1 **Title: Nursing Students' Perceptions of Transferring Experiences in**

2 **Palliative Care Simulation into Practice**

3

4 **Abstract**

5 **Background:** Learning palliative care is challenging for nursing students. Simulation is

6 recommended as a learning approach. Whether experiences from simulation transfer into

7 clinical practice must be investigated.

8 **Objective:** The aim of this study was to explore nursing students' experiences of participating

9 in palliative care simulation and examine how they describe the perceived transfer of

10 knowledge, skills, and competence into clinical practise.

11 **Method:** This prospective, qualitative study was comprised of 11 in-depth interviews with

12 second-year bachelor nursing students. Content analysis was performed to analyse the

13 answers to open-ended questions.

14 **Results:** From this sample, simulation is a preferred method to gather knowledge, skills, and

15 attitudes towards palliative care. Realistic cases stimulated senses and feelings. Courage grew

16 through active participation and debriefing and influenced the students' self-confidence.

17 Debriefing seemed to alter the situation from one of chaos to control.

18 **Conclusions:** Experiences from the simulation were perceived to transfer to practice, serve as

19 a sound basis for clinical judgement, and enable communication with patients and their

20 relatives. Continuity in learning through simulation combined with practice is highlighted.

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25

26 **Key points**

27 - Palliative care simulation contributed to the participants' experience that influenced

28   their knowledge, skills, and attitude development

29 - Realistic cases stimulated senses and feelings

30 - Debriefing contributed to developing a perception of courage to meet patients and

31   their relatives

32 - Palliative care simulation gave the participants perceptions of increased self-

33   confidence to seek palliative care situations in clinical practice

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, Larkin, & Payne, 2013). However, nursing students find palliative care challenging to learn and perform (Hall-Lord, Petzäll, & Hedelin, 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, van der Riet and Jeong (2014) 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, Kelleher, & Chun Hua, 2015), in this field, reflection on competence and their own reactions to death is warranted (Gillan, van der Riet, & Jeong, 2014; Henoch et al., 2017). Reflection is emphasised as a cornerstone for learning in simulation-based education (Decker et al., 2013; Fanning & Gaba, 2007; Husebø, O'Regan, & Nestel, 2015), and simulation is recommended as an active learning approach to prepare students for palliative care (Kirkpatrick, Cantrell, & Smeltzer, 2017; Smith et al., 2018; Venkatasalu et al., 2015).

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 by Bloom et al. (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). The affective or emotional domain, which is a further development in the domain of knowledge, was elucidated by Krathwohl, Bloom, and Masica (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 & 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 & 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 & Gaba, 2007). Simulation is often used in advanced medical, surgical, obstetric, and paediatric courses (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 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.

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.

Methods

Design

A qualitative explorative design (Polit & 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.

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, Leino-Kilpi, & Salminen, 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, 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.

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.

126   *Table 1:* **Description of the simulation cases and learning outcomes used in this study**

127

128   Recruitment

129   Recruitment for the in-depth interviews occurred during the students' last week of hospital

130   practice. To avoid first-hand contact between the researchers and respondents (WMA 2013),

131   supervisors in the wards identified relevant candidates and informed the first author. The

132   students were contacted via email.

133

134   Participants

135   This study comprises 11 second-year bachelor nursing students. Inclusion criteria included

136   participation in palliative care simulation during their second or third practise period. They

137   should have gained experience in palliative care during that particular practise, representing

138 different genders and from various medical or surgical wards. Exclusion criteria included

139 students with substantial former palliative care experience.

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

140 *Table 2:* **Description of the participants`**

141

142 Data collection

143 The first author (KV), who is a palliative care specialist and educator, had taught the students

144 in a previous course but was not involved in this semester. Data collection was conducted in a

145 group room at the university. The interviews were audio-recorded. The other researchers

146 came from different departments or universities and were unknown to the students. The

147 research group developed a semi-structured interview guide based on the research question

148 *"What do nursing students describe as their experiences from simulation of palliative cases,*

149 *and what are their perceptions of the transition of knowledge, skills, and competence from*

150 *simulation into practise?"*

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

152

153   Data analysis

154   The first author (KV) transcribed the audio-recorded interviews verbatim. The last author

155   (EKG) checked every third transcript against the audio recordings. This study used content

156   analysis inspired by Graneheim and Lundman (2004) and Graneheim, Lindgren, and

157   Lundman (2017) to analyse answers to the open-ended questions. The first step, exploring the

158   interview text, was conducted by the first author who read the text several times with an

159   inductive approach to obtain the overall meaning and identify meaningful units. Without

160   reducing the core, the meaning units were coded by the authors (KV, ALH, KTJ, and EKG),

161   who then discussed how the units could be understood and interpreted (Graneheim &

162   Lundman 2004, Graneheim, Lindgren & Lundman 2017). To enhance the study's credibility

163   and confirmability (Lincoln & Guba1985), all of the authors discussed the analytic steps to

164   ensure agreement on a main theme, themes, and categories (Table 3). The researchers'

165   significant experience as nurses might have influenced their interpretations of the meaning

166   units or quotations.

