

“Do Not Protect Us, Train Us.”—Swiss Healthcare Students’ Attitudes Toward Caring for Terminally Ill Patients

OMEGA—Journal of Death and Dying

0(0) 1–22

© The Author(s) 2021



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/00302228211007003

journals.sagepub.com/home/ome

Typhaine Maïko Juvet¹,
Marc-Antoine Bornet²,
Jean-François Desbiens³,
Diane Tapp³, and Pauline Roos¹

Abstract

Positive attitudes and a sense of competence toward end-of-life care are the key to adequately support terminally ill patients. This qualitative study aims to explore healthcare students’ attitudes toward caring for terminally ill patients. Eleven students from the University of Applied Health Sciences in Switzerland participated in focus groups. Attitudes were overall positive. Most participants felt that supporting dying patients was a way to achieve professional fulfillment. However, most students felt not competent in palliative care and lacking experience. They wanted to receive better training, more specifically in good practices and appropriate behaviors. Our study fills a knowledge gap regarding the opinions and pedagogical needs of healthcare students, and highlights the importance of experiencing end-of-life care during the educational process. We recommend early exposure to terminally ill patients and

¹Haute Ecole Arc Santé (HE-Arc Santé), University of Applied Sciences and Arts Western Switzerland (HES-SO), Neuchâtel, Switzerland

²Lausanne University Hospital (CHUV), University of Lausanne (UNIL), Lausanne, Switzerland

³Faculty of Nursing, Laval University (ULaval), Québec, Canada

Corresponding Author:

Pauline Roos, Haute Ecole Arc Santé (HE-Arc Santé), University of Applied Sciences and Arts Western Switzerland (HES-SO), Route de Moutier 14, 2800 Delémont, Switzerland.

Email: pauline.roos@he-arc.ch

appropriate attitudes toward death and dying as part of the bachelor's curriculum, accompanied by benevolent guidance from teachers and health professionals.

Keywords

terminally ill patients, palliative care, attitudes toward death, nursing students, Switzerland

Nursing students may encounter death daily upon entering their profession. To overcome this challenge, students must develop advanced skills and attitudes to provide holistic, high-quality care to patients at the end of life. These skills include managing physical symptoms, providing psychological support, and considering patients' families—all while respecting patients' spiritual beliefs. Students must maintain positive attitudes toward these patients to offer them and their loved ones adequate support (Merlane & Cauwood, 2020).

Literature Review*Nursing Training in Switzerland*

In Switzerland, palliative care is valued, and government strategies strongly support teaching and caring institutions in this field (Federal Office of Public Health et al., 2014). Despite its importance, the topic of death and dying is covered minimally in the nursing curriculum (OdASanté, 2015). As an illustration, at the nursing school where this study was conducted, palliative care is first taught in the one-year preparatory curriculum as a one-day course and a half-day laboratory on topics related to death and end-of-life care. Later, the three-year bachelor's in nursing science curriculum includes four days of classes and two and a half days in the laboratory. The curriculum also includes internships at healthcare institutions where most students encounter death and dying.

Worldwide Nursing Training

Inadequate instruction on death and dying is a global issue, and numerous initiatives are being developed to rectify it (Cavaye & Watts, 2014). Previous studies showed interesting approaches for improving palliative care curricula, offering focused and practical end-of-life care education (Bloomfield et al., 2015; Dobbins, 2011) and simulations (Carman et al., 2016; Jafari et al., 2015). Such simulation exercises have been shown to help students connect theory and practice (Gillan et al., 2014; Norman, 2012).

Attitudes Toward Caring for Terminally Ill Patients

Studies on healthcare students' attitudes have illustrated the impact of teaching students about death and dying, finding that nursing students did not feel competent enough to care for terminally ill patients due to a lack of education and practice (Munòz-Pino, 2014). In contrast, specific training can support positive attitudes among students (Abudari et al., 2014; Mahiro et al., 2014), which are associated with better end-of-life care (Wang et al., 2018). Furthermore, students' attitudes toward end-of-life care tended to improve as they continued their studies. Positive attitudes were associated with professional exposure to terminally ill patients (Arslan et al., 2014; Iranmanesh et al., 2008), students' personal experience with death, and age (Dimoula et al., 2019; Lange et al., 2008; Sakai et al., 2013). Likewise, in Switzerland, a recent study showed that students' positive attitudes were associated with age, year of study, professional encounters, and self-perceived palliative care nursing skills (Laporte et al., 2020). However, these quantitative data do not provide a comprehensive view of students' attitudes, nor do they explain how students perceive their curriculum and educational needs.

Research Questions

This study aims to explore the attitudes of healthcare students toward death and end-of-life care and to help elucidate the pedagogical needs of Swiss healthcare students. In this context, the following research questions have been addressed:

- What are students' attitudes toward caring for terminally ill patients?
- How are students' attitudes influenced by 1) social representations of death, 2) their personal beliefs and values and those of their patients, 3) the prospect of the students' own deaths or the deaths of relatives, 4) students' training and perceived skills in palliative care, and 5) students' experiences with death in their personal and professional lives?

Methods

Setting

This descriptive qualitative study, which was part of a larger mixed study, was conducted in June 2019, at the Haute Ecole Arc Santé (HE-Arc Santé), University of Applied Sciences and Arts Western Switzerland, in Switzerland. This health sciences school, which enrolls about 400 students spread over two sites (Neuchâtel and Delémont), offers a three-year bachelor's degree in nursing science and a related preparatory grade. The preparatory grade is a one-year course to prepare students who want to enter the nursing curriculum, but also

other healthcare curricula (e.g., technician in medical radiology, physiotherapy, osteopathy, occupational therapy, dietetics and nutrition, and midwifery).

