setting

Papers 1, 2 and 3 are set in a specific nursing education programme in Norway, and the participants' study model is based on the National Curriculum Regulations for Nursing Programmes (Forskrift til rammeplan for sykepleierutdanning 2008), which are presented in Appendix 2. The setting of Paper 4 is nursing education in Norway following the implementation of the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019).

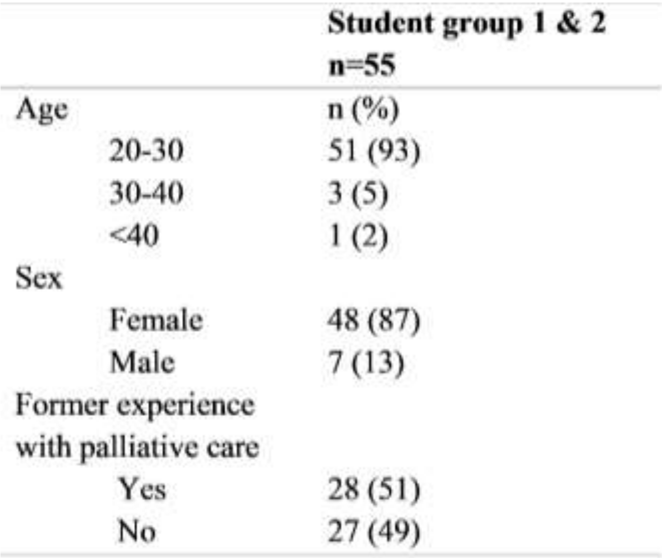
Description of the Samples

Paper 1

The inclusion criteria were satisfied by a participant being a second-year nursing student at a specific university of applied sciences in Norway. In the spring of 2017, these students were on a medical or surgical placement that had palliative care as a learning outcome. They were recruited by e-mail from the Division of Academic Affairs. Oral information about the study was given in advance to the class. The sample comprised 55 of the 72 second-year undergraduate students (72%). To increase the number of participants, students were recruited from two subsequent periods of placement. Student Group 1 (n = 30) had previously completed a placement in a nursing home, while Student Group 2 (n = 25) had also completed a placement in home care, medical or surgical ward at a hospital, or mental health care. See Table 5 for demographic data for the samples. The necessary permission to conduct the survey was obtained through the Norwegian Centre for Research Data (Appendix 3), and the participants signed an informed consent form (Appendix 4).

Table 5

Demographic data of sample.



		Student group 1 & 2 n=55
Age		n (%)
	20-30	51 (93)
	30-40	3 (5)
	<40	1 (2)
Sex		
	Female	48 (87)
	Male	7 (13)
Former experience with palliative care		
	Yes	28 (51)
	No	27 (49)

Papers 2 and 3

Inclusion criteria consisted of participation as described in Paper 1 and experience of palliative care situations in the current placement. In addition, the participants were to represent different sexes and different medical or surgical departments. The students had been informed orally and in writing, as part of Paper 1, that some of them would be invited back to share their experience in interviews at the end of their hospital placement. Access to the students was gained by way of the supervisors on the wards, thus first-hand contact between the researcher/interviewer and participants was avoided. The permission required to conduct the interviews was obtained from the Norwegian Centre for Research Data (Appendix 3), and the participants signed an informed consent form (see Appendix 5). Eleven of the Paper 1 respondents also participated in Papers 2 and 3. Table 6 provides an overview of demographic data, type of placement and experience for the participants represented in Papers 2 and 3.

Table 6

Description of Participants, Placements and former experiences with palliative care.

Participants	**Placement**	**Former experience with palliative care**
Informer 1 Female	Practice 2 Medical unit	No former experience
Informer 2 Female	Practice 2 Medical unit	No former experience
Informer 3 Female	Practice 2 Surgical unit	One former experience
Informer 4 Female	Practice 2 Surgical unit	Some former experience
Informer 5 Female	Practice 2 Medical unit	No former experience
Informer 6 Female	Practice 2 Surgical unit	Some former experience
Informer 7 Female	Practice 3 Surgical unit	One former experience
Informer 8 Male	Practice 2 Surgical unit	No former experience
Informer 9 Male	Practice 3 Surgical unit	Some former experience
Informer 10 Female	Practice 3 Medical unit	Some former experience
Informer 11 Female	Practice 3 Medical unit	Some former experience

Paper 4

The source of the data in Paper 4 is public full-time bachelor's degree nursing programmes in Norway. The inclusion and exclusion criteria are presented in Table 1 of Paper 4. Inclusion criteria consisted of programme descriptions and/or course plans available online for theoretical and clinical subjects for the academic years 2020–2023 or 2021–2024. Thematic lists of course plan content, compulsory reading and teaching schedules were excluded. In Norway, private universities offering nursing education are affiliated with religious foundations and based on diaconal values, and historically these religious foundations have been at the forefront of the hospice movement. As we did not know whether the religious aspects of two such universities affected their emphasis on palliative care learning outcomes, these two universities were excluded.

Data Collection

Survey Measurement (Paper 1)

In the absence of validated questionnaires to assess the nursing students' learning outcomes in terms of knowledge, skills and competence in palliative care attained through simulation and hospital placement, an ad-hoc instrument was developed. Pretest and postsimulation test questionnaires measured the students' self-reported attainment of palliative care learning outcomes in terms of knowledge, skills and competence before and after the simulation intervention. The participants were invited to complete the pretest and postsimulation test questionnaires in a neutral classroom at campus on the day of the simulation. The questionnaires were sent by e-mail from the Division of Academic Affairs and completed electronically via the data programme Questback.

Later, a postplacement test questionnaire measured the degree to which the informants applied palliative care learning outcomes in their current hospital placement. This questionnaire was e-mailed to the students at the beginning of their final week of placement. Two follow-up e-mails were sent. The questions in this survey are given in Table 7. For further detail, please see Appendix 6.

Table 7.

Survey questions

Knowledge	**Skills**	**Competence**
Pretest: To what degree do you have the knowledge to… **Postsimulation test:** To what degree have you developed knowledge during the simulation to **Postplacement test:** In this placement, to what degree have you used knowledge and	**Pretest:** To what degree do you have the skills to… **Postsimulation test:** To what degree have you developed skills during the simulation to… **Postplacement test:** In this placement, to what degree have you used skills and…	**Pretest:** To what degree do you have the competence to… **Postsimulation test:** To what degree have you developed competence during the simulation to… **Postplacement test:** In this placement, to what degree have you benefited from participating in simulation and reflected about how to…
1. Observe and clinically assess signs that a patient is dying? 2. Inform a relative about clinical signs indicating that a patient is dying? 3. Inform a patient about clinical signs indicating that they are dying?	4. Observe and clinically assess patients’ symptoms through the ESAS-r assessment tool? 5. Initiate symptom management for a patent in pain? 6. Initiate symptom management for a patient with nausea? 7. Initiate symptom management for a patient with respiratory problems? 8. Initiate symptom management for a restless patient? 9. Communicate about the patient’s situation to a dying patient? 10. Communicate to a dying patient’s relatives? 11. Safeguard a patient’s autonomy and integrity?	12. Show respect to a dying patient? 13. Show empathy to a dying patient? 14. Take other people’s situations and reactions seriously when talking to a dying patient and their relatives? 15. Reflect over own ability to care for dying Patients? 16. Care for relatives to a dying patient?

In-depth Interviews (Papers 2 and 3)

For Papers 2 and 3, the preferred method of data collection was in-depth, face-to-face interviews, as the intention was to explore the participants’ personal experience (Creswell, 2014). The advantages emphasised in the literature are that in interviews one can more easily ensure the clarity of questions and ask follow-up questions to clarify that interviewer and interviewee have understood each other. The interviews were conducted by me. In order to collect good data, I undertook to overcome communication barriers, ask open-ended questions and ensure the flow of discussion. To ensure that the participants could speak freely and were not interrupted (Polit & Beck, 2017), the interviews were carried out in a private room at the university during the last week of the participants’ hospital placement. The use of open-ended questions from the semi-structured interview guide (Appendix 7), such as ‘Tell me about your experience of the simulation?’ or ‘Do you have examples of situations where you have used your experience from the simulation on the placement?’, elicited illustrative examples and richly detailed information from the participants. On average, the interviews lasted an hour and were audio-recorded. In addition, I made field notes of my own reflections during and after the interview.

Document Collection (Paper 4)

During the autumn of 2021, programme descriptions and course plans were retrieved from the universities’ websites for inclusion in the document analysis. The sample collection was performed by me as first author. To reduce the risk of overlooking information, I used the national web portal Utdanning.no, created by the Directorate for Higher Education and Competence, to ensure that I had included all relevant nursing education programmes. Nine of the eleven public universities were included. The programme descriptions and course plans were combined into one document, and the selected universities were labelled alphabetically as ‘University A’, ‘University B’ and so on up to ‘University I’ to avoid deidentification.

Data Analysis

Descriptive Statistics (Paper 1)

To summarise the data in Paper 1, statistical analysis software (SAS University Edition) was used to perform a statistical analysis. Statistical tests are tools that estimates the probability that results from a sample reflect true population values. The results are considered significant if they are not likely to have been the result of chance at a specified level of probability (in this case the *p*-value was set to <0.05) (Altman, 1991). The data materials were analysed for probability, correlation and variation (Creswell, 2014). As the aim of Paper 1 was to examine how the simulation intervention affected knowledge, skills and competence along a learning trajectory, a deductive approach was sought in order to reject a null hypothesis of ‘no effect’. The statistician, last author and I produced an analysis plan based on the research questions. We were looking for an analysis of the students’ self-reported knowledge, skills and competence in palliative care before and after simulation, and their opportunities to practise the learning outcomes in placement. We also wished to ascertain whether there were significant differences between Student Group 1 and Student Group 2. Given the small sample size, a normal distribution could not be assumed. Therefore, the Wilcoxon signed-rank test (non-parametric test) was used to determine whether participants' scores changed significantly as a result of the simulations and whether they practised their learning outcomes during their hospital placement. The test calculates the difference between paired scores and ranks the absolute difference (Altman, 1991).

Statistically significant differences between Student Group 1 and Student Group 2 were tested using the Kruskal-Wallis test. This is a non-parametric test for comparing two or more independent samples of equal or different sample sizes (Altman, 1991). A p-value < 0.05 indicated statistical significance.

Qualitative Content Analysis (Papers 2, 3 and 4)

For Papers 2 and 3, we used qualitative content analysis, inspired by the steps described by Graneheim et al. (2017); Graneheim and Lundman (2004). Characteristic of the method is how it deals with manifest as well as latent content, focuses on subject and context and emphasises differences and similarities within parts of the text (Graneheim et al., 2017; Graneheim & Lundman, 2004). The goal is to identify the patterns and themes and the main considerations and meanings in a text (Polit & Beck, 2017). As the first step, I as first author transcribed the recorded interviews verbatim, including laughter, silences, hesitations and so on as recommended. I then combined the units of analysis, these being the transcripts of the in-depth interviews, into one document. I read the texts several times, taking an inductive approach (Graneheim et al., 2017) in order to ascertain the overall meaning. At the same time, notes on preliminary codes in the text were made. I attempted to focus on the manifest content (i.e. the visible and obvious), although interpretation is difficult to avoid. The text was condensed into meaning units but without reducing the core. Meaning units can be described as words, sentences and paragraphs that are related through their content and context. Different colours were used to indicate these in the document. To get a better overview of the text, a code form was created with columns for meaningful units, codes, subcategories, categories and themes. Similar meaning units and codes that described the content of the meaning units from the different interviews were organised together in this code form for further analysis.

The research team took a hermeneutic approach (Polit & Beck, 2017) to the text. According to Gadamer (2003), the researcher cannot separate themselves from the meaning of the text. We therefore used ourselves and our pre-understanding in order to clarify codes and categories and how they could be understood and interpreted. We worked with the text individually at first and then through joint discussion. Knowledge was created in interaction with the data, and we as a research team used our experience and substantial background as a tool in our interpretation, as described by Graneheim and Lundman (2004). On the basis of the research questions and continual movement between the parts and the whole of the text, we undertook to understand the parts from the whole and the whole from the parts (Gadamer, 2003). We went beyond exact words and remained open to the emotions and underlying meanings that the participants conveyed. Codes for similar content were put together and described as a category. Graneheim and Lundman (2004) describe categories as being internally homogeneous and externally heterogeneous. Sometimes these can be broken down into sub-categories, and sometimes sub-categories can be abstracted into categories. Categories that described similar content were then grouped by theme. In our analysis process, we were especially aware of consistency within and between meaning units, codes, categories and themes. A whole consisting of subjective and objective characteristics eventually coalesced into an understanding of the text. The level of abstraction and degree of interpretation (Graneheim et al., 2017) increased over the course of the analysis, and in Paper 2 the themes were interpreted within an overarching theme.

In Paper 4, we analysed the selected data by way of a summative qualitative content analysis approach inspired by Hsieh and Shannon (2005), which allows counting and comparison. To extract information from the data, we took a deductive content analysis approach consisting of three phases: preparation, organisation and reporting of data (Elo & Kyngäs, 2008). In the preparation phase, programme descriptions and course plans describing palliative care learning outcomes or containing associated words were selected as units of analysis (see Table 3, Paper 4) and colour-coded in the combined document to facilitate the analysis process. In the organisational phase, we defined categories on the basis of the description in the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019) of expected palliative care learning outcomes and how these should be integrated. We then developed a structured categorisation matrix and used this to organise the data (see Tables 2 and 4 in Paper 4).

I reviewed the units of analysis several times as first author, then coded these to correspond with the identified categories. The research team as a whole discussed the findings. The reporting phase is presented in the findings and discussion sections.

Research Ethics

Any research project has an ethical commitment to its research subjects. The Norwegian Centre for Research Data approved Papers 1, 2 and 3 (Appendix 3). These papers have been produced in accordance with the Ethical Guidelines for Nursing Research in the Nordic Countries (Northern Nurses Federation, 2003). To protect the integrity and autonomy of the student participants represented in Papers 1, 2 and 3, they were informed orally and in writing that participation was voluntary, that they had the right to withdraw, and that participation would not affect the evaluation of their hospital placement. The information communicated to them also assured them of de-identification and confidentiality. To satisfy the principle of justice, the participants alternated between performing and observing in the simulation intervention. Another ethical consideration was the fact that it can be emotionally challenging for second-year students to simulate palliative care. Although a goal of simulation is the creation of a safe learning environment, one must be aware that everybody involved in the learning process is exposed to some potential risk of harm, both psychologically and emotionally (Emmerich et al., 2017). In a simulation exercise, students and facilitators reveal their knowledge, skills and competence differently than in a lecture. Mutual respect and the participants' physical, social and mental integrity must be taken into consideration during the briefing, simulation and debriefing. Therefore, it is important to establish confidentiality with regard to what happens in a simulation exercise (Emmerich et al., 2017). The possible reactions that a simulation may trigger, and the appropriate responses were discussed with the simulation team. As regards the emotional reactions that palliative care may evoke, the participants were offered follow-up conversations with faculty members following the simulation and clinical placement as part of ethical preparedness. However, no one took advantage of this offer. To preclude my role as both facilitator and researcher affecting the participants, I was not on the facilitator team. One of the co-authors of Paper 3 acted as facilitator for the simulation intervention; however, it was not until the analysis phase of the script began that this author was invited to take part in the paper. The other authors came from different departments and universities and did not know the participants.

Ethical approval was not required for Paper 4 as the data were retrieved from open websites. However, we have undertaken to keep the universities deidentified to ensure anonymity.

Results

Paper 1

The Wilcoxon signed-rank test showed a significant increase in the participants' self-reported knowledge, skills and competence between the pretest and the postsimulation test in both Student Group 1 and Student Group 2 (Table 4, Paper 1). The positive difference was constructed as the level of evaluation in the postsimulation test minus the level of evaluation in the pretest (Altman, 1991) and indicates that, overall, the simulation intervention affected knowledge, skills and competence. However, differences were found between the postplacement test scores and postsimulation test scores with regard to the application of learning outcomes during the hospital placement. These differences were constructed as the level of evaluation in the postplacement test minus the level of evaluation in the postsimulation test (Altman, 1991). These results indicate that palliative care learning outcomes were practised to a small degree during the hospital placement (Table 6, Paper 1). When the Kruskal-Wallis test was used to compare the two student groups, it was found that the general impact of the simulation intervention was greater in Student Group 2 than in Student Group 1. Furthermore, it was found that the degree of application of learning outcomes during the placement was lower in Student Group 1 than in Student Group 2, especially with regard to the question of competence.

Paper 2

The following themes were identified when analysing the students' experience of participating in the palliative care simulation and their perception of the transfer of knowledge, skills and competence to clinical placement: (1) train as you fight, (2) from chaos to control (3) and perceived transfer to placement.

'Train as you fight' represents the participants' descriptions of the simulation as a realistic experience. They found it easier to learn things practically and remember the case when their senses and feelings were roused, and their actions received a response. The value of keeping calm and the influence of body language on communication in palliative care situations were emphasised. However, in the simulation and debriefing, they needed to leave their comfort zones. The simulation was sometimes perceived as frightening, unnatural and as an assessment, and the debriefing as an examination. At the same time, the simulation was perceived as a safe learning environment.

The theme ‘from chaos to control’ represents how the debriefing could bring about new insights. Reflecting on how they had managed the simulated situation and what they could improve helped them to change their focus from being action-oriented to being present. The opportunity to not harm but rather test and discuss different alternatives allowed them to be daring. They called attention to the role the facilitator played in relieving the pressure and hence their performance anxiety, thus ensuring a positive outcome.

The third theme, ‘perceived transfer to placement’, was based on findings which identified the simulation experience as being used to develop relationships with patients and relatives, as well as to make clinical judgments and decisions on the placement. A feeling of self-confidence arose within the simulated setting as a result of the participants’ new knowledge about what should be emphasised with a dying patient and how to respond and about the importance of being present and establishing a good relationship. Some of the participants reflected that the opposite might have happened if they had not felt a sense of attainment from the simulation. If a situation became too complicated, they would step back. An overarching theme that was interpreted is the courage to dare, which is based on the participants saying that they needed to leave their comfort zones in order to participate in the simulation and debriefing. This was interpreted as a challenge to their courage. At the same time, the simulation was described as a safe learning environment where they gained new insights and confidence, and that this made them feel safer and more self-confident when they were forming relationships and making clinical judgements in practice. This was perceived as increasing the participants’ courage.

Examples from the content analysis, including themes and connecting categories, are presented in Table 3 in Paper 2.

Paper 3

The question of whether the learning outcomes from the simulation intervention stagnated or developed further during the hospital placement was identified in the analysis through the following themes: (1) actively choosing palliative care, (2) gatekeepers for development of learning outcomes; and (3) palliative care can be emotionally challenging.

The first of these, actively choose palliative care, has to do with the participants’ view that taking a progressive approach to participation in palliative care situations is a prerequisite to learning on a hospital placement. They emphasised the need to set personal goals and the responsibility to indicate one’s wish to take part in palliative care. It can be challenging to choose learning situations in palliative care, and it was their experience that the learning outcomes from the simulation and teaching helped them to be involved. However, the participants’ opportunities to choose palliative care were dissimilar, for the number of patients with palliative care needs varied. Even the participants that wanted to be engaged in palliative care missed opportunities.

The participants reflected on how their relationships with nurses, patients and relatives, as well as elements in themselves had both positive and negative influences on their opportunity to develop their palliative care learning outcomes, an influence that can be interpreted as gatekeeping the development of learning outcomes.

The participants appreciated it when the nurse asked about their experiences, letting them observe when they felt unprepared and letting them participate when they felt ready. This, they said, required good communication before and afterwards so that they could clarify their expectations and reflect on the situation. Most of the participants felt included in learning situations. Some, however, felt overlooked, saying that the nurses sometimes excluded them from palliative care and asked them to perform other tasks. This we interpret as the nurses performing a gatekeeper function.

Patients and relatives were also perceived as gatekeepers. While some of them understood the participants’ learning needs, others did not want care to be provided by a student. As the participants sometimes engaged in and occasionally withdrew from palliative care, they too can be perceived as gatekeeping the development of learning outcomes. One explanation they gave for withdrawing was not wanting their participation in the palliative care process to be a burden on either experienced nurses or patients and relatives.

The last theme – ‘palliative care can be emotionally challenging’ – reflects the participants’ thoughts about professionalism in a difficult context. When a patient’s situation became complex and relatives were present, the participants felt inexperienced and unconfident and assumed an observer role. They said it was difficult to behave professionally, and some of them took those feelings home with them.

Examples from the content analysis, including themes, connecting categories and quotes, are presented in Table 2 in Paper 3.

Paper 4

Our findings from the document analysis as to whether universities in Norway have integrated palliative care learning outcomes into nursing education show varying emphasis on palliative care in the selected learning outcome descriptors and related subjects and along the academic trajectory. In addition, the terminology used varied. Of the nine universities included, only three described palliative care learning outcomes in their programme description. Modified text was commonly used to include palliative care in course plans. Only two universities took the learning outcome descriptions verbatim from the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019). Several universities reproduced the following text word for word from the regulations – 'The candidate has broad knowledge of the nurse's health-promoting, preventive, therapeutic, rehabilitative and caring function' – but excluded the following: 'including knowledge of palliative care'. Table 2 in Paper 4 gives an overview of the selected universities' integration of palliative care learning outcomes and indicates whether they used the description of palliative care from the national regulations verbatim or whether they modified it, as well as the exact words used.

As shown in Table 4 in Paper 4, the emphasis on palliative care differed by academic year, subject and learning outcome descriptor. Palliative care learning outcomes and associated words could be found throughout the three years of most of the course plans. However, there were exceptions, as two universities did not include palliative care in year 2, and one university did not include it in year 3. One university did not include palliative care learning outcomes for any year.

All, but one, of the universities included palliative care learning outcomes in their course plans for basic nursing, and several of the universities included them for both theoretical and clinical subjects. Other categories exhibited greater variation. Most of the universities included palliative care learning outcomes for both theoretical and clinical subjects, but there were exceptions, such as University H, which included 'palliative care' or associated terminology for clinical subjects only.

Only a few of the universities included wording for relatives and the needs of the bereaved in association with palliative care. None of the universities included 'palliative care' or associated words in course plans for mental health or paediatrics. The most commonly used learning outcome descriptor was 'knowledge', followed by 'skills' and 'competence'.

In Table 4 in Paper 4, some of the learning outcome descriptors have been marked with a star to indicate that the included learning outcomes use the terms 'nurses' caring function' or 'symptom relief' without associating these terms with palliative care. Thus, it is unclear whether the learning outcomes relate to palliative care or to nurses' caring function in general.

Summary and Synthesis of the Results

The nursing students participating in the simulation intervention reported positive differences between the pretest and the postsimulation test, indicating that learning outcomes were attained through the simulation. However, negative differences between the scores on the postplacement test and the postsimulation test in Paper 1 give the impression that the participants practised the learning outcomes from the simulation intervention to only a small degree during the placement (Paper 1). The findings in Papers 2 and 3 may explain the results to an extent.

The findings in Paper 2 indicate that simulation is a preferred method for gathering knowledge, skills and competence related to palliative care. Participants gained courage as a result of active participation and the debriefing, which influenced their self-confidence. The debriefing seemed to alter the situation from one of chaos to one of control. It was the participants' perception that the experience they gained in the simulation intervention was transferred to practice, served as a sound basis for clinical judgement and enabled them to communicate with patients and their relatives. The findings in Paper 3 emphasise the active choice of palliative care as a prerequisite to further learning. Relationships with nurses, patients and relatives, together with factors in themselves, served a gatekeeping function with regard to attending learning situations. The experience of becoming a nurse who can provide palliative care was described as emotionally challenging. Factors that promoted palliative care learning outcomes included simulation experience, clarified expectations, support and good dialogue with the nurse before and after a learning situation.

The findings in Paper 4 indicate that, despite palliative care's inclusion as a topic in the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019), palliative care has been given differing emphasis by the universities with regard to selected learning outcome descriptors, related subjects and its presence along the academic trajectory. In addition, varied terminology use was found.

Discussion

Discussion of Results

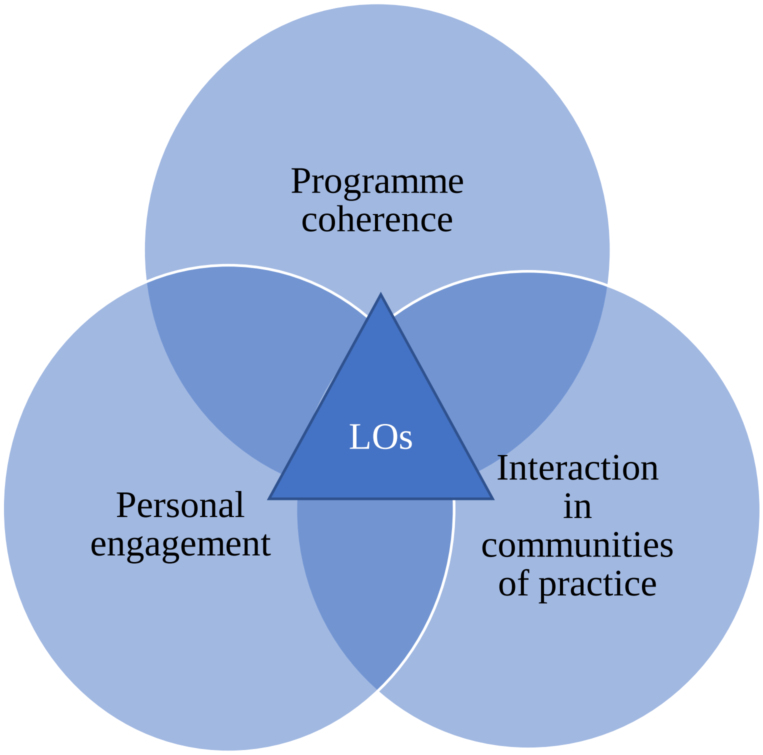
The overall aim of this thesis has been to explore nursing students' experience of participating in a palliative care simulation intervention. Furthermore, it has examined the students' perspectives on attaining learning outcomes through simulation and transferring these outcomes to hospital placement. Additionally, the thesis identifies and outlines whether palliative care learning outcomes have been integrated into bachelor's degree nursing programmes in Norway following the implementation of the Regulations on National Guidelines for Nursing Education. The results, and the connections between them, will be discussed according to the following themes: 'personal engagement', 'interaction in a community of practice' and 'programme coherence'.

Personal engagement refers to participants' descriptions of the simulation as an experience that was engaging but also outside of their comfort zone and where they had to actively choose to be involved. By letting themselves engage in the simulation, their emotions were affected, and their knowledge, skills and competence grew. On the placement, the participants functioned as gatekeepers over when to engage and when to withdraw within a palliative care situation. The opportunity to engage in or withdraw from learning situations was also influenced by nurses, relatives and patients acting a gatekeeper function, thus their personal engagement with the students' learning needs seems to influence on the learning outcomes. The theme *interaction in a community of practice* is based on the significance of engaging in reflection with peers and facilitators in the simulation and with nurses on the wards. Furthermore, the importance of obtaining palliative care experience and the existence of various gatekeepers had an influence on the participants' opportunity to engage. The last theme, *programme coherence,* alludes to the national regulations requirement that palliative care be integrated into nursing education and to the varying degrees to which the universities have observed this requirement.

The three themes seem to mutually influence each other with regard to students' opportunities to attain palliative care learning outcomes. This is visualised in Figure 3 and serves as the basis for the discussion.

Figure 3

Factors Influencing Attainment of Palliative Care Learning Outcomes (LOs) in Bachelor's Degree Nursing Education Programmes



Learning about Palliative Care Requires Personal Engagement

The results in Papers 1, 2 and 3 suggest that learning about palliative care requires personal engagement. The palliative care simulation was described as being outside of the students' comfort zone, which challenged the students' motivation and willingness to participate (Paper 2). During the placement, further development of learning outcomes presupposed a progressive approach to learning. The participants needed to clearly express their learning needs and actively choose palliative care situations, and the nurse needed to be engaged in their learning needs (Paper 3). Attaining learning outcomes during the simulation and placement can be seen as situated learning wherein action, communication and collaboration are affected by the context, described as communities of practice (Lave & Wenger, 1991). During the simulation and the clinical placement, the learners' self-knowledge, or understanding of their own weaknesses and strengths, interacts with the cultural and social contexts. Identifying with the community requires engagement, imagination and alignment (Wenger et al., 2015).

In the pretest before the simulation (Paper 1), the participants gave themselves low scores for their own estimated knowledge, skills and competence in palliative care. In addition, the demographic data reveal that few of the participants had prior experience with this patient group. This may indicate that the participants saw themselves as newcomers to the field. Hoang et al. (2022) emphasise that an end-of-life care simulation may be one of the nursing students' very first experiences in the field. A newcomer acts with 'legitimate peripheral participation', described by Lave and Wenger (1991) as the first step towards situating themselves within the community of practice. Wenger et al. (2015) refer to a newcomer as either a 'tourist' or a 'sojourner', wherein the latter takes part more actively than the former, and these two states are associated with either a surface or a deep approach to learning (Wenger et al., 2015). The participants represented in Paper 2 described the simulation as realistic and engaging. However, some of the participants found the simulation frightening, a factor that may have influenced their engagement in the simulation. Additionally, some participants found simulation with a manikin unnatural, and others said that the simulation roused their emotions (Paper 2). Kirckpatrick et al. (2017) and Hoang et al. (2022) have found, similarly, that students view the delivery of palliative care in a simulation as anxiety-provoking and stressful. These findings illustrate how nursing students simulating palliative care cases may find themselves vulnerable with regard to both the learning method and the palliative care situation, which in turn can make it hard for them to engage. Fabro et al. (2014) emphasise that the emotions that occur in a simulation are real, even if the patient situation is not. According to transformative learning theory, a learning process is based not only on the facts of the subject but also on the senses and emotions acting to trigger the reflective process that causes the student to ask questions about their habits of mind (Taylor, 2009). Thus, by including emotions and senses (e.g. sound, sight, smell and touch), the facilitator can allow the learners to actively engage in the learning process and maximise their learning in the simulation (Clapper, 2010; Husebø et al., 2015). This is exemplified in Paper 2, where the participants found it easier to learn when applying their senses and feelings. Palliative care is said to be a field in which students can experience complex feelings and thoughts about their own fear of and reactions towards death and dying (Ek et al., 2014;

Gillett et al., 2016). The inclusion of emotions in a simulation can allow learners to process their personal reactions and emotions in preparation for a palliative care experience on a placement. Thus, activating students' emotions can be seen as a desired effect of a simulation, an effect that promotes learning. However, Hoang (2022) stresses the importance of the facilitator's competence in best practice debriefing and their ability to facilitate reflective discussion. Nunes and Harder (2019) have found that it helps students to normalise their feelings when they listen to other students describing their own feelings in the debriefing. The authors emphasised that, in palliative care simulations, a facilitator running a debriefing need to be competent in debriefing and experienced in coping with the strong feelings and emotions that can be experienced in palliative care so as to reduce the feelings of anxiety and apprehension that palliative care may evoke. After the palliative care simulation, the participants in Paper 2 reported feeling safer and more emotionally prepared for their placement and added that the opposite might have occurred had their emotions not been adequately managed. Venkatasalu et al. (2015) suggest that simulation-based education prepares students emotionally for their first placement. Being emotionally prepared may help the student take the 'sojourner' position and engage in palliative care on their placement. The participants in Paper 3 said that they wanted to take part in palliative care situations and expressed excitement and joy over the situations in which they had participated. However, they also perceived it as emotionally challenging to meet patients with palliative care needs and their families. Paper 3 interprets these mixed emotions as the students gatekeeping the development of learning outcomes. The results in Paper 1 reveal that the impact of the simulation and the degree to which learning outcomes from the simulation were used on the placement were greater in Student Group 2 than in Student Group 1. Although both groups consisted of second-year students, the results potentially indicate that having had an additional placement experience may have helped the second-year students to personally engage in palliative care. The participant statements in Papers 2 and 3 reveal mixed emotions about engaging in palliative care learning situations. Mixed emotions were also identified as a common finding in palliative care simulations in the review by Kirckpatrick et al. (2017). This indicates that students need to be supported in carrying out not only their cognitive work but also the emotional identity work needed to become a professional (Wenger et al., 2015). This requires the engagement of the facilitator and nurses on the placement in the students' learning processes. Being emotionally prepared can help open up the gates to learning about the complexity of palliative care. Thus, simulation and placement experience may help students practise the self-awareness that is described as a core competency in palliative care

(Gamondi et al., 2013; O’Connor, 2016) as well as undergo continuing professional development. Rotter and Braband (2020) draw attention to the need for principles of self-care to be included in palliative care education to help students’ cope with their emotions.