167   Ethical considerations

168   The participants were informed both in writing and orally about the study purpose, that it was

169   voluntarily, they had a right to withdraw, and that their grades in practise would not be

170   affected. Furthermore, their data would be treated confidentially (World Medical Association

171   2013), and the study would be conducted in accordance with the ethical guidelines for nursing

172   research in the Nordic countries (Northern Nurses Federation, 2003). All of the participants

173   provided written consent. The simulation team discussed and took into account that the

174   participants might feel uncomfortable both in relation to palliative care and the simulation. To

175   avoid the possibility that their roles as both facilitators and interviewers might affect the

176   interviews, the authors of this article were not facilitators of the simulation.

177   **Findings**

178   The following themes were identified from the analysis: (1) train as you fight; (2) from chaos

179   to control; (3) and perceived transfer to practise (Table 3). A more latent theme emerged

180   through the themes and categories. The participants reported that they needed to leave their

181   comfort zones to participate in the simulation and debriefing. It sometimes felt like an

182   assessment. This was interpreted as challenging their courage. However, a safe learning

183   environment, new insights, and confidence received during the simulation and debriefing was

184   described to make the participants feel safer and more self-confident when making

185 relationships and clinical judgements in practise. The authors perceived that this increased the
186 participants' courage. An overarching theme was therefore interpreted as the courage to dare.
187

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.

188 *Table 3*: **Example from the content analysis including themes and connecting categories**

189

190 (1) Train as you fight

191 According to the participants, the simulation was more educational than lessons or self-study.
192 *"I say 'train as you fight.' You can have many lessens but by visualising and physically*
193 *acting, it will be a reflex reaction when you get into practise"* (9). This was explained as "*It's*
194 *easier to learn things practically as you'll remember the cases when you learn things in a*
195 *different way"* (4). They especially drew attention to their simulation experiences by applying
196 their senses and feelings. They experienced how body language influenced communication
197 and the value of keeping calm. *"I have not previously had a visual experience on the*
198 *importance of keeping calm and not panicking. In the second round, the nurses were much*
199 *calmer and then the patient became calmer"* (2). One case focused on common signs in a
200 dying patient and provided the participants' with experiences on clinical changes. "*It's easier*
201 *to remember when I can feel how you look for signs, when I can take the hand and feel the*
202 *skin"* (7). Some found it more logical to understand when they heard respiratory changes,
203 explanations, and feedback.
204 The participants described palliative care and simulation as an "out of the comfort zone
205 experience" that activated their emotions. *"At first I didn't want to, but one is supposed to get*
206 *out of one's comfort zone, and it's OK to have these kind of experience before you become a*
207 *nurse"* (1). Simulation was perceived as scary, and for some unnatural, especially those who
208 simulated with manikins. They needed to release their control, in the simulation and

209 debriefing, and expressed that *"It is not a good feeling to lose face in front of fellows if you do*

210 *something really wrong"* (2). They emphasised that the simulation was less scary than real

211 situations. Since they could not harm the patient, the simulation was described as a safe

212 learning environment. *"If you are uncertain in practise, you leave the situation without the*

213 *opportunity to gain insight into what would have been the right course of action"* (6). The

214 opportunity to not harm, but test and discuss different alternatives, gave them opportunities to

215 dare. *"Practise is very serious; the patient can die even in a learning situation. That can't*

216 *happen in simulation. Therefore, we dare more"* (2). They called attention to the facilitator's

217 role in relieving the pressure on their performance anxiety. "The facilitator's allowed us to

218 lower our shoulders and work without fear…. It made it much easier for us when we

219 simulated the cases" (9).

220 (2) From chaos to control

221 The participants said that their attitudes towards palliative care changed throughout the

222 debriefing, and reflecting upon the situation helped them manage it in a new way. *"We felt a*

223 *lack of control. The observers said that we were too busy with technical skills. Then we got*

224 *many tips on how we could be more present. We tried this, and the situation became*

225 *different"* (7). The opportunity to simulate twice was emphasised by the participants.