Sample

A total of 178 students, involved in the quantitative phase of the study (Laporte et al., 2020), were informed that they could additionally participate in focus groups. To participate in the quantitative phase of the study, participants had to be preparatory grade students, first-years nursing student or third-year nursing students at one of the two school sites. Students in second year were excluded for two reasons. First, they pre-tested the quantitative questionnaire. Second, they were in internship during the data collection period. A student who did not participate in the quantitative phase could not take part in the focus groups.

Several recalls were made in order to raise interest in the research participation and to increase the study sample. Thirteen participants registered and eleven came to the focus groups (90.9% women, average age 24.4 years old). Of these participants, two were in preparatory grade and nine in the third year. Seven participants were Christians (mostly Catholic) and four were atheist.

Data Collection

Data were collected during focus groups. This method has proved to be useful for a rich understanding of participants' experiences and beliefs (Gill et al., 2008; Morgan, 2014). Two focus groups, one in each school location, took place in June 2019, during a lunch break. Each participant received a lunch box and could eat during the meeting. The interviews lasted approximately one hour. They were conducted by a trained research assistant or a trained research associate, in accordance with usual good practice in conducting focus groups (Gill et al., 2008; Powell & Single, 1996). Interviews were audio recorded and then transcribed verbatim.

Attitudes towards caring for terminally ill patients were assessed using a self-made, semi-structured questionnaire. The selected topics have all been identified in the literature as determinants of attitudes; social representations of death and dying; patients and students' own personal beliefs and values; relationship with one's own and relatives' death; career paths (Braun et al., 2010; Wang et al., 2018; Wessel & Rutledge, 2005); lived experience influenced by previous personal and professional experiences with death (Hagelin et al., 2016; Iranmanesh et al., 2008; Lange et al., 2008); training assessments received (Abudari et al., 2014; Kassa et al., 2014); and sense of competence (Max & MacKenzie, 2017). Open questions were asked to the group and each student could choose whether to answer or not.

Ethical Aspects

Volunteers provided written informed consent to participation in the study and to audio recording. In cases in which the participation in the study could generate suffering, the researcher was available to listen and help; the school nurse was also informed and later followed up with the participant. The study was performed in accordance with the principles of the latest Declaration of Helsinki, and with the applicable Swiss legislation. Since the project did not deal with diseases or the functioning of the human body, it did not fall within the scope of the Human Research Ordinance. This information was formally verified with the Ethics Commission of Canton Vaud (CER-VD, www.cer-vd.ch), which indicated that we did not have to submit our protocol for evaluation.

Coding and Analyses

Coding and analyses were performed using NVivo software (Version 12, QRS International). The data from the focus groups were transcribed verbatim. We adopted a mixed-methods approach for coding and a thematic analysis according to 3 levels of codes. Initially, we used a deductive approach for the survey category. These general category (first level of codes), which are exposed in the method section, were defined in advance based on a previous study's results (Laporte et al., 2020). We then added some themes (second level of codes) arising from the interviews using an inductive approach (Miles & Huberman, 2003). Finally, the codes, representing the third level, reflected a deeper degree of nuance in the participants' responses. Therefore, each statement was assigned one or more codes according to the continuous thematization method (Paillé & Mucchielli, 2012). The codes were then grouped according to their relationship to the themes. Two independent analysts, one of whom was blinded to the study, coded the transcripts following the triangulation principle (Côte & Turgeon, 2002). The two coders confronted their results and developed a common synthesis. The most relevant topics, that best represent the students' relationship to death, were selected. They constitute the chapters of the results section. For each of them, a summary of the coding was produced and illustrated with some representative verbatim.

Results

Palliative care and death were found to be important topics for participants. They knew that supporting dying patients is fundamental, and they wanted to do it well. Students agreed that sometimes death can be a relief. However, they expressed complex emotions related to death, mostly fear.

Fear and Questioning Regarding Care for Terminally Ill Patients

Fear was a central theme and was expressed in multiple ways by the respondents. Respondents reported they experience, first of all, the fear of the dead body, of being confronted with its coldness, odor, or appearance. However, fear concerned communication as well: for example, fear of failing to find an appropriate verbal and nonverbal language to communicate with patients and their loved ones. Other fears mentioned were those of having values or representations significantly differing from those of the patients, and of becoming worn out or overwhelmed if facing death too often. Preparatory grade participants expressed greater fear than did third-year bachelor students. For their part, third-year students remembered the fear they had at the beginning of their studies.

One of these students had profound questions about the care she had provided: “[...] the hardest thing for me during the first experiences, after the patient died, was asking myself, Did he get everything he needed? Did he leave feeling confident? Did he preserve his dignity? Have I been able to meet all his needs? Did he suffer?”

Social, Professional and Family Taboo

We found that students felt a social taboo regarding death. They thought that this taboo was hindering their learning process and making it harder to gain practical skills related to dealing with death. The taboo was not only observed in society, but also perceived among health professionals. A participant described how she had experienced a professional taboo related to non-acceptance: “The doctor made it clear that the death of his patient was a failure: he had failed to cure him.” She pointed out that this experience had taken place in a service that does not have as its primary mission of caring for end-of-life patients, which probably influenced the doctor’s reaction.

Some students also described a family taboo. They felt that they were not free to speak about death, even when death was discussed in a hypothetical perspective, such as in the context of advance care planning. As an example, a participant said, “[...] in my family, death is taboo. It is as if the fact of talking about death would necessarily cause it.”

Influence of Personal and Patients’ Beliefs and Values on the Care Provided

Participants described how their attitudes and the way they provided support were influenced by their personality. In fact, their personal values, representations, spirituality, and previous experiences were particularly determinant. One of them summed it up as follows: “Whether it is physical comfort, relationships or whatever, I think that our lives, our experiences and the way we perceive care have a big influence.”