An interesting interpretation in Paper 2 is that during the simulation not only did the participants use their courage, but their courage also grew. Courage is defined as ‘an attitude and a quality of mind that enables one to face anything recognized as dangerous, difficult, or painful with firmness and without fear, instead of withdrawing from it’ (Numminen et al., 2017, p. 879) and is described as playing a significant role in nurses’ ability to engage in care (Thorup et al., 2012). One explanation for the experience of improved confidence in caring for dying patients reported by participants in Paper 2 and other studies (Gillan et al., 2014b; Lippe & Becker, 2015; Ruiz-Pellón et al., 2020) may be the activation of their courage, and the simulation may also have increased their self-confidence.

Paper 2 participants reported that by taking on the challenge of the simulation and letting themselves engage, their stress and anxiety levels fell, their self-confidence and communication skills grew, and they acquired new knowledge about how to manage palliative care situations. Paper 1 gives the same impression on the basis of the increase in the self-reported scores of the participants from both groups 1 and 2 between the pretest and the postsimulation test. A number of the literature reviews report positive outcomes from palliative care simulation in terms of knowledge, communication skills, confidence, attitudes and understanding of palliative care principles (Condry & Kirkpatrick, 2021; Hoang et al., 2022; Smith et al., 2018). Although transformative learning is viewed as a goal of simulation-based learning (Clapper, 2010), the body of evidence indicating that simulation is a form of transformative learning is, according to Gillan et al. (2021), small. However, Hoang et al. (2022) found in their review that, by simulating palliative care cases, students obtained a deeper understanding that changed their views about caring for a dying patient, and this accords with our study. Thus, it may be possible to use transformative learning theory (Mezirow, 2009) to elaborate on why simulation increases knowledge, skills and competence. Briese et al. (2020) have argued that the ten phases of learning involved in transformative learning theory (Mezirow, 2009) may occur in a simulation. According to Parker and Myrick (2010), nursing students may encounter challenges to their values, beliefs and assumptions in a simulation that disorientate their habits of mind. By testing meanings and discourse within a group while engaging in a simulation, participants may better be able to obtain new perspectives on palliative care, or, in the words of Mezirow (2009), to discover a *disorienting dilemma* that changes their *frames of reference*. The transformative learning process is described as a student-centred process based on learners' personal life experience and as a type of metacognitive reasoning that leads students to critically reflect on their own and others' understanding of a subject (Mezirow, 2009). These elements are recognisable from simulation theory, which describes the learning method as experiential, interactive, collaborative and learner-centred and one in which mutual trust must be established and reflection is seen as the cornerstone of learning (Briese et al., 2020; Jeffries et al., 2016). The participants represented in Paper 2 emphasised that debriefing allows for new insights. Using the process of reflection to explore one's experience involves intellectual and affective activities that can lead to new understandings (Boud et al., 1985). However, this may not always be the case. Simulation can also result in assimilative and accommodative learning (Piaget, 1952), or no learning at all. The facilitator's engagement in the learning situation therefore plays a significant role in leading students to engage in critical reflection over their own and others' assumptions regarding choices made and the consequences of one's actions in the light of theoretical, research-based and experience-based knowledge (Brookfield, 2015). The critical reflection that takes place during the debriefing – on oneself and one's peers with regard to content, process and underlying conditions, including attitudes, emotions and values – is a core element of simulation-based learning (Cheng et al., 2017; Husebø et al., 2015; Jeffries & Rogers, 2012). Ruiz-Pellón et al. (2020) confirm that listening to the stories of others, observing and reflecting facilitate critical thinking. In the debriefing, the participants in Papers 1-3 had the opportunity to link their experience to the learning outcomes, re-examine their experience, confirm their own knowledge and take on others' perspectives for guidance in further tasks (Jaye et al., 2015; Jeffries & Rogers, 2012). In addition, the simulation gave students the opportunity to reflect both in action and on action (Clapper, 2010; Schön, 1983), as their reflections about their own and others' assumptions started in the briefing and simulation and continued in the retrospective debriefing in which they analysed and interpreted recalled information. Hoang et al. (2022) draw attention to pre-brief and pre-scenario activities to prepare students for a simulation. The authors found inconsistency in the implementation of palliative care simulations, with the result that students felt unprepared for the simulations. This could, in turn, affect the process of reflection in action and on action (Schön, 1983). According to Nestel and Kelly (2018), how a scenario briefing is facilitated has an essential effect on the learning experience and has consequences for the debriefing. Thus, factors that might prevent a student from taking action on a new transformative insight include external or internal constraints, situational or psychological factors, or simply inadequate information or insufficient skill to proceed

(Mezirow, 1990). The participants represented in Papers 2 and 3 emphasised the importance of discussion with peers and the facilitators during the debriefing. This can be understood to mean that interacting with others gave them the opportunity to validate their new perspectives. According to Mezirow (2003), one's frame of reference is transformed through self-examination, critical assessment of assumptions and recognition of shared experiences. The process requires validation through a range of insights that is broader than the individual possesses (Mezirow, 2009). This leads to the overlap shown in Figure 3, illustrating that personal engagement and interaction within a community of practice mutually influence learning outcomes.

Interaction in Communities of Practice

Several findings in Papers 2 and 3 refer to the participants' experience of learning about palliative care by way of interaction in communities of practice. Paper 2 recognises shared experience in its interpretation of how the debriefing opens for new insights and changes the situation from one of chaos to one of control. This description of going from chaos to control refers to the practical handling of the case, how those involved in the simulation and debriefing collaborated and what their thought processes were. If the debriefing is to pave the way for reflection, then the types of questions the facilitator asks are of importance (Husebø et al., 2013). The possession of expert knowledge marks an asymmetry in the power relationship between the students and the facilitator. Paper 2 participants drew attention to the extremes between the simulation as an assessment and a safe environment for learning. They pointed to an important issue: even though the simulation and debriefing deliberately activate participants' emotions so as to enhance learning, this may create an uncomfortable experience (Decker et al., 2013). Simulation is often described as a safe learning environment; however, 'safe learning environment' as used here refers primarily to patient safety as an endpoint and not to safety for the students (Nestel & Kelly, 2018; Struksnes et al., 2015). One of the principles of transformative learning is that it confronts power relations and engages different points of view so that learners can learn from each other (Taylor, 2009). It is the facilitators' responsibility to ensure a reasonable level of physical and emotional safety for learners by providing clear communication and an honest debriefing with a student-centred rather than a teacher-centred perspective (Hoang et al., 2022; INACSL Standards Committee, 2016c; Nunes & Harder, 2019). Madsgaard et al. (2022) find that facilitators see psychological safety as a prerequisite for optimal learning and that they need to balance the levels of difficulty and emotion during the various phases of a simulation. They also find that a significant amount of learning can arise from uncomfortable experiences. This is in line with the results in Paper 2, which describes a simulation as an ‘out of the comfort zone experience’ and emphasises that, for learning to occur, the environment must allow for failure and experimentation without risk because, otherwise, the learner may resist engagement or avoid the learning situation (Clapper, 2010). One outcome of the interaction between students and facilitator in a palliative care simulation found by Venkatasalu et al. (2015) is that it made it easier for students to talk with their supervisors, which can help promote equality in relationships. Thus, interaction may promote engagement. In Paper 2, the participants preferred feedback from students as they were more in agreement, but they appreciated when the facilitator linked their constructive feedback to theory. Emphasis was placed on the opportunity to discuss the feedback and the opportunity to consider a better solution.

As palliative care is associated with emotional intensity, the way in which a debriefing is implemented is of great importance to learning outcomes (Hoang et al., 2022; Kirckpatrick et al., 2017). In line with the findings in Paper 2, which suggests that debriefing creates confidence, Parker and Myrick (2010) underscore that non-judgmental peer evaluation helps to defuse stress and promotes collaborative learning.

The findings in Papers 2 and 3 indicate that the participants used their experience from the simulation in palliative care situations on their placement. In Paper 3, factors that helped the participants feel ready to engage with a patient with palliative care needs included being invited to participate, having their expectations clarified and being assigned specific tasks. Other studies confirm that students’ experience from simulation-based training remains as enduring and conscious as their learning outcomes and that it transfers to episodes of patient care when they are on a placement (Gillan et al., 2021; Hustad et al., 2019; Miles, 2018). These findings contrast with those in Paper 1, which indicate that participants practised the learning outcomes from their simulation only to a small degree despite palliative care learning outcomes being part of the course plan for the placement. Student group 1 used the learning outcomes less than the more experienced students in group 2. This supports the claim by Nash and Harvey (2017) that one cannot assume that simulation-based learning is automatically transferred to a placement. According to Perkins and Salomon (2012), the question is not whether transfer of knowledge, skills and competence can occur but the conditions under which the transfer of learning occurs. A prerequisite for transfer is that students have the opportunity to detect a potential relationship with prior learning, elect to pursue this and make a fruitful connection. These are referred to as the conditions necessary to build mental bridges and transfer learning from one situation to another (Perkins & Salomon, 2012). The surface commonalities between cases are often seen as driving such transfer (Perkins & Salomon, 1992; Tan et al., 2022). In Paper 2, the participants found the simulation cases to be realistic and relevant to their placements, which suggests that surface commonalities were present and enabled the near transfer to closely related contexts and performances (Perkins & Salomon, 1992). However, disparities in opportunities to engage in or withdraw from palliative care learning situations were perceived as gatekeeping, either in and of themselves or externally, and seem to have influenced the transfer process (Paper 3). According to El Hussein and Cuncannon (2022), there is much complexity underlying the transfer process that connects simulation-based learning to clinical placement. Gillett et al. (2016) discuss extrinsic barriers present when nursing and medical students learn communication skills on a placement, such as gatekeeping by qualified staff and the lack of opportunity to make sense of one's experience through discussion. Nash and Harvey (2017), in correspondence with the findings in Paper 3, find that the nurse on the ward plays a significant role by following up on simulation topics and helping students to 'detect' potential learning situations. Smith et al. (2018) support the view that there are few opportunities for nursing students to learn palliative care in the clinical setting, particularly on specialist palliative care placements. According to Mezirow (2009), having the opportunity to experiment in new roles and plan a new course of action that is directed by one's new perspective is part of the transformative process needed to build competence and self-confidence in new roles and relationships. This underscores the importance of giving students the opportunity to take part in and engage in palliative care situations so that they can experiment with their new understanding. Receiving the support of experienced nurses and critically reflecting on the learning process helped students during clinical training to feel secure in their encounters with end-of-life care (Melin-Johansson et al., 2018). In the simulation that Papers 1, 2 and 3 build upon, the participants returned to the case after a debriefing and conducted the case once more to make the learning experience more significant, which was then followed by a new debriefing as recommended (Daley & Campbell, 2017). In Paper 2, the participants indicated that it was the performance in the second round of the simulation that converted their performance from being action-oriented to being present for the patient. This exemplifies how experimentation with their new understanding facilitated the transformative learning process of changing frames of reference. For those who gained experience of palliative care on a placement, the simulation experience provided them with a sound basis for forming relationships and making clinical judgements.

They were appreciative of the simulation experience early on their placement, as it provided an opportunity to use the experience and they realised that they could contribute to palliative care situations in a new way (Paper 2). However, Wenger et al. (2015) argue that engagement is rarely effective without some degree of alignment with the context. In Paper 3, the participants emphasised that the nurses on the ward needed to be comfortable with the students' understanding of a patient's situation before making a decision as to whether to include or exclude the student from a palliative care situation. The participants also found that patients and their families sometimes understood their learning needs but at other times did not want them to be present. Given that quality of life is a primary element of palliative care (Radbruch et al., 2020), it is reasonable to interpret this assessment of the students' interaction as gatekeeping. By explaining to the students why they cannot participate, important palliative care principles can still be learned.

The simulation literature often points out that the contextual factors of a simulation, such as fidelity and a safe learning environment, can maximise transfer potential. Shariff et al. (2020) draw attention to the fact that there has been little discussion of how simulation can help optimise learning on a placement. Current debriefing models emphasise what participants have learned from a simulation and what they will do differently next time (Jaye et al., 2015). Little attention is paid to how to attain the goal of improved practice (Shariff et al., 2020). To enhance the process, Rivière et al. (2019) suggest that the facilitator of a debriefing let the group of students identify the differences and similarities between the simulation scenario and the other cases they have experienced or tentative cases in order to generalise their knowledge and become aware of their further learning needs. Generalising and focusing on the relationships within a set of situations, on similarities and small differences, promotes the transfer process (Marton, 2006). Transfer, like any complex cognitive performance, benefits from motivational and dispositional drivers (Perkins & Salomon, 2012). If we emphasise only the learning outcomes of the simulation and not the learning process, we are not making full use of the potential to encourage ongoing learning afterwards (Shariff et al., 2020). Since transformative learning can occur as a progressive sequence of insights (Mezirow, 2009), facilitating the transfer of learning may also enhance a transformative learning process. Wenger et al. (2015) discuss learning a profession as identity work wherein identity is formed when the learner takes part in different communities of practice and crosses the boundaries between them. How nursing education goes about ensuring programme coherence will affect the opportunities that students have to personally engage with and interact within multiple communities of practice and attain palliative care learning outcomes as illustrated in Figure 3.

Programme Coherence

In Paper 2, the participants expressed gratitude for the way the simulation led to consciousness-raising early in their placement, indicating that the simulation allowed them to use this raised consciousness and work on it. The opportunities that nursing students have to engage, collaborate and attain palliative care learning outcomes are influenced by how the subject is presented and integrated in the educational programme. Programme coherence according to Smeby and Heggen (2014), is the extent to which the theoretical and practical parts of a curriculum are integrated into teaching and placement respectively. The national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019), requires the educational programme to be structured so as to ensure coherence, progression and integration of theory and practice in a manner that supports the learning outcome descriptions. Our interpretation of the findings in Paper 4 indicates that, in the field of palliative care, coherence between selected learning outcome descriptors, related subjects and their presence along the academic trajectory is emphasised by the universities in different ways.

Most of the universities presented in Paper 4 included palliative care learning outcomes in the first year of the educational programme in basic nursing course plans. The other categories presented in Table 4 of Paper 4 exhibited greater variety. Nursing students will encounter people with palliative care needs in many different placements, as the palliative care approach is recognised as beneficial for all life-limiting conditions regardless of age (Radbruch et al., 2020). The national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019) stress that a graduate must be able to provide nursing care for people in the palliative phase in the primary health care and specialist health services. Nursing students have indicated, as shown in Papers 2 and 3 as well as in other studies (Hall-Lord et al., 2017; Malone et al., 2016), that the complexity of palliative care makes it a challenge to endure, perform and learn. It is therefore warranted to focus more on the progression from palliative care within basic nursing to complex cases within multidisciplinary contexts over the course of the educational programme, in theoretical and clinical subjects alike. This need has also been reported in other countries that have identified great variation in how palliative care has been integrated into nursing education (Hagelin et al., 2021; Heath et al., 2021; Hökkä et al., 2022; Mastroianni et al., 2019). Carmack and Kemery (2018) support the view that palliative care should be integrated throughout nursing education. In Norway, 50% of nursing education is made up of integrated clinical placements (Råholm et al., 2010), thus creating the opportunity for students to be involved in palliative care situations within multidisciplinary environments across service levels so as to enhance their ongoing learning and ensure their progression in the attainment of palliative care learning outcomes. However, given the limited opportunities for nursing students to learn about palliative care on a placement (Smith et al., 2018) and given the results in Papers 1, 2 and 3 indicating that learning outcomes attained in simulation were used only to a small extent on placements, this raises an argument to be considered within the ongoing discussion in nursing education about whether to replace clinical hours with simulation (Bogossian et al., 2019; Olaussen et al., 2020). As reported in the multicentred study by Hayden et al. (2014), even when simulation replaced 25% or 50% of practice, there was no significant difference found in knowledge and critical thinking when the educational programme was finished and six months afterwards. However, EU Directive 2005/36/EC Article 31 (European Parliament Council, 2005) requires that students have direct contact with a healthy or sick individual and/or community during 50% of their integrated clinical placement. Consequently, the directive prevents European nursing educational programmes from replacing placement with simulation. Considering that the European qualification framework shifts the focus from input (length of learning experience, type of curriculum) to learning outcomes, the EU Directive shows the contrasting intentions behind outcome-based education and evidence-based practice. Henriksen et al. (2020) argue that a specific quantity of clinical hours does not necessarily ensure a student’s attainment of expected learning outcomes and, furthermore, that a consequence of the EU directive may be that nursing students are offered a limited range of experience and are thus not fully prepared for patient care. This is particularly concerning within palliative care, where, as discussed in Papers 1 and 3 and in other studies, it is challenging to gain access to learning situations on placements (Gillett et al., 2016; Smith et al., 2018). One way of focusing better on palliative care and ongoing learning may be to include simulation in pre-clinical education or as a supplement to placement. In line with the findings in Papers 1, 2 and 3 that indicate that learning outcomes were attained in the simulations and that some of the participants used their learning outcomes on their placements, Olaussen et al. (2022) have found that combining simulation with clinical placement seems to increase student learning during the clinical placement period. It enhanced students’ motivation and sense of mastery and, consequently, their efforts to seek out new challenges, explore and learn in both the clinical and the simulated environments. One option for improving student involvement may be to invite students to develop their own palliative cases in collaboration with faculty (Roberts et al., 2020). Clinical experience and the course plan’s learning outcomes could provide the basis for a simulation. In cases where students may find it particularly difficult to gain access, such as the case of a child or a mentally ill person with palliative care needs, clinical virtual simulation could be an option. In clinical virtual simulation, reality is depicted on a computer screen and involves real people operating in simulated systems (Padilha et al., 2019). Students and faculty rarely collaborate on curriculum design, but doing so may become an increasingly suitable way of addressing student needs (Edwards et al., 2018; Roberts et al., 2020). In addition, inviting students to interact within the faculty’s community of practice is a way to let students’ personal engagement influence programme coherence. In this way all three circles in Figure 3 come into play to improve learning outcomes.

Paper 4 shows that the emphasis on palliative care differed according to the selected learning outcome descriptor. Only three of the nine universities included the learning outcome descriptor ‘skills’ in their clinical course plans, nor is the learning outcome descriptor ‘skills’ included with regard to palliative care in the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019). The learning outcome descriptor ‘skills’ can be summarised as the ability to apply knowledge and use know-how to complete tasks and solve problems, and this ability can be both cognitive and practical (European Parliament Council, 2008). Considering that palliative care includes using skills to relieve patients’ pain and troublesome symptoms and to communicate with the patient and the patient’s relatives about the transition to death (Ferrell et al., 2016; Gamondi et al., 2013; Radbruch et al., 2020), it seems to be of crucial importance to incorporate a greater focus on students’ opportunities to engage in and practise palliative care within a community of practice in order to enhance their learning outcomes.

The great variation in how palliative care is emphasised and how terminology is used in nursing education in Norway as described in Paper 4 affects how and when palliative care is introduced to nursing students. Pereira et al. (2021) point out that the differential development and organisation of palliative care education within a country may have major implications for the delivery of effective palliative care education and practice in such countries. In view of the increased recognition that all life-limiting conditions and people of all ages can benefit from palliative care (Murtagh et al., 2014), nursing education has an opportunity to promote this at the forefront. It would thus be an advantage to have this perspective reflected in the study programmes and course plans throughout nursing education.

Heggen et al. (2015) argue that the most important issue in programme coherence is how students experience the various connections between the different elements of the programme. Thus, more explicit use of the term ‘palliative care’ in the learning outcomes for both theoretical and clinical subjects may help students better capture the emphasis on the field within their education.

Mason et al. (2020) suggests that policy guidance on providing training in palliative care in education would provide an important means of increasing the focus on it. Nursing education in Norway thus has an advantage, as policy guidance with a focus on palliative care was implemented during the 2020–2021 academic year (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019). Globally, however, such guidance remains lacking, despite the growing recognition of the complexity of palliative care in national health policy frameworks (Mason et al., 2020). Furthermore, the findings in Paper 4 indicate that the descriptions of palliative care learning outcomes set out in the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019) are not systematically followed. This demonstrates that directives are not necessarily realised as intended. A challenge discussed in Paper 4 is that it is left to each country and each university to decide what kind of emphasis to put on palliative care (Pereira et al., 2021) and that having ‘champions’ advocating for palliative care seems to be an advantage (Hagelin et al., 2021). It has been observed that the shortage of expert staff is a barrier in palliative care education (Hökkä et al., 2022; Rosa et al., 2022; White et al., 2019) and that educators can find palliative care difficult to teach (Hagelin et al., 2021). A greater focus on competence in palliative care among university staff may enhance the focus on palliative care in nursing education.

As the results of Paper 1 to 4 indicate, for educational programmes to produce graduates with a successful final learning outcome in palliative care, factors such as personal engagement, interaction within communities of practice and programme coherence are important. These three factors mutually influence each other, and graduates’ learning outcomes will be affected to the extent these factors are strengthened or weakened.

Methodological Considerations

Any element of the research process is subject to the influence of biases that can produce a distortion or error and affect the results (Polit & Beck, 2017). Several criteria must be addressed in order to evaluate the trustworthiness of research, as discussed by Lincoln and Guba (1985). In quantitative research, these criteria are validity and reliability (Polit & Beck,

2017) and they will be discussed with regard to Paper 1, to be followed by a section discussing the trustworthiness of Papers 2, 3 and 4 in terms of credibility, dependability, confirmability and transferability (Lincoln & Guba, 1985).

Validity and Reliability

Validity refers to whether the conclusion of a study has been well-founded and can be trusted (Polit & Beck, 2017). The simulation intervention was designed specifically for this project. One might question whether it is realistic to prepare so thoroughly for a simulation as described and, if not, whether the results might have been affected positively (Hasson, 2015). However, the results could also act as a reminder that time and preparation are needed to enhance quality in education and research.

The results in Paper 1 were confirmed by the experience of the participants as described in Papers 2 and 3. Thus, a mixed methods research design could have been used, and the findings in Papers 2 and 3 could have strengthened the discussion in Paper 1. Although the most critical issue when selecting a design is the research question, issues of practicality also matter (Polit & Beck, 2017). In a mixed methods approach, a researcher who has experience of the various research traditions along with their combined application is seen as an advantage, and I do not have such experience. In addition, it is necessary to decide upon a mixed methods approach before embarking on a study, and this did not occur in this project. However, to strengthen the validity, we have used different data sources in order to understand what it is about the intervention that drives the observed effects, which is referred to as the 'black-box question' (Polit & Beck, 2017).

In Paper 1, the sample size is small. Hence there is a potential risk of a type Ⅱ error, which means the acceptance of a false negative conclusion (Altman, 1991). Calculating sample size power is recommended in quantitative studies to detect the true relationships that exist among variables (Polit & Beck, 2017). We regarded the analyses in this paper as exploratory, and for this reason they could scarcely generate a number for expected change (effect size) or, consequently, a specific number of participants. However, in the wake of changes to the university's study model that subsequently led to fewer students obtaining medical and surgical placements, only a limited number of students were available for recruitment. Matters such as this are beyond the control of researchers; hence, in this case, we had to bring in as many participants as wanted to join the study.

Regarding internal validity, the choice of self-report as a data-collection method may have led to response bias as a result of, for example, informants' inability to remember what actually happened or to present themselves in a favourable way independently of a question's content, as discussed by Polit and Beck (2017). A strength here is that the baseline and postsimulation measures were conducted on the day as the simulation intervention. The response rate was high. Therefore, it may be reasonable to assume that the intervention was the reason for the increase in knowledge, skills and competence. The postplacement test was conducted seven to nine weeks after the simulation. Attrition is a problem in longitudinal studies that investigate the trajectory of a phenomenon over time (Polit & Beck, 2017). In Paper 1, the attrition rate was as follows: not completed both the pretest and postsimulation test, $n = 3$. Not completed both the postplacement test and postsimulation test, $n = 10$. It is unknown whether the attrition rate affected the results. Another question is whether self-report is the best data collection method to obtain answers to questions about attaining learning outcomes. According to Haakstad (2011), research on learning outcomes is carried out through the use of either a direct method, where 'outcomes' are measured by how well the students perform on a test, or an indirect method, on the basis of students' own assessment of attained learning outcomes in questionnaires and interviews. Thus, testing or observing students' learning outcomes may have added different perspectives to the paper.

In the search for relevant research literature, I have encountered different types of outcome measures and measurement scales. Knowledge, skills and attitude are commonly used as outcome measures in simulation research. Hence, selecting attitude as an outcome measure would provide a better basis for comparison with other studies. In palliative care research, the Frommelt Attitude Toward Care of the Dying scale (Frommelt, 1991) is a commonly used and validated assessment tool. This was opted out since it focuses primarily on attitudes. Nevertheless, we chose to adhere to the ratified qualification framework for higher education that nursing education is based on (Kunnskapsdepartementet, 2011) and thus developed our ad-hoc questionnaire. In the absence of a previously validated questionnaire, we undertook to strengthen the construct validity, or whether the test relates to underlying theoretical concepts (Polit & Beck, 2017), by using the palliative care guidelines (Gamondi et al., 2013; O'Connor, 2016) and learning outcomes described in course plans for placement when we developed the ad-hoc questionnaire. A weakness is the criterion of validity, which is described as the relationship to other measures (Polit & Beck, 2017), since the questionnaire was not psychometrically tested against a highly rated existing standard or in the actual sample.

The way that the questions in the survey were formulated was changed over the course of the learning trajectory in order to make the questions relevant for the specific test. In the pretest we asked: ‘To what degree do you have the knowledge to…?’ In the postsimulation test, this wording was changed: ‘To what degree have you developed knowledge during the simulation to…?’ Then, in the postplacement test, this was reformulated as: ‘In this placement, to what degree have you used knowledge to…?’ This may have influenced the participants’ understanding of the questions in the survey. However, the pilot yielded valuable information regarding the clarity of the questions and ensured face validity. In other words, the test appears to have tested what it sought to test (Polit & Beck, 2017). A weakness is that the questions in the pretest questionnaire were not consistently repeated in all of the forms. This was due to an error loading the questions in the computer system used. Hence, questions 15 and 16 were not included in the postplacement test and are therefore not represented in Table 6 or Table 7 of Paper 1.

The Likert scale, with its continuous response option of 0 to 10, was used. The scale is used in the placement evaluation form, and in the ESAS-r assessment tool used in the simulation, and was preferred by the pilot participants. The research team considered familiarity an advantage. The open-ended questions in the survey were not analysed and presented in the paper but were rather used as background information for the qualitative interviews and to develop the interview guide.

Several factors may have influenced the statistical conclusion validity (i.e., whether the conclusions reached on the basis of the evidence can be trusted) (Creswell, 2014). One such factor is the choice of a proper method for analysing the data, in which regard there are different traditions addressing what constitutes the right method (Polit & Beck, 2017). According to the original analysis plan, we first analysed the data with a two-way analysis of variance (ANOVA) to describe the relationship between the dependent variables of knowledge, skills and competence and the independent variable of the simulation. This parametric test determined whether there were any statistically significant differences within or between the means of the different groups and questionnaires (Polit & Beck, 2017). As the data represented different numbers of participants in the groups, a general linear model was used. A p-value of < 0.05 was considered statistically significant. However, a reviewer for Paper 1 recommended non-parametric tests, as these are usually seen as robust and they are preferred when a sample is small and normal distribution cannot be assumed (Altman, 1991). We therefore used the Wilcoxon signed-rank test and the Kruskal-Wallis test to analyse the data, which yielded the same conclusion as the ANOVA test. The results from the ANOVA test are presented in Appendix 8.

Another factor influencing statistical conclusion validity is confounding bias. This can be described as a variable that affects the results, but which is not actually measured or observed (Creswell, 2014). Such variables may be age, sex, previous experience or attitudes towards palliative care, simulation or palliative care experiences in their private life during the data collection period. To include these variables, a multivariate model could have been used.

Due to external validity, there are several elements that may have influenced the results. As discussed in the background, in nursing education internationally there are different degree levels, lengths of study, types of content and uses of learning methods (Lahtinen et al., 2013), which makes comparison a challenge. Thus, conclusions must be drawn with caution.

Reliability in a study refers to whether a measurement is free of measurement error. The lack of either a comparison group or randomisation in Paper 1 can be seen as a weakness. In randomised controlled trials, participants are randomised or allocated to the intervention ‘by chance’ into two groups. The groups are comparable in terms of both measured and unmeasured variables so that any difference in outcome between them can be related to the effect of the intervention (Polit & Beck, 2017). The study on which Paper 1 is based was originally planned and conducted according to a longitudinal crossover design with an experimental group and a comparison group (Polit & Beck, 2017). In a crossover design, the comparison group is exposed to more than one condition. In our study, the comparison group first had a hospital placement without a simulation and then received the simulation intervention as part of their second hospital placement; they thus serve as their own ‘control’. In addition to the pretest, postsimulation test and postplacement test, the comparison group had a postplacement test after completion of the placement without a simulation.

As a consequence of changes to the university’s study model, only seven students had two subsequent hospital placements. Six of these students wanted to participate. Even though we completed the data collection and analysis as planned, it was our view that the small number would not have any statistical relevance and we analysed and presented the data from the comparison group as part of Student Group 2 in the Wilcoxon signed-rank test and Kruskal-Wallis test.

We made a discretionary selection (Polit & Beck, 2017) as in our view the condition of the patients and the follow-up of the students were most similar in a hospital setting. The exclusion criteria are inaccurately described throughout the papers. The information letter inviting students to participate and Paper 1 both indicate that there are no exclusion criteria. However, Paper 2 states that substantial former palliative care experience is an exclusion criterion, and Paper 3 does not describe exclusion criteria at all. This can lead to misunderstanding, and the reader may question whether former experience has played a role in the results.

Given that participation was voluntary, students who dislike simulation as a learning approach or those who wanted to avoid palliative care may not have been represented. We avoided first-hand contact between the researchers and respondents as recommended (World Medical Association, 2013); however, power relations between participants and facilitators/researcher could have led to selection bias as they were known to each other. Furthermore, we are aware that the Hawthorn effect (Polit & Beck, 2017) may have had an impact on the results, as the participants knew they were being tested.

The fact that I am a teacher at the university where the data were collected probably influenced my access to, and recruitment of, the participants. My role during the simulation was to welcome the participants to the simulation laboratory and provide them with information on the survey. To avoid influencing the simulation, I observed from a separate room and made field notes. Nevertheless, my presence that day may have influenced the answers. My various roles may also have influenced the facilitators who initiated the intervention, such as through our implementation of the simulation as well as their effort to help me. Whether they regarded me as a researcher, or a colleague was not mentioned.