226 Perceived knowledge, skills, and a new attitude changed the situation and were expressed as

227 *"I felt we went from chaos to control"* (7). The participants agreed that reflecting on the

228 simulated situation provided an opening for new insights. *"Debriefing is mind-expanding and*

229 *a confirmation of one's knowledge that promotes a feeling of security. At the same time, you*

230 *get new knowledge from others"* (5).

231 For some of the participants, simulation was described as an assessment, and debriefing as an

232 examination. *"If it gets too much like an exanimation, I don't learn much"* (10). One

233 described the simulation and debriefing as an assessment of future skills. *"They judge you*

234 *from how good you will be in your profession"* (1). A better performance was experienced

235 when the level of expectation was low. The power structure between the students and

236 facilitator was interpreted as *"we are the kids in the room"* (2). The most preferred feedback

237 came from the other students. *"It's good that the facilitator says something, but it's just as*

238 *useful what the students say – we are more in agreement"* (5). The opportunity to participate

239 and discuss feedback was emphasised. *"Debriefing is more than feedback, you get a*

240 *discussion on the feedback and an opportunity to consider a better solution"* (2). The

241 discussion focused on what they had managed and what they could improve. *"The facilitator*

242 *does not break us down, but builds us up and tells us what is good and what we can do*

9

243 *differently"* (7). *"While the students often say 'well done,' the facilitator says 'well done*

244 *because,' and links it to theory"* (11).

(3) Perceived transfer to practise

246 The palliative care simulation gave the participants perceived self-confidence to seek

247 palliative care situations, establish good relationships, and use their clinical judgement. In

248 their opinion, a feeling of self-confidence was created in the simulated setting and was a result

249 of new knowledge regarding managing palliative care situations. *"Before the simulation, I*

250 *withdrew, afterwards in practice I had more knowledge, felt secure and more self-confident to*

251 *be in the situation and make choices. I recognised that my self-confidence transmitted to the*

252 *patient and family and contributed to a relaxed atmosphere"* (9). The simulation made

253 palliative care less scary. *"I think it was the simulation that made me dare to examine that*

254 *patient ... probably because I was safer than before"* (7). Some of the participants reflected

255 that the opposite might have happened if they had not felt a sense of achievement from the

256 simulation. *"I think the nervousness from the simulation could hold you back if you felt*

257 *insecure and didn't manage. The sense of security created in simulation helps you in*

258 *practise"* (10). Another participant was unaware of a connection. "*I'm not sure that I thought*

259 *about what I'd learned in simulation when I was in practise, but I did remember that in*

260 *simulation, I thought this was a good way to act"* (4).

261 The participants described how they used experiences from the simulation to be more present

262 in their relationships with patients. They knew more about how to respond, expressed through

263 relief and joy: *"The patient had hinted that she wanted to talk – I felt it was difficult to get*

264 *into it – but after we had simulated and seen how much it could help, I let the patient talk – I*

265 *dared to!"* (7). The participants reported that they had more self-confidence to respond to

266 relatives' needs. *"The relatives looked at me, and I noticed that they expected that I would be*

267 *scared. Nevertheless, I felt self-confident to talk to them about what they felt ... without the*

268 *simulation, I would have had more panic about how to talk to them"* (10). One referred to this

269 as courage*. "Actually, if I compare with earlier, I feel that I have a little more guts to talk to*

270 *relatives"* (11). If the situation became too complicated, they stepped back. "*I avoided a*

271 *situation. The patient was very young – he had many relatives present ... there was a lot of*

272 *fear and worries ... I did not feel safe enough"* (7).

273 Clinical signs in a dying patient observed in simulation were recognised in practise and

274 promoted the participants' clinical judgement. *"I was the first to recognise the patients'*

275 *apnoea period. We had talked about it in simulation ... so I thought hey, I have seen this*

276 *before. We don't simulate just to feel ready, it built self-confidence to get a reality check of*

277 *ones' knowledge"* (10). The simulation increased the students' awareness of what should be
278 emphasised with a dying patient. *"I stood with the blood pressure gauge in my hand, the*
279 *patient was dying. Then I thought, stop – what did we learn in simulation – the patient doesn't*
280 *need to know what his blood pressure is – he needs to know that someone is present. So I put*
281 *the blood pressure gauge away"* (7).
282 The participants were grateful for this consciousness-raising early in practise. *"Personally, I*
283 *had great benefit from the simulation at the start of the practise period because I got the*
284 *opportunity to use it and work on it"* (11). They underwent personal development and realised
285 that they could contribute to palliative care situations in a new way. *"I think both as a person*
286 *and a professional I can actually use this simulated experience"* (11).