Though, this does not mean that they were not open to others. They were in fact sensitive to other people's values and wanted to remain open to different cultures and beliefs. Most of them thought that end of life is easier or more peaceful when the patient believes in a life after death, even when the caregiver is not a believer. However, they were aware that care can be more complicated if their values disagree with those of the patient, family members, or other caregivers.

A student summarized the group's concerns as follows: "It is important to be aware of that. We can also have our own representations, which do not fit at all with those of the patient we are dealing with, and of his family. And this makes it difficult to take care of them because we have our own representations, they have theirs, but if we do not know them, it is a lot of discussion that we need to have, yet we have to be comfortable talking about this kind of things with the [patients'] families."

Another participant said, "It was quite complicated [...] because we have different values, maybe we have a different spirituality and then we try to work with people who are really scared, who say, 'There is nothing left for me afterwards and I am very scared and uh, it scares me, and I do not want to.'"

Experience of Death's Influence on Attitude

The personal experience of death, such as the loss of a loved one, played a significant role in the participants' attitudes. This is apparent through several indicators, such as the understanding of the phenomenon, the habituation, the creation of care-related values, and the consideration of the feelings of patients' relatives.

A participant saw it this way: "I find that also our personal experience shapes a bit the way we see death and dying, [...] it creates our values, our representations, and so, afterwards, we provide support that is a little bit personalized, and [...] ways of reacting that are different, in relation to our experience."

Another student added, "For my own part, the academic knowledge that we learn about end-of-life support has helped me a little bit, but what has helped me a lot more were all the personal and lived experiences related to death, which also help to better understand what the patient is going through."

However, according to some students, personal experience did not help them to know how to behave and position themselves in the event of death in a professional context. For instance, a death episode in a student's personal life was more of a hindrance, for fear of transference and of feeling personally involved.

Negative Relationship With Death of Relatives

Most participants had a negative relationship with the death of their loved ones (be it experienced or imagined). The negative reports were linked to the fear of

loss, sudden or tragic death, unprepared end of life, pathological grief, family taboo, therapeutic obstinacy, and poor care by the healthcare staff. Nonetheless, some of them reported positively about well-prepared end of life, personal involvement in situations related to end of life, communication of wishes and advance directives, sharing memories of the lost loved ones, and acceptance of the life cycle.

Divided Opinions About One's Own Death

Participants showed several different (positive and negative) types of relationships with the idea of their own death. Negative reports were related to the fear of the unknown, fear of pain, fear of leaving loved ones, feeling that they had not lived long enough (but considering their average age was 24 years, this is understandable). Positive reports were related to beliefs about life after death, awareness in enjoying life, seeing death as a relaxing and relieving experience for the body, and the desire to be prepared for this important step in their life (advance directives, organ donation, etc.).

A student illustrated her positive attitude toward her own death: "I am pretty, serene, in the sense that death is not something I will be afraid of. [...] Somehow, for me, there are two possibilities: either there is something after death, and so much the better, or there is nothing, and so much the worse; [...] either way we will not be here anymore, [...]. Because, once you are dead, until proven otherwise, you are not really aware of what is going on."

Confrontation With Death in Career Path

Most participants projected themselves into professions and positions where they would face death and dying. This suggests that students did not choose their career path to avoid death. On the contrary, some felt that accompanying dying people was a way to achieve professional fulfillment.

A student explained it this way: "It was dealing with death or dying that I actually felt most complete in my role, that I felt like I was really me, and that I could advocate the values I believe in and be the nurse that I wanted to be."

Most students described their desire to help and support patients and their families in crisis situations. One participant said that she would have liked to develop home palliative care. Only one student expressed the fear of being emotionally worn down or not strong enough if she would be faced with death too often.

Sense of Competence's Development With Experience

Only some third graders felt competent and considered themselves well trained. These students had the impression that they became competent as much through practice, during internships, and as they were exposed to death in their personal

experience, as they did in courses. They noticed positive changes in their personal development: they affirmed they were more mature, more able to approach the subject of death, and less uncomfortable with it. They thought they had more tools than before the training. They managed to take the initiative and become involved more and more frequently. They developed internal resources and became aware of the usefulness of leveraging external resources, such as psychological support.

All students though, including those who felt skilled, pointed out the lack of experience. Above all, they said they needed practice and (personal or professional) experience to feel sufficiently prepared and to be able to adapt to different situations. Additional personal academic work (bachelor thesis, portfolio) also helped.

A third-year bachelor student, one of the most self-confident, expressed herself in this way: "I think we have tools now [...] to be able to talk to families, to go to families, to tell them that their relatives, their family members, their loved ones, are at the end of their life. They have 15 million questions: 'For when it is? Do we have to do a funeral wake? Do we have to do this, do we have to do that?' And what do we have the right to tell them, what do we not have the right to tell them? How do we react? You walk into a room, they are all crying, what is the right thing to do? To stay with them? Or rather to quickly close the door? [...] And I think that in this, accompanying the families, we have not been trained enough, and I would need it, to know how to behave. When they arrive, what do we say? Do we say hello with a little smile? Or should we pretend to be sad?"

Insufficient Training on Good Practices

In general, participants were quite critical about the training they had received in palliative care and saw nearly twice as many negative elements as positive elements. Both bachelor and preparatory grade students would have appreciated more theory at the beginning of their training, in order to gain better knowledge. They found that the content of the training was not thorough enough to prepare them for the experiences they would face in the internship. For example, a student who had dealt with a brain-dead patient during his internship highlighted a lack of knowledge about the medical aspect of death (brain death vs. cardiac death). The classroom work had focused on representations and experiences acquired through group work, rather than on theoretical inputs. Though, students stated they would prefer group work to be proposed at the end of training, once they have already experienced caring for end-of-life patients. This way, during group work, they could share their own experiences rather than discussing a video or a cartoon board, with which they do not identify themselves at all.