Trustworthiness

The main data-collection instrument in qualitative research is the researcher. It is therefore necessary to take steps to demonstrate trustworthiness, described as the researcher's degree of confidence in the data, interpretation and methods used to confirm that the findings reflect the experiences and viewpoints of the participants and not the researcher's perceptions (Polit & Beck, 2017). The framework proposed by Lincoln and Guba (1985) presents four criteria for developing trustworthiness in qualitative research. These are credibility, dependability, confirmability and transferability. *Credibility* refers to the extent to which the analysis and interpretation in a study can be trusted (Lincoln & Guba, 1985). Confidence in the truth of the data in Papers 2 and 3 was emphasised by choosing a qualitative explorative design and face-to-face interviews with participants who had obtained experience of palliative care during a placement in order to learn about the participants' personal experience. The participants represented different hospital units and different sexes. When we reached saturation level, when the interview themes became repetitive, a couple of additional students were included as recommended (Polit & Beck, 2017). To enhance credibility, the transcribed texts were read several times from an inductive approach (Graneheim et al., 2017) to obtain the overall meaning. An action taken that demonstrates credibility is the presentation of the analytical steps, from code to theme, in Table 3 of Paper 2 and Table 2 of Paper 3. In addition, rich descriptions of participant experiences according to mood, feeling and context have been provided by way of quotes so that readers can grasp the essence of these experiences. This can be seen in the provision of participant quotes that depict each emerging theme. Paper 2 does not state which of the informants the quotes come from, which is in accordance with the journal's privacy policy. However, this can conceal whether any of the informants' quotes have been favoured. Nevertheless, to enhance credibility, we have described how the interpretations were established and demonstrated that the findings were derived directly from the data. This gives readers an opportunity to transparently evaluate the categorisation of the quotes.

However, the sample was recruited by teachers who had responsibility for the students during the hospital placement. This may have influenced the students' willingness to participate, and it might have been advantageous to use a more neutral person to recruit students. In addition, I cannot be sure whether my role as a teacher on the campus influenced the students' responses. The source of information may also have an influence on credibility. Conducting an observational study might have added further perspectives to Papers 1, 2 and 3. The advantage of this method is that observing behaviours, actions and activities can yield more information and insight than conducting interviews (Polit & Beck, 2017). As we wanted to explore the participants' experience, and because palliative care is reportedly an emotionally challenging subject to become knowledgeable about (Gillan et al., 2014a; Lippe & Carter, 2015), we chose face-to-face interviews. We considered conducting focus group interviews but did not opt for this as we did not know before the interviews whether the participants had personal simulation or placement experience that might be difficult for them to discuss freely in a group.

In Paper 4, credibility was improved by the inclusion of most of the Norwegian universities offering nursing education in an effort to obtain a representative data base. One limitation is the exclusion of private universities. This may have led to 'biased selectivity' (Bowen, 2009), but we prioritised the objective of a homogeneous sample. An advantage offered by document analysis is that documents are exact, cover many settings, are stable and remain unaffected by the data collection process (Bowen, 2009). To enhance credibility, we reviewed all of the programme descriptions and course plans from the selected universities in an effort to identify suitable units of analysis describing palliative care learning outcomes. A systematic approach consisting of three phases – preparation, organisation and reporting of data (Elo & Kyngäs, 2008) – in the qualitative content analysis process was used. As first author, I coded the text, developed the categorisation matrix on the basis of the recommendations in the national regulations (Forskrift om nasjonal retningslinje for sykepleierutdanning, 2019) and organised the data accordingly. To demonstrate credibility, we have presented the categorisation matrix, in Tables 2 and 4 in Paper 4, to allow the reader an overview of the categories and findings.

The *dependability* of a study can be defined in terms of whether the research data are stable over time and changing conditions and whether the study has the potential for replication (Lincoln & Guba, 1985). We see it as a strength that the results for the categories 99999and themes in the analysis process for Papers 2 and 3 were similar regardless of the simulation group to which the participants belonged or whether the simulation occurred during their second or third placement.

C*onfirmability* refer to the objectivity or neutrality of the data. Lincoln and Guba (1985) recommend establishing an audit trail to demonstrate that the findings reflect the opinions of participants and not of researchers. This includes describing the data collection and analysis in a transparent manner. The focus during the interviews and analysis was on ensuring that the participants' perspective was represented. However, confirmability may have been affected by the way questions were asked, which in turn may have influenced the participants' opinions. The tendency in the quantitative data used in Paper 1 was known and had been discussed in the research team but not completely analysed at the time the interviews were conducted. In addition, before the interviews, I read the field notes I had made when observing the simulation and the answers to the open-ended questions in the survey. The research team discussed the potential for this knowledge to influence the questions asked and provide an opportunity to gain a deeper understanding of the participants' experience of the simulation and placement. The team also discussed the need for me to take care so that my pre-understanding did not prevent the participants from expressing their views.

During the interviews, I sought to clarify the questions asked, follow up with new questions, ask for elaboration on examples and confirm answers as recommended (Polit & Beck, 2017). I could also have used the technique of member checking, in which data, interpretations and conclusions are shared with participants in order to clarify their intentions, correct errors and provide additional information if necessary (Polit & Beck, 2017). A strength is that all of the interviews were conducted, audio-recorded and transcribed by one person. However, as pointed out by Graneheim and Lundman (2004), the qualifications of the interviewer must be taken into account. I worked on my self-awareness and awareness of the context during the interviews, but I am aware that my inexperience and pre-understanding may have affected the quality of the interviews.

Confirmability can be related to the methods of analysis and interpretation available for a study. Several content analysis methods are available. We found Graneheim and Lundman (2004) thorough description of the steps in content analysis useful for the data analysis for Papers 2 and 3. According to Graneheim et al. (2017), both manifest and latent content require interpretation, but the interpretation may vary in its depth and level of abstraction. This is reflected in Paper 2, in which the overall theme ‘courage to dare’ refers to a higher level of interpretation than found in Paper 3. We see it as an advantage that the research team had different thematic and pedagogical backgrounds and represented different universities. This was particularly useful when we were discussing manifest content and how our own pre-understanding might affect our understanding of the data. However, our significant experience as nurses and nurse educators may have influenced how we interpreted the meaning units and quotes.

Both my and the research team’s background in palliative care and nursing education may also have influenced our interpretations and the confirmability in Paper 4. Though we undertook to be objective throughout the analysis and discussion, the selected universities present their programme descriptions and course plans differently, which made them difficult to compare, for which reason we elected to divide the course plans up into four main subjects, which may have led to an overly general description. Some of the universities had a list of different subjects that described the content of the course plans. Although palliative care was mentioned in several subject lists, these lists were not included because the aim of the document analysis was to identify and outline learning outcome descriptions. If we had included the lists, compulsory reading and teaching schedules, a different impression of how the universities emphasise palliative care may have emerged. Furthermore, different words are used to describe palliative care in Norwegian and English, thus some of the description content may have changed in translation. To improve confirmability, the analysis process is described in detail. Tables 2, 3 and 4 of Paper 4 show the connections between the data and findings.

Transferability refers to the extent that findings can be transferred to other settings or groups (Lincoln & Guba, 1985). The data in Papers 2 and 3 provide rich descriptions of the participants' experiences, and the presentation of a sufficient description of the context and findings promotes transferability. The interpretation of the findings and their relevance to other settings or groups should be evaluated by those reading the papers (Polit & Beck, 2017). In Paper 4, the clear description of the context, data collection and data analysis and the vigorous presentation of findings can be used to reflect on other contexts and settings and thereby enhance transferability.

Conclusion

The present thesis considers palliative care learning outcomes in nursing education from different perspectives. Papers 1, 2 and 3 include the voices of students expressing their experience and their self-assessment of their attainment of palliative care learning outcomes in a simulation and the transfer of their learning outcomes to hospital placements. Paper 4 identifies and outlines how palliative care learning outcomes have been integrated into bachelor's degree nursing programmes in Norway following the implementation of the Regulations on National Guidelines for Nursing Education.

Papers 1 and 2 contribute to the field by providing knowledge about how simulation seems to increase knowledge, skills and competence in palliative care. The simulation activated senses and feelings, and palliative care as a topic was perceived as emotionally challenging. The participants needed to leave their comfort zones in order to participate in the simulation and debriefing. Courage was used, but their courage also grew by way of active participation, and it had an influence on their self-confidence in palliative care. The testing of meanings and discourse in the group by way of the debriefing created opportunities for new insights, and the simulation experience seems to have facilitated a transformative learning process.

Whether the learning outcomes from palliative care simulations transfer to and develop further on placements has been subject to little investigation. Papers 1 and 3 contributes findings to the field indicating that the participants, particularly the least experienced participants, practised their learning outcomes to a small extent. The participants reported that a conscious and progressive approach is necessary in order to choose palliative care situations on a placement. Factors in themselves, together with relationships with nurses, patients and relatives all served a gatekeeping function and influenced whether participants engaged in or withdrew from palliative care learning situations. However, the participants who did get involved in palliative care felt safer and more self-confident than before the simulation and used their learning outcomes from the simulation as a sound basis for establishing relationships and clinical judgements.

The integration of palliative care into nursing education is reported as a barrier to ensuring that people affected by life-limiting diseases receive palliative care. The document analysis in the Norwegian setting presented in Paper 4 indicates that palliative care as described in the national regulations has not been systematically integrated into the programme descriptions and course plans of the selected universities. Few of the universities described palliative care learning outcomes in their programme descriptions. In their course plans, palliative care received differing emphasis in terms of selected learning outcome descriptors, related subjects and presence along the academic trajectory. Varied terminology is used to describe palliative care. Only a few of the universities included relatives and the needs of the bereaved, and none included palliative care in course plans for mental health or paediatrics. The most commonly used learning outcome descriptor was ‘knowledge’, followed by ‘skills’ and ‘competence’.

How nursing students understand palliative care and how well trained they are can help ensure both the provision of palliative care to those who needs it, and the development of the field in the nursing profession. If educational programmes are to produce graduates who have successfully attained the final learning outcomes in palliative care, then, as the results of this thesis indicate, factors such as personal engagement, interaction within communities of practice and programme coherence are important. These three factors mutually influence each other, and nursing students’ learning outcomes will be affected to the extent that these factors are strengthened or weakened.

Implications for Nursing Education and Clinical Placement

The results of this thesis are significant in terms of how palliative care curricula can be organised. Learning outcomes can be attained by way of simulation, and students gaining experience, processing their own reactions and preparing for clinical placement. There is a need to increase focus on palliative care in nursing education, and complexity can be built upon successively from the simple to the complex in course plans. As Papers 1, 2 and 3 indicate, whether students actually encounter people who are dying and their relatives while on a clinical placement can be a matter of chance. Thus, simulation can make an important contribution to ensuring a minimum of experience in palliative care needs.

Although palliative care in nursing education is the focus of this thesis, the way in which learning outcomes are attained and applied is transferable to other subjects in healthcare education. Changes in the organisation of the health services leading to increased use of outpatient treatment and primary health services will lead to less hospital placements. On the basis of these matters and the barriers for attaining learning outcomes described in this thesis, the following recommendations is provided:

- Include palliative care learning outcomes in programme descriptions and course plans. Use the learning outcome descriptors ‘knowledge’, ‘skills’ and ‘competence’ for both theoretical and clinical subjects throughout bachelor’s degree programmes.
- Use palliative care simulation to ensure that learning outcomes are attained.
- Focus on how simulation can contribute to ongoing learning on placements.
- Use simulation in combination with placement.
- Simulate situations that are difficult to gain access to on a placement.
- Involve students in palliative care situations on their placements and follow this up by clarifying their expectations and providing support in the situation and reflection.
- Ideally, institute a national palliative care education programme within nursing education in Norway.

Implications for Future Research

The results in Papers 1, 2, 3 and 4 show a need for further research to evaluate how palliative care is emphasised in nursing education and how nursing education can facilitate nursing students' attainment of palliative care learning outcomes. We make the following recommendations:

- Include a greater number of participants and cases in further studies. Rigorous multicentre studies focusing on nursing students' attainment of learning outcomes in palliative care and what inhibits and promotes students' ability to transfer their learning outcomes from simulations to clinical situations is recommended.
- Elaborate on the perspective of conducting virtual cases to create a thematic programme of learning situations and solutions in palliative care.
- Conduct studies focusing on how nursing students' palliative care learning outcomes affect patients and their relatives.
- Conduct studies focusing on how the interactions between nurses and students on a clinical placement can affect the students' attainment of palliative care learning outcomes.
- Conduct studies investigating when to choose simulation rather than other teaching strategies.
- Conduct research on how palliative care learning outcomes have been integrated into compulsory reading and teaching schedules.
- Compare the descriptions of palliative care learning outcomes at the bachelor's and master's degree levels in the countries of northern and southern Europe.
- Compare the curricula in countries where palliative care receives emphasis in white papers and is explicitly documented in nursing course plans and curricula in order to shed light on different approaches to enhancing palliative care learning outcomes.
- Identify and outline how learning outcomes in subject areas other than palliative care are described in the national regulations and integrated into the programme descriptions and course plans of universities in Norway.

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Appendix 1: Simulation manual including cases

Manual til scenario 1: Relasjonskompetanse

Læringsutbytte:

Kunnskaper:
Har kunnskap om informasjon om ernæring som er relevant for pasient og pårørende når pasienten er døende.

Ferdigheter:
Kan kommunisere om pasientens situasjon med pasient og pårørende.
Kan ivareta pasient og pårørende sin autonomi og integritet i samsvar med etiske og juridiske retningslinjer.

Generell kompetanse:
Viser respekt, forståelse og nestekjærlighet og tar andre menneskers situasjon og opplevelse alvorlig.

Case:
Jesper Jensen 69 år. Diagnose: Lungekreft med spredning til skjelett og hjerne. Pasienten har vært syk de siste tre årene. Han har fått behandling med cellegift for kreften, og strålebehandling mot smerter relatert til skjelettmetastaser i ryggen.
Jensen ble innlagt i medisinsk avdelingen for to dager siden pga dårlig almenntilstand, pneumoni og økende smerter. Pasienten har gått ned 5 kilo de siste månedene, og spist og drukket svært lite de siste ukene. Pasienten sover store deler av dagen, og er en del våken om nettene. Palliativt team har vært involvert for justering av smertestillende. Pasienten får Penicillin 5 mill/IE i.v x 4. Familien er informert av lege om at røntgen thorax viser en forverrelse av kreften, og at pasienten har kort forventet levetid.
Familie: Ektefelle, Elise Jensen, og to barn hvorav et barn bor i en annen by, fire barnebarn i alderen 7 – 17.
Yrke: Maskinist på båt – reist mye i sitt yrkesliv.

Briefing:
Introduser dagens læringsutbytte
Det er dagvakt og pasienten har vært i avdelingen 2 dager. Sykepleier 1 går inn til pasienten for å ta ned antibiotika og hente ut lunsjbrett, og møter der ektefellen som er bekymret over pasientens ernæringstilstand. Hun tok på legevisitten i dag opp sitt ønske om at mannen må få sondeernæring og væskebehandling, og ble forklart av lege at det ikke er aktuelt med tanke på pasientens sykdomsutvikling. Hun er kritisk til manglende tiltak.

Roller:
Pasient: Døsig, lite interessert i behandling som gis. Virker resignert. Gir uttrykk for at han ikke ønsker mat og drikke. Tørr i munnen. Har fått smertestillende for 20 minutter siden. Ligger vondt – ønsker stillingsendring. Prøver å avlede/bagatellisere ektefellens bekymringer. Er opptatt av de hverdagslige tingene – han kan gjerne spørre om hvordan det går med barnebarna.
Sykepleier 1
Skal inn til pasienten for å hente ut lunsjbrett og ta ned antibiotika. Informeres om at ektefellen er på besøk og bekymret for pasientens ernæringstilstand. Trenger å tilkalle sykepleier 2 for å hjelpe pasienten i bedre stilling. Kjenner familien fra tidligere opphold.
Sykepleier 2:

Kommer inn for å assistere ved stillingsendring – blir værende i diskusjonen. Kjenner familien fra tidligere opphold.

Pårørende:

Ektefelle Elise er frustrert over at hun ikke fikk medhold hos legen i sitt ønske at det legges ned ernæringssonde, og startes væskebehandling. Hun mener pasienten dør hvis han ikke snart starter å spise. I fortvilelse stiller hun en del kritiske spørsmål til sykepleier, samtidig som hun prøver å gi pasienten mat.

Instruksjon på aktuelle spørsmål fra pårørende:

- Hvor mye har pasienten spist/drukket i dag?
- Har han i det hele tatt spist noe mens han har vært her.
- Legen i mottagelsen snakket om væskebehandling – hvorfor vil ikke legen i avdelingen gi det?
- Vil du at jeg skal lage vafler å ta med til deg – med jordbær fra hagen?
- Prøv nå å drikk litt!
- Jeg vil at han skal få sondeernæring, jeg forstår ikke hvorfor de ikke kan prøve.
- Han dør jo om han ikke spiser.
- Hvorfor får han behandling for lungebetennelsen – men ikke behandling for underernæringen – hvor er logikken i det?
- Ektefellen kan gjerne stille det samme spørsmålet flere ganger.

Observatørene:

- Har oppmerksomhet mot det som skjer og læringsutbytte.

Tilgjengelig utstyr på pasient og i rom:

Pasient: Venekanyle tilkoblet antibiotika.

På nattbordet:

Lunsjbrett med en skive som ikke er spist av, og et halvfullt glass med drikke.
Sprøyte med NaCl, og propp til seponering av antibiotika.
Ufullstendig drikkeliste.
Pussbekken.
Vaskeklut.
Oksygenkateter.

Pasientkurve tilgjengelig:

Medikamenter på kurve grunndosering og ved behov.
HLR - satt

Aktuelle medikamenter i medisin tralle

Som på kurve

Tilgjengelig på rommet:

Puter

Scenarioet starter:

Scenarioet starter med at sykepleier 1 går inn til pasienten og kobler fra antibiotika, hun møter der en frustrert pårørende, og en resignert pasient.

Spørsmål fra pårørende	Aktuell respons
Hvor mye har pasienten spist/drukket i dag?	Informere og åpne opp for hva som ligger bak spørsmålene.
Har han i det hele tatt spist noe mens han har vært her?	Fokusere på at pasienten kan få ønskekost – små mengder og det han liker.

Legen i mottagelsen snakket om væskebehandling – hvorfor vil ikke legen i avdelingen gi det?	Pasientens tørstebehov er ofte nedsatt og kan lindres med godt munnstell. Pasienten kan få mer plagsomme symptomer i form av væskeopphopning i kroppen-ødemer og vann i lungene – økt tungpust. Oppmuntre pårørende til å delta i munnstell – gi smaksopplevelser
Spør pasienten om han vil at hun skal lage vafler å ta med sammen med jordbær fra hagen.	Ta tak i pårørendes ressurser og oppmuntre til gode smaksopplevelser.
Jeg vil at han skal få sondeernæring! Jeg forstår ikke hvorfor de ikke kan prøve.	Fokusere på at på grunn av sykdomsutvikling ønsker vi å legge vekt på livskvalitet og ikke livsforlengelse. Sykepleiers jobb blir å formidle at det er naturlig i livets siste dager å spise mindre, kroppen trenger mindre energi, pasienten har ikke krefter til å spise, og det er sykdomsutviklingen som gjør at pasienten dør.
Hvorfor får han behandling for lungebetennelsen – men ikke behandling for underernæringen – hvor er logikken i det?	Antibiotika kan lindre symptomer som sekretopphopning, hoste og feberutvikling. Fokus på livskvalitet.
Han dør jo om han ikke spiser.	Dilemmaene som utspiller seg er pårørendes syn: Han spiser ikke derfor dør han- mot pleiernes kunnskap; Han dør, derfor spiser han ikke. Mat og drikke – liv. Pårørendes bekymring og omsorg rundt ernæring er ofte et uttrykk for fortvilelse over at pasienten dør. Diskusjonen kan være en inngangsport til samtaler om forberedelse til det som kommer, om forsoning og avskjed.
Respons på pasientens behov for stillingsendring. Respons på pasientens behov for å bagatellisere – snakke om hverdagslige ting.	Hjelp til å finne hvile i ny stilling. Ta tak i det pasienten bringer på banen – hva er viktig for deg nå?

Debrifing:

1. **Beskrivelsesfasen.**

Deltakerne forteller hva de gjorde i kronologisk rekkefølge. Observatørene supplerer.

2. **Analysefasen.**

Start med påminner om læringsutbytte for simuleringen.
Deltakerne skal nevne ting **de selv** gjorde godt. Observatører deltar.
Aktuelle fokusområder- spørsmål ut fra læringsutbyttene:

Kunnskaper:
Har kunnskap om informasjon om ernæring som er relevant for pasient og pårørende når pasienten er døende.
Hvilken informasjon om ernæring ble formidlet?
Dilemma mellom at pårørende tenker at pasienten dør fordi han ikke spiser og sykepleierens kunnskap om at pasienten spiser ikke fordi han er døende. Hvordan svarer en pårørende som sier «Han dør om han ikke spiser»?

Hvilken kunnskap trenger sykepleieren å informere om i forhold til dette? (sykdomsprosessen reduserer sult og energibehov, mulige bivirkninger av væskeopphodning).
Hva gjør iv behandling med en døende pasient?
Hva kan en tilby istedenfor/ha fokus på når sonde/væskebehandling ikke er aktuelt? (ønskekost, munnstell og smaksopplevelser).
Livskvalitet kontra livsforlengelse.
Dilemmaet mellom at det gis antibiotika, men ikke ernæring. (Antibiotika kan lindre symptomer).

Ferdigheter:
Kan kommunisere om pasientens situasjon med pasient og pårørende.
Ble pasientens situasjon kommunisert?
Hvordan var kommunikasjonen mellom sykepleier – pårørende og pasient?
Ofte har vi fokus på at mottaker av tjenester ikke forstår, ikke lytter, er krevende… eller at vi ikke har tid… Sjelden drøfter vi hvordan vi kommuniserer, kan vi gjøre endringer.
Bruk av aktiv lytting ved å skape gode likeverdige relasjoner, stille åpne spørsmål, tåle taushet og ivareta pasientens følelsesmessige reaksjoner.
Skal samtalen skje på rommet eller vaktrommet, alene med pårørende eller felles?
Hvor mye kan en blande seg inn i deres situasjon?
Informasjonen må tilpasses mottaker og skje i dialog.
Hvordan komme lenger enn overflatedialog.
Et godt spørsmål som kan stilles til både pasient og pårørende; Hva er viktig for deg nå.
Å avslutte/oppsummere denne type samtaler er en utfordring som det kan fokuseres på.

Kan ivareta pasient og pårørende sin autonomi og integritet i samsvar med etiske og juridiske retningslinjer.
Ble pasienten og pårørende sin autonomi og integritet ivaretatt?
Hva vil det si å ivareta pasienten og pårørende sin autonomi og integritet?
Hvordan kom det til uttrykk her?
Hvilke etiske og juridiske retningslinjer er i spill?
Respekt for selvbestemmelse (autonomi).

- Velgjørenhet (behandlingsgevinst).
- Ikke skade (bivirkninger).
- Rettferdighet (helseressurser og likebehandling).
- Rett til nødvendig helsehjelp.
  - Faglig forsvarlig og omsorgsfull helsehjelp.

Yrkesetiske retningslinjer: Sykepleierens fundamentale plikt er å fremme helse, forebygge sykdom, lindre lidelse og sikre en verdig død.

Generell kompetanse:
Viser respekt, forståelse og nestekjærlighet og tar andre menneskers situasjon og opplevelse alvorlig.
Ble pasienten og pårørende sin virkelighetsopplevelse tatt på alvor?
Hvordan kom det til uttrykk?

3. Anvendelsesfasen

Hva har deltakerne lært av å delta i simulering og debrifing? Hva kan de nyttiggjøre seg /hva trenger de å fordype seg i for å få mer kunnskap om temaet? Observatører deltar.

Scenario 2: Klinisk vurderingskompetanse

Læringsutbytte:

Kunnskaper:

Observere og vurdere kliniske tegn hos en døende pasient ved hjelp av kartleggingsverktøyet Edmonton Symptom Assessment System (ESAS-r)

Ferdigheter:

Iverksetter symptomlindrende tiltak hos en døende pasient.

Generell kompetanse:

Ivaretar den døende pasienten og hans pårørende sin integritet og verdighet i samsvar med etiske og juridiske retningslinjer.

Case:

Jesper Jensen 69 år. Diagnose: Lungekreft med spredning til skjelett og hjerne. Pasienten har vært syk de siste tre årene. Han har fått behandling med cellegift for kreften, og strålebehandling mot smerter relatert til skjelettmetastaser i ryggen.
Jensen ble innlagt i medisinsk avdelingen for seks dager siden pga dårlig almenntilstand, pneumoni og økende smerter. Pasienten har gått ned 5 kilo de siste månedene, og spist og drukket svært lite de siste ukene. Han sover store deler av dagen, og er en del våken om nettene. Pasient og pårørende er informert av lege om at røntgen thorax viser en forverrelse av kreften, og at det nå er kort forventet levetid. Pårørende er innforstått med at pasienten er døende. Palliativt team har vært involvert for justering av smertestillende. Pasienten kan få Morfin iv da han ikke klarer å svelge tabletter. Han har god effekt av Haldol ved uro, og står på Penicillin 5 mill/IE i.v x 4.
Familie: Ektefelle Elise Jensen, og to barn hvorav et barn bor i en annen by, fire barnebarn i alderen 7 – 17.
Yrke: Maskinist på båt – reist mye i sitt yrkesliv.
Rapport fra dagvakt: Pasienten er trøtt/døsig, vekslende klar og desorientert når han er våken. Tidvis urolig, smertepåvirket og kvalm. Drukket et halvt glass juice, men ikke spist. Har perifert venekateter (Pvk). Morfin sist gitt kl. 13.10 og Haldol kl. 06.20. Pasienten har urinkateter. Ektefellen har vært hos han siden i går kveld.

Briefing:

Introduser dagens læringsutbytte.
Caset starter på et ettermiddagsskift, pasienten har vært i avdelingen i 6 dager. Personalet går inn for å hilse på, vurderer pasientens tilstand, og behov for stillingsendring.

Roller:

Pasient – SimMan dukke. Gir uttrykk for smerte, desorientert, mest stille. Kan vurdere å svare på tiltale.
Sykepleier 1: Tar ansvar for observasjoner ved hjelp av kartleggingsverktøy – kjenner pasienten fra før.
Sykepleier 2: Tar ansvar for medikamenter
Ektefelle Elise: Nedstemt, sliten, bekymret for at pasienten har det vondt. Gjør sykepleierne obs på symptomer/tegn de evt ikke legger merke til. Ansiktsuttrykk, marmorert, nedsatt urinproduksjon, hallusinert osv. Beskriver at pasienten i perioder er fysisk urolig og desorientert.
Observatørene:

Har oppmerksomhet mot det som skjer og læringsutbytte.

Tilgjengelig utstyr på pasient og i rom:
Pasient: Urinkateter – kateterpose med 100 ml konsentrert urin.
Venekanyle.
På/ved nattbordet:
Et halvfullt glass med drikke, pussbekken, vaskeklut, utstyr til munnstell og oksygenkateter.
Pasientkurve tilgjengelig:
Medikamenter på kurve viser grunndosering og medisiner som kan gis ved behov.
Uhensiktsmessig behandling seponert.
HLR-, pårørende er informert, og har samtykket.

Aktuelle medikamenter i medikamenttralle
Morfin og Haldol.
Evt:
Aktuelle blodprøver, epikrise/Individuell Plan (IP)

Kliniske tegn på markert på Sim- man 3G dukken:

Kliniske tegn:	Ved start	Etter 5 min: Avhengig av tiltak
Respirasjon	Ujevn respirasjon Cheyne - Stoke RF: Varierer fra 6- 20 SaO$_2$:91	RF: Varierer SaO$_2$:96 dersom O2 gis
Sirkulasjon	BT: 140/80 p:108	BT: 125/70 p: 92
Temperatur	Afebril	Afebril
Bevissthet	Desorientert	Desorientert
Andre tegn.	Kald/klam	Kald/klam
	Marmorert perifert	Marmorert perifert

Forløp – aktuelle tiltak

Symptom	**Observasjon/vurdering**	**Aktuelle tiltak**
Respirasjon	Observere verbale og nonverbale utrykk for respirasjonsproblem Vurdere behov for oksygen, stillingsendring	Høgt ryggleie Frie luftveier O$_2$?
Sirkulasjon	Observere og vurdere pasientens sirkulasjon Kald/klam	Vurdere hud for farge, cyanose og temperatur Puls – evt BT Kald klut på pannen
Temperatur	Afebril	
Smerte	Observere verbale og nonverbale utrykk for smerte. Vurdere behov for smertestillende, evt. i	Administrere smertestillende – effekt kan avhengig av studentenes håndtering av situasjonen (kan for eksempel trenge mer

	kombinasjon med beroligende	dersom studentene «tåler å stå i situasjonen») Ikke medikamentell smertebehandling (avspenning, avledning, musikk og massasje)
Kvalme	Observere verbale og nonverbale utrykk for kvalme. Vurdere behov for kvalmestillende	Administrere kvalmestillende Ikke medikamentell kvalmebehandling (munnstell, frisk luft i rommet, avspenning, avledning, musikk og massasje)
Uro /bevissthet	Observere pasientens verbale og nonverbale utrykk for uro /bevissthet	Vurdere behov for Haldol
Urinproduksjon	Observere og vurdere pasientens eliminasjon	Notere mengde

Ved runde 2 blir pasienten økt urolig – vurderes og fra debrifing i runde 1

Debrifing:
Beskrivelsesfasen
Deltakerne forteller hva de gjorde i kronologisk rekkefølge. Observatørene supplerer.

Analysefasen
Start med påminner om læringsutbytte for simuleringen.
Deltakerne skal nevne ting de selv gjorde godt. Observatører deltar.
Aktuelle fokusområder- spørsmål ut fra læringsutbyttene:

Kunnskaper:
Observere og vurdere kliniske tegn hos en døende pasient ved hjelp av kartleggingsverktøyet Edmonton Symptom Assessment System (ESAS-r)
Hvilke tegn så dere på at pasienten er døende. Hvilke andre tegn kan oppstå?
Var systematisk kartlegging til hjelp?
Hva oppnår en med kartlegging? (Sikre at en kjenner til utvikling av symptomer for å kunne iverksette lindrende tiltak og forberede pårørende)

Ferdigheter:
Iverksetter symptomlindrende tiltak hos en døende pasient.
Hvilke symptomlindrende tiltak ble satt i verk?
Hvilke utfordringer kan oppstå?
  Smertestillende dose opp mot respirasjonsdepresjon.
  Bruk av oksygen – har det effekt?
Forverring av uro – delir, trenger det behandling?
Ulikt syn på hvor mye en skal «måle», hvilke signaler gir det?

Generell kompetanse:

Ivaretar den døende pasienten og hans pårørende sin integritet og verdighet i samsvar med etiske og juridiske retningslinjer.