Discussion

288
289 The aim of this study was to explore nursing students' experiences of participating in a
290 palliative care simulation and examine how they described the perceived transfer of
291 knowledge, skills, and competence into clinical practise. The interpreted overarching theme,
292 courage to dare, provided a basis to discuss how the participants' use and receive courage to
293 develop knowledge, skills, and competence in simulation, prerequisites for development to
occur and transfer into practise.
294 Hawkins and Morse (2014, p.266) defines courage in nursing practise as "Despite fear for self
295 and others, courage is ethical-moral "risk-taking" action with the intent to ensure safe patient
296 care". They argue, that courage can be learned and mentored, and that a core attribute to
297 courage is duty and responsibility, which manifests in advocacy (Hawkins & Morse, 2014).
298 The participants in this study reported that testing and discussing different alternatives during
299 the simulation was challenging. Corresponding to the findings of Kirkpatrick et al. (2017),
300 they reported that, when taking the challenge, stress and anxiety decreased while their self-
301 confidence increased concurrently with increased communication skills and a new attitude
302 towards palliative care.
303 Observing palliative care situations in simulation using their senses combined with the
304 opportunity to discuss the situations in debriefing, in line with Kolb's reflecting cycle (Kolb,
305 2015), was described as useful for recognising palliative care needs. This is in line with
306 findings of Gillan, Jeong, and van der Riet (2014) that support the view that experimental
307 learning by visualising and hands on experience combined with reflection in debriefing
308 increases knowledge in palliative care. In our study the findings refer to simulation both as
309 "out of the comfort zone" and a "safe learning environment." The participants said that they
310 felt vulnerable and were afraid of losing control and reported that they needed to use courage

311 to participate. They noted that if the simulation was too stressful, they did not learn much.

312 However, acceptance of making mistakes, opportunities to simulate twice, and the facilitators'

313 support were factors described as helpful for lowering their stress levels.

314 The participants described several prerequisites for the development of knowledge, skills, and

315 competence in the simulation. Realistic training in a safe environment is in this study was

316 referred to as "Train as you fight." This adage relies on a military expression for realistic

317 training (Rietjens, van Fenema, & Essens, 2013). Fight refers to the army, while in this

318 setting, the fight could be interpreted as the nursing performance. A safe learning environment

319 combined with debriefing seems to increased self-confidence. Flannery and Grace (1999, p.

320 36) defines self-confidence as "courage to act derived from certainty about one's capabilities,

321 values, and goals." It is characterised by belief in positive achievements, persistence, and self-

322 awareness, and promoted by knowledge, experience, motivation, and success. The

323 participants' description of "from chaos to control" refers to chaos in the room and chaotic

324 feelings. Even if the situation is not real, the feelings are (Kirkpatrick et al., 2017). As

325 previously described (Gillan, Jeong & van der Riet 2014; Kirkpatrick et al., 2017), the

326 participants in this study recognised through simulation that change of attitude from wanting

327 to cure the patient to simply being present and focusing on quality of life is a core competence

328 in palliative care. When using their knowledge, skills, and competence to be present, they

329 experienced control. Palliative care became less frightening. This finding corresponded to

330 results from Venkatasalu et al. (2015). A prerequisite to the feeling of changing chaos into

331 control can be that the students and facilitator worked together in action and reflection.

332 Reflection in debriefing is a cornerstone of simulation and promotes critical thinking (Decker

333 et al., 2013; Stroup, 2014). The opportunity to confirm one's own knowledge and take part in

334 others' perspectives seems to provide new insight. Adding the affective domain of learning in

335 debriefing (Gibbs 1988) increases engagement and learning (Husebø et al., 2015).

336 The present study describes a tension between debriefing that provides self-confidence and

337 debriefing as assessment. The participants emphasised the value of having a discussion, not

338 just feedback. Debriefing can create a potentially uncomfortable experience (Decker et al.,

339 2013). Combined with the emotional intensity associated with palliative care, the way

340 debriefing is implemented is of great importance for the learning outcome (Kirkpatrick et al.,

341 2017).