A student gave her opinion on the teachings received, "I think we have attended many courses called 'palliative care', but I have often been

disappointed with the theoretical input that was offered during these courses. Actually, it is often absent. We do a lot of group work, but without any theoretical input beforehand. I think we should go much further. . . .”

They wished more training in good practices and advisable behaviors. Their questions were: “How to behave? What should we say? What not to do? Can we touch? Can we cry?” They needed training to manage their and others’ emotions and to know how to protect themselves from others’ difficult feelings. They asked about communication strategies with patients and relatives. In sum, they wanted to learn how to be helpful and adequate caregivers in these challenging moments.

A student recalled her experience: “We had a course, I do not remember what it was called, on managing emotions. Everybody cried in the class, and it was ‘nice,’ but in the end it did not teach us much [. . .]. We did not really do anything with it, and that would have been interesting, I think.”

Participants wanted professors or experts to talk about their own lived experience and the way they normally manage the situation, in terms of acts and emotions. They wished real testimony of patients or relatives, telling about the attitudes they would expect from a nurse. Many students affirmed they would have needed feedback from an expert also in reflective exercises. They wanted the teacher to be able to show them how to go further, rather than each group of students explaining to the class what they had understood.

One student put it this way: “What I missed in classes is a teacher’s vision of what we discuss in the group. I notice that in these works, we are left with many questions. Did I do the right thing? Was I in my role? Did I not let my personal feeling get in the way of my professionalism? So maybe the supervision of a professor or somebody who has experience in this could make us feel more confident and then maybe help us move forward.”

Participants affirmed they appreciated being made aware of the human side of accompaniment and non-drug measures. The inputs on the diverse cultural and religious rites (good practices, what to do, what not to do in each religion) were useful to them. They thought they were well-trained in symptom management; however, they did not feel sufficiently prepared to be in contact with relatives: they felt helpless in supporting and accompanying them in their grief.

A student said, in an emotional way, “I felt helpless [. . .] in relation to relatives: I think that all the palliative care courses we had were mainly patient-focused, focused on the healthcare system, focused on many things, but not focused on caregivers, and on relatives of the person dying. And I really felt that [. . .] we did not really have any leads, any direction on how to handle it.”

Discussion

We found that attitudes towards caring for terminally ill patients were positive. Our results are consistent with those of several studies, such as two studies

conducted in Turkey that showed that nursing students' attitudes toward caring for dying patients were also positive (Arslan et al., 2014; Gurdogan et al., 2019). Similarly, a study in Italy among nursing students also reported a positive attitude on the part of respondents (Leombruni et al., 2013), as did a study in Japan (Nandasena et al., 2018) and another study in England among a similar population (Grubb & Arthur, 2016). Participants did not avoid death; on the contrary, they wanted to support dying people, because they knew that they were important for these patients; they were also respectful and open-minded to others' beliefs.

These results are consistent with the well-documented representation of nursing, which is that caring for vulnerable patients and offering whole-person compassionate care are core values of the nursing profession (Ricot, 2016). Nurses are considered to have qualities such as kindness, warmth, compassion, and genuineness (Johnston & Smith, 2006). This probably explains why a large number of healthcare students show an interest in developing knowledge in palliative care (Dobrowolska et al., 2019).

Fear and Questioning Regarding Care for Terminally Ill Patients

It is, however, important to point out that the emotion most cited by the participants was fear. Our results are consistent with those of several studies also in this aspect. This is the case of research conducted in Korea (Chung et al., 2015), Portugal (Maritza Espinoza & Olivia Sanhueza, 2012) and Mexico (Mondragón-Sánchez et al., 2015) with nursing students who showed that they were afraid of death. First, there was fear of the lifeless body. This has already been referenced by several studies in which many nursing students reported having experienced insecurity, discomfort, and fear in contact with the dying person or the dead body (Munòz-Pino, 2014; Parry, 2011; Peters et al., 2013; Rotter & Braband, 2020). Second, there was fear of the inevitability of death and of the unknown. As reported by several authors, this is the moment when students' illusion of immortality vanishes and they realize they will have to face their own finitude (González & Juan, 2011; McKenzie & Brown, 2017; Parry, 2011; Ronayne, 2009; Wallace et al., 2009). In addition, participants expressed fear of doing wrong or not knowing. It was communication with relatives what worried students the most and felt the least competent in. This is in accordance with a previous study that showed how communication with the family of a dying patient and management of their reactions were considered the most difficult tasks for nursing students (Dobrowolska et al., 2019).

Social, Professional and Family Taboo

Nursing students from our sample felt impeded from developing their skills toward caring for terminally ill patients by societal and family taboos they

were experiencing. Nowadays, death is denied, shameful, and unspeakable (Ariès, 1975; Jankélévitch, 1977). In medicine, this is reflected through the relentless therapeutic imperative (Cox-North et al., 2013), patient avoidance, and lack of communication (Braun et al., 2010; Matsui & Braun, 2010). Nursing students, who cannot discuss death with their teachers, colleagues, or relatives, may be at risk of developing fear of the dying process, maladaptive behavior toward family members, and poor care toward the dying patient (Xu et al., 2019). Lakasing (2014) affirmed that, to prevent nursing students from developing these negative attitudes, our society needs a cultural change in order to open a discussion about death. It has to begin with specific training in the nursing students' curriculum as well as the development of the awareness that death can be positive and a relief from suffering and disability.

Influence of Personal and Patients' Beliefs and Values on the Care Provided

Participants admitted that their personality and their personal representations could affect their attitudes and support toward terminally ill patients. In some cases, it was a positive influence, as they were more sensitive to certain aspects that affected them personally. However, they were also aware that this could have a negative impact on their judgment. Thus, they were careful about controlling their emotions in the presence of patients.