Ble pasienten og pårørende sin autonomi og integritet ivaretatt?
Hva vil det si å ivareta pasienten og pårørende sin autonomi og integritet?
Hvordan kom det til uttrykk her?
Hvilke etiske og juridiske retningslinjer er i spill?
Respekt for selvbestemmelse (autonomi)

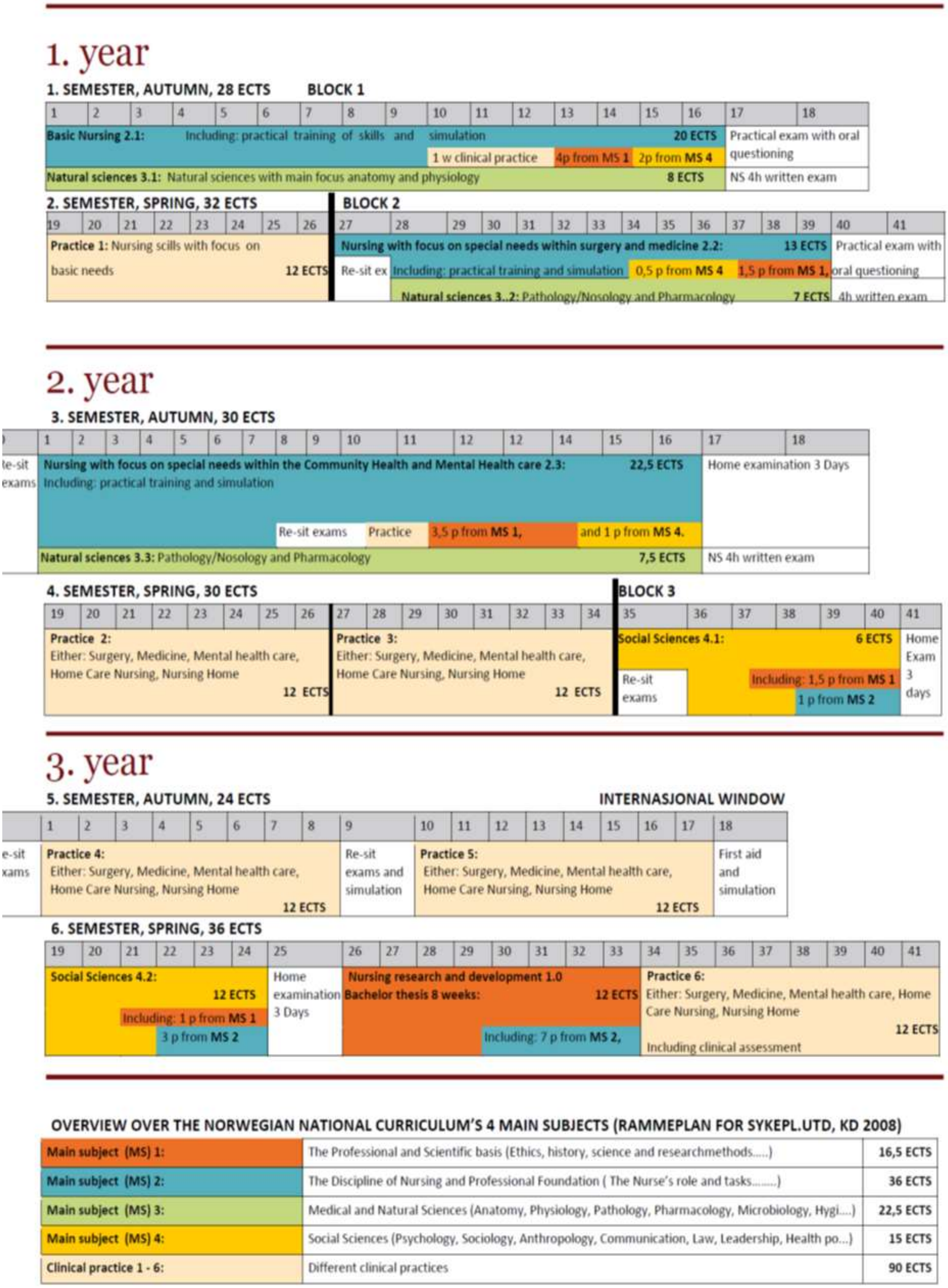
- Velgjørenhet (behandlingsgevinst)
- Ikke skade (bivirkninger)
- Rettferdighet (helseressurser og likebehandling)
- Rett til nødvendig helsehjelp
    - Faglig forsvarlig og omsorgsfull helsehjelp

Yrkesetiske retningslinjer: Sykepleierens fundamentale plikt er å fremme helse, forebygge sykdom, lindre lidelse og sikre en verdig død.

Anvendelsesfasen

Hva har deltakerne lært av å delta i simulering og debrifing?
Hva kan de nyttiggjøre seg /hva trenger de å fordype seg i for å få mer kunnskap om temaet?
Observatører deltar.

Appendix 2: The study model for the participants in paper 1, 2 and 3



1. year

1. SEMESTER, AUTUMN, 28 ECTS **BLOCK 1**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Basic Nursing 2.1: Including: practical training of skills and simulation **20 ECTS**

1 w clinical practice | 4p from **MS 1** | 2p from **MS 4**

Practical exam with oral questioning

Natural sciences 3.1: Natural sciences with main focus anatomy and physiology **8 ECTS**

NS 4h written exam

2. SEMESTER, SPRING, 32 ECTS **BLOCK 2**

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41

Practice 1: Nursing scills with focus on basic needs **12 ECTS**

Nursing with focus on special needs within surgery and medicine 2.2: **13 ECTS**

Re-sit ex | Including: practical training and simulation | 0,5 p from **MS 4** | 1,5 p from **MS 1,**

Practical exam with oral questioning

Natural sciences 3..2: Pathology/Nosology and Pharmacology **7 ECTS**

4h written exam

2. year

3. SEMESTER, AUTUMN, 30 ECTS

1 2 3 4 5 6 7 8 9 10 11 12 12 14 15 16 17 18

te-sit exams

Nursing with focus on special needs within the Community Health and Mental Health care 2.3: **22,5 ECTS**
Including: practical training and simulation

Re-sit exams | Practice | 3,5 p from **MS 1,** | and 1 p from **MS 4.**

Home examination 3 Days

Natural sciences 3.3: Pathology/Nosology and Pharmacology **7,5 ECTS**

NS 4h written exam

4. SEMESTER, SPRING, 30 ECTS **BLOCK 3**

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41

Practice 2:
Either: Surgery, Medicine, Mental health care, Home Care Nursing, Nursing Home
12 ECTS

Practice 3:
Either: Surgery, Medicine, Mental health care, Home Care Nursing, Nursing Home
12 ECTS

Social Sciences 4.1: **6 ECTS**

Re-sit exams | Including: 1,5 p from **MS 1** | 1 p from **MS 2**

Home Exam 3 days

3. year

5. SEMESTER, AUTUMN, 24 ECTS **INTERNASJONAL WINDOW**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

e-sit xams

Practice 4:
Either: Surgery, Medicine, Mental health care, Home Care Nursing, Nursing Home
12 ECTS

Re-sit exams and simulation

Practice 5:
Either: Surgery, Medicine, Mental health care, Home Care Nursing, Nursing Home
12 ECTS

First aid and simulation

6. SEMESTER, SPRING, 36 ECTS

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41

Social Sciences 4.2: **12 ECTS**
Including: 1 p from **MS 1** | 3 p from **MS 2**

Home examination 3 Days

Nursing research and development 1.0
Bachelor thesis 8 weeks: **12 ECTS**
Including: 7 p from **MS 2,**

Practice 6:
Either: Surgery, Medicine, Mental health care, Home Care Nursing, Nursing Home
12 ECTS
Including clinical assessment

OVERVIEW OVER THE NORWEGIAN NATIONAL CURRICULUM'S 4 MAIN SUBJECTS (RAMMEPLAN FOR SYKEPL.UTD, KD 2008)

Main subject (MS) 1:	The Professional and Scientific basis (Ethics, history, science and researchmethods.....)	**16,5 ECTS**
Main subject (MS) 2:	The Discipline of Nursing and Professional Foundation (The Nurse's role and tasks........)	**36 ECTS**
Main subject (MS) 3:	Medical and Natural Sciences (Anatomy, Physiology, Pathology, Pharmacology, Microbiology, Hygi....)	**22,5 ECTS**
Main subject (MS) 4:	Social Sciences (Psychology, Sociology, Anthropology, Communication, Law, Leadership, Health po...)	**15 ECTS**
Clinical practice 1 - 6:	Different clinical practices	**90 ECTS**

Appendix 3: Approval from The Norwegian Centre for Research Data

Kristin Valen
Avdeling for helsefag Høgskolen Stord/Haugesund
Postboks 1064
5407 STORD

Vår dato: 06.05.2016 Vår ref: 48268 / 3 / HIT Deres dato: Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 07.04.2016. Meldingen gjelder prosjektet:

48268	*Kunnskapsutvikling i palliasjon gjennom simulering og klinisk praksis*
Behandlingsansvarlig	*Høgskolen i Oslo og Akershus, ved institusjonens øverste leder*
Daglig ansvarlig	*Kristin Valen*

Personvernombudet har vurdert prosjektet og finner at behandlingen av personopplysninger er meldepliktig i henhold til personopplysningsloven § 31. Behandlingen tilfredsstiller kravene i personopplysningsloven.

Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/meldeplikt/skjema.html. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, http://pvo.nsd.no/prosjekt.

Personvernombudet vil ved prosjektets avslutning, 31.12.2019, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Kjersti Haugstvedt

Hildur Thorarensen

Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

NSD – Norsk senter for forskningsdata AS Harald Hårfagres gate 29 Tel: +47-55 58 21 17 nsd@nsd.no Org.nr. 985 321 884
NSD – Norwegian Centre for Research Data NO-5007 Bergen, NORWAY Faks: +47-55 58 96 50 www.nsd.no

Kontaktperson: Hildur Thorarensen tlf: 55 58 26 54
Vedlegg: Prosjektvurdering

Prosjektvurdering - Kommentar

Prosjektnr: 48268

Det oppgis at meldingen gjelder forstudien og at intervjuguide og spørreskjema for hoveddel vil bli ettersendt.
Vi legger til grunn at disse vedleggene ettersendes i god tid før data innhentes.

Utvalget informeres skriftlig om prosjektet og samtykker til deltakelse. Informasjonsskrivet er godt utformet, men dato for prosjektslutt bør tilføyes.

Personvernombudet legger til grunn at forsker etterfølger Høgskolen i Oslo og Akershus sine interne rutiner for datasikkerhet.

Det vil bli benyttet databehandler for spørreskjema og transkribering i prosjektet. Høgskolen i Oslo og Akershus skal inngå skriftlig avtale med vedkommende om hvordan personopplysninger skal behandles, jf. personopplysningsloven § 15. For råd om hva databehandleravtalen bør inneholde, se Datatilsynets veileder: http://www.datatilsynet.no/Sikkerhet-internkontroll/Databehandleravtale/.

Forventet prosjektslutt er 31.12.2019. Ifølge prosjektmeldingen skal innsamlede opplysninger da anonymiseres. Anonymisering innebærer å bearbeide datamaterialet slik at ingen enkeltpersoner kan gjenkjennes. Det gjøres ved å:

- slette direkte personopplysninger (som navn/koblingsnøkkel)
- slette/omskrive indirekte personopplysninger (identifiserende sammenstilling av bakgrunnsopplysninger som f.eks. bosted/arbeidssted, alder og kjønn)
- slette digitale lyd opptak

Vi gjør oppmerksom på at også databehandlere må slette personopplysninger tilknyttet prosjektet i sine systemer. Dette inkluderer eventuelle logger og koblinger mellom IP-/epostadresser og besvarelser.

Appendix 4: Informed consent form for participating in the simulation and survey

HØGSKOLEN STORD/HAUGESUND

Forespørsel om deltakelse i forskningsprosjekt

Hei.

Dette er en henvendelse til deg som skal i medisinske eller kirurgiske avdeling i praksisperiode 2 eller 3 våren 2017.

Forespørsel er om du vil delta i et forskningsprosjekt som skal undersøke i hvilken grad simulering av case med fokus på alvorlig syke og døende pasienter forbereder sykepleierstudenter til å møte denne pasientgruppen i praksis. Studien legger særlig vekt på om kunnskaper, ferdigheter og holdninger lært i simulering overføres til klinisk praksis, og realiserer praksisperiodens læringsutbytte innen palliasjon.

Hva innebærer det å delta?

Dersom du deltar vil du før og etter simuleringsaktiviteten bli bedt om å gjøre en egenevaluering av kunnskaper, ferdigheter og holdninger (generell kompetanse) du har i forhold til døende pasienter og deres pårørende. Spørsmålene besvares gjennom en elektronisk questback.

I simuleringsaktivitet jobber dere i grupper med seks studenter som bytter på å være observatør og deltaker. Det gjennomføres to simulerings caser som handler om en døende kreftpasient. Det ene caset fokuserer på relasjonskompetanse, og kommunikasjon med pårørende. Det andre handler om klinisk vurderingskompetanse med symptomlindring, og kartlegging av tegn på at pasienten er døende. Simuleringsaktiviteten gjennomføres i sykepleielaboratoriet på skolen i praksisuke 2, enten onsdag 8 eller torsdag 9. mars. Avsatt tid for spørreundersøkelse og simulering er beregnet til tre timer som inngår som veiledningstid i praksis.

Etter endt praksisperiode vil du bli bedt om å gjennomføre en ny elektronisk questback, for å kartlegge om simuleringen har hatt betydning for dine kunnskaper, ferdigheter og holdninger (generell kunnskap) i møte med døende pasienter og deres pårørende i praksis.

En gruppe studenter vil i tillegg bli spurt om å bli intervjuet i slutten på praksisperioden for å fortelle om sine erfaringer med å ha simulere case med fokus på døende pasienter i tilknytning til praksis.

Noen studenter vil inngå i en kontrollgruppe. De vil ha praksis to uten simulering, for så å simulere i praksis tre. Dette for å kartlegge om kunnskapsutvikling innen palliasjon påvirkes av simulering. Kontrollgruppen vil besvare den elektroniske questbacken i oppstart og slutt av praksis to, etter endt simulering, og i slutten av praksis tre.

Frivillig deltakelse og mulighet for å trekke sitt samtykke

Det er frivillig å delta, og du kan når som helst trekke deg.

Hva skjer med informasjonen om deg?

For å kunne følge den enkelte student i de ulike delene av prosjektet vil du få tildelt en kode, som registreres på spørreskjemaene. De samlede opplysningene fra alle deltagerne vil bli analysert, og funn blir publisert som forskningsartikler. Opplysningene du gir vil bli oppbevart konfidensielt, og slettet etter bruk. Deltagelse i studien vil ikke påvirke vurderingen av deg i praksis.

Jeg er villig til å delta i prosjektet

Dersom du ønsker å delta ber jeg om at du fyller ut svarslipp med informert samtykke, og levere det til din praksislærer innen fredag 03.03.17

Ta gjerne kontakt ved spørsmål.

Mvh Kristin Valen

kristin.valen@hsh.no

92616472

Jeg ønsker å delta i forskningsprosjektet «*Kunnskapsutvikling i palliasjon gjennom simulering og klinisk praksis.»*

Navn…………………………………………….Telefon……………………Avdeling……

Appendix 5: Informed consent form for participating in an in-depth interview

Hei «studentens navn».

Som tidligere nevnt ønsker jeg å intervjue noen av studentene som deltar i forskningsprosjektet *«Kunnskapsutvikling i palliasjon gjennom simulering og klinisk praksis.»* Jeg tar derfor kontakt med deg, for å høre om du vil dele dine erfaringer i et intervju.

Det jeg ønsker å få mer kunnskap om, er hvilke erfaringer du har fått av å delta på simuleringsøvelsen. Har det å reflektere rundt situasjonen til en døende pasient og dens pårørende forberedt deg til å møte denne pasientgruppen i praksis? Jeg kommer til å spørre om du har hatt nytte av erfaringene fra simuleringsøvelsen, og om du eventuelt har eksempler på situasjoner der du har brukt erfaringene i møte med pasienter i palliativ fase og deres pårørende. Situasjoner du eventuelt har erfart i praksis trenger ikke å være like de som ble simulert.

Jeg er også interessert i om du ser svakheter eller styrker ved simulering som metode som er av betydning for din læring?

Det er frivillig å delta, og svarene anonymiseres. Intervjuet vil skje på skolen på et tidspunkt som passer for deg den siste uken i praksis. Varighet ca. 45- 60 min. De som intervjues får et gavekort i studentkantina på 75 kr som takk.

Dersom du ønsker å delta fyller du ut samtykke til deltakelse, og sender mailen i retur til meg. Signaturen din kan jeg få når vi møtes. Skriv eventuelt hvilke dager neste uke som passer. Ta gjerne kontakt på 92616472 om du lurer på noe.

Samtykke til deltakelse i studien

Jeg har lest informasjonen, og er villig til å delta i studien.

Navn:

Telefonnummer: Dato: Signatur:

Fint om du og gir beskjed så snart som mulig om du ønsker å delta eller ikke. På den måten kan jeg eventuelt ta kontakt med andre.

Mvh Kristin Valen

Stipendiat / Avdeling for helsefag / Høgskulen på Vestlandet

Tlf: +4752702722 / +4792616472

Besøksadresse: Bjørnsons gate 45, Haugesund

Appendix 6: Survey

Spørreskjema 1
Pretest før simuleringsøvelsen, og i oppstart av praksis 1 for sammenligningsgruppen

Takk for at du deltar i denne studien, og svarer på følgende spørsmål. Svarene skal brukes til å kartlegge sykepleierstudenters kunnskaper, ferdigheter og holdninger (generell kunnskap) innen palliasjon i starten av en praksisperiode, og før simuleringsaktivitet.
Mvh Kristin Valen

Sett kryss ved aktuelt alternativ
Kjønn: Kvinne
Mann
Alder: 20 – 30 år
30 – 40 år
Over 40 år
Har du erfaring med omsorg for døende før du startet i denne praksisperioden**?**
Nei
Ja
Hvis ja i stor grad
middels grad
eller liten grad

KUNNSKAP Marker på en skala fra 0 – 10, der 0 er i liten grad og 10 er i stor grad det som passer for deg.
1) I hvilken grad har du kunnskap til å observere og kliniske vurdere tegn på at en pasient er døende? 0 1 2 3 4 5 6 7 8 9 10 I liten grad I stor grad
2) I hvilken grad har du kunnskap til å kunne informere en pasient om kliniske tegn som indikerer at pasienten er døende?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

3) I hvilken grad har du kunnskap til å kunne informere pårørende om kliniske tegn som indikerer at pasienten er døende?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

4) Nevn i stikkordsform kliniske tegn på at en pasient er døende innen disse områdene
Respirasjon…
Sirkulasjon…
Ernæring…
Eliminasjon…
Hud…
Bevissthet…

5) Kan du gi eksempler på kunnskap du har innen omsorg for døende

FERDIGHET

6) I hvilken grad har du ferdigheter til å observere og klinisk vurdere en pasients symptomer ved hjelp av ESAS-r (Edmonton Symptom Assessment System)?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

7) I hvilken grad har du ferdigheter til å iverksette symptomlindrende tiltak hos en døende pasient som har smerter?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

8) I hvilken grad har du ferdigheter til å iverksette symptomlindrende tiltak hos en døende pasient som er kvalm?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

9) I hvilken grad har du ferdigheter til å iverksette symptomlindrende tiltak hos en døende pasient som har respirasjons-problemer?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

10) I hvilken grad har du ferdigheter til å iverksette symptomlindrende tiltak hos en døende pasient som er urolig?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

11) I hvilken grad kan du kommunisere om pasientens situasjon med en døende pasient?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

12) I hvilken grad kan du kommunisere om pasientens situasjon med pårørende til en døende pasient?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

13) I hvilken grad har du ferdigheter til å ivareta pasientens autonomi og integritet i samsvar med etiske og juridiske retningslinjer?
0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

14) Kan du gi eksempler på ferdigheter du har i forhold til omsorg for døende?

GENERELL KOMPETANSE

15) I hvilken grad har teoretisk undervisning forberedt deg til å vise respekt i møte med en døende pasient og deres pårørende?
0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad
16) I hvilken grad har teoretisk undervisning forberedt deg til å vise forståelse og nestekjærlighet i møte med en døende pasient og deres pårørende? 0 1 2 3 4 5 6 7 8 9 10 I liten grad I stor grad
17) I hvilken grad har teoretisk undervisning forberedt deg til å ta andre menneskers situasjon og opplevelse alvorlig i møte med en døende pasient og deres pårørende? 0 1 2 3 4 5 6 7 8 9 10 I liten grad I stor grad
18) I hvilken grad har du reflektert over egen evne til å utøve sykepleie til døende pasienter? 0 1 2 3 4 5 6 7 8 9 10 I liten grad I stor grad
19) I hvilken grad kjenner du deg forberedt til å ivareta døende pasienter i din nåværende praksisperiode? 0 1 2 3 4 5 6 7 8 9 10 I liten grad I stor grad
20) I hvilken grad kjenner du deg forberedt til å ivareta pårørende til døende pasienter i din nåværende praksisperiode? 0 1 2 3 4 5 6 7 8 9 10 I liten grad I stor grad
21) Er det noe ved omsorg for døende pasienter og deres pårørende du vil trekke frem som særlig utfordrende?
22) Er det noe ved omsorg for døende pasienter og deres pårørende du vil trekke frem som særlig lærerikt?

Spørreskjema 2
Posttest etter simuleringsøvelsen

Takk for at du deltar i denne studien, og svarer på følgende spørsmål. Svarene skal brukes til å kartlegge sykepleierstudenters kunnskaper, ferdigheter og holdninger (generell kunnskap) innen palliasjon etter en simuleringsaktivitet
Mvh Kristin Valen

Sett kryss ved aktuelt alternativ
Kjønn: Kvinne
Mann
Alder: 20 – 30 år
30 – 40 år
Over 40 år
Har du erfaring med omsorg for døende før du startet i denne praksisperioden**?**
Nei
Ja
Hvis ja i stor grad
middels grad
eller liten grad

KUNNSKAP
1) I hvilken grad har simuleringsøvelsen bidratt til kunnskap i å observere og kliniske vurdere tegn på at en pasient er døende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor
grad

2) I hvilken grad har simuleringsøvelsen bidratt til kunnskap i å informere en pasient om kliniske tegn som indikerer at pasienten er døende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor
grad

3) I hvilken grad har simuleringsøvelsen bidratt til kunnskap i å informere pårørende om kliniske tegn som indikerer at pasienten er døende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor
grad

4) Nevne i stikkordsform kliniske tegn innen disse områdene

Respirasjon…
Sirkulasjon…
Ernæring…
Eliminasjon…
Hud…
Bevissthet…

5) Kan du gi eksempler på kunnskap innen omsorg for døende
som du har blitt bevisst på i simuleringsøvelsen?

FERDIGHETER

6) I hvilken grad har simuleringsøvelsen bidratt til ferdigheter til å observere og klinisk vurdere en pasients symptomer ved hjelp av ESAS-r (Edmonton Symptom Assessment System)?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor
grad

7) I hvilken grad har simuleringsøvelsen bidratt til ferdigheter til å iverksette symptomlindrende tiltak hos en døende pasient som har smerter?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor
grad

8) I hvilken grad har simuleringsøvelsen bidratt til ferdigheter til å iverksette symptomlindrende tiltak hos en døende pasient som er kvalm?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor
grad

9) I hvilken grad har simuleringsøvelsen bidratt til ferdigheter til å iverksette symptomlindrende tiltak hos en døende pasient som har respirasjons-problemer?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor
grad

10) I hvilken grad har simuleringsøvelsen bidratt til ferdigheter til å iverksette symptomlindrende tiltak hos en døende pasient som er urolig?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor
grad

11) I hvilken grad har simuleringsøvelsen bidratt til ferdigheter i å kommunisere om pasientens situasjon med en døende pasient?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

12) I hvilken grad har simuleringsøvelsen bidratt til ferdigheter i å kommunisere om pasientens situasjon med pårørende til en døende pasient?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

13) I hvilken grad har simuleringsøvelsen bidratt til ferdigheter i å ivareta pasientens autonomi og integritet i samsvar med etiske og juridiske retningslinjer?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

14) Kan du gi eksempler på ferdigheter innen omsorg for døende som du har blitt bevisst på i simuleringen?

GENERELL KOMPETANSE

15) I hvilken grad har simuleringsøvelsen forberedt deg til å vise respekt i møte med en døende pasient og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

16) I hvilken grad har simuleringsøvelsen forberedt deg til å vise forståelse og nestekjærlighet i møte med en døende pasient og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

17) I hvilken grad har simuleringsøvelsen forberedt deg til å ta andre menneskers situasjon og opplevelse alvorlig i møte med en døende pasient og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

18) I hvilken grad har simuleringsøvelsen bidratt til refleksjon over egen evne til å utøve sykepleie til døende pasienter?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

19) I hvilken grad har simuleringsøvelsen forberedt deg til å ivareta døende pasienter i din nåværende praksisperiode?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

20) I hvilken grad har simuleringsøvelsen forberedt til å ivareta pårørende til døende pasienter i din nåværende praksisperiode?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor
grad

21) Er det noe ved den simulerte pasientsituasjonen du vil trekke frem som særlig utfordrende?

22) Er det noe ved den simulerte pasientsituasjonen du vil trekke frem som særlig lærerikt?

Spørreskjema 3
Postpraksis test, etter gjennomført praksisperiode for de som har simulert

Takk for at du deltar i denne studien og svarer på følgende spørsmål. Svarene skal brukes til å kartlegge sykepleierstudenters kunnskaper, ferdigheter og holdninger (generell kunnskap) innen palliasjon etter gjennomført simuleringsaktivitet og praksisperiode.

Mvh Kristin Valen

Sett kryss ved aktuelt alternativ

Kjønn: Kvinne
Mann

Alder: 20 – 30 år
30 – 40 år
Over 40 år

Har du erfaring med omsorg for døende før du startet i denne praksisperioden?
Nei
Ja
Hvis ja i stor grad
middels grad
eller liten grad

Har du fått erfaring med omsorg for døende i denne praksisperioden?
Nei
Ja
Hvis ja i stor grad
middels grad
eller liten grad

KUNNSKAP

1) I hvilken grad har du brukt erfaring fra simuleringsøvelsen til å gjenkjenne kliniske tegn på at en pasient i praksis er døende?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

2) I hvilken grad har du brukt kunnskap fra simuleringsøvelsen til å informere en pasient om kliniske tegn som indikerer at pasienten er døende?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

3) I hvilken grad har du brukt kunnskap fra simuleringsøvelsen til å informere pårørende om kliniske tegn som indikerer at pasienten er døende?

0 1 2 3 4 5 6 7 8 9 10
I liten grad I stor grad

4) Nevn i stikkordsform kliniske tegn på at en pasient er døende innen disse områdene

Respirasjon…
Sirkulasjon…
Ernæring…
Eliminasjon…
Hud…
Bevissthet…

5) Kan du gi eksempler på kunnskap innen omsorg for døende som det ble fokusert på i simuleringsøvelse, og som du har brukt i praksis?

FERDIGHET

6) I hvilken grad har du i denne praksisperioden observert og klinisk vurdert en pasients symptomer ved hjelp av ESAS-r (Edmonton Symptom Assessment System)?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

7) I hvilken grad har du brukt ferdigheter fra simuleringsøvelsen til å iverksette symptomlindrende tiltak hos en døende pasient som har smerter?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

8) I hvilken grad har du du brukt ferdigheter fra simuleringsøvelsen til å iverksettesymptomlindrende tiltak hos en døende pasient som er kvalm?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

9) I hvilken grad har du du brukt ferdigheter fra simuleringsøvelsen til å iverksette symptomlindrende tiltak hos en døende pasient som har respirasjonsproblemer?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

10) I hvilken grad har du brukt ferdigheter fra simuleringsøvelsen til å iverksettesymptomlindrende tiltak hos en døende pasient som er urolig?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

11) I hvilken grad har du i denne praksisperioden hatt nytte av at simuleringsøvelse fokuserte på kommunikasjon om pasientens situasjon med en døende pasient?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

12) I hvilken grad har du i denne praksisperioden hatt nytte av at simuleringsøvelsen fokuserte på kommunikasjon om pasientens situasjon med pårørende til en døende pasient?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

13) I hvilken grad har du i denne praksisperioden hatt nytte av at simuleringsøvelsen fokuserte på pasientens autonomi og integritet?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

14) Kan du gi eksempler på ferdigheter du har utført i forhold til omsorg for døende og deres pårørende?

GENERELL KOMPETANSE

15) I hvilken grad har du i denne praksisperioden hatt nytte å delta i simulering og reflektert rundt respekt i møte med døende pasienter og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

16) I hvilken grad har du i denne praksisperioden hatt nytte å delta i simulering og reflektert rundt forståelse og nestekjærlighet i møte med døende pasienter og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

17) I hvilken grad har du i denne praksisperioden hatt nytte å delta i simulering og reflektert rundt det å ta andre menneskers situasjon og opplevelse alvorlig i møte med døende pasienter og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

18) I hvilken grad har du i denne praksisperioden hatt nytte å delta i simulering og reflektere over egen evne til å utøve sykepleie til døende pasienter?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

19) I hvilken grad kjenner du deg forberedt til å ivareta døende pasienter i din nåværende praksisperiode?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

20) I hvilken grad har kjenner du deg forberedt til å ivareta pårørende til døende pasienter i din nåværende praksisperiode?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

21) Er det noe ved simuleringsøvelsen som har hatt særlig overføringsverdi til praksis?

22) Er det noe ved simuleringsøvelse som har vært negativt for praksis?

Spørreskjema 4
Etter gjennomført praksisperiode for de som ikke har simulert

Takk for at du deltar i denne studien og svarer på følgende spørsmål. Svarene skal brukes til å kartlegge sykepleierstudenters kunnskaper, ferdigheter og holdninger (generell kunnskap) innen palliasjon etter gjennomført praksisperiode.
Mvh Kristin Valen
Sett kryss ved aktuelt alternativ
Kjønn: Kvinne
Mann
Alder: 20 – 30 år
30 – 40 år
Over 40 år
Har du erfaring med omsorg for døende før du startet i denne praksisperioden?
Nei
Ja
Hvis ja i stor grad
middels grad
eller liten grad
Har du fått erfaring med omsorg for døende i denne praksisperioden?
Nei
Ja
Hvis ja i stor grad
middels grad
eller liten grad

KUNNSKAP

1) I hvilken grad har du gjenkjent kliniske tegn på at en pasient er døende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

Ikke brukt i questback

2) I hvilken grad har du informert pasienter om kliniske tegn som indikerer at pasienten er døende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

3) I hvilken grad har du informert pårørende om kliniske tegn som indikerer at pasienten er døende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

4) Nevn i stikkordsform kliniske tegn på at en pasient er døende innen disse områdene

Respirasjon…
Sirkulasjon…
Ernæring…
Eliminasjon…
Hud…
Bevissthet…

5) Kan du gi eksempler på kunnskap i forhold til omsorg for døende du har brukt i praksis?

FERDIGHET

6) I hvilken grad har du i denne praksisperioden observert og klinisk vurdert en pasients symptomer ved hjelp av ESAS-r (Edmonton Symptom Assessment System)?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

7) I hvilken grad har du i denne praksisperioden iverksatt symptomlindrende tiltak hos en døende pasient som har smerter?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

8) I hvilken grad har du i denne praksisperioden iverksatt symptomlindrende tiltak hos en døende pasient som er kvalme?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

9) I hvilken grad har du i denne praksisperioden iverksatt symptomlindrende tiltak hos en døende pasient som har respirasjonsproblem?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

10) I hvilken grad har du i denne praksisperioden iverksatt symptomlindrende tiltak hos en døende pasient som er urolig?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

11) I hvilken grad har du i denne praksisperioden kommunisert om pasientens situasjon med en døende pasient?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

12) I hvilken grad har du i denne praksisperioden kommunisert om pasientens situasjon med pårørende til en døende pasient?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

13) I hvilken grad har du i denne praksisperioden fokuserte på pasientens autonomi og integritet?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

14) Kan du gi eksempler på ferdigheter i forhold til omsorg for døende du har tatt i bruk i denne praksisperioden?

GENERELL KOMPETANSE

15) I hvilken grad har du i denne praksisperioden reflektert rundt respekt i møte med en døende pasient og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

16) I hvilken grad har du i denne praksisperioden reflektert rundt forståelse og nestekjærlighet i møte med en døende pasient og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

17) I hvilken grad har du i denne praksisperioden reflektert rundt andre menneskers situasjon og opplevelse i møte med en døende pasient og deres pårørende?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

18) I hvilken grad har du i denne praksisperioden reflektert over egen evne til å utøve sykepleie til døende pasienter?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

19) I hvilken grad har du kjent deg forberedt til å ivareta døende pasienter i din nåværende praksisperiode?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I stor grad

20) I hvilken grad har du kjent deg forberedt til å ivareta pårørende til døende pasienter i din nåværende praksisperiode?