342 According to Campbell and Daley (2017), the reflecting process in simulation leads to

343 thoughts, actions, and learning outcomes for the better transfer of knowledge to practise and

344 more nuanced thinking about future tasks. To foster transformative learning, the simulation

345 cases require fidelity according to the equipment, environment, and psychological factors

346 (Jeffries, 2012). A safe learning environment is needed (Clapper, 2010).

347 Regarding the perceived transfer to practise, the participants said that they used the simulation

348 as a frame of reference to recognise clinical changes. They made clinical judgements and took

349 action. Reflections on paradigm cases that include knowledge on how to manage situations is

350 described as a way to identify practical knowledge that can translate to clinical settings

351 (Benner, 2010; Valen, Ytrehus, & Grov, 2011). Findings from Venkatasalu et al. (2015)

352 support the view that simulation prepares students to recall their learning in practise. Several

353 participants in this study were uncertain how they could have managed palliative care

354 situations without the simulation, but there are doubts. The translation of simulated

355 experiences to practise is not necessarily a straightforward process (Nash & Harvey, 2017).

356 One must consider the design, effective reflection through debriefing, the participants'

357 experience with the method, and the opportunity to use the knowledge in practise.

358 From this sample, changed attitudes and increased self-confidence seemed to influence the

359 perceived transition of knowledge, skills, and competence. The participants reported that they

360 were more self-confident in palliative care situations than before the simulation. It seems like

361 they use their courage to seek situations and pursue relationships with patients and relatives.

362 Nursing students struggle with the presence of relatives (Henoch et al., 2017). Few studies

363 deal with how students speak with family members (Kirkpatrick et al., 2017). This study

364 indicates that the participants gained knowledge and courage to talk to relatives and supports

365 recommendations to include relatives' perspective in palliative care education and simulation

366 (Alt-Gehrman, 2017; Hall-Lord et al., 2017; Henoch et al., 2017).

367 The participants in the present study reflected on their increased self-confidence as a result of

368 support from the group, and posited that the opposite might happen if their emotions were not

369 adequately managed in the simulation. Gibbs (1988) states that learners can return to feelings

370 of failure at a later stage when dealing with similar situations in practise. This emphasises the

371 importance of education when supporting students in both palliative care simulations and in

372 practise to reduce fear so courage can develop and the student can provide safe patient care.

373 The findings of this study indicate that combining simulation and clinical practise can

374 strengthen the learning process.

375 **Strengths and limitations**

376 The strengths of this study are user participation preparing realistic cases. The informants

377 were familiar with simulation as a learning approach. Four facilitators experienced in

378 simulation pedagogy used a briefing and debriefing guide to ensure similarities. The

379   simulation was combined with hospital practise and reflecting the learning outcomes in terms

380   of knowledge, skills, and competence in palliative care. The informants represented various

381   hospital wards and different genders and had none or few previous experiences with palliative

382   care. They all gained experience with palliative care situations during practise. The first

383   author collected all of the data.

384   Since recruitment was voluntary, a limitation can be that students who dislike simulation and

385   those not interested in palliative care might not be represented. We assumed that the use of a

386   manikin, as mentioned by the students, can reduce realism in the simulation; however, others

387   reported that the manikin represented a safe learning environment. The sample was collected

388   at a single institution and the number of informants was low. The purpose of studies based on

389   small samples is not to generalise but rather to gain in-depth knowledge and new hypotheses

390   from participants (Lincoln & Guba l985).

Implications for future research and nursing education

392   The authors suggest further studies with different methodological approaches focusing on

393   palliative care simulation. These can provide opportunities to evaluate the effect of the

394   simulation, and students can use knowledge, skills, and competence from the simulation in

395   practise.

396   Active learning approaches are recommended in higher education. The simulation of

397   palliative care cases is one method to gain competence necessary for nursing, particularly

398   when including the issues of knowledge, skills, and competence.

Conclusion

400   The findings of this study indicate that simulating palliative care cases, the practical

401   performance and the reflection connected cases and performance, provide courage to seek

402   palliative care situations in practise. Courage is used and received through active participation

403   and debriefing. Realistic cases stimulate the participants' senses and feelings. Simulation is

404   described as an out of the comfort zone experience and a safe environment for learning. The

405   focus changes from action-oriented to being present. It is necessary to decrease evaluation and

406   be aware of the learning environment to ensure positive outcomes. In this study, the

407   participants reported that they used the simulated experience in practise to develop

408   relationships with patients and relatives and for clinical judgements and decision-making.

409   Continuity in learning through simulation combined with practise was emphasised.

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