Values and spirituality were significant topics for the participants. They knew that these are important aspects for terminally ill patients. They wanted to be open-minded and accessible so that the patient could freely talk to them. In this regard, a study conducted in Australia with nursing students highlighted the importance of values and beliefs in relation to one's own death and the care of dying patients. Being aware of one's values and beliefs allowed to feel less apprehensive and to have a more positive attitude toward one's own death and the death of patients (Adesina et al., 2014).

However, some participants expressed difficulties in managing other people's values when they were different from their own. This is probably due to the different individual belief systems and the multiple religions currently represented in Switzerland. Our findings are corroborated by a previous study in which students reported great difficulties in providing spiritual care of dying people and addressing their psychological needs (Dobrowolska et al., 2019).

Experience of Death's Influence on Attitude

Many participants had not yet had an experience with death. For those who had, personal experience was as much formative as professional experience or school training. However, these experiences had often been negative because of lack of debriefing and accompaniment.

A previous study suggested that students learned more from real-life experience than from theory in class (Wong, 2017). Another study showed that personal experience of a family member's death made students face following deaths more calmly (Grubb & Arthur, 2016; Xu et al., 2019). Other results suggested that professional exposure seemed to promote positive attitudes toward death (Arslan et al., 2014; Hagelin et al., 2016; Iranmanesh et al., 2008). A recent quantitative study conducted in the same setting showed that the number of end-of-life patients met professionally was the most important factor influencing attitudes (Laporte et al., 2020). This is in accordance with our point of view that experience and exposure to death seem to be important factors for students' attitude, sense of competence, and self-confidence. For example, in this study sample, students with less experience (preparatory grade) expressed more fear than others.

Exposure provides an opportunity to develop knowledge and skills as well as confidence. Moreover, this early confrontation will help to reduce students' negative imagery and anxiety (Ek et al., 2014). Some researchers recommend scenario simulation and hospice ward visits to expand nursing students' experience, reduce fear, and increase their calm and understanding toward dying patients (Wong, 2017; Xu et al., 2019). Of course, in order to remain positive, and to develop confidence in their capacity for caring, students need support and discussion about their experience with their teachers and professional supervisors (Ek et al., 2014).

Relationship Between One's Own and Relatives' Death

Some students from the present study were afraid of their own death. Others were serene and saw it as a natural part of life. Most of them had a negative experience linked to the death of a loved one and the related fear. Nevertheless, these negative feelings did not impact their attitude toward caring for terminally ill patients. On the contrary, it motivated them to do better.

Only a few studies have investigated the relationship between nursing students and their own and relatives' death as well as their impact on their attitudes. One of these, in accordance with these results, showed that most students perceive death simply as a real fact and neither fear nor welcome it (Wong, 2017). Attitude toward death seems to be related to family approach to it and to the environment in which people grew up. In fact, another study showed that nursing students who accepted and faced death the most naturally were those who could discuss freely about death in their families. The authors of the mentioned study suggested that family open discussion about death could develop a natural and positive attitude by reducing fear and removing death mysteriousness (Xu et al., 2019).

Confrontation With Death in Career Path

Participants did not want to avoid death during their internship and their professional life. Most of them had purposely chosen a specialty where they would be confronted with dying people.

The reasons usually given for this career choice were that palliative nurses are altruistic, want to help patients and their families, and respect patients' dignity (Dobrowolska et al., 2019). This probably explains why a large number of students showed an interest in developing knowledge in palliative care (Dobrowolska et al., 2019). Another study showed that students may acknowledge the confrontation with death as a challenge for professional fulfillment or personal growth (Barnard et al., 2006). However, a large number of nursing students found it stressful to work with dying patients, which could be a problem in their professional life (Dobrowolska et al., 2019). The reasons they cited were the fear that negative emotions, caused by the death and the family's grief, could affect their personal life and mental health. Another reason was the lack of skills and personal abilities to manage this type of situation (Dobrowolska et al., 2019). However, Calma and colleagues highlighted that providing students with skills and knowledge during their curriculum are key factors for developing desire and confidence to work in this field after graduation (Calma et al., 2019).

This is a crucial topic for the future of nursing care. As the population ages and chronic diseases increase, nurses skilled in palliative care are going to be needed more than ever. The fact that the future generation of nurses agrees to practice whole-person-centered care is promising for future end-of-life patients.

Sense of Competence's Development With Experience

Most participants did not feel ready to care for dying people. They all pointed out the lack of practice. This is in accordance with a previous study that reported that students felt unprepared to take care of a dead body and meet relatives despite having taken a course in palliative care (Hench et al., 2017). In the present study, only some third-year bachelor students felt competent enough to dispense palliative care. These students expressed both the most positive attitude and the highest confidence in their own skills. Conversely, preparatory grade students expressed greater fear and lower sense of competence than did other students.

As shown by previous studies, self-competence is influenced by age, experience, and training in end-of-life care (Herrero-Hahn et al., 2019). Positive attitudes towards caring for terminally ill patients are also associated with more experience (Laporte et al., 2020), training (Paul et al., 2019), and greater age (Dimoula et al., 2019; Lange et al., 2008; Mahiro et al., 2014; Matsui & Braun, 2010). Self-competence and attitude seem to be strictly related, and are

influenced by the same factors. In fact, we believe that the feeling of competence is “a component” of positive attitudes: that mean that positive attitudes could be enhanced by developing a sense of competence and confidence. This can be obtained via targeted teaching and rewarding exercises (Ek et al., 2014). Specific training has been shown to increase knowledge, deepen understanding, and enhance students’ sense of security (Berndtsson et al., 2019).

Insufficient Training on Good Practices and Implications for Nursing Schools

Although some third-year students felt trained enough in palliative care, all participants expressed the need for better training. First, students needed more theoretical classes at the beginning of the training and in preparatory grade. Then, they wished to work on practical competence instead of purely theoretical knowledge. This means behaviors and good practices, emotion management, and relationship and communication skills to deal with families. Students wanted to work in a nursing position in demanding situations. They needed the experience and supervision of a teacher, acting as a role model. Most of all, all students expressed the need to be confronted with death, in order to learn to deal with it and develop as nurses. To our knowledge, this is the first study to describe the opinions and needs of healthcare students toward caring for terminally ill patients using qualitative methods.