0 1 2 3 4 5 6 7 8 9 10

I liten grad I
stor grad

21) Er det noe ved omsorg for døende pasienter og deres pårørende du vil trekke frem som særlig utfordrende?

22) Er det noe ved omsorg for døende pasienter og deres pårørende du vil trekke frem som særlig lærerikt?

Appendix 7: Semi-structured interview guide

Intervjuguide

- Fortell om din erfaring med simuleringsøvelsen der fokuset var omsorg for pasienter i palliativ fase og deres pårørende .
  Egnen utførelse versus observatørrollen.

- Hvilken erfaring har du fått med pasienter i palliative fase og deres pårørende i denne praksisperioden?

- Har du eksempler på situasjoner der du har **brukt erfaringer fra** simuleringsøvelsen i praksis?
  Eksempler
  Gjenkjenne tegn, informere om ernæring
  gi symptomlindring, kommunikasjon, ESAS-r kartlegging

- Spørreundersøkelsen viser at studentene i liten grad har anvende erfaringer fra simuleringen i praksis. Hva kan forklaringen være?

- Har det å reflektere rundt situasjonen til pasienter i palliative fase og dens pårørende i simuleringensøvelsen forberedt deg til å møte denne pasientgruppen i praksis? På hvilken måte, kan du gi eksempel?
  Fokuser på handlingsberedskap, trygghet i yrkesutøvelse og håndtering av følelser.

- Hvilke tanker har du om læringsutbyttene i praksis? Repetere evt
  Har simulering i praksis bidratt til at du har nådd læringsutbytte innen palliasjon–evt hvordan.

- Ser du noen svakheter ved simulering som metode som er av betydning for din læring?

- Kan du beskrive noen styrker ved simulering som metode som er av betydning for din læring?

Appendix 8: Results from the ANOVA test

Table 7. Self-reported values for the items in the survey questionnaire (ANOVA test)

	Pre-test before simulation	**Post-test after simulation**	**Assessment after practice with simulation**	**Assessment after practice without simulation**	**P-value pre-test post-test**	**P-value group**	**Interference**	**Diff pre-test post-test**	**P-value model**	**R-square**
KNOWLEDGE										
To what degree do you have knowledge/received knowledge in simulation/used knowledge in practice about:					<.0001	0.14	0.06		<.0001	0.53
1. Clinical signs to observe and assess that the patient is dying										
Comparison group	3.00	8.80	5.50	2.83				5.80		
Experimental group	3.96	7.53	3.63	.				3.57		
Total	3.85	7.65	3.87	2.83				3.80		
2. How to inform a relative about clinical signs indicating that he/she is dying?					<.0001	0.42	0.18		<.0001	0.64
Comparison group	1.83	7.60	0.00	0.17				5.77		
Experimental group	2.65	6.96	1.75	.				4.31		
Total	2.56	7.02	1.52	0.17				4.46		
3. How to inform a patient about clinical signs indicating that he/she is dying?					<.0001	0.16	0.13		<.0001	0.69
Comparison group	2.17	8.60	2.50	0.17				6.43		

Experimental group	2.67	7.47	2.34	.				4.80		
Total	2.61	7.57	2.36	0.17				4.96		
SKILLS										
To what degree do you have skills/received skills in simulation/used skills in practice to;					<.0001	0.46	0.60		<.0001	0.37
4. Observe and clinically assess the patients' symptoms through ESAS-r assessment tool	3.30	7.40	1.30	0.50	0.0038	0.46	0.59	4.10		
Comparison group	3.30	6.60	2.80	.				3.30		
Experimental group	3.30	6.70	2.60	0.50				3.40		
Total										
5. Initiate symptom management to a patent in pain?					<.0001	0.10	0.19		<.0001	0.53
Comparison group	3.83	8.80	2.67	3.00				4.97		
Experimental group	3.96	7.45	3.29	.				3.49		
Total	3.94	7.57	3.21	3.00				3.63		
6. Initiate symptom management to a patient with nausea?					0.608	0.13	0.38		0.0003	0.17
Comparison group	3.67	4.40	3.17	2.83				0.73		
Experimental group	4.04	6.10	3.05	.				2.06		
Total	4.00	5.94	3.07	2.83				1.94		
7. Initiate symptom management to a patient with respiratory problems?					0.001	0.77	0.58		<.0001	0.43
Comparison group	3.00	7.20	1.83	2.00				4.20		
Experimental group	3.46	6.92	3.22	.				3.46		
Total	3.41	6.94	3.04	2.00				3.53		

8. Initiate symptom management to a restless patient?					0.473	0.02	0.17		<.0001	0.31
Comparison group	3.00	4.00	2.33	2.17				1.00		
Experimental group	3.60	6.61	2.56	.				3.01		
Total	3.54	6.37	2.53	2.17				2.83		
9. Communicate about the patients’ situation to a dying patient?					<.0001	0.95	0.60		<.0001	0.58
Comparison group	2.00	7.00	4.33	1.50				5.00		
Experimental group	2.71	7.06	3.29	.				4.35		
Total	2.63	7.06	3.43	1.50				4.43		
10. Communicate to the dying patient’s relatives?					<.0001	0.30	0.15		<.0001	0.66
Comparison group	2.00	8.60	4.67	1.00				6.60		
Experimental group	2.83	7.69	3.71	.				4.86		
Total	2.74	7.78	3.83	1.00				5.04		
11. Safeguard the patient’s autonomy and integrity					0.0013	0.50	0.67		<.0001	0.44
Comparison group	4.17	7.80	4.33	.				3.63		
Experimental group	4.08	7.22	5.27	.				3.14		
Total	4.09	7.28	5.15	.				3.19		
COMPETENCY										
To what degree do you have competence/received competence in simulation/used competence in practice to;					0.0013	0.37	0.85		<.0001	0.48
12. Show respect to a dying patient?										
Comparison group	5.33	9.20	5.83	5.17				3.87		

Experimental group	4.75	8.39	5.93	.				3.64		
Total	4.81	8.46	5.91	5.17				3.65		
13. Show empathy to a dying patient?					0.0002	0.26	0.41		<.0001	0.47
Comparison group	5.17	9.40	5.83	5.83				4.23		
Experimental group	5.17	8.43	5.80	.				3.26		
Total	5.17	8.52	5.81	5.83				3.35		
14. Take other people’s situation and reactions seriously when talking to a dying patient and their relatives?					0.03	0.46	0.47		<.0001	0.45
Comparison group	6.67	9.00	6.33	4.83				2.33		
Experimental group	5.25	8.39	6.02	.				3.14		
Total	5.41	8.44	6.06	4.83				3.03		

Table 8. Self-reported knowledge, skills and competence for each measurement (ANOVA test).

	Pre-test before simulation	**Assessment after practice without simulation**	**Post-test after simulation**	**Assessment after practice with simulation**
Knowledge	Mean (SD), median	Mean (SD), median	Mean (SD), median	Mean (SD), median
Experiment group	3.09 (1.86), 3	.	7.32 (1.79), 8	2.58 (3.09), 1
Comparison group	2.33 (1.19), 2.5	1.06 (1.76), 0	8.33 (1.50), 8	2.67 (3.51), 1
Skills				
Experiment group	3.50 (2.09), 3	.	6.96 (2.1), 7	3.40(3.64), 2

Comparison group	3.13 (1.59), 3	1.85 (2.45), 1	6.90 (2.86) , 7	3.08 (3.65), 1.5
Competence				
Experiment group	4.53 (2.27), 4	.	8.27 (1.56), 8	5.89 (3.21), 7
Comparison group	4.64 (2.60), 4.5	4.58 (3.22), 5	8.96 (1.34), 10	5.92 (2.83), 5

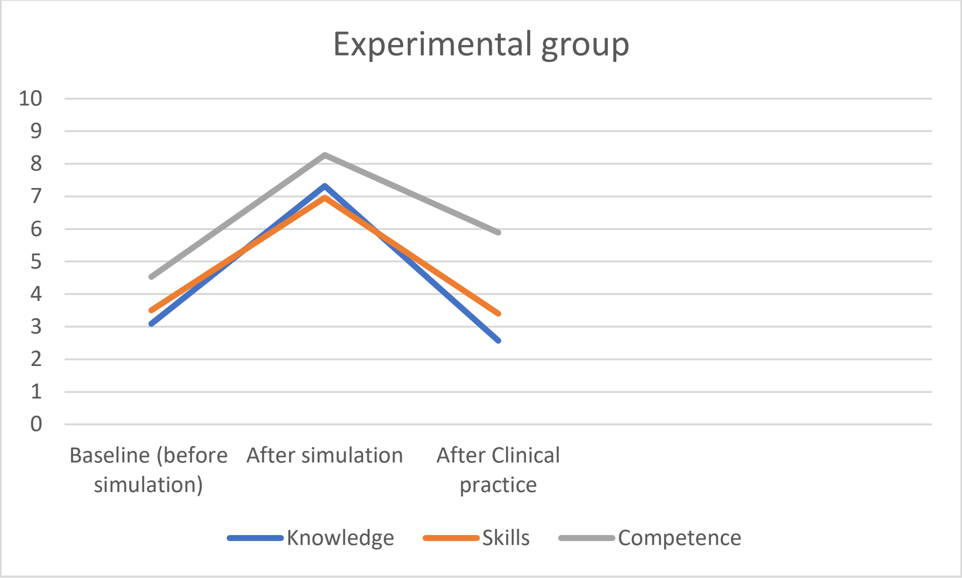


Figure 4. Knowledge, skills and competence through the learning trajectory for the experimental group (student group 1 and 2).

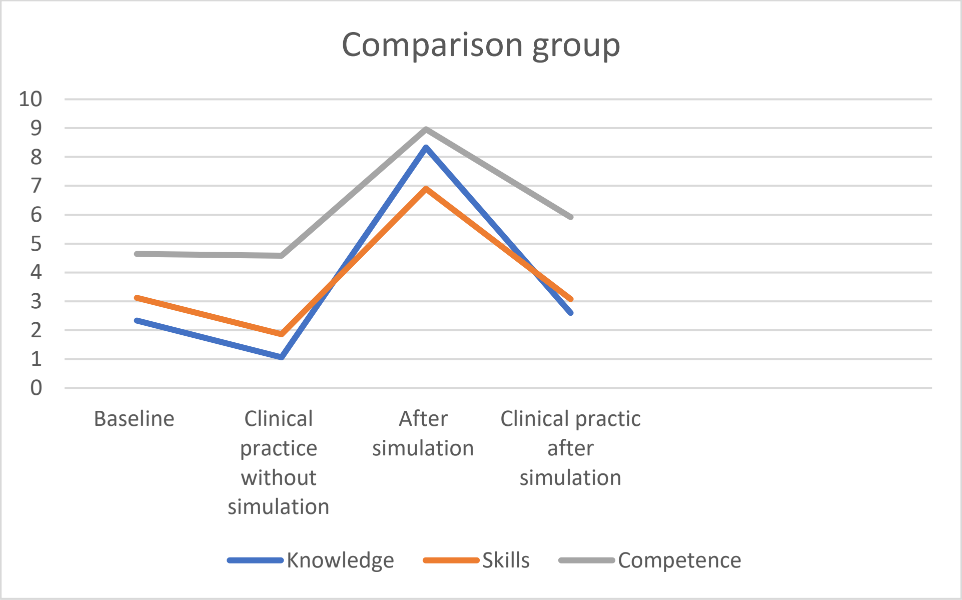


Figure 5. Knowledge, skills and competence through the learning trajectory for the comparison group (the group having placement without and with simulation)

Paper 1

Valen, K., Simonsen, M., Holm, A. L., Jensen, K. T., & Grov, E. K. (2021). Impact of palliative care simulation on nursing students' learning outcomes and reported use in hospital placement. *Nursing Open, 9*(6), 2847-2857. https://doi.org/10.1002/nop2.991

Received: 20 March 2021 | Revised: 7 May 2021 | Accepted: 22 June 2021

DOI: 10.1002/nop2.991

RESEARCH ARTICLE

NursingOpen Open Access WILEY

Impact of palliative care simulation on nursing students' learning outcomes and reported use in hospital placement

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Funding information
The Western Norway University of Applied Sciences funded the study, grant no: 3008

Abstract

Aim: Nursing students report emotional distress and feelings of inadequacy to the complexity of palliative care. This study aimed to examine nursing students' attainment of learning outcomes in palliative care through simulation and hospital placement.

Design: A longitudinal, intervention study.

Methods: Fifty-five second-year bachelor nursing students participated. Three waves of assessments were performed: (1) pretest; (2) postsimulation test and (3) postplacement test after the completion of the placement. Non-parametric Wilcoxon's signed-rank test for paired samples was used to test for differences between assessments of knowledge, skills and competence before and after simulation, and between postsimulation and post hospital placement.

Results: The results showed positive differences between pre- and postsimulation, indicating that learning outcomes were attained through simulation. However, negative differences between the postplacement test and postsimulation test scores indicated that the participants had practiced learning outcome from the simulation to a small degree during placement.

KEYWORDS

hospital placement, nursing education, nursing students, palliative care, simulation, transfer of learning

1 | INTRODUCTION

When a patient's life is coming to an end, the World Health Organization (WHO) recommends palliative care to promote quality of life through symptom control and mental, social or existential support for the patient and family (WHO, 2014). Death is one of life's most vulnerable moments, and the palliative approach has been shown to enhance quality of life to a greater extent than usual practice (Holmenlund et al., 2017). According to the WHO's global atlas (Worldwide Palliative Care Alliance & WHO, 2014), only approximately 14% of the world population receives palliative care when needed. The report presents education as an important element for increasing access to palliative care. Nurses and nursing students are frontline care providers. Many students are young and face death for the first time in life during nursing education. Emotional distress and feelings of inadequacy are reported, and the complexity of the necessary competence in palliative care make such competence challenging to learn and perform (Hall-Lord et al., 2017; Henoch et al., 2017; Jeppesen et al., 2017; Zhou et al., 2021). Research recommends simulation as one learning approach. This study focuses on whether students transfer learning outcomes from simulations to placements.

2 | BACKGROUND

In European nursing education, the variety of knowledge domains in education are divided into learning outcomes described as knowledge, skills and competence following recommendations from the European Qualifications Framework for Lifelong Learning (European Parliament Council, 2008). In the scope of palliative care, nursing students need to learn about physical conditions, symptom management, communication, psychosocial elements and life closure skills. The ability to co-operate in an interdisciplinary team with good interpersonal communication skills is essential. In addition, healthcare providers must control their own reactions to death and dying (Gamondi et al., 2013). Several studies have recommended an innovative learning approach involving the use of simulation to help nursing students learn core competencies in palliative care (Cant & Cooper, 2017; Kirkpatrick et al., 2017; Lippe & Becker, 2015; Smith et al., 2018; Venkatasalu et al., 2015). The state of the research is very limited (Smith et al., 2018). Simulation is characterized by learning objectives, fidelity, problem solving and support in a safe learning environment (Jeffries, 2016). The goal is to develop knowledge, skills and competency, and a transformative learning process is an important element (Clapper, 2010). Mezirow (2018) describes that transformative learning happens when a disoriented dilemma transforms habits of mind or problematic frames of references. A transformation of meaning perspectives can occur through critical reflection over the situation and affects the person's ability to change their mindset and behaviour in the future. When students participate in palliative care simulation, they bring frames of reference to the situation that are both positive and negative according to their earlier experiences in the field of palliative care. Nursing students who have participated in simulations of palliative care cases report increased knowledge about palliative care principles, improved communication skills, courage, self-confidence and positive attitudes towards palliative care (Smith et al., 2018; Valen et al., 2019; Venkatasalu et al., 2015). Stroup (2014) emphasizes that the potential gains in critical thinking and confidence are not beneficial to the student if they occur only in the laboratory. Whether the students use their former learning in simulation, and the learning outcomes from simulation in placement can be viewed in light of the Perkins and Salomon (2012) framework for analysing whether learning transfers from one situation to another. This framework suggests that to foster transfer of learning, the learner needs to detect a potential relationship with previous learning, elect to pursue this relationship and identify a fruitful connection between previous learning and the current situation. The role of motivational and dispositional factors must also be included. Most studies on palliative care simulation measure students' immediate reactions and satisfaction with training or knowledge, skills and attitudes gained from training (Smith et al., 2018). From an educational perspective, it is of interest to collect students' evaluations of their opportunities to practice the learning outcomes from palliative care simulation during hospital placement. Therefore, the aim of this study was to examine nursing students' self-reported development of knowledge, skills and competence in palliative care in the following learning trajectory: baseline, after simulation and after hospital placement. The following research questions were addressed:

1. How do nursing students self-report knowledge, skills and competence in palliative care before and after simulation?
2. How do nursing students self-report their opportunities to practise the learning outcomes from palliative care simulation during hospital placement?

3 | METHODS

3.1 | Design

A longitudinal, intervention study with two independent implementations was conducted (Polit & Beck, 2017). The simulation intervention was administered during two following periods of eight-week hospital placement, where palliative care was one of the learning outcomes. The participants were divided into student group 1 and 2. Student group 1 took part in the simulation in their second week, while student group 2 participated in the simulation in week ten, which was their second week in the hospital placement. Three waves of assessments were performed: (1) pretest; (2) postsimulation test and (3) postplacement test after the completion of the placement. Table 1 shows an overview of the intervention steps.

3.2 | Recruitment

The participants were recruited from a university in Norway. The inclusion criteria were second-year nursing students entering medical

TABLE 1 An overview of the intervention and assessments performed in the study

Week of hospital placement	1 2 3 4 5 7 8		9 10 11 12 13 14 15 16	
Student group 1 (weeks 1–8)	T_0 S	T_2	T_0 S	T_2
Student group 2 (weeks 9–16)	T_1		T_1	

Note: T_0 Pretest before the simulation.

T_1 Post-test after completion of the simulation.

T_2 Postplacement test after completion of 8 weeks of hospital placement.

S, Simulation.

or surgical placement. The duration of clinical training in nursing education in Norway is half of the programme duration (Lahtinen et al., 2013). There were no exclusion criteria; however, the students had to participate voluntarily.

3.3 | Participants

Fifty-five of seventy-seven students (72%) voluntarily gave written consent to participate during their first or second hospital placement. Student group 1 had previously completed one placement in a nursing home, while student group 2 in addition had completed one placement in home care, hospital or mental health care. See Table 2 for the demographic data.

3.4 | Intervention

A three-hour simulation intervention took place at the university at the beginning of the participants' hospital placement in spring 2017. The design of the simulation intervention was based on the International Nursing Association for Clinical Simulation and Learning Standards of Best Practice: Simulation (INACSL Standards Committee^{SM}, 2016). The learning outcomes were consistent with core competencies in palliative care as described by Gamondi et al. (2013) and O'Connor (2016). The case-driven interventions were developed based on two focus-group interviews, one interview with third-year students and one interview with supervisors in placement to strengthen the relevance of the cases. The participants in the study were divided into nine groups consisting of six students; in each group, three students were observers, and three students were in action during the simulations, and the students alternated between the roles. For the learning outcomes and cases, see Table 3. The same participants conducted each case twice. The use of briefing and debriefing guides ensured consistency across the different groups. The participants were familiar with the learning method, and they had received lectures about palliative care. The facilitators were experienced and trained as facilitators by Copenhagen Academy of Medical Education and Simulation.

TABLE 2 Demographic data of the sample

	Student group 1 & 2 *n* = 55
Age	***n* (%)**
20–30	51 (93)
30–40	3 (5)
<40	1 (2)
Sex	
Female	48 (87)
Male	7 (13)
Former experience with palliative care	
Yes	28 (51)
No	27 (49)

3.5 | Data collection

Validated questionnaires to evaluate simulations in relation to nursing students' knowledge, skills and competence in palliative care are lacking (Smith et al., 2018). Therefore, ad hoc instruments were developed by the authors to obtain data on the participants' self-reported knowledge, skills and competence. The scoring alternatives were presented with a Likert Scale with a continuous response option from 0 to 10. The questionnaires were constructed based on the European Qualifications Framework on knowledge, skills and competence (European Parliament Council, 2008) and included items on core competencies in palliative care (Gamondi et al., 2013; O'Connor, 2016). The questions are listed in Table 4. Question 15 and 16 were not included in the postplacement test and are, therefore, not represented in Tables 6 and 7. The questionnaires were sent by email and answered electronically using the data programme Questback. Pretest and postsimulation test were collected on the day of simulation, while the postplacement test was collected after completion of 8 weeks of hospital placement. The response rate was as follows: completed both the pretest and postsimulation test, $n = 52$ (student group 1, $n = 28$; student group 2, $n = 24$). Completed both the postplacement test and postsimulation test, $n = 45$ (student group 1, $n = 23$; student group 2, $n = 22$).

3.6 | Data analysis

Statistical analysis was performed using Statistical Analysis Software (SAS University Edition). Due to the small sample size, a normal distribution could not be assumed. Therefore, the Wilcoxon signed-rank test (non-parametric test) was used to determine whether the participants' scores changed significantly due to the simulations and whether learning outcomes were practised during hospital placement (Altman, 1991). Statistically significant differences between student group 1 and student group 2 were tested using the Kruskal-Wallis test. $p < .05$ indicated statistical significance.

3.7 | Ethical considerations

All of the participants provided written consent after being informed orally and in writing about the study purpose, that it was voluntary, and their right to withdraw. Furthermore, that the study would be conducted in accordance with the ethical guidelines for nursing research in the Nordic countries (Northern Nurses Federation, 2003). In addition, that data would be treated confidentially (World Medical Association, 2013), and grades in placement would not be affected. The authors of this article were not facilitators of the simulation to

TABLE 3 Description of the simulation cases and learning outcomes used in this study

Simulation case and learning outcome
Patient: Jesper Jensen, 69 years old. Metastatic lung cancer. Hospitalized with poor general condition, pneumonia and pain. Treated with antibiotics and analgesics. No longer interested in food. Informed by the doctor of short life expectancy.
Case 1: Relational skills. The students simulate that the nurse is taking away the antibiotic infusion, and offer the patient some food. Jensen is tired. He has realized that he is going to die soon, and is no longer interested in eating. Jensen's wife has a different view of the situation and requests tube feeding for her husband. A teacher act as standardized patient. **Learning outcome** **Knowledge:** knowledge of nutrition, relevant to the dying patient and relatives. **Skills:** communicates about the patient's situation with patient and relatives. Safeguards patient and wife's autonomy and integrity according to ethical and legal guidelines. **General competence:** show respect, understanding and take other people's situation and experience seriously.
Case 2: Clinical assessment. This case focussed on clinical assessment when Jensen is diagnosed as terminal. The wife is present. A High Fidelity Simulator is used. **Learning outcome** **Knowledge:** observe and evaluate clinical signs of a dying patient using the Edmonton Symptom Assessment System (ESAS). **Skills:** initiate symptomatic relief in a dying patient. **General competence:** ensure the dying patient and his relative's integrity and dignity in accordance with ethical and legal guidelines.

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avoid the opportunity that their roles as both facilitators and interviewers affected the interviews. The Norwegian Centre for Research Data approved the study (project number 48268).

3.8 | Validity and reliability

In the absence of a previously validated simulation case and related questionnaire to measure the outcomes in this study, we worked to strengthen the content validity (Polit & Beck, 2017) by welcoming third-year students, supervisors and lecturers to provide ideas to help develop the simulation cases. An expert panel of nurses in practice assessed the simulation cases. The cases were pilot-tested by third-year students and facilitators. The feedback from the pilot testing resulted in the development and use of briefing and debriefing guides for the facilitators to ensure equal implementation. Moreover, the participants recommended to make the learning outcomes more specific and reduce the number (from eleven to seven) to be in line with the cases and the time allotted. The students highlighted the need for information about consent for participation in the study, where taking part or withdrawal will have no consequences for marks (pass/fail) in placement. Furthermore, the facilitators suggested to offer students' conversation with the teacher after the simulation to share feelings and emotions experienced during the palliative care simulation. The students participating in the pilot, also provided valuable information about the questionnaire in progress, suggesting to clarify the content and formulation of the items and the preferred measurement scale. The items were described as understandable and relevant. A continuous value scale with options from 0 to 10 and open-ended questions were recommended. The students appreciated a familiar rating scale, and the one used in this study is like the ESAS-r, which is an assessment tool used in clinical placement.

Self-reports can undermine validity due to informants' inability to remember what actually happened; even though self-reports are the gold standard for assessment (Polit & Beck, 2017). Observing the students or testing their knowledge, skills and competence might have added different perspectives to the study. To strengthen the construct validity (Polit & Beck, 2017) and capture the higher order that the learning outcomes and questionnaires were intended to represent, the European Qualifications Framework and palliative care guidelines were used (Gamondi et al., 2013; O'Connor, 2016).

In terms of reliability, the study may have had selection bias, as the participants were not randomized (Polit & Beck, 2017). Students who disliked simulation as a learning approach or wanted to avoid palliative care are perhaps not represented. Attrition is a problem in longitudinal studies that investigate the trajectory of a phenomenon over time (Polit & Beck, 2017). In this study, it is unknown how the attrition rate influenced the results. The study allowed for two independent implementations of the intervention, each with an eight-week duration. The participants were divided into nine groups of six students, and the results were comparable for each group. This approach may have enhanced the reliability of the study. We are aware that the Hawthorn effect may have had a positive impact on the results since the students knew they were being tested.

4 | RESULTS

For research question #1, "How do nursing students self-report knowledge, skills and competence in palliative care before and after simulation?" the Wilcoxon signed-rank test showed positive differences in the pretest and postsimulation test evaluation for all questions, indicating that overall, the simulation affected knowledge, skills and competence. The difference was constructed as the level of evaluation in the postsimulation test minus the level of evaluation in the pretest (Altman, 1991). Thus, a positive difference implies the simulation was considered useful for a specific question about knowledge, skills or competence (see Table 4). When we analysed whether there was a statistically significant difference in the evaluations between student group 1 and student group 2, the Kruskal-Wallis test yielded the following results: when we combined all knowledge questions into one sample, there was a statistically significant difference in knowledge between the student groups.

TABLE 4 Difference between schema 1 and schema 2 (pre- and postsimulation tests)

Question	Difference			Wilcoxon test	
	N	Mean	Median	W	*p*-value
Knowledge					
Pretest: To what degree do you have knowledge to; Post-test: Have you developed knowledge in simulation to;					
1. Observe and clinically assess signs that a patient is dying	52	3.81	3.5	652.5	<.0001
2. Inform a relative about clinical signs indicating that a patient is dying?	52	4.44	4	663	<.0001
3. Inform a patient about clinical signs indicating that he/she is dying?	52	5.00	5	685.5	<.0001
Skills					
Pretest: To what degree do you have skills to; Post-test: Have you developed skills in simulation to;					
4. Observe and clinically assess the patients' symptoms through ESAS-r schema?	52	3.56	3.5	577	<.0001
5. Initiate symptom management to a patent in pain?	52	3.73	3	585	<.0001
6. Initiate symptom management to a patient with nausea?	52	1.98	2	366	<.0001
7. Initiate symptom management to a patient with respiratory problems?	52	3.60	4	588.5	<.0001
8. Initiate symptom management to a restless patient?	52	2.77	3	426	<.0001
9. Communicate about the patients' situation to a dying patient?	52	4.44	4	637.5	<.0001
10. Communicate to the dying patient's relatives?	52	5.04	5	689	<.0001
11. Safeguard the patient's autonomy and integrity	52	3.33	3	633.5	<.0002
Competence					
Pretest: To what degree do you have competence to; Post-test: Have you developed competence in simulation to;					
12. Show respect to a dying patient?	52	3.77	4	609.5	<.0001
13. Show empathy to a dying patient?	52	3.48	4	609	<.0001
14. Take other people's situation and reactions seriously when talking to a dying patient and their relatives?	52	3.17	3	617	<.0001
15. Reflect over own ability to care for dying patients.	52	3.27	3	542	<.0001
16. Care for relatives to a dying patient	52	4.62	4.5	634	<.0001

Wilcoxon's signed rank test.

Student group 2 had a median difference of 5 between the pre- and postsimulation knowledge scores, while student group 1 had a median difference of 4, with a *p*-value = .0098. When we considered all skills questions as one sample, the effect was significantly larger in student group 2 than in student group 1. Student group 2 had a median difference of 4 between the pre- and postsimulation skills scores, and student group 1 had a median difference of 3, with a *p*-value = .0224. When we considered all competence questions as one sample, the result was just above the threshold value for significance (*p*-value = .0568). The result showed that student group 2 had a median difference of 4, while the corresponding median for student group 1 was 3 (see Table 5).

When we analysed the results from research question #2, "How do nursing students self-report their opportunities to practise the learning outcomes from palliative care simulation during hospital placement?" we found negative differences between the postplacement test and postsimulation test scores. The difference was constructed as the level of evaluation in the postplacement test minus the level of evaluation in the postsimulation test (Altman, 1991). A negative difference indicated that the participants had practised

TABLE 5 Difference schema 1 and schema 2 (pre- and postsimulation test) distributed on student groups

Difference	Group 1			Group 2			Kruskal-Wallis test	
Question	*N*	Mean	Median	*N*	Mean	Median	Chi-sq	*p*-value
1	28	3.39	3	24	4.29	4	3.447	.0634
2	28	4.18	4	24	4.75	4.5	1.6244	.2025
3	28	4.71	4.5	24	5.33	5	2.3535	.125
All knowledge	84	4.1	4	72	4.79	5	6.6774	.0098
4	28	2.57	3	24	4.71	5	6.9359	.0084
5	28	3.32	3	24	4.21	4	2.2894	.1303
6	28	1.29	1	24	2.79	3	2.5189	.1125
7	28	3.79	4	24	3.38	3.5	0.4432	.5056
8	28	2.61	2.5	24	2.96	3	0.0413	.839
9	28	4.21	4	24	4.71	4.5	0.9311	.3346
10	28	4.75	4.5	24	5.38	5	1.2618	.2613
11	28	3.39	3	24	3.25	3	0.0043	.9478
All skills	224	3.24	3	192	3.92	4	5.2114	.0224
12	28	3.43	3.5	24	4.17	4	0.7111	.3991
13	28	2.86	3	24	4.21	4	5.1478	.0233
14	28	3	3	24	3.38	3.5	0.282	.5954
15	28	3.04	3	24	3.54	3	0.3732	.5413
16	28	4.68	4.5	24	4.54	4.5	0.0014	.9704
All competence	140	3.4	3	120	3.97	4	3.6286	.0568

Kruskal-Wallis test.

learning outcome from the simulation to a small degree during hospital placement since the difference is constructed as described above (see Table 6). Moreover, when we compared student group 1 and student group 2, the median differences between the postsimulation and postplacement scores were equal in the two groups for knowledge and skills but significantly lower for group 2 for competence, with a *p*-value of .0335. Both groups had negative median differences, which indicates that their evaluations of their application of competence during placement were lower than their evaluations of their competence after simulation. However, the median difference was significantly lower in student group 2, which suggests that the application of competencies during placement was lower in group 1 (see Table 7).

5 | DISCUSSION

A prerequisite for transfer of learning to a new situation is to be exposed to new learning situations and reflect on experiences. In this study, the participants' self-reported knowledge, skills and competence in palliative care increased from pretest to postsimulation test. However, the median value decreased when students were asked if they had practised their knowledge, skills and competencies during hospital placement. The results indicate that the participants reported statistically significant learning outcomes from simulation but to a small degree practised the learning outcome during hospital placement. In addition, when comparing the two student groups, the impact of simulation in general was larger in student group 2 than in student group 1. Furthermore, the degree of application of competencies during placement was lower in student group 1 than in student group 2.