Based on these results, we recommend early exposure to terminally ill patients as part of the bachelor’s curriculum. Courses and practical exercises should prepare students in a practical way to deal with and care for terminally ill patients (Berndtsson et al., 2019; Brajtman et al., 2009; Henoch et al., 2017). During their internships, students should not be protected from exposure to death. As previously suggested in the present paper, we believe that this early confrontation will help reduce students’ negative imagery and anxiety (Ek et al., 2014). In order to live this experience positively, however, students should be accompanied by benevolent support and guidance from teachers and health professionals (Ek et al., 2014).

Strengths and Limitations

This study has some limitations. As only volunteers took part in the study, there may have been a selection bias. Indeed, it may have occurred that participants had more positive attitudes than other students. Another selection bias is that no first-year students took part in the study. This limits generalizability of results and does not allow comparisons between all years of study. Furthermore, this study was conducted in one school, spread over two sites in Switzerland. These limitations must be considered before generalizing the results to other demographic and public health contexts.

A small number of students took part in the study; this could depend on the period during which the focus groups took place. In fact, the exam sessions were close, and participants had to come during their free time. This may have discouraged some students who would have been interested in participating otherwise. For these reasons mentioned above, we are not sure whether we have reached data saturation. However, students generally agreed among themselves, i.e. one student answered the question, and the others agreed. Moreover, the focus groups were each attended by six and seven participants each, which is an appropriate size for this type of interview (Gill et al., 2008; Powell & Single, 1996).

Conclusion

End-of-life care is definitely a major topic in our society, as population is ageing, and healthcare professionals as well as professionals from other related disciplines question themselves on how they can best support dying people. The fresh perspective we provide on the topic makes our research interesting and potentially beneficial not only to the field but to society itself.

This study fills a previous knowledge gap regarding the opinions and pedagogical needs of healthcare students toward caring for terminally ill patients. Our study highlights the importance of early exposure to end-of-life patients and provide scope for further discussion about lived experience and associated feelings. Several educational strategies are suggested in the present article to help future nurses develop positive attitudes and self-confidence toward end-of-life care.

Acknowledgments

The authors thank Marc Stanek for conducting one of the focus groups and Sandrine Corbaz-Kurth for the transcription and coding of the interviews.

Author Contributions

Pauline Roos, Typhaine M. Juvet, Jean-François Desbiens, Diane Tapp, and Marc-Antoine Bornet designed the research. Typhaine M. Juvet conducted focus groups, coding, and analysis. All authors interpreted the data. Typhaine M. Juvet, Marc-Antoine Bornet, and Pauline Roos wrote the first draft of the manuscript. All authors participated in the writing of subsequent versions and approved the final article.

Authors' Note

The full dataset can be provided upon reasonable request to the corresponding author.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was funded by the University of Applied Sciences and Arts Western Switzerland (HES-SO, www.hes-so.ch/).

Ethical Approval

No ethical approval was needed. Since the project did not deal with diseases or the functioning of the human body, it did not fall within the scope of the Human Research Ordinance. This information was formally verified with the Ethics Commission of Canton Vaud (CER-VD, www.cer-vd.ch/), which indicated that we did not have to submit our protocol for evaluation.

References

- Abudari, G., Zahreddine, H., Hazeim, H., Assi, M., & Emar, S. (2014). Knowledge of and attitudes towards palliative care among multinational nurses in Saudi Arabia. *International Journal of Palliative Nursing*, 20(9), 435–441. <https://doi.org/10.12968/ijpn.2014.20.9.435>
- Adesina, O., DeBellis, A., & Zannettino, L. (2014). Third-year Australian nursing students' attitudes, experiences, knowledge, and education concerning end-of-life care. *International Journal of Palliative Nursing*, 20(8), 395–401. <https://doi.org/10.12968/ijpn.2014.20.8.395>
- Ariès, P. (1975). *Essais sur l'histoire de la mort en Occident du Moyen Age à nos jours* [Essays on the history of death in the west from the middle ages to the present]. Seuil.
- Arslan, D., Akca, N. K., Simsek, N., & Zorba, P. (2014). Student nurses' attitudes toward dying patients in Central Anatolia. *International Journal of Nursing Knowledge*, 25(3), 183–188. <https://doi.org/10.1111/2047-3095.12042>
- Barnard, A., Hollingum, C., & Hartfiel, B. (2006). Going on a journey: Understanding palliative care nursing. *International Journal of Palliative Nursing*, 12(1), 6–12. <https://doi.org/10.12968/ijpn.2006.12.1.20389>
- Berndtsson, I. E. K., Karlsson, M. G., & Rejnö, Å. C. U. (2019). Nursing students' attitudes toward care of dying patients: A pre- and post-palliative course study. *Heliyon*, 5(10), e02578. <https://doi.org/10.1016/j.heliyon.2019.e02578>
- Bloomfield, J. G., O'Neill, B., & Gillett, K. (2015). Enhancing student communication during end-of-life care: A pilot study. *Palliative and Supportive Care*, 13(6), 1651–1661. <https://doi.org/10.1017/S147895151500022X>
- Brajtman, S., Higuchi, K., & Murray, M. A. (2009). Developing meaningful learning experiences in palliative care nursing education. *International Journal of Palliative Nursing*, 15(7), 327–331. <https://doi.org/10.12968/ijpn.2009.15.7.43422>
- Braun, M., Gordon, D., & Uziely, B. (2010). Associations between oncology nurses' attitudes toward death and caring for dying patients. *Oncology Nursing Forum*, 37(1), E43–E49. <https://doi.org/10.1188/10.ONF.E43-E49>
- Calma, K. R. B., Halcomb, E., & Stephens, M. (2019). The impact of curriculum on nursing students' attitudes, perceptions and preparedness to work in primary health care: An integrative review. *Nurse Education in Practice*, 39, 1–10. <https://doi.org/10.1016/j.nepr.2019.07.006>

- Carman, M. J., Sloane, R., Molloy, M., Flint, E., & Phillips, B. (2016). Implementation of a learning bundle to promote end-of-life education for prelicensure nursing students. *Journal of Hospice and Palliative Nursing, 18*(4), 356–363. <https://doi.org/10.1097/NJH.0000000000000258>
- Cavaye, J., & Watts, J. H. (2014). An integrated literature review of death education in pre-registration nursing curricula: Key themes. *International Journal of Palliative Care, 2014*, 1–19. <https://doi.org/10.1155/2014/564619>
- Chung, M. Y., Cha, K. S., & Cho, O. H. (2015). Correlation between self-esteem, death anxiety, and spiritual wellbeing in Korean University students. *Korean Journal of Adult Nursing, 27*(3), 367–374. <https://doi.org/10.7475/kjan.2015.27.3.367>
- Côte, L., & Turgeon, J. (2002). Comment lire de façon critique les articles de recherche qualitative en médecine [How to critically read qualitative medicine research articles]. *Pédagogie Médicale, 3*(2), 81–90. <http://dx.doi.org/10.1051/pmed:2002018>
- Cox-North, P., Doorenbos, A., Shannon, S. E., Scott, J., & Curtis, J. R. (2013). The transition to end-of-life care in end-stage liver disease. *Journal of Hospice and Palliative Nursing, 15*(4), 209–215. <https://doi.org/10.1097/NJH.0b013e318289f4b0>
- Dimoula, M., Kotronoulas, G., Katsaragakis, S., Christou, M., Sgourou, S., & Patiraki, E. (2019). Undergraduate nursing students' knowledge about palliative care and attitudes towards end-of-life care: A three-cohort, cross-sectional survey. *Nurse Education Today, 74*, 7–14. <https://doi.org/10.1016/j.nedt.2018.11.025>
- Dobbins, E. H. (2011). The impact of end-of-life curriculum content on the attitudes of associate degree nursing students toward death and care of the dying. *Teaching and Learning in Nursing, 6*(4), 159–166. <https://doi.org/10.1016/j.teln.2011.04.002>
- Dobrowolska, B., Mazur, E., Pilewska-Kozak, A., Dońska, K., Kosicka, B., & Palese, A. (2019). Predicted difficulties, educational needs, and interest in working in end of life care among nursing and medical students. *Nurse Education Today, 83*, 104194. <https://doi.org/10.1016/j.nedt.2019.08.012>
- Ek, K., Westin, L., Prah, C., Österlind, J., Strang, S., Bergh, I., Hénoch, I., & Hammarlund, K. (2014). Death and caring for dying patients: Exploring first-year nursing students' descriptive experiences. *International Journal of Palliative Nursing, 20*(10), 509–515. <https://doi.org/10.12968/ijpn.2014.20.10.509>
- Federal Office of Public Health, Swiss Conference of the Cantonal Ministers of Public Health, & Palliative CH. (2014). *Framework concept for palliative care in Switzerland. A basis for defining palliative care for the implementation of the «National Strategy for Palliative Care»*. Federal Office of Public Health. <https://www.bag.admin.ch/bag/en/home/strategie-und-politik/nationale-gesundheitsstrategien/strategie-palliative-care/rahmenkonzept-palliative-care.html>
- Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: Interviews and focus groups. *British Dental Journal, 204*(6), 291–295. <https://doi.org/10.1038/bdj.2008.192>
- Gillan, P. C., Jeong, S., & van der Riet, P. J. (2014). End of life care simulation: A review of the literature. *Nurse Education Today, 34*(5), 766–774. <https://doi.org/10.1016/j.nedt.2013.10.005>
- González, J. M. L., & Juan, L. C. (2011). Evolution of the emotional impact of death and the dying process in student nurses. *Metas de Enfermería, 14*(7), 62–66.