According to the previously mentioned framework by Perkins and Salomon (2012), the question is not whether a statistically significant transfer of knowledge, skills and competence can occur but under what conditions learning occurs. To foster transfer of learning, the learner needs to detect a potential relationship with prior learning, elect to pursue this relationship, and identify a fruitful connection between previous learning and the current situation. We use the framework to discuss conditions for simulation and hospital placement that might have influenced the findings. Since the median differences between the postsimulation test and pretest scores in general were approximately between 3 and 5, the results indicate that the participants rated their knowledge, skills and competence low on the pretest.

This positive difference might indicate that palliative care was seen as difficult or, to use the terminology of Mezirow (2018), a problematic frame of reference before the simulation. The low scores in the pretest might indicate that the students found it hard to detect a relationship and build a mental bridge to prior learning. These results are in line with the findings from studies indicated nursing students' feelings of inadequacy in this field (Hall-Lord et al., 2017; Henoch et al., 2017; Zhou et al., 2021) thatthe results could also have been a

TABLE 6 Difference between schema 2 and schema 3 (post-test simulation and postplacement test)

Question	*N*	Mean	Median	W	*p*-value
Knowledge					
To what degree have you in this placement practised knowledge and :					
1. Observed and clinical assess signs that a patient is dying?	45	−3.64	−3	−372	<.0001
2. Informed a relative about clinical signs indicating that a patient is dying?	44	−5.66	−6	−409	<.0001
3. Informed a patient about clinical signs indicating that he/she is dying?	45	−5.24	−6	−383.5	<.0001
Skills					
To what degree have you in this placement practised skills and;					
4. Observe and clinically assess the patients' symptoms through ESAS-r schema?	45	−4.07	−4	−412.5	<.0001
5. Initiate symptom management to a patent in pain?	45	−4.29	−5	−420	<.0001
6. Initiate symptom management to a patient with nausea?	44	−2.50	−2	−254	<.0001
7. Initiate symptom management to a patient with respiratory problems?	45	−3.71	−4	−350	<.0001
8. Initiate symptom management to a restless patient?	45	−3.73	−4	−306	<.0001
9. Communicate about the patients' situation to a dying patient?	45	−3.62	−3	−342.5	<.0001
10. Communicate to the dying patient's relatives?	45	−4.13	−4	−317.5	<.0001
11. Safeguard the patient's autonomy and integrity	45	−2.07	−1	−225	.0003
Competence					
To what degree have you in this placement practised competence and:					
12. Show respect to a dying patient?	45	−2.42	−1	−235.5	<.0001
13. Show empathy to a dying patient?	45	−2.53	−2	−278	<.0001
14. Taken other people's situation and reactions seriously when talking to a dying patient and their relatives?	45	−2.27	−2	−263.5	<.0001

Wilcoxon's signed rank test.

result of self-reporting bias. Some students find it difficult to provide high ratings of their knowledge, skills and competence before a performance, especially in a field such as palliative care that they find unfamiliar and challenging. To facilitate students' recognition of and ability to detect former learning in palliative care during the simulation, the present study emphasized fidelity with the equipment by indicating signs and symptoms of the dying patient, such as reduced appetite and difficulty breathing. Silence in the room provided fidelity in the environment, and psychological factors were amplified through the inclusion of a grieving relative. The fidelity and the defined learning outcomes and safe learning environment was meant to help the participants with the second mental bridge in Salemon & Perkins's framework, that is, electing to pursue the detected connection between prior learning and the new situation. Connecting the relevant relationship between initial learning and learning in the simulation, the positive differences in the median values for knowledge, skills and competence might indicate that the participants faced disorienting dilemmas (Mezirow, 2003). Together with their peers in the simulation, the participants got an opportunity to identify a fruitful connection with their former knowledge, skills and competence and develop new insight into palliative care principles through action and reflection. The low values for nausea and restlessness can be explained by a lack of focus on those symptoms in these cases. In the simulations, the participants in this study simulated the same case twice, with a reflective debriefing session after each simulation as recommended (Daley & Campbell, 2017). Being able to learn from the experience, discuss and try again may have influenced the students' motivation. The reported effect of the simulation on learning outcomes is in line with previous research (Lippe & Becker, 2015; Smith et al., 2018; Stroup, 2014; Svellingen et al., 2021; Venkatasalu et al., 2015).

Venkatasalu et al. (2015) reports that simulations of palliative care cases made it easier to recognize death and dying in placement for nursing students. The postplacement test in the present study measuring whether students had used their knowledge, skills and competencies in hospital placement yielded median difference scores from −0.5 to −6.5. The difference is constructed as the level of evaluation in the postplacement test minus the level of evaluation in the postsimulation test (Altman, 1991). This negative difference may indicate that the students did not have opportunities to

TABLE 7 Difference schema 2 and schema 3 (postsimulation and postpractice test) distributed on student groups

Difference	Group 1			Group 2			Kruskal-Wallis test	
Question	*N*	Mean	Median	*N*	Mean	Median	Chi-sq	*p*-value
1	23	−4.39	−5	22	−2.86	−2	2.598	.107
2	22	−6.05	−6	22	−5.27	−6.5	0.2258	.6347
3	23	−5.7	−6	22	−4.77	−6	0.1337	.7146
All knowledge	68	−5.37	−6	66	−4.3	−4.5	2.0074	.1565
4	23	−3.39	−4	22	−4.77	−5	1.4043	.236
5	23	−4.78	−5	22	−3.77	−5	0.7712	.3798
6	22	−2.59	−2	22	−2.41	−1.5	0.0022	.9624
7	23	−4.57	−5	22	−2.82	−4	2.4728	.1158
8	23	−4.17	−5	22	−3.27	−3.5	0.9435	.3314
9	23	−3.74	−5	22	−3.5	−3	0.1252	.7234
10	23	−4.48	−5	22	−3.77	−2.5	0.4246	.5146
11	23	−2	−2	22	−2.14	−1	0.1694	.6807
All skills	183	−3.72	−4	176	−3.31	−3	1.5506	.213
12	23	−3.04	−2	22	−1.77	−0.5	1.89	.1692
13	23	−3.09	−2	22	−1.95	−1	1.6438	.1998
14	23	−2.87	−2	22	−1.64	−0.5	1.0788	.299
All competence	69	−3	−2	66	−1.79	−1	4.5217	.0335

Kruskal-Wallis test.

take part in palliative care and continue building mental bridges, which is necessary to further develop their competence in the field (Perkins & Salomon, 2012). Several conditions can have affected the results. A driving force often described as necessary to determine whether transfer occurs is surface commonalities between the cases (Day & Goldstone, 2012; Perkins & Salomon, 1992). Smith et al. (2018) report that there are few opportunities for nursing students to learn palliative care in a clinical setting; consequently, in this study, conditions might not have been optimal for detecting palliative care needs and linking the situation to prior learning. There are no data in this study to validate such a possible explanation, but it must be taken into consideration that the medical and surgical placements were not specialized in palliative care. Another explanation could be limited invitations from the staff to the participants to take part in situations that involved patients with palliative care needs. Carmack and Kemery (2018) described that unit nurses were reluctant to involve students in palliative care, thus decreasing opportunities for exposure and learning. Even when there were patients with palliative care needs during the participants' hospital placements, the participants had to elect to participate and to pursue the detected connection with prior learning. For students in medical and surgical placements, there are many interesting subjects to learn, and many nursing students find technical skills most interesting (van Iersel et al., 2016). The seven-to-nine-week distance between the simulation and the postplacement test in this study may have affected the participants' attention to palliative care and explain the negative differences between the postplacement and postsimulation test scores. Additional simulation "boosters" could have been one way to maintain the focus on the palliative care learning outcomes (Shariff et al., 2020).

The impact of simulation, in general, was larger in student group 2 than in student group 1 when the two student groups are compared. It is conceivable that student group 2 were given more opportunities in clinical placement since they had experience from one more placement than student group 1, and consequently more prerequisites for learning the complexity of palliative care. This can be an argument for emphasizing palliative care late in the education; however, the literature gives no consensus on this matter, and Carmack and Kemery (2018) recommend that palliative care activities must be integrated throughout nursing education.

Even though palliative care is set as a learning outcome for placement, students need self-motivation (Ryan et al., 2000) to seek out new challenges and transfer learning outcomes from simulation to placement. The participants' attitudes and motivation to elect to participate in palliative care situations in hospital placement was not questioned in this study. Students' self-motivation can be strengthened in the simulation by exploiting the potential that lies in encouraging students to become aware of ongoing learning (Shariff et al., 2020). Rivière et al. (2019) point out that the facilitator can improve the process during debriefing by letting the student group generalize their knowledge and be aware of further learning needs. Deliberate practice (Ericsson et al., 1993) can be used to set their personal goals according to what they need to continue working on in the field of palliative care.

However, an explanation for the negative difference between the postplacement test and the postsimulation test scores could also be that the participants avoided pursuing the detected connection with prior learning due to their own feelings, the complexity of the situation or the patient and relatives' needs. A question both educational and ward staff should ask is whether it is ethically appropriate to expose patients with palliative care needs and their family members to students before students are well-trained.

Furthermore, the survey asked specific if the informants had used knowledge, skills and competence from the simulation on a palliative care situation in placement, indicating that we investigated near transfer. Transfer also includes far transfer to rather different contexts and performances (Perkins & Salomon, 1992). By asking more openly, we might have received answers indicating that the participants transferred the learnings outcomes to other situations in more acute or curative care, for example, about clinical reasoning or collaboration.

As argued, several conditions might have influenced the learning process of palliative care in simulation and hospital placement. Each mental bridge in the framework of Perkins and Salomon (2012) is individually necessary and mutually dependent in transfer of learning from one situation to another. The results from this study indicate that the conditions for connection between the mental bridges resulted in statistically significant learning outcomes in the simulations. However, interestingly, the students reported that they practised learning outcomes from simulating palliative care to a small extent in palliative care situations during hospital placement. This is an interesting finding since palliative care is a field that requires knowledge, skills and competence that nursing students find challenging to learn and perform (Hall-Lord et al., 2017; Henoch et al., 2017; Jeppesen et al., 2017), and education is described as an important element to increase access to palliative care for seriously sick and dying patients. The study results support the argument for the importance of allowing students to simulate different palliative care scenarios to ensure that they receive training in palliative care before they graduate. Moreover, educators and clinical staff need to help students build mental bridges to promote competence development in palliative care in the clinical environment through purposeful follow-up.

This study indicates that students' transfer and use of learning outcomes in placement is not a straightforward process. Few studies have examined the transfer of learning from simulation to clinical placement. Further studies should exceed the number of participants and cases. We recommend multicentre studies to investigate whether students use the learning outcomes in placement, particularly what inhibits and promotes students' ability to practice learning outcomes from simulation in clinical situations. Another perspective to elaborate is conducting virtual cases in order to create a thematic programme of learning situations and solutions in palliative care. Virtual cases could also be applied to other topics in clinical nursing.

6 | STRENGTHS AND LIMITATIONS

The strength of this study is the user participation and recommendations of third-year students and their supervisors that allowed us to prepare realistic cases and perform pilot testing of the cases and collect information on the content and formulation of the items in the questionnaire and the suggested rating scales. The participants and facilitators were familiar with simulations as a learning and teaching approach. The participants represented different hospital units and different genders and had no or few previous experiences with palliative care. One way that the motivation of the participants in the study could have been strengthened would have been to allow them to create a tailor-made, relevant simulation case with their clinical supervisors based on current patient situations. Furthermore, the aim of the study could have been more clearly communicated with the nurses in placement to increase the participants' access to palliative learning situations. The baseline and postsimulation measures were conducted the day the intervention occurred. Therefore, it is reasonable to assume that the intervention was the reason for increased knowledge, skills and competence. The ad hoc instrument developed for this study has not been psychometrically tested. However, the instrument was constructed based on white papers and international guidelines, and therefore, the contents are relevant for this particular study. The number of participants was low, and the hospital placements were not specialized in palliative care. The statistical analyses took into consideration the sample size. However, about the development of the scoring values for the measurements, both the median and mean values were presented to inform readers about the actual divergence. Misinterpretation might have generated bias in the use of the self-reported questionnaires, or the participants could have overestimated the effects of the training (Polit & Beck, 2017). Observation of their skills may have led to different results. Nevertheless, given the aim of this study, to examine nursing students' development of knowledge, skills and competence in palliative care through simulation and their opportunities to practice the learning outcomes during hospital placement, a self-reported method can provide valuable information.

7 | CONCLUSION

The results indicate that overall, palliative care simulation expanded participants' self-reported knowledge, skills and competence. However, the participants reported that they practised the learning outcomes of simulation to only a small degree during hospital placement. The study findings indicate that to fully exploit simulations, we need to focus on how students can detect and connect the coherence between a simulated setting and real-life situations and elect to pursue this coherence to foster further development of learning outcomes. Promoting simulation-based palliative care in clinical placement and in nursing education needs to be encouraged to increase access to palliative care and thereby improve quality of life for patients and their families.

ACKNOWLEDGEMENT

We would like to thank the nursing students and facilitators who participated in this study.

CONFLICT OF INTEREST

There are no competing interests to declare.

AUTHOR CONTRIBUTIONS

KV and EKG designed the study. KV developed the simulation cases and questionnaires in collaboration with EKG, ALH and KTJ. KV was responsible for recruitment and performed the data collection. MS analysed the data. KV collaborated with MS and EKG to present the data. All authors contributed to the discussion of the results and writing the manuscript. All authors confirmed the last version of the manuscript.

ETHICAL APPROVAL

The Norwegian Centre for Research Data approved the study (project number 48268). All participants gave written consent for their participation and the publication of the findings.

DATA AVAILABILITY STATEMENT

Data are available on request to the first author.

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How to cite this article: Valen, K., Simonsen, M., Holm, A. L., Jensen, K. T., & Grov, E. K. (2021). Impact of palliative care simulation on nursing students' learning outcomes and reported use in hospital placement. *Nursing Open*, 00, 1–11. https://doi.org/10.1002/nop2.991

Paper 2

Valen, K., Holm, A. L., Jensen, K. T., & Grov, E. K. (2019). Nursing students' perception on transferring experiences in palliative care simulation to practice. *Nurse Education Today*, *77*, 53-58. https://doi.org/10.1016/j.nedt.2019.03.007

Nurse Education Today 77 (2019) 53–58

Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/locate/nedt

Nursing students' perception on transferring experiences in palliative care simulation to practice

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ARTICLE INFO

Keywords:
Clinical practice
Courage
Learning activities
Nursing students
Palliative care
Simulation
Transfer

ABSTRACT

Background: Learning palliative care is challenging for nursing students. Simulation is recommended as a learning approach. Whether experiences from simulation transfer into clinical practice must be investigated.
Objective: The aim of this study was to explore nursing students' experiences of participating in palliative care simulation and examine how they describe the perceived transfer of knowledge, skills, and competence into clinical practise.
Method: This prospective, qualitative study was comprised of 11 in-depth interviews with second-year bachelor nursing students. Content analysis was performed to analyse the answers to open-ended questions.
Results: From this sample, simulation is a preferred method to gather knowledge, skills, and attitudes towards palliative care. Realistic cases stimulated senses and feelings. Courage grew through active participation and debriefing and influenced the students' self-confidence. Debriefing seemed to alter the situation from one of chaos to control.
Conclusions: Experiences from the simulation were perceived to transfer to practice, serve as a sound basis for clinical judgement, and enable communication with patients and their relatives. Continuity in learning through simulation combined with practice is highlighted.

1. Introduction

Palliative care promotes quality of life for seriously ill and dying patients through symptom control and other mental, social, or existential challenges for the patients and their relatives. An ageing population, with more complex chronic and life-limiting conditions, will increase the demand for competence in the field. At present only approximately 14% of people worldwide who need palliative care currently receive it. Lack of education and training, and awareness of palliative care among health professionals are major barriers to improving access (Worldwide Palliative Care Alliance/WHO, 2014). Since nurses are frontline care providers, an important field for nursing education is palliative care, including end of life care. To achieve the aim of palliative care, students must learn about symptom management and how to care for and communicate in order to enhance the patients' and their families' quality of life (Gamondi et al., 2013). However, nursing students find palliative care challenging to learn and perform (Hall-Lord et al., 2017; Henoch et al., 2017) and feel unprepared for palliative care in clinical practice (Alt-Gehrman, 2017; Hall-Lord et al., 2017; Henoch et al., 2017). A literature search by Gillan et al. (2014b) found that palliative care is poorly addressed in nursing curricula and is traditionally presented in lectures and group discussions. Although students benefit from different teaching strategies (Alt-Gehrman, 2017; Venkatasalu et al., 2015), in this field, reflection on competence and their own reactions to death is warranted (Gillan et al., 2014b; Henoch et al., 2017). Reflection is emphasised as a cornerstone for learning in simulation-based education (Decker et al., 2013; Fanning and Gaba, 2007; Husebø et al., 2015), and simulation is recommended as an active learning approach to prepare students for palliative care (Kirkpatrick et al., 2017; Smith et al., 2018; Venkatasalu et al., 2015).

2. Background

Jeffries (2005, p. 97) defines simulation as “activities that mimic a clinical environment where you can train procedures, decision-making and conduct critical thinking using role play, games, video or simulators.” Characteristics of the learning method include learning objectives, fidelity, problem solving, support, and debriefing whereupon the situation and learning outcomes are reflected on (Jeffries, 2012). Three domains of learning are involved. Knowledge was primarily described

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https://doi.org/10.1016/j.nedt.2019.03.007
Received 30 August 2018; Received in revised form 28 February 2019; Accepted 27 March 2019

by Bloom et al. (1956). The affective or emotional domain, which is a further development in the domain of knowledge, was elucidated by Krathwohl et al. (1964). The psychomotor domain was described by Harrow (1972). Simulation allows participants to combine these domains through theoretical knowledge, practical skills, and emotions, and integrate them into the value-base of nursing in a risk-free environment (Campbell and Daley, 2017). However, it might be challenging to integrate all three domains because they have their own taxonomies where participants can be at different levels. The use of the three domains of learning in simulation can be described as experiential learning and gives the participants an opportunity to go through the stages of Kolb's experiential learning cycle in a structured manner (Fanning and Gaba, 2007). Kolb's experiential learning cycle contains four related parts: concrete experience, reflective observation, abstract conceptualisation, and active experimentation (Kolb, 2015). In simulation, the concrete exercise is combined with debriefing with the intent to provide an analysis of and reflection on the experience, aiming to facilitate new experiences (Fanning and Gaba, 2007). Simulation is often used in advanced medical, surgical, obstetric, and paediatric courses (Hayden et al., 2014) but less so in palliative care (Kirkpatrick et al., 2017). Students who have simulated cases with a palliative focus report increased confidence, improved communication skills, and learned palliative care principles. A change in attitude from wanting to cure the patient to simply being present and focusing on quality of life is difficult although recognised as essential (Kirkpatrick et al., 2017). When family members are included in scenarios, complexity increases and greatly influences students' learning. However, few studies include this perspective (Alt-Gehrman, 2017; Kirkpatrick et al., 2017). Identifying gaps in the literature and providing directions for future research is how students transfer learning outcomes from simulation into clinical practice (Kirkpatrick et al., 2017; Smith et al., 2018; Stroup, 2014; Venkatasalu et al., 2015).

According to Mezirow (1991), transformative learning focuses on “the process of using a prior interpretation to construe a new or received interpretation of one's experience in order to guide future tasks.” There is a need to investigate if simulation gives nursing students knowledge and awareness needed to increase the access to palliative care for seriously ill patients and their families.

3. Aim

The aim of this study was to explore nursing students' experiences of participating in a palliative care simulation and examine how they describe the perceived transfer of knowledge, skills, and competence into clinical practise.

4. Methods

4.1. Design

A qualitative explorative design (Polit and Beck, 2014) was used to increase the understanding of nursing students' experience with palliative care simulation and the transfer of knowledge, skills, and competence into practice.

4.2. Setting

During the spring 2017, a university in Norway conducted a three-hour simulation activity addressing palliative care. The simulation was held at the beginning of the second year nursing students' eight weeks of hospital practice. In Norway, nursing education offer bachelor-level programs that last for three years. The duration of the clinical training is one-half of the education (Lahtinen et al., 2013).

The simulation design was based on the International Nursing Association for Clinical Simulation and Learning standards of best practise simulation (INACSL Standards Committee, 2016). Learning outcomes were in line with core competence in palliative care (O'Connor, 2016; Gamondi et al., 2013). The cases (see Table 1) were developed based on two focus-group interviews, one with third-year students and one with supervisors in practise, to strengthen the relevance of the cases. Students from different medical and surgical wards were invited to this voluntarily simulation to ensure a sufficient number of participants. The simulation at the university included 55 participants who were divided into groups of six students who switched between being three observers and three in action during the simulation. The same participants conducted each case twice. The use of a briefing and debriefing guide ensured similarities in the different groups. The participants were familiar with simulation as a learning approach, as it is a method used in their education. The facilitators were trained by the Copenhagen Academy of Medical Simulation and had between five and 10 years of experience in simulation pedagogy.

Table 1
Description of the simulation cases and learning outcomes used in this study.

Simulation case and learning outcome
Patient: Jesper Jensen, 69 years old. Metastatic lung cancer. Hospitalized with poor general condition, pneumonia and pain. Treated with antibiotics and analgesics. No longer interested in food. Informed by the doctor of short life expectancy.
Case 1: Relational skills.
The students simulate that the nurse is taking away the antibiotic infusion, and offer the patient some food. Jensen is tired. He has realized that he is going to die soon, and is no longer interested in eating. Jensen's wife has a different view of the situation and requests tube feeding for her husband. A teacher act as standardized patient.
Learning outcome
Knowledge: knowledge of nutrition, relevant to the dying patient and relatives.
Skills: communicates about the patient's situation with patient and relatives. Safeguards patient and wife's autonomy and integrity according to ethical and legal guidelines.
General competence: show respect, understanding and take other people's situation and experience seriously.
Case 2: Clinical assessment.
This case focused on clinical assessment when Jensen is diagnosed as terminal. The wife is present. A High Fidelity Simulator is used.
Learning outcome
Knowledge: observe and evaluate clinical signs of a dying patient using the Edmonton Symptom Assessment System (ESAS).
Skills: initiate symptomatic relief in a dying patient.
General competence: ensure the dying patient and his relative's integrity and dignity in accordance with ethical and legal guidelines.

4.3. Recruitment

Recruitment for the in-depth interviews occurred during the students' last week of hospital practice. To avoid first-hand contact between the researchers and respondents (WMA, 2013), supervisors in the wards identified relevant candidates and informed the first author. The students were contacted via email.

4.4. Participants

This study comprises 11 s-year bachelor nursing students (Table 2). Inclusion criteria included participation in palliative care simulation during their second or third practise period. They should have gained experience in palliative care during that particular practise, representing different genders and from various medical or surgical wards. Exclusion criteria included students with substantial former palliative care experience.

4.5. Data collection

The first author (KV), who is a palliative care specialist and educator, had taught the students in a previous course but was not involved in this semester. Data collection was conducted in a group room at the

Table 2

Description of the participants`.

Participants.	Gender.	Second year students. Practice period 2 or 3.	Former experience with palliative care.
Informer 1	Female	Practice 2 Medical unit	No former experience
Informer 2	Female	Practice 2 Medical unit	No former experience
Informer 3	Female	Practice 2 Surgical unit	Refers to one former experience
Informer 4	Female	Practice 2 Surgical unit	Some former experience
Informer 5	Female	Practice 2 Medical unit	No former experience
Informer 6	Female	Practice 2 Surgical unit	Some former experience
Informer 7	Female	Practice 3 Surgical unit	One former experience
Informer 8	Male	Practice 2 Surgical unit	No former experience
Informer 9	Male	Practice 3 Surgical unit	Some former experience
Informer 10	Female	Practice 3 Medical unit	Some former experience from practice
Informer 11	Female	Practice 3 Medical unit	Some former experience from practice

university. The interviews were audio-recorded. The other researchers came from different departments or universities and were unknown to the students. The research group developed a semi-structured interview guide based on the research question *"What do nursing students describe as their experiences from simulation of palliative cases, and what are their perceptions of the transition of knowledge, skills, and competence from simulation into practise?"*

One-by-one interviews were used to explore the participants' personal experiences.

4.6. Data analysis

The first author (KV) transcribed the audio-recorded interviews verbatim. The last author (EKG) checked every third transcript against the audio recordings. This study used content analysis inspired by Graneheim and Lundman (2004) and Graneheim et al. (2017) to analyse answers to the open-ended questions. The first step, exploring the interview text, was conducted by the first author who read the text several times with an inductive approach to obtain the overall meaning and identify meaningful units. Without reducing the core, the meaning units were coded by the authors (KV, ALH, KTJ, and EKG), who then discussed how the units could be understood and interpreted (Graneheim and Lundman, 2004; Graneheim et al., 2017). To enhance the study's credibility and confirmability (Lincoln and Guba, 1985), all of the authors discussed the analytic steps to ensure agreement on a main theme, themes, and categories (Table 3). The researchers' significant experience as nurses might have influenced their interpretations of the meaning units or quotations.

4.7. Ethical considerations

The participants were informed both in writing and orally about the study purpose, that it was voluntarily, they had a right to withdraw, and that their grades in practise would not be affected. Furthermore, their data would be treated confidentially (World Medical Association, 2013), and the study would be conducted in accordance with the ethical guidelines for nursing research in the Nordic countries (Northern Nurses Federation, 2003). All of the participants provided written consent. The simulation team discussed and took into account that the participants might feel uncomfortable both in relation to palliative care and the simulation. To avoid the possibility that their roles as both facilitators and interviewers might affect the interviews, the authors of this article were not facilitators of the simulation.

5. Findings

The following themes were identified from the analysis: (1) train as you fight; (2) from chaos to control; (3) and perceived transfer to practise (Table 3). A more latent theme emerged through the themes and categories. The participants reported that they needed to leave their comfort zones to participate in the simulation and debriefing. It sometimes felt like an assessment. This was interpreted as challenging their courage. However, a safe learning environment, new insights, and confidence received during the simulation and debriefing was described to make the participants feel safer and more self-confident when making relationships and clinical judgements in practise. The authors perceived that this increased the participants' courage. An overarching theme was therefore interpreted as the courage to dare.

5.1. Train as you fight

According to the participants, the simulation was more educational than lessons or self-study. *"I say 'train as you fight.' You can have many lessens but by visualising and physically acting, it will be a reflex reaction when you get into practise"* (9). This was explained as "*It's easier to learn things practically as you'll remember the cases when you learn things in a different way*" (4). They especially drew attention to their simulation experiences by applying their senses and feelings. They experienced how body language influenced communication and the value of keeping calm. *"I have not previously had a visual experience on the importance of keeping calm and not panicking. In the second round, the nurses were much calmer and then the patient became calmer"* (2). One case focused on common signs in a dying patient and provided the participants' with experiences on clinical changes. "*It's easier to remember when I can feel how you look for signs, when I can take the hand and feel the skin*" (7). Some found it more logical to understand when they heard respiratory changes, explanations, and feedback.

The participants described palliative care and simulation as an "out of the comfort zone experience" that activated their emotions. *"At first I didn't want to, but one is supposed to get out of one's comfort zone, and it's OK to have these kind of experience before you become a nurse"* (1). Simulation was perceived as scary, and for some unnatural, especially those who simulated with manikins. They needed to release their control, in the simulation and debriefing, and expressed that *"It is not a good feeling to lose face in front of fellows if you do something really wrong"* (2). They emphasised that the simulation was less scary than real situations. Since they could not harm the patient, the simulation was described as a safe learning environment. *"If you are uncertain in practise, you leave the situation without the opportunity to gain insight into what would have been the right course of action"* (6). The opportunity to not harm, but test and discuss different alternatives, gave them opportunities to dare. *"Practise is very serious; the patient can die even in a learning situation. That can't happen in simulation. Therefore, we dare more"* (2).

Table 3

Example from the content analysis including themes and connecting categories.

Overarching theme	Courage to dare		
Theme	Train as you fight	From chaos to control	Perceived transfer to practice
Categories	Experiences through applying their senses and feelings. Out of the comfort zone. Safe environment for learning.	Debriefing opens for new insights. Simulation as assessment. Debriefing gives self-confidence.	Safe and self-confident in practice. Trained to make relations with patient and relatives. Trained to do clinical judgments. Experiences from simulation continues in practice.

They called attention to the facilitator's role in relieving the pressure on their performance anxiety. “The facilitator's allowed us to lower our shoulders and work without fear…. It made it much easier for us when we simulated the cases” (9).

5.2. From chaos to control

The participants said that their attitudes towards palliative care changed throughout the debriefing, and reflecting upon the situation helped them manage it in a new way. *“We felt a lack of control. The observers said that we were too busy with technical skills. Then we got many tips on how we could be more present. We tried this, and the situation became different”* (7). The opportunity to simulate twice was emphasised by the participants. Perceived knowledge, skills, and a new attitude changed the situation and were expressed as *“I felt we went from chaos to control”* (7). The participants agreed that reflecting on the simulated situation provided an opening for new insights. *“Debriefing is mind-expanding and a confirmation of one's knowledge that promotes a feeling of security. At the same time, you get new knowledge from others”* (5).

For some of the participants, simulation was described as an assessment, and debriefing as an examination. *“If it gets too much like an exanimation, I don't learn much”* (10). One described the simulation and debriefing as an assessment of future skills. *“They judge you from how good you will be in your profession”* (1). A better performance was experienced when the level of expectation was low. The power structure between the students and facilitator was interpreted as “*we are the kids in the room*” (2). The most preferred feedback came from the other students. *“It's good that the facilitator says something, but it's just as useful what the students say – we are more in agreement”* (5). The opportunity to participate and discuss feedback was emphasised. *“Debriefing is more than feedback, you get a discussion on the feedback and an opportunity to consider a better solution”* (2). The discussion focused on what they had managed and what they could improve. *“The facilitator does not break us down, but builds us up and tells us what is good and what we can do differently”* (7). *“While the students often say ‘well done,’ the facilitator says ‘well done because,’ and links it to theory”* (11).

5.3. Perceived transfer to practise

The palliative care simulation gave the participants perceived self-confidence to seek palliative care situations, establish good relationships, and use their clinical judgement. In their opinion, a feeling of self-confidence was created in the simulated setting and was a result of new knowledge regarding managing palliative care situations. *“Before the simulation, I withdrew, afterwards in practice I had more knowledge, felt secure and more self-confident to be in the situation and make choices. I recognised that my self-confidence transmitted to the patient and family and contributed to a relaxed atmosphere”* (9). The simulation made palliative care less scary. *“I think it was the simulation that made me dare to examine that patient ... probably because I was safer than before”* (7). Some of the participants reflected that the opposite might have happened if they had not felt a sense of achievement from the simulation. *“I think the nervousness from the simulation could hold you back if you felt insecure and didn't manage. The sense of security created in simulation helps you in practise”* (10). Another participant was unaware of a connection. “*I'm not sure that I thought about what I'd learned in simulation when I was in practise, but I did remember that in simulation, I thought this was a good way to act”* (4).

The participants described how they used experiences from the simulation to be more present in their relationships with patients. They knew more about how to respond, expressed through relief and joy: *“The patient had hinted that she wanted to talk – I felt it was difficult to get into it – but after we had simulated and seen how much it could help, I let the patient talk – I dared to!”* (7). The participants reported that they had more self-confidence to respond to relatives' needs. *“The relatives looked at me, and I noticed that they expected that I would be scared. Nevertheless, I felt self-confident to talk to them about what they felt … without the simulation, I would have had more panic about how to talk to them”* (10). One referred to this as courage. *“Actually, if I compare with earlier, I feel that I have a little more guts to talk to relatives”* (11). If the situation became too complicated, they stepped back. “*I avoided a situation. The patient was very young – he had many relatives present … there was a lot of fear and worries … I did not feel safe enough”* (7).

Clinical signs in a dying patient observed in simulation were recognised in practise and promoted the participants' clinical judgement. *“I was the first to recognise the patients' apnoea period. We had talked about it in simulation … so I thought hey, I have seen this before. We don't simulate just to feel ready, it built self-confidence to get a reality check of ones' knowledge”* (10). The simulation increased the students' awareness of what should be emphasised with a dying patient. *“I stood with the blood pressure gauge in my hand, the patient was dying. Then I thought, stop – what did we learn in simulation – the patient doesn't need to know what his blood pressure is – he needs to know that someone is present. So I put the blood pressure gauge away”* (7).

The participants were grateful for this consciousness-raising early in practise. *“Personally, I had great benefit from the simulation at the start of the practise period because I got the opportunity to use it and work on it”* (11). They underwent personal development and realized that they could contribute to palliative care situations in a new way. *“I think both as a person and a professional I can actually use this simulated experience”* (11).

6. Discussion

The aim of this study was to explore nursing students' experiences of participating in a palliative care simulation and examine how they described the perceived transfer of knowledge, skills, and competence into clinical practise. The interpreted overarching theme, courage to dare, provided a basis to discuss how the participants' use and receive courage to develop knowledge, skills, and competence in simulation, prerequisites for development to occur and transfer into practise.

Hawkins and Morse (2014, p.266) defines courage in nursing practise as “Despite fear for self and others, courage is ethical-moral “risk-taking” action with the intent to ensure safe patient care”. They argue, that courage can be learned and mentored, and that a core attribute to courage is duty and responsibility, which manifests in advocacy (Hawkins and Morse, 2014). The participants in this study reported that testing and discussing different alternatives during the simulation was challenging. Corresponding to the findings of Kirkpatrick et al. (2017), they reported that, when taking the challenge, stress and anxiety decreased while their self-confidence increased concurrently with increased communication skills and a new attitude towards palliative care.

Observing palliative care situations in simulation using their senses combined with the opportunity to discuss the situations in debriefing, in line with Kolb's reflecting cycle (Kolb, 2015), was described as useful for recognising palliative care needs. This is in line with findings of Gillan et al. (2014a) that support the view that experimental learning by visualising and hands on experience combined with reflection in debriefing increases knowledge in palliative care. In our study the findings refer to simulation both as “out of the comfort zone” and a “safe learning environment.” The participants said that they felt vulnerable and were afraid of losing control and reported that they needed to use courage to participate. They noted that if the simulation was too stressful, they did not learn much. However, acceptance of making mistakes, opportunities to simulate twice, and the facilitators' support were factors described as helpful for lowering their stress levels.

The participants described several prerequisites for the development of knowledge, skills, and competence in the simulation. Realistic training in a safe environment is in this study was referred to as “Train as you fight.” This adage relies on a military expression for realistic training (Rietjens et al., 2013). Fight refers to the army, while in this setting, the fight could be interpreted as the nursing performance. A safe learning environment combined with debriefing seems to increased self-confidence. Flannery and Grace (1999, p. 36) defines self-confidence as "courage to act derived from certainty about one's capabilities, values, and goals." It is characterised by belief in positive achievements, persistence, and self-awareness, and promoted by knowledge, experience, motivation, and success. The participants' description of "from chaos to control" refers to chaos in the room and chaotic feelings. Even if the situation is not real, the feelings are (Kirkpatrick et al., 2017). As previously described (Gillan et al., 2014a; Kirkpatrick et al., 2017), the participants in this study recognised through simulation that change of attitude from wanting to cure the patient to simply being present and focusing on quality of life is a core competence in palliative care. When using their knowledge, skills, and competence to be present, they experienced control. Palliative care became less frightening. This finding corresponded to results from Venkatasalu et al. (2015). A prerequisite to the feeling of changing chaos into control can be that the students and facilitator worked together in action and reflection. Reflection in debriefing is a cornerstone of simulation and promotes critical thinking (Decker et al., 2013; Stroup, 2014). The opportunity to confirm one's own knowledge and take part in others' perspectives seems to provide new insight. Adding the affective domain of learning in debriefing (Gibbs, 1988) increases engagement and learning (Husebø et al., 2015).

The present study describes a tension between debriefing that provides self-confidence and debriefing as assessment. The participants emphasised the value of having a discussion, not just feedback. Debriefing can create a potentially uncomfortable experience (Decker et al., 2013). Combined with the emotional intensity associated with palliative care, the way debriefing is implemented is of great importance for the learning outcome (Kirkpatrick et al., 2017).

According to Campbell and Daley (2017), the reflecting process in simulation leads to thoughts, actions, and learning outcomes for the better transfer of knowledge to practise and more nuanced thinking about future tasks. To foster transformative learning, the simulation cases require fidelity according to the equipment, environment, and psychological factors (Jeffries, 2012). A safe learning environment is needed (Clapper, 2010).

Regarding the perceived transfer to practise, the participants said that they used the simulation as a frame of reference to recognise clinical changes. They made clinical judgements and took action. Reflections on paradigm cases that include knowledge on how to manage situations is described as a way to identify practical knowledge that can translate to clinical settings (Benner, 2010; Valen et al., 2011). Findings from Venkatasalu et al. (2015) support the view that simulation prepares students to recall their learning in practise. Several participants in this study were uncertain how they could have managed palliative care situations without the simulation, but there are doubts. The translation of simulated experiences to practise is not necessarily a straightforward process (Nash and Harvey, 2017). One must consider the design, effective reflection through debriefing, the participants' experience with the method, and the opportunity to use the knowledge in practise.

From this sample, changed attitudes and increased self-confidence seemed to influence the perceived transition of knowledge, skills, and competence. The participants reported that they were more self-confident in palliative care situations than before the simulation. It seems like they use their courage to seek situations and pursue relationships with patients and relatives. Nursing students struggle with the presence of relatives (Henoch et al., 2017). Few studies deal with how students speak with family members (Kirkpatrick et al., 2017). This study indicates that the participants gained knowledge and courage to talk to relatives and supports recommendations to include relatives' perspective in palliative care education and simulation (Alt-Gehrman, 2017; Hall-Lord et al., 2017; Henoch et al., 2017).

The participants in the present study reflected on their increased self-confidence as a result of support from the group, and posited that the opposite might happen if their emotions were not adequately managed in the simulation. Gibbs (1988) states that learners can return to feelings of failure at a later stage when dealing with similar situations in practise. This emphasises the importance of education when supporting students in both palliative care simulations and in practise to reduce fear so courage can develop and the student can provide safe patient care. The findings of this study indicate that combining simulation and clinical practise can strengthen the learning process.

7. Strengths and limitations

The strengths of this study are user participation preparing realistic cases. The informants were familiar with simulation as a learning approach. Four facilitators experienced in simulation pedagogy used a briefing and debriefing guide to ensure similarities. The simulation was combined with hospital practise and reflecting the learning outcomes in terms of knowledge, skills, and competence in palliative care. The informants represented various hospital wards and different genders and had none or few previous experiences with palliative care. They all gained experience with palliative care situations during practise. The first author collected all of the data.

Since recruitment was voluntary, a limitation can be that students who dislike simulation and those not interested in palliative care might not be represented. We assumed that the use of a manikin, as mentioned by the students, can reduce realism in the simulation; however, others reported that the manikin represented a safe learning environment. The sample was collected at a single institution and the number of informants was low. The purpose of studies based on small samples is not to generalise but rather to gain in-depth knowledge and new hypotheses from participants (Lincoln and Guba, 1985).

8. Implications for future research and nursing education

The authors suggest further studies with different methodological approaches focusing on palliative care simulation. These can provide opportunities to evaluate the effect of the simulation, and if students can use knowledge, skills, and competence from the simulation in practise.

Active learning approaches are recommended in higher education. The simulation of palliative care cases is one method to gain competence necessary for nursing, particularly when including the issues of knowledge, skills, and competence.

9. Conclusion

The findings of this study indicate that simulating palliative care cases, the practical performance and the reflection connected cases and performance, provide courage to seek palliative care situations in practise. Courage is used and received through active participation and debriefing. Realistic cases stimulate the participants' senses and feelings. Simulation is described as an out of the comfort zone experience and a safe environment for learning. The focus changes from action-oriented to being present. It is necessary to decrease evaluation and be aware of the learning environment to ensure positive outcomes. In this study, the participants reported that they used the simulated experience in practise to develop relationships with patients and relatives and for clinical judgements and decision-making. Continuity in learning through simulation combined with practise was emphasised.

Conflicts of interests

None declared.

Funding

The Western Norway University of Applied Sciences funds the study, grant no: 3008.

Approval

The Norwegian Centre for Research Data has approved the study (project number 48268).

Acknowledgment

Thank you to the nursing students participating in this study.

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Paper 3

Valen, K., Haug, B., Holm, A. L., Jensen, K. T., & Grov, E. K. (2020). From palliative care developed during simulation, to performance in clinical practice – Descriptions from nursing students. *Journal of Hospice and Palliative Nursing*, *22*(3), 204-213. https://doi.org/10.1097/NJH.0000000000000644

Feature Article

From Palliative Care Developed During Simulation, to Performance in Clinical Practice—Descriptions From Nursing Students

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It is an international consensus that health care workers should be well trained to promote care for seriously ill and dying patients. Nursing students have reported that they feel inadequately prepared for palliative care. Simulation exercises have been described as increasing knowledge, skills, and competence, and participants have reported that they are more confident and prepared for palliative care with this learning approach than without. So far, there has not been much reported on how simulation contributes to learning in clinical practice. Therefore, this study explored whether learning outcomes from palliative care simulation further developed in practice. Second-year bachelor's-prepared nursing students voluntarily participated in a simulation activity as part of their hospital practice. Eleven students were interviewed about their learning experiences. The findings indicate that a prerequisite for further learning was to actively choose palliative care. Relationships with nurses, patients, and relatives and factors in themselves served as gatekeepers for attending learning situations. Becoming a nurse who can provide palliative care was described as an emotionally challenging experience. Elements that promoted learning outcomes in palliative care were simulation experience, clarified expectations, support, and a good dialog with the nurse before and after the learning situation.

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The Norwegian Centre for Research Data approved the study (project no. 48268). All participants gave written consent for their participation and publication of the findings. The data used in this study are available upon request to the first author. After completing this study, the data will be available from The Western Norway University of Applied Sciences' data storage.

The authors have no conflicts of interest to disclose.

The Western Norway University of Applied Sciences funded the study, grant no: 3008.

Authors' Contributions: K.V. and E.K.G. designed the study. K.V. developed the simulation cases in collaboration with E.K.G., A.L.H., B.H., and K.T.J. B.H. was one of the facilitators in the simulation. K.V. was responsible for recruitment, interviews, and transcripts. All authors contributed to analyzing and discussing the results and writing the manuscript. All authors confirmed the last version of the manuscript.

DOI: 10.1097/NJH.0000000000000644

KEY WORDS

clinical practice, communities of practices, nursing student, palliative care, simulation

Only a small percentage of people who need advanced care in the last phase of their life (palliative care) currently receive it. A lack of training and education is emphasized as one of the barriers to palliative care,[1] which is consistent with nursing students worldwide who report that palliative care is challenging to endure, perform, and learn.[2,3] Students feel inadequately prepared to perform palliative care,[4] and newly graduated nurses experience palliative care as an ethically challenging and emotionally demanding type of work.[5] Therefore, international consensus reveals that all health care workers should be better educated and trained in palliative care to promote patient safety and quality of life for the persons affected, irrespective of the patient's diagnosis.[1,6] The American Association of Colleges of Nursing has outlined recommendations for educating undergraduate nursing students to improve palliative care. They address competencies regarding physical conditions; symptom management; communication; and psychosocial, cultural, and spiritual elements, as well as teamwork. In addition, health care providers need to have life closure skills and control their own reactions to death and dying.[7]

To help nursing students achieve these competencies, higher education defines learning outcomes divided into knowledge, skills, and competence. Knowledge is described as facts, principles, theories, and practices. Skill is defined as an ability to cognitively or practically apply knowledge to complete tasks and solve problems. Competence is the proven capability to use knowledge, skills, and personal or social abilities in professional and personal development.[8] This indicates that nursing students are not only learning to do, but also learning to be a nurse who can perform palliative care.

Learning a profession can, according to Wenger et al,[9] be seen as a trajectory that forms an identity across "landscapes of practices." They express that "A 'landscape of practice' consists of a complex system of communities of practice and the boundaries between them."[9(p13)] A community of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.[9] In regard to palliative care, students meet with several communities of practice in theoretical courses and clinical practice. According to the social learning theory of Wenger et al,[9] identifying with the landscape requires engagement, imagination, and alignment. Engagement refers to getting experiences, for example, by doing things, working on issues, and debating. Imagination can involve exploring new possibilities. Alignment within a context involves ensuring that activities are coordinated, laws are followed, and intentions are implemented. Making sense of the landscape and our position in it is most effective when a combination of engagement, imagination, and alignment is present. If reflection is part of the interaction, a culture of learning ensues. Wenger et al[9] elaborate on their perspective by saying that boundaries arise in the landscape based on competence, culture, and history. They are unavoidable, necessary, and both formal and informal. Students are engaged not only in transitions across boundaries via lectures, skills laboratories, and practices, but also through their current and future work roles. Through each new context, identities modulate.[9]

Simulation as a learning approach is described as an entrance to and participation in a professional community of practice.[10] "Simulation is a technique, not a technology, to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner."[11(p2)] Several reviews of the literature indicate that simulation of palliative care cases is a positive way to provide undergraduate education in palliative care. Knowledge, skills, and competence are reported to increase, and participants feel confident with palliative care.[4,12,13] However, the perceptions of students' possibility to use and continue to develop learning outcomes from simulation in clinical practice are underreported.[14,15] Therefore, the aim of this study is to examine whether learning outcomes from simulation stagnate or further develop in clinical practice. The following research question is addressed: How do nursing students describe their experiences with the opportunity to develop further learning outcomes achieved in simulation with palliative cases in clinical practice?

METHODS

Design

A qualitative explorative design[16] was used.

Recruitment

Because of ethical guidelines, supervisors in the wards identified relevant candidates to avoid firsthand contact between the researchers and respondents.[17] Information was given to the first author, and the students were contacted by email from the division of academic affairs.

Participants

This study included 11 Bachelor of Science in Nursing students in Norway. Inclusion criteria were participation in a voluntary simulation activity addressing palliative care in the spring of 2017, experience in palliative care during that particular practice, and the representation of different genders and various medical or surgical wards. Two of the included participants were male, and nine were female. Four participants had no former experience with palliative care, and the remaining participants had either one or a few experiences with palliative care. The participants were in their second year. Seven students participated during their second clinical practice, and four during their third clinical practice.

The Simulation

When developing learning outcomes and cases for the simulation, guidelines for core competences in palliative care,[7] the International Nursing Association for Clinical Simulation and Learning Standards of Best Practice: Simulation,[18] and experiences from third-year students and their supervisors collected through focus-group interviews[16] were used. In addition, a group of third-year students pilot-tested the cases, found them relevant, and gave input that clarified the learning outcomes. See Table 1 for case and learning outcomes. The simulation had a duration of 3 hours, and the participants worked in groups of 6 and alternated between being 3 observers and 3 in action. The intervention was conducted with 9 groups and at 8-week intervals to include students in both second and third clinical practice. The participants were offered follow-up conversations with faculty after simulation and clinical practice regarding

TABLE 1 Description of the Simulation Cases and Learning Outcomes Used in This Study

Simulation Case and Learning Outcomes

Patient: Jesper Jensen, 69 y old. Metastatic lung cancer. Hospitalized with poor general condition, pneumonia, and pain. Treated with antibiotics and analgesics. No longer interested in food. Informed by the doctor of short life expectancy.

Case 1: Relational skills. Teacher as simulated patient.

The students simulate that the nurse is taking away the antibiotic infusion and offer the patient some food. Jensen is tired. He has realized that he is going to die soon and is no longer interested in eating. Jensen's wife has a different view of the situation and requests tube feeding for her husband.

Learning outcomes

Knowledge: Knowledge of nutrition, relevant to the dying patient and relatives.

Skills: Communicates about the patient's situation with patient and relatives.

Safeguards patient and wife's autonomy and integrity according to ethical and legal guidelines.

General competence: Show respect and understanding and take other people's situation and experience seriously

Case 2: Clinical assessment. High-fidelity manikin as patient

This case focused on clinical assessment when Jensen is diagnosed as terminal. The wife is present.

Learning outcomes

Knowledge: Observe and evaluate clinical signs of a dying patient using the Edmonton Symptom Assessment System

Skills: Initiate symptomatic relief in a dying patient

General competence: Ensure the dying patient and his relative's integrity and dignity in accordance with ethical and legal guidelines seriously.

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feelings palliative care may evoke. Guidelines for briefing, simulation, and debriefing were developed by the research team and used by the facilitators. In Norway, bachelor-level programs in nursing education are 3 years long. The duration of clinical training is one-half of the nursing education[20] (Table 1).

Data Collection

The research group developed a semistructured interview guide. The guide contained questions regarding the participants' experiences with palliative care during practice and whether learning outcomes from simulation were developed. The first author (K.V.) conducted and recorded individual interviews in a private room at the university during the participants' last weeks of hospital practice. The interviews lasted on average 1 hour.

Data Analysis

The first author (K.V.) transcribed the recorded interviews verbatim. Qualitative content analysis inspired by Graneheim et al[21] was used to analyze answers to the open-ended questions. The text was read several times with an inductive approach by the first author to obtain the overall meaning and identify meaningful units. All authors coded the interviews, deriving themes, and categories and discussed them among each other.[21]

Criteria for trustworthiness developed by Lincoln and Guba[22] guided verification that the qualitative analysis represented the data through the concepts of credibility, dependability, confirmability, and transferability. Credibility refers to confidence in the truth of the data and their interpretation. To ensure that the participants' perspectives were represented as clearly as possible, the interviewer listened intently and used follow-up questions to clarify the participants' intentions.[16] Quotations from the interview are included in order to illustrate and ensure the credibility of the participants' descriptions. According to Lincoln and Cuba,[22] dependability refers to the systematic, logical, and documented inquiry process in addition to data stability over time and conditions. Such stability can be difficult to judge because the participants' situation may not be constant. To strengthen the dependability, Table 2 is presented to demonstrate which codes and supporting quotes from the original text are included in categories and themes.[21] Confirmability refers to the objectivity or neutrality of the data. The researchers' significant experience as nurses and nurse educators might have influenced the interpretations of the meaning units or quotations. K.V., who is a palliative care specialist, had taught the students in a previous course but was not involved in this particular semester. B.H. was a facilitator in the simulation and a supervisor in the ward. Thus, confirmability is emphasized through discussing the findings with the other researchers that came from different departments or universities and were unknown to the students. To ensure transferability, or similarities between

TABLE 2 Example From the Content Analysis Including Themes and Connecting Categories

Statements	Categories	Sub-Themes	Themes
"…I was risk-oriented and asked when I was unsure—I wanted to learn, I was active, gave of myself and wanted to be a part of the group."	• Wanting to learn and be a part of the group • Setting personal goals • Challenging oneself • Using the learning outcome from simulation and teaching helps one to be active • Varying opportunities to choose palliative care	Progressive approach to learning Request conciseness according to learning topics in palliative care	Actively chose palliative care
"The relation you have with your contact nurse and others in practice have implications for your learning outcome because they are the ones who control what you are allowed to be a part of."	• Having a good dialog with the nurse • Included in learning situations • Feeling overlooked • Set to do other tasks	Nurses are gatekeepers	Gatekeepers for the development of the learning outcome
"When you say that you are a nursing student, the family does not say anything, but you can see it in their eyes that 'Oh my God. This will not turn out well.'"	• Patient and relatives understand our learning needs • Patient and relatives do not want a student	The patient or family is a gatekeeper	
"I did not want to create any extra stress when the situation was so hard for the patient and family. I thought the best thing to do was to get one nurse who has experience with palliative care, and I withdrew from the situation."	• Withdraws from palliative care out of consideration to the patient and relatives • Understands that it might be demanding for the nurse to include a student in palliative care	The student is a gatekeeper	
"I did not do much, there were relatives present, and the patient was very sick. … I think I would have been allowed to if I had felt confident."	• Not confident enough • Hard to behave professionally • Palliative care provokes excitement and sadness • Bringing the feelings home	Professionalism in a difficult context Personal impressions	Palliative care can be emotionally challenging

contexts, confirming evidence is presented and rich descriptions of the intervention are given.

Ethical Considerations

All participants provided written consent after receiving written and oral information about the study purpose, that their participation in the study was voluntarily, that they had a right to withdraw from the study, and that participation would not affect their grades in practice. The information stated that data would be treated confidentially,[17] and the study would be conducted in accordance with the Ethical Guidelines for Nursing Research in the Nordic Countries.[23]

FINDINGS

The following themes reflect the essence of the participants' perspectives about their opportunity to further develop learning outcomes from the simulation in practice: (1) actively chose palliative care, (2) gatekeepers for development of learning outcomes, and (3) palliative care can be emotionally challenging. See Table 2 for examples from the content analysis including themes and connecting categories.

Actively Chose Palliative Care

The participants expressed that a premise to further develop learning outcomes achieved in simulation was that the student had a progressive approach to learning and actively chose opportunities to participate in palliative care. One participant said, "I wasn't good at first, but I was risk-oriented and asked when I was unsure… I wanted to learn, I was active, gave of myself and wanted to be a part of the group." The need to set personal goals was underlined, and their responsibility to indicate if they wanted to take part in palliative care was emphasized. Participants perceived that choosing learning situations with palliative care could be challenging and experienced that learning outcomes from simulation and teaching helped them to be involved. One participant explained, "I hoped they did not expect me to say anything—a nurse told me that I might not say so much and to just be there, and then I got a flashback to what we learned in lectures and in palliative care simulation." The participants had varying opportunities to choose palliative care. In one ward, there were 8 deaths in 5 days, and in another ward, 1 or 2 patients had palliative care needs during the 8 weeks. They sometimes found it difficult to recognize palliative care needs and described that even if they did and wanted to take part in palliative care, they missed the opportunities. One student said, "I had hoped that I would be responsible for one of those patients over a week, but I was a little unlucky, and when I returned they were either gone or moved to another department."

Gatekeepers for the Development of Learning Outcomes

The participants reflected on how relationships with the nurses, the patients, and the relatives and elements in themselves affected their opportunity to develop their learning outcomes in palliative care, both in a positive and negative way. This is interpreted as gatekeepers for the development of learning outcomes.

Nurses Are Gatekeepers for the Development of Learning Outcomes

Nurses in the ward were described as key persons who decided whether students could take part in palliative care: "The relationship you have with your contact nurse and others in the practice has implications for your learning outcomes because they are the ones who control what you are allowed to be a part of. It is of great importance that they are comfortable with you." The participants appreciated when the relationships were based on a good dialog with the nurses. The students experienced that this happened when the nurse was seeking their experiences, letting them observe when they felt unprepared, and allowing them to participate when they were ready. This requires, as they said, a good conversation ahead of time and afterward, where they could clarify expectations and reflect on the situation. They recognized that experienced nurses have the knowledge they need to pass on their experience and help them perform palliative care. As an example of good dialog and support in a patient meeting, one expressed the following: "I can talk to a relative and then look at the nurse if I am unsure of something, and then she jumps in. I have done that a lot—have the nurse ready and give her a look, and she continues." To a great extent, most of the participants felt included in learning situations with a palliative focus. They appreciated when the nurse asked for their opinion in ethical discussions and when they received specific tasks. One student explained, "I think it was nice that they sort of—this is a learning situation so you can do that." They emphasized the need to clarify the student's experience. Some of the participants felt overlooked in practice. One participant described the following: "It is uncomfortable when they introduce themselves to the patient and relatives, but they do not introduce me—and I stand there like a fool… I feel the nurses are in front, and we are behind…. One does not learn in the same way standing on the sideline and looking in." They understood that patient care is most important and reflected that the nurses might go on "autopilot" and forget a bit about the student. The participants also stated that the nurses sometimes excluded them from palliative care and asked them to do other tasks. They reflected that there might be different reasons for that, for example, lack of time to involve them or lack of experience.

Patients and Relatives are Gatekeepers for the Development of Learning Outcomes

The patients and relatives were also perceived as gatekeepers. There were patients and relatives who did not want a student assigned to their case. One participant said: "When you tell them that you are a nursing student, you see it. They do not say anything, but you see it in their eyes—that 'Oh my God, this will not turn well.'" Another expressed, "You have such patients who say, 'Oh yes. You are a student. Come here to learn.'" The participants felt that they were in a unique position between the staff and the family. They had more time to develop a good relationship with the patient and the nurse, who could give advice and ensure that everything was done right.

The Student Is a Gatekeeper for the Development of Learning Outcomes

Occasionally, the participants withdraw from palliative care in order to clear the way for experienced nurses to help the patient and their relatives. As students, they expressed that they did not want to burden the experienced nurses by participating in the palliative care process. One participant expressed the following: "I did not want to create any extra stress when there was so much emotion and hardship for them. I thought, 'You are going to get some hardcore nurses who have been in the game for a long time, so I withdrew from the situation.'" They also did not want to be a burden to the nurse, and they expressed that it might be demanding to include a student in palliative care.

Palliative Care Can Be Emotionally Challenging

Palliative care was described as emotionally challenging. When the patient situation became complex and the relatives were present, the participants felt inexperienced and not confident and took the observer role. They described that it was difficult to behave in a professional way. One expressed the following: "I did not do much, there were relatives present, and the patient was very sick. …I think I would have been allowed to if I had felt confident." When they choose to engage in palliative care, they sometimes found it difficult to be honest and see people cry without crying themselves. Even though hospice care gave rise to sadness, it was also experienced as exciting. "I feel it is sad but also very exciting, and at the end of the day, you have a little bad conscience because it has been very exciting and sad, and you do not know where to land." Sometimes they brought the feelings home. "When I go home from the evening shift, there is so much I have to think about that I cannot sleep." Another participant who had been worried if she could manage to leave her feelings at work expressed: "When I get home, I can relax and take part in my family, and I manage to sleep at night, and then I think I have done something right."

DISCUSSION

Learning in Landscapes of Practice—Challenges, Opportunities, and Boundaries

The discussion pays attention to how the following themes: (1) actively choose palliative care, (2) gatekeepers for the development of learning outcomes, and (3) palliative care can be emotionally challenging, may influence nursing students' ability to further develop learning outcomes in palliative care from simulation into practice.

Learning in landscapes of practices goes through engagement, imagination, and alignment. In the present study, the participants describe their engagement as the need to express personal goals, actively choose palliative care, and want to be a part of the group.[9] They underline that this is a prerequisite for learning, but also experienced as emotionally challenging to perform as presented by Hall-Lord et al[2] and Henoch et al.[3] This can be perceived as boundaries they had to pass through during their journey. Wenger et al[9] label the learner in this position as "tourists" or "sojourners." They base the terms on whether participation is low or high and associate it with surface or deep approaches to learning. Deep learning takes place when the learner uses his knowledge, skills, and competence to solve a problem, individually or in collaboration. Self-reflection and the ability to explore how one can meet new challenges with comfort and tenacity are a part of the process.[24] In the present study, the participants acted as a gatekeeper for when to engage and when to withdraw in a palliative care situation. The term *gatekeeper* within the workplace setting is commonly used to describe individual decision makers who control or regulate access to information, others, resources, and opportunities.[25] Elements that made them feel more ready to engage in palliative care were clarified expectations, being invited in, and when they were assigned specific tasks. This can be perceived as the participants taking the role of "sojourner."

Sometimes the participants withdrew from palliative care situations to manage their own feelings. They also argued the fear of making mistakes or being a burden to the patient or nurse made them step behind. Withdrawing from palliative care does not necessarily mean that the participants missed learning outcomes or did not want to be engaged. It might be a valuable experience to assess their own competence and awareness of the patient's, the relatives', or the nurse's needs. To show respect and a sense of when to be present and when to keep a distance is part of developing interpersonal and communication skills. A question is whether someone reaches out to the student and gives him/her an opportunity to reflect on the choice.

To see oneself in a broader context now and in the future, imagination and reflection are key components.[9] When the participants expressed that they wanted to be engaged in palliative care, but did not want to create any extra stress, the authors interpreted this as the participants used their imagination for how their presence could affect patient care. The participants experienced that simulation helped them to obtain a sense of how they could act, leaving them with a repertoire of approaches, which made it easier to actively choose palliative care in the ward. Venkatasalu et al[15] found that simulations of palliative care cases helped nursing students recognize death and dying in practice. Participants in this study report that they had varied opportunities to choose palliative care. Smith et al[26] also reported that there are few opportunities to learn palliative care in the clinical setting. This may indicate that learning outcomes achieved in practice can be random. Kirkpatrick et al[27] argue that simulation can be a substitute when opportunities to perform palliative care are limited.

Wenger et al[9] discussed that engagement is rarely effective without some degree of alignment with the context. In the present study, it emerged from the data that the contact nurse needed to be comfortable with the students' understanding of the patients' situation before a decision was made whether he/she would be included or excluded from a palliative care situation. This risk assessment of the student is interpreted as nurses are gatekeepers. Gatekeeping by qualified staff members is experienced as a barrier for developing end-of-life communication skills for nursing and medical students.[28]

The participants in this study underlined the value of a good dialog in this 2-way process of alignment and their responsibility to express their learning goals, establish trust with the nurse, and assess their own capacity. They recognized that some nurses had the knowledge they needed, passed on their experience, and let them be a part of the patient care. The findings of Gillan et al[29] address the role that clinical nurses have in promoting positive palliative care experiences for nursing students. Nurses in palliative care often know how to behave and are aware of the working codes in the landscape. They can help students pass boundaries and transform all the different impressions they experience into meaningful meetings in practice. Nevertheless, the nurses sometimes safeguarded the patient, the student, or themselves and closed the gate. Power is always a part of learning.[9] The power does not necessarily have a negative sign and can be a necessary part of the alignment. However, it is important to note that participants in this study sometimes felt overlooked and were told to perform other tasks. Carmack and Kemery[14] report that unit nurses were reluctant to involve students in palliative care, thus decreasing opportunities for exposure and learning. Obstacles to providing palliative care are a lack of time, the physical environment, the family's emotions, and a lack of preparedness through one's own education.[30] These might be factors influencing how easy it is to include a student. Standing on the sideline observing or not being able to take part can make the student take on the role of a "tourist."

Sometimes the patient and relatives were perceived as gatekeepers. This emerges through the participants' descriptions of how some families or patients would invite them in, and others wanted to receive care from somebody else. A systematic review found that patients in hospice were highly positive about their involvement in teaching medical students. However, patients did have some concerns about being physically examined by a student and found their involvement in teaching students to be tiring, and they felt unable to decline their consent to participate.[31] From this study, it is interesting to note that the students themselves acted as gatekeepers. This could be seen as avoidance—the "tourist perspective"—and might also reflect the students' self-insight and ethical confidence as from the "sojourner's" perspective.

Learning to Become a Nurse Who Can Provide Palliative Care

The participants in the present study wanted to act professionally but found it hard to be confident and not get too emotional. This can be perceived as a boundary they had to cross between their current and future work role. Learning to help people with palliative care needs can give strong impressions that leave deep traces and affect one's own thoughts about death.[32] Even with an increased focus on palliative care in education, it is still referred to as an area of health care where students are not adequately prepared.[14] If students are not confident, it can influence how they handle themselves in this landscape and how they approach new experiences. According to Wenger et al,[9] learners must manage and reconcile new identities with former experiences. Identifying oneself as a person who provides palliative care may be difficult for nursing students because of a lack of former experience with palliative care in education and in life. Identity work is intrinsically emotional and involves learning social rules about emotional engagement and the appropriate expression of emotions.[9] Intense emotions and experiences of failure are common consequences of the identity work that occurs when crossing boundaries in landscapes of practice.[9] Negative feelings can result in a resistance to invest in an identity within the new context.[33] Wenger et al[9] argue that those who have a role in supporting learning need to pay attention to not only the cognitive but also the emotional identity work needed for becoming a professional. The boundaries that students face within themselves and the working environment act as gatekeepers and may be a challenge but are necessary elements for developing competence and identity in the nursing profession. Even though some participants experienced palliative care as sad and found it hard not to bring their feelings home, they also found it exciting and managed to persevere in the situation. Recognizing one's own ethical, cultural, and spiritual values and beliefs about serious illness and death is described as a core competency for palliative care providers.[7]

The findings in this study are similar to those of Venkatasalu et al,[15] which report that simulation helped nursing students recall their learning, perform specific end-of-life skills, and become emotionally prepared. Nursing students in the study by Valen et al[19] used simulation as a frame of reference. Simulation gave them courage to participate in palliative care situations in practice, through a changed attitude in themselves and an increased level of confidence. Carmack and Kemery[14] recommend that an assessment of outcomes from simulation should extend beyond students' attitude and feelings. Although this is noteworthy, being emotionally prepared is a gate-opener for learning the complexity of palliative care.

Simulation provides the advantage that participants are able to work in a safe environment. Expectations are clarified through learning outcomes and briefing. Peers support each other, and thematic difficulties and ethical issues can be reflected in debriefing.[10] The steps in simulation are parallel to what the participants in this study address as important for developing learning in practice. Clarified expectations, support in the situation, and an opportunity to have a good dialog with the nurse before and after participation are key elements.

IMPLICATIONS FOR PRACTICE

As described in this study, developing knowledge, skills, and competence in palliative care in practice is not necessarily a straightforward process. It depends on available and relevant learning situations and whether the students actively choosing them have support to act in those situations. This raises a discussion about how the education can utilize learning outcomes from simulation in clinical practice. According to Kirkpatrick et al,[12] students' maturity level should be considered when planning where palliative care should be placed in their education. Findings in the present study argue for early integration. Increased consciousness-raising and a variety of experiences are necessary to support the important identity work to become a nurse who can provide palliative care. On the other hand, it is necessary to take into account the vulnerable situations that patients and their family encounter in palliative care. To ensure quality care, it can be an ethical challenge to protect the patient and simultaneously ensure that students are well trained. To face these ethical challenges, simulation can provide an important learning contribution. One way to enhance the further development of learning outcomes in palliative care is to let students, nurses, and nurse educators develop simulation cases together to involve the nurses at the ward more actively in the students' learning outcomes and the nurse educator more actively in the ward.

IMPLICATIONS FOR RESEARCH

The authors suggest that additional studies with different methodological approaches[16] should focus on how simulation of palliative care cases affects nursing students' development of competence and students' opportunity to use their simulation experiences in practice. Future studies that evaluate simulation interventions not only by the students' learning outcomes but also by whether the reported learning outcomes benefit the patient and relatives would be appreciated.

STRENGTHS AND LIMITATIONS

The strength of this study is its focus on a part of nursing education where research is in its infancy. The development of the simulation intervention included user participation, and a briefing and debriefing guide ensured similarities when running the simulation in different groups. The simulation was combined with hospital practice and reflects further developing of learning outcomes. A limitation of this study is that the participants were from one university and one hospital and that two of the authors performed research in their field, which may have impacted their preunderstanding of the study.[16] The hospital wards were not specialized for palliative care, and the participants had to concentrate on several learning outcomes. Because the inclusion criteria were experiences with palliative care, including students without palliative care experiences might lead to other results. Including the nurses' perspectives about the students' opportunity to learn palliative care may have provided richer data. One research bias could be the authors' former experiences as nurses and nurse educators. The intention of this qualitative study was not to generalize,[16] but to give a picture of what facilitates the development of learning outcomes in the landscape of practices.

CONCLUSION

The participants in this study highlighted various aspects that influenced their ability to further develop learning outcomes from simulation in practice. A prerequisite for learning was to actively choose palliative care situations. Factors in themselves, relationships with nurses, and patients and relatives all served as gatekeepers and influenced whether the participants engaged or withdrew from learning situations. Learning to become a nurse who can perform palliative care is emotionally challenging. The discussion addresses this as identity work that requires deep learning and goes through engagement, imagination, and alignment in landscapes of practices. The participants emphasize that steps comparable to simulation pedagogy are important for further development of the learning outcomes achieved in simulation. Clarified expectations, support in the situation, and a good dialog with the nurse before and after participation were described to be important for developing learning outcomes in practice. The findings underline the important role that nurses have to include students in the community in practice to enhance their learning outcomes.

Acknowledgments

The authors thank the nursing students and facilitators who participated in this study.

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Paper 4

Valen, K., Jensen, K. T., Holm, A. L., & Grov, E. K. (2022). Palliative care in Norwegian nursing education: A document analysis of the integration of learning outcomes. *Journal of Nursing Research, 0*(0). https://doi.org/10.1177/20571585221098387

Master/doctorate paper

Nordic Journal of Nursing Research

Nordic Journal of Nursing Research
1–9

DOI: 10.1177/20571585221098387
journals.sagepub.com/home/njn
SAGE

Palliative care in Norwegian nursing education: A document analysis of the integration of learning outcomes

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Abstract

Large variations in palliative care education across and within countries are reported. Nursing students report that they feel unprepared for palliative care. The present study identified and outlined whether universities integrated learning outcomes on palliative care as described in the national regulation into programme descriptions and course plans after implementation of the National Curriculum Regulations for Norwegian Health and Welfare Education (RETHOS) in the 2020 academic year. A qualitative descriptive design with a document analysis approach was used. The findings revealed variation in the terminology used. Palliative care was differently emphasized in selected learning outcome descriptors, related subjects, and presence in the academic trajectory. It is crucial to emphasize palliative care in nursing education to prepare the future workforce to meet patients' and their families' individual needs in a multidisciplinary environment across service levels.

Keywords

course plans, document analysis, learning outcomes, nursing education, palliative care

Accepted: 18 April 2022

Introduction

Today's health service is constantly evolving and offers increasingly advanced diagnosis, treatment, and follow-up to the public. More people survive and live longer with their advanced diseases. As a result, we have an aging population with a high incidence of heart failure, chronic respiratory diseases and cancer and an increase in comorbidity with need for palliative care.[1] The palliative approach includes optimizing quality of life (QoL) and relieving pain and troublesome symptoms in people with severe diseases regardless of diagnosis and age.[2] As many as 70–80% of all patients need palliative care in their last years or months of life.[3] This care should be tailored to the patients' and their families' individual needs, often in a multidisciplinary environment across service levels.[2,4,5]

People who provide palliative care must be equipped with the necessary knowledge, skills and competence to do so.[4] However, palliative care education is repeatedly identified as a challenge, where lack of training is seen as a barrier to ensuring palliative care for all, and to development of the discipline.[6–9] In the field of nursing, students globally report that they feel unprepared for palliative care upon clinical placement.[10–12]

Back in 2004, The European Association for Palliative Care (EAPC) published a consensus-based guide for the development of nursing education programmes across Europe.[13] The guide proposed a general framework of knowledge acquisition divided into level A (basic), level B (advanced), and level C (specialist). The structure of the levels and the number of hours associated with the educational preparation were left for each country to decide. Nearly two decades later, large variations in palliative care education across and within European countries are reported.[1,14] This is particularly reported related to inclusion of palliative care in nursing undergraduate curricula.[14] Palliative care teaching in nursing education is commonly included as a module in another subject and is only taught as a specific mandatory subject in France, Austria and Poland. Few countries offer clinical placements in a specific palliative care unit, and there are still countries that do not offer any palliative care teaching in nursing education at all.[1] A study on nursing education in Sweden,[15] describes that it is up to each university to decide whether to include a compulsory course about palliative care in their undergraduate nursing programmes. Only a few did. Lecturers had to compete with other topics and strived to increase the content of palliative care education. Similar

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findings are reported from other parts of the world, as well as in other healthcare disciplines.[16–18]

Although the complexity in palliative care is increasingly recognized within national health policy frameworks, there is a lack of policy guidance on the provision of training to meet this healthcare challenge.[6] In the 2020 academic year, Norway adopted the National Curriculum Regulations for Norwegian Health and Welfare Education (RETHOS, henceforth referred to as the national regulation), which includes palliative care. The purpose of the national regulation is to ensure a nationally equal academic level to produce graduate candidates with a common final competence, independent of the educational institution.[19] Nursing education in Norway is a three-year bachelor's degree programme and consists of 50% integrated clinical placement. The programme is based on the Bologna declaration that generated a consensus to focus on evidence-based education at the bachelor's, master's, and PhD levels.[20] The expected final competence is described in the form of learning outcomes for completed candidates.[20] Learning outcomes are defined as 'statements of what a learner knows, understands and is able to do upon completion of a learning process that is defined in terms of knowledge, skills and competence also described as learning outcome descriptors'.[20(p.C111/4)]

The national regulation presents learning outcomes on palliative care in Chapter 2 'Health, disease, and nursing', which is one of five competence areas. It is described as follows under the learning descriptors of knowledge §4 b: 'the candidate has broad knowledge of the nurse's health-promoting, preventive, therapeutic, rehabilitative and caring function, including knowledge of palliative care'. The learning descriptors of skills do not include palliative care as a learning outcome, but competence §6a describes that 'the candidate can plan and carry out nursing care for the acutely and critically ill, chronically ill and people with comorbidity and complex needs in the primary and specialist health services. Furthermore, the candidate must be able to provide nursing care for people in the palliative phase'. The national regulation stresses that the candidate must be able to provide nursing care for people in the palliative phase in primary care and specialist health services. The structure of the education must ensure coherence, progression, and integration between theory and practice in a manner that supports the learning outcome descriptions.[19]

The wording 'nurse's caring function' is translated from the Norwegian term 'sykepleierens lindrende funksjon'. Caring is at the core of the nursing profession, which aims to alleviate suffering, protect patient dignity and promote health.[21] The caring function and palliative care are sometimes used synonymously in the Norwegian language.[22] However, the national regulation emphasises palliative care explicitly and this is perceived as an important focus related to nursing care.

Although documents are governing tools, the directives in these documents are not automatically realised as intended. When nursing education institutions in Norway implemented the national regulation, each local education programme developed programme descriptions and course plans that provided an outline for the bachelor's level. Universities have some flexibility in the design of their educational programmes, but the national goals must be met.[23]

Based on the literature review, there seems to be variation internationally in the implementation of palliative care into educational programmes. Thus, we find it of interest to explore how a country that has recently implemented policy guidelines that emphasise palliative care, integrates this subject into nursing education.

Study aim and research question

The aim of the study was to identify and outline whether learning outcomes for palliative care were integrated into programme descriptions and course plans in nursing education in Norway as described in the national regulation.

The following research question was addressed: What are described as learning outcomes for palliative care in programme descriptions and course plans in Norwegian bachelor's nursing programmes?

Methods

Document analysis

A qualitative descriptive design with a document analysis approach was used.[24,25] Document analysis, as a qualitative research method, is a systematic procedure for reviewing and evaluating documents to gain understanding and empirical knowledge.[26] The method may be used in a variety of ways, including to track change and development. Excerpts, quotations, and entire passages are used to yield data by organizing these items into major themes, categories, and case examples specifically using qualitative content analysis.[26]

Summative qualitative content analysis

Documents in the present study were analysed using a summative qualitative content analysis approach inspired by Hsieh and Shannon.[27] This method allows counting and comparisons and was used to identify and outline whether learning outcomes for palliative care were integrated into programme descriptions and course plans. Public nursing education in Norway was

Table 1. Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
Public Norwegian nursing education	Private nursing education
Bachelor's programme – full time	Thematic lists describing the content of the course plans
Programme descriptions and/or course plans for theoretical and clinical subjects for the academic year 2020–2023 or 2021–2024 based on online availability	Compulsory reading Teaching schedule

selected from university websites and reviewed for inclusion during Autumn 2021. Nine of 11 universities were included. Table 1 lists the inclusion and exclusion criteria.

The selected universities are presented as University A, B, C, etc. through to the letter I. When extracting information from the selected sources, we used a deductive content analysis approach described by Elo and Kyngäs.[28] The national regulation was used as the data source to define the categories when comparing the selected programme descriptions and course plans. The analysis process had three main phases: preparation, organizing, and reporting.[28]

Preparation phase

The selected university programme descriptions and course plans were reviewed to identify and select units of analysis. A unit may be a word, theme, sentence, or portions of pages.[24] The chosen units of analysis in the present study were programme descriptions and course plans describing learning outcomes for palliative care. Because palliative care may be described using different words, we included associated words, such as end-of-life care, death, terminal care, symptom relief, and caring nursing. Table 2 provides the entire list.

Organizing phase

To make sense of the data as a whole, we developed a structured categorisation matrix,[28] in which the identified categories were based on recommendations in the national regulation. Categories one, two, and three are presented in Table 3. The table describes whether palliative care was included verbatim or modified in programme descriptions and course plans and explicit words that were used. Modified indicates that minor changes were made to the wording of the learning outcome. Table 4 provides an overview of categories four, five, and six. Category four presents the academic year in which palliative care was presented. Category five describes the subjects. The subjects were divided into the following subcategories: basic nursing, acute and critical care, comorbidity/homecare, pathology, or teamwork. The matrix indicates whether the subject was theoretical or clinical. The categories reflect the national regulation requirement to include palliative care in primary care and specialist health services, and the structure of the education programme must ensure coherence, progression and integration between theory and practice in a manner that supports the learning outcome descriptions.[19] The national regulation describes palliative care under the learning outcome descriptors of knowledge and competence. Therefore, the learning outcome descriptors used by universities are presented in category six.

After creation of the structured categorization matrix, the first author reviewed the units of analysis several times and coded for correspondence with the identified categories. The entire team discussed the findings. The reporting phase is presented in the Findings and Discussion sections.

Ethical considerations

Ethical approval was not required for this work because the data were retrieved from open websites. The universities are not identifiable.

Findings

Inclusion of palliative care or associated words in programme descriptions and course plans

Table 3 provides an overview of categories one, two and three based on recommendations in the national regulation and the codes from the document analysis. Universities presenting a programme description online, including palliative care or words associated with the term as learning outcomes, were available in three of nine universities: A, G, and H. When describing learning outcomes for palliative care in course plans, modified text was common. Only universities F and G

Table 2. Words or phrases used to describe learning outcomes on palliative care in programme descriptions and course plans.

Words or phrases	Number of hits in the units of analysis
Palliative phase	9
Caring function	6
Death, symptoms that death has occurred, cultural expressions at death, death as a phenomenon, worthy death	5
Suffering	4
Caring function, including palliative care	4
Caring nursing in the palliative phase	3
Needs of relatives and bereaved	3
Palliative care and interventions at the end of life	2
Terminal phase	2
Caring nursing	2
Symptom relief	1
Symptom relief in the palliative and terminal phase	1
Caring/palliative interventions	1
The processes in the final phase of life	1
Nursing in the last phase of life	1
Clinical signs of death	1

Table 3. Categorization matrix for categories 1–3; the selected universities' implementation of learning outcomes for palliative care in the programme and course plans, and the explicit words used.

	1. LO in PC are included in the programme description	2. LO in PC are included in course plans	3. Explicit words used
University A	Yes, modified	Yes, modified	Palliative care, terminal care, end of life, palliative phase, caring function, caring nursing, suffering, death
University B	No	Not included in any	
University C	Programme description not presented	Yes, modified	Symptom relief, death as a phenomenon, clinical signs of death, end of life, needs of the bereaved
University D	No	Yes, modified	End of life care, palliative care, worthy death
University E	Programme description not presented	Yes, modified	Caring function, caring nursing, palliative care, relatives' need
University F	No	Yes, verbatim	Palliative care
University G	Yes, verbatim	Yes, verbatim	Palliative care
University H	Yes, modified	Yes, modified	Palliative care, caring
University I	Programme description not presented	Yes, modified	End of life care, palliative care, suffering and death, needs of the bereaved

Note. LO: learning outcomes; PC: palliative care.

used the description from the national regulation verbatim. When analysing the data for explicit words used to describe palliative care, several words associated with the term emerged, including end-of-life care, death, terminal phase, symptom relief, and caring nursing. Table 2 provides an overview of explicit words and phrases used and how often the different terms emerged in the units of analysis. The analysis revealed that different course plans within the same university used different terms to describe palliative care. The number varied from one, as in universities F and G, to eight in University A. Several universities described 'that the candidate has broad knowledge of the nurse's health-promoting, preventive, therapeutic, rehabilitative and caring function' but excluded knowledge of palliative care.

Academic year, subject and learning outcomes descriptors where palliative care is described

When analysing whether learning outcomes for palliative care were represented in academic years 1, 2, or 3, we found that the term was represented throughout the three years in most of the education programmes (Table 4). However, there were exceptions. Universities D and H did not include palliative care in year 2, and University I did not include it in year 3. Learning outcomes for palliative care were not included in any year in University B. Notably, some of the included learning outcomes used the term 'nurses' caring function' or 'symptom relief' without associating these terms with palliative care, and whether the learning outcome was related to palliative care or the nurses' caring function in general was not clear. These issues are marked with a star in Table 4.

Basic nursing was the course plan where all universities, except University B, included learning outcomes for palliative care, several universities included this in both theoretical and clinical subjects. Other categories exhibited greater variation. Most universities included learning outcomes for palliative care in theoretical and clinical subjects, but there were exceptions, such as University H, which only included the term in clinical subjects.

Universities C, E, and I included relatives and the needs of the bereaved associated with palliative care. None of the universities included palliative care in course plans describing mental health or paediatrics.

The national regulation describes learning outcomes for palliative care under the learning outcome descriptions of knowledge and competence. Analysis of the course plans revealed that the learning outcomes description of knowledge was used by six of the nine universities in theoretical subjects, and in four of the nine universities in clinical subjects. The learning outcomes descriptor 'skills' was used in theoretical subjects by Universities A, C, and I, and Universities A, C, and D included skills in clinical subjects. Competence as a learning outcome descriptor was only used by University C in theoretical subjects, but it was included in Universities C, E, F, G, and H in clinical subjects.

Discussion

These findings demonstrated variation in the integration of palliative care into programme descriptions and course plans. Palliative care was emphasized differently across learning outcome descriptors, related subjects, and academic years. The following discussion centres on the terminology used and the universities' integration of learning outcomes for palliative care.

The use of terminology

Palliative care and associated words were revealed in our analyses of the programme descriptions and course plans. Although the associated words described in Table 2 are part of palliative care, we perceived these words as inadequate because the palliative care approach includes more than care for the dying.[2,4,5] Zaman et al.[29] drew attention to the distinction between 'palliative care' and 'end-of-life care'. End-of-life

Table 4. Categorization matrix for categories 4–6; academic year, subject and learning outcomes descriptors where palliative care is described at the selected universities.

		5. Subject								6. Learning outcome descriptor					
		Basic nursing		Acute and critical care		Comorbidity/ homecare		Pathology or teamwork		Knowledge		Skills		Competence	
	4. Academic year	TS	CS	TS	CS	TS	CS	TS	CS	TS	CS	TS	CS	TS	CS
University A	1.	x	x							x	x		x		
	2.				x			x		x		x	x		
	3.						x						x		
University B	1.														
	2.														
	3.														
University C	1.	x	x									x	x*	x	x
	2.				x						x*				
	3.					x	x					x	x		
	1.	x								x*					
University D	2.														
	3.								x				x		
University E	1.	x	x							x*	x*				
	2.			x						x*					
	3.					x	x			x*	x*				x
University F	1.	x								x					
	2.			x	x					x					x
	3.						x								x
University G	1.	x						x		x					
	2.				x										x
	3.								x						x
University H	1.		x								x*				
	2.														
	3.						x								x
University I	1.	x													
	2.			x						x		x			
	3.														

Notes. TS: theoretical subjects; CS: clinical subjects; x: presence of the particular learning outcome; x*: learning outcomes describing nurses' caring function but not palliative care explicitly.

care refers to care for a patient with a terminal condition, while palliative care is recommended from the time of diagnosis to the end of life for all life-limiting illnesses. In Norway the term palliative care was not included in national regulations regarding nursing education until 2020. The focus was to 'relieve suffering and help the patient to a dignified death'.[30] Palliative care may be an unknown word to students, and the words used by universities are perhaps easier to understand. However, a systematic review by Hui et al.[31] stressed that the exact meanings of 'end of life' and 'terminal care' were not clear. Their findings revealed a paucity of references conceptualizing or defining the terms. Thus, modification of the descriptions used in the national regulation increases the possibility of changing the content and intention. Therefore, it is unfortunate that different words and phrases are used to describe learning outcomes for palliative care between and within universities. We recognized that University B did not include palliative care or associated words and that Universities D, E, and H only included palliative care explicitly as a specific topic in one of their course plans. The absence of the term might indicate that the learning outcomes were general and hidden as a topic. Palliative care may appear in syllabi, lectures, or tasks, but the findings in this study suggest that the topic is omitted. Other studies indicate that palliative care often is included as part of other subjects,[1,15,16] and that end-of-life care is the topic most emphasized.[32]

However, the national regulation explicitly uses the term palliative care when describing 'the candidate has a broad knowledge of the nurse's health-promoting … and caring function, including knowledge of palliative care', and similarly under competence. Palliative care includes more than a nurse's caring function. Caring is the core of the nursing care process[21] and includes the knowledge, skills, and competence that nurses need when caring for all people. As several universities include the nurse's caring function but exclude using the term palliative care in their learning outcomes, our interpretation was that the national regulation was not followed.

What happens in the transformation from legal text to programme descriptions and course plans when palliative care is modified extensively, and other words are used in learning outcomes? We argue that there is a risk of the universities losing their opportunity to ensure a nationally equal academic level and graduate candidates who have a common final competence in palliative care, independent of the educational institution.

Integration of learning outcomes on palliative care

The national regulation uses knowledge and competence as the learning outcome descriptors when describing palliative care. The candidate must be able to provide nursing care for people in the palliative phase in primary care and specialist health services. The present study found that universities did not systematically follow the national regulation. Our organization of the data into the structured categorization matrix (Tables 3 and 4) identified variations in the integration of the topic of palliative care and the academic year. These results reveal a shortcoming in the implementation of the national regulation and recommendations describing palliative care tailored to the patients' and their families' individual needs in a multidisciplinary environment across service levels.[2,5,7] Lack of integration of palliative care into nursing education, as described in this and several other studies,[15,16,33] is considered as a barrier, across country borders, to enhancing palliative care for all people.[1,9] According to the national regulation, the structure of education must ensure coherence and progression. As shown in Table 4, learning outcomes for palliative care were represented in academic years 1, 2, or 3 in five of the nine universities. However, with the exclusion of the course plans with general wording which clouded whether the outcome was related to palliative care or the nurses' caring function in general (marked with * in Table 4), only Universities A, F, and G met the recommendation. Smeby and Heggen[32] revealed that programme coherence had a significant impact on theoretical knowledge and practical skills. Because of the complexity of palliative care and the call for increased emphasis on palliative care in nursing education,[1,9] the presentation of palliative care throughout all three years is beneficial.

The integration of theory and practice in a manner that supports the learning outcome descriptions is emphasized in the national regulation. Some universities, such as A and E, had course plans that integrated the two learning environments. However, palliative care was commonly added to course plans that described either theory or practice. Palliative learning outcomes were linked to theory in 14 course plans and clinical placement in 15 courses. Arias-Casais et al.[1] and Jeong et al.[34] describe that a theoretical approach is most common as a teaching method when teaching palliative care. In addition there are few opportunities for nursing students to learn palliative care in the clinical setting, particularly in specialist palliative care placements.[35] This finding is supported by Valen et al., where the nursing students experienced that healthcare personnel acted as gatekeepers for entering palliative care situations and thereby affected the students' learning outcomes.[36] Thus, there is a risk that these issues will affect the students' progression in the field, especially since palliative care skills and competence development is a continuous process, and knowledge and skills become internalized and manifest while practising.[32] The learning outcome descriptor *skills* was used in connection with palliative care by Universities A, C, D, and I, but not in the national regulation. We argue that palliative care requires nursing skills that may be developed through nursing education.[37] The systematic review and meta-analysis by Donne et al.[12] revealed that palliative care education improves health professional students' knowledge about and attitudes towards palliative care, but more research is required to draw conclusions about the students' skills development. We therefore call for national regulations and course plans that include both knowledge, skills, and competence in palliative care.

Although a gap was identified in palliative care health services between the guidelines and practices for the needs of relatives and the bereaved,[38,39] we found it surprising and insufficient that only three of the nine universities included relatives in learning outcomes associated with palliative care. When searching for units of analysis[28] containing palliative care or associated words in the selected course plans, we found no connection to mental health or paediatrics. Palliative care is supposed to be provided for all life-limiting illnesses and for people of all ages including patients' relatives.[2] The *EAPC atlas on palliative care in Europe 2019* draws attention to the fact that only 16/51 countries included palliative care in paediatric nurses' curricula. The health workforce's capacity to provide care to neonates, children and adolescents including support for their families, needs to be strengthened, and education is seen as a key to such competence development.[1,7] Another concern in our study is that the number of credits in the included course plans varied from three to 20. The national regulation gives no directions for the credits required to meet the learning outcome in palliative care, nor do other directives.[6,13] Variation in the number of teaching hours and clinical practice within and among countries will likely affect the degree of palliative care. The university course plans often included learning outcomes for acute and critically ill patients, which leaves the impression that nurses' health-promoting, preventive, and therapeutic functions are more important. Pressure on time is reported as a barrier to include palliative care.[16,18] One question is whether the universities present learning outcomes consistent with strategic plans. Another is whether it depends on enthusiasts in palliative care to ensure that this topic is emphasized. Findings by Hagelin et al.[15] and White et al.[18] indicate that 'champions' advocating for palliative care often are the case, and an advantage.

The national regulation in Norway was implemented in the 2020 academic year and was new for the universities when they developed the selected programme descriptions and course plans. This novelty may have influenced the emphases of learning outcomes for palliative care. However, many countries do not include palliative care as a compulsory course, and the subject is normally a module within other subjects.[1] There are gaps regarding teaching time content, assessment and teaching staff dedicated to palliative care.[14–18] We are concerned whether these factors limit the ability of education programmes to convey the complexity of palliative care.

Hagelin et al.'s[15] study finds that lecturers experienced that the most challenging aspects for students were to provide an understanding of the palliative care approach, promote good communication skills and identify the patients' existential concerns.

We emphasize that palliative care must be taught explicitly. Only then can the learning outcomes in the final competence description be achieved and documented. By providing explicit description of palliative care in the course plans and curricula, nursing faculties have the unique opportunity to improve care for patients with palliative care needs and their families.

Today, palliative care education is highlighted in political plans, guidelines, and research.[2,19] The present findings suggest that there is still work to be done before universities anchor palliative care in programme descriptions and strategy plans to ensure that their graduates have a common final competence in palliative care, independent of the educational institution. We recommend development of national programme to prepare the future workforce with the necessary knowledge, skills and competence to provide palliative care, such as the Palliative Care Curriculum for Undergraduates programme in Australia that has been well established since 2003,[4] or the End-of-Life Nursing Education Consortium (ELNEC) developed by the American Association of Colleagues of Nursing.[9] National programmes should be in line with international educational goals, such as the Bologna process in Europe, as competence levels from A to C can create confusion compared to recommended learning outcome descriptions and education levels from bachelor's to PhD level.[40]

Strengths, limitations, and trustworthiness

Document analysis is efficient because the data of many documents are available online without the authors' permission. Therefore, document analysis is cost-effective.[26] However, one limitation is that documents are sometimes hard to retrieve. Two of the 11 Norwegian universities were excluded from our study based on the lack of online access. An incomplete selection of documents may lead to 'biased selectivity'.[26] Another advantage is that documents are stable, exact, cover many events, settings, or a long time span, and are unaffected by the data collection process. However, documents often include insufficient details to answer a research question because they are produced for other reasons.[26] To ensure trustworthiness in the present study, the authors worked systematically to achieve confirmability in all of the steps throughout the study. Credibility or confidence in the truth of the data[28] is emphasized by the inclusion of most Norwegian universities offering nursing education. All programme descriptions and course plans were reviewed to identify suitable units of analysis that described learning outcomes for palliative care. We worked systematically to cover all data and organized the data into a categorization matrix[28] based on recommendations in the national regulation. The first author coded the text and developed the categorization matrix, and the other authors assessed the adequacy of the analyses and commented on possible complements. The findings may be biased because private institutions offering nursing education were excluded. These universities are affiliated with religious foundations in Norway, which may affect the emphasis on palliative care.

To increase credibility reliability, the analysis process was described in detail. Tables 2, 3, and 4 provide connections between the data and the findings.

Throughout the analysis and discussion, we worked on our objectivity to ensure confirmability. The first and last authors are particularly aware that their background as teachers in palliative care may have influenced their interpretations. Because different words are used to describe palliative care in Norwegian and English, some of the content of the description may have changed in the translation. The selected universities present their programme descriptions and course plans differently, which made these factors difficult to compare. Some universities had a list of different subjects that described the content of the course plans. Although palliative care was mentioned in several subject lists, these lists were not included because the aim of the document analysis was to identify and outline learning outcome descriptions. If we had included the lists, compulsory reading, and teaching schedules, a different impression of how the universities emphasize palliative care may have been found. Trustworthiness includes the question of transferability, which refers to 'the extent to which the findings can be transferred to other settings or groups'.[41] However, it is the reader's decision whether or not the findings can be transferable to their own context. To facilitate transferability, Graneheim and Lundman[41] suggested giving a clear description of culture and context, selection and characteristics of participants, data collection and the process of analysis and documentation. Thus, we have given a vigorous presentation of the findings that can serve as background for reflection to other contexts and settings, and thereby enhance transferability.

Further research

The findings in this document analysis only provide information from the universities' programme descriptions and course plans. Research on how learning outcomes on palliative care are integrated into compulsory reading and teaching schedules is recommended. Investigating whether nursing students attain learning outcomes in palliative care requires other research strategies. It would also be of interest to identify and outline how learning outcomes in topics other than palliative care are described in the national regulation and integrated into programme descriptions and course plans from universities in Norway. In Europe, where we have the consensus on descriptions of learning outcomes corresponding to the three education levels (bachelor's, master's and PhD), comparisons between countries in the northern and southern parts might be interesting to emphasize since the healthcare service structure and family responsibility varies geographically. From such perspectives, research may give rich knowledge on dealing with palliative care in different settings within Europe. Internationally, comparing curricula from countries where palliative care is highlighted in white papers and explicitly documented in nursing course plans and curricula, might shed light on different approaches to enhance palliative care competence.

Conclusion

This document analysis from the Norwegian nursing education demonstrated that palliative care, as described in the national regulation, was not systematically integrated into the selected universities' programme descriptions and course plans. A variation was revealed in the terminology used, and palliative care was emphasized differently in selected learning outcome descriptors, related subjects, and academic years.

Explicit use of the term palliative care should be included regarding learning outcomes in knowledge, skills, and competence, in both theoretical and clinical subjects. Coherence and progression throughout the learning trajectory must be emphasized to prepare the future workforce with the necessary palliative care competence to meet the patients' and their families' individual needs in a multidisciplinary environment across service levels. To ensure that graduated candidates have a common final competence in palliative care independent of the educational institution, national regulations and educational programmes explicitly addressing palliative care are recommended.

Author contributions

Study design: KV and EKG. Data collection: KV. Data analyses and discussion: KV, ALH, KTJ and EKG. All authors approved the final manuscript.

Data availability statement

The analysed documents were obtained from publicly accessible sources from the selected university websites.

Ethics approval

Ethical approval was not required for this work because the data were retrieved from open websites. The universities are not identifiable.

Conflict of interest

The authors declare that there is no conflict of interest.

Funding

The authors declared receipt of the following financial support for the research, authorship, and/or publication of this article: Our respective institutions funded the work on the article based on the authors' research times.

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