- Grubb, C., & Arthur, A. (2016). Student nurses' experience of and attitudes towards care of the dying: A cross-sectional study. *Palliative Medicine, 30*(1), 83–88. <https://doi.org/10.1177/0269216315616762>
- Gurdogan, E. P., Kimci, E., & Aksoy, B. (2019). The relationship between death anxiety and attitudes toward the care of dying patient in nursing students. *Psychology, Health & Medicine, 24*(7), 843–852. <https://doi.org/10.1080/13548506.2019.1576914>
- Hagelin, C. L., Melin-Johansson, C., Henoch, I., Bergh, I., Ek, K., Hammarlund, K., Prahll, C., Strang, S., Westin, L., Österlind, J., & Browall, M. (2016). Factors influencing attitude toward care of dying patients in first-year nursing students. *International Journal of Palliative Nursing, 22*(1), 28–36. <https://doi.org/10.12968/ijpn.2016.22.1.28>
- Henoch, I., Melin-Johansson, C., Bergh, I., Strang, S., Ek, K., Hammarlund, K., Lundh Hagelin, C., Westin, L., Österlind, J., & Browall, M. (2017). Undergraduate nursing students' attitudes and preparedness toward caring for dying persons—A longitudinal study. *Nurse Education in Practice, 26*, 12–20. <https://doi.org/10.1016/j.nepr.2017.06.007>
- Herrero-Hahn, R., Montoya-Juárez, R., Hueso-Montoro, C., Martí-García, C., Salazar-Blandón, D. A., & García-Caro, M. P. (2019). Cultural adaptation, validation, and analysis of the self-efficacy in palliative care scale for use with Spanish nurses. *International Journal of Environmental Research and Public Health, 16*(23), 4840. <https://doi.org/10.3390/ijerph16234840>
- Iranmanesh, S., Savenstedt, S., & Abbaszadeh, A. (2008). Student nurses' attitudes towards death and dying in South-east Iran. *International Journal of Palliative Nursing, 14*(5), 214–219. <https://doi.org/10.12968/ijpn.2008.14.5.29488>
- Jafari, M., Raffei, H., Nassehi, A., Soleimani, F., Arab, M., & Noormohammadi, M. (2015). Caring for dying patients: Attitude of nursing students and effects of education. *Indian Journal of Palliative Care, 21*(2), 192–197. <https://doi.org/10.4103/0973-1075.156497>
- Jankélévitch, V. (1977). *La mort*. Flammarion.
- Johnston, B., & Smith, L. N. (2006). Nurses' and patients' perceptions of expert palliative nursing care. *Journal of Advanced Nursing, 54*(6), 700–709. <https://doi.org/10.1111/j.1365-2648.2006.03857.x>
- Kassa, H., Murugan, R., Zewdu, F., Hailu, M., & Woldeyohannes, D. (2014). Assessment of knowledge, attitude and practice and associated factors towards palliative care among nurses working in selected hospitals, Addis Ababa, Ethiopia. *BMC Palliative Care, 13*(1), 6–17. <https://doi.org/10.1186/1472-684X-13-6>
- Lakasing, E. (2014). Death's worsening taboo: is hampering the provision of high quality palliative care. *British Journal of General Practice, 64*(622), 243–243. <https://doi.org/10.3399/bjgp14X679769>
- Lange, M., Thom, B., & Kline, N. E. (2008). Assessing nurses' attitudes toward death and caring for dying patients in a comprehensive cancer center. *Oncology Nursing Forum, 35*(6), 955–959. <https://doi.org/10.1188/08.ONF.955-959>
- Laporte, P., Juvet, T., Desbiens, J. F., Tapp, D., Pasquier, J., & Bornet, M. A. (2020). Factors affecting attitudes toward caring for terminally ill patients among nursing students in Switzerland: A cross-sectional study. *BMJ Open, 10*(9), e037553. <https://doi.org/10.1136/bmjopen-2020-037553>

- Leombruni, P., Miniotti, M., Bovero, A., Zizzi, F., Castelli, L., & Torta, R. (2013). Attitudes toward caring for dying patients: An overview among Italian nursing students and preliminary psychometrics of the FATCOD-B scale. *Journal of Nursing Education and Practice*, 4(3), 188–196. <https://doi.org/10.5430/jnep.v4n3p188>
- Mahiro, S., Takashi, N., & Satoko, N. (2014). Work engagement and attitudes toward caring for dying patients and families among home-visiting nurses in Japan. *International Journal of Palliative Nursing*, 20(7), 343–348. <https://doi.org/10.12968/ijpn.2014.20.7.343>
- Maritza Espinoza, V., & Olivia Sanhueza, A. (2012). Fear of death and its relationship with emotional intelligence of nursing students in concepción. *Acta Paulista de Enfermagem*, 25(4), 607–613. <https://doi.org/10.1590/S0103-21002012000400020>
- Matsui, M., & Braun, K. (2010). Nurses' and care workers' attitudes toward death and caring for dying older adults in Japan. *International Journal of Palliative Nursing*, 16(12), 593–598. <https://doi.org/10.12968/ijpn.2010.16.12.593>
- Max, E., & MacKenzie, M. A. (2017). Just in KASE: Evaluating nursing student's knowledge, attitudes, and Self-Efficacy toward care for the dying patients. *Journal of Hospice & Palliative Nursing*, 19(4), 356–362. <https://doi.org/10.1097/NJH.0000000000000356>
- McKenzie, E. L., & Brown, P. M. (2017). Nursing students' death anxiety and fear towards dementia patients. *Australasian Journal on Ageing*, 36(3), E32–E35. <https://doi.org/10.1111/ajag.12414>
- Merlane, H., & Cauwood, L. (2020). Core principles of end-of-life care. *British Journal of Nursing (Mark Allen Publishing)*, 29(5), 280–282. <https://doi.org/10.12968/bjon.2020.29.5.280>
- Miles, M. B., & Huberman, A. M. (2003). *Analyse des données qualitatives* [Qualitative data analysis]. De Boeck.
- Mondragón-Sánchez, E. J., Cordero, E. A. T., Espinoza, M., de, L. M., & Landeros-Olvera, E. A. (2015). A comparison of the level of fear of death among students and nursing professionals in Mexico. *Revista Latino-Americana de Enfermagem*, 23(2), 323–328. <https://doi.org/10.1590/0104-1169.3550.2558>
- Morgan, D. (2014). *The Focus Group Guidebook*. SAGE Publications. <https://doi.org/10.4135/9781483328164>
- Munòz-Pino, I. P. (2014). Experience of nursing students upon their first care encounter with terminally ill patients. *Investigación y Educación En Enfermería*, 32(1), 87–96. <https://doi.org/10.1590/S0120-53072014000100010>
- Nandasena, H. M. R. K. G., Sakai, S., & Koyama, T. (2018). Analysis of characteristics related to the attitudes of nursing students toward terminal care: A comparative study between Sri Lanka and Japan. *Journal of Health Sciences*, 14(1), 35–41. [http://dspace.lib.niigata-u.ac.jp/dspace/bitstream/10191/47195/1/14\(1\)_35-41.pdf](http://dspace.lib.niigata-u.ac.jp/dspace/bitstream/10191/47195/1/14(1)_35-41.pdf)
- Norman, J. (2012). Systematic review of the literature on simulation in nursing education. *The ABNF Journal: Official Journal of the Association of Black Nursing Faculty in Higher Education, Inc.*, 23(2), 24–28. <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=b6028f6b-f06e-4c23-800b-91a79b0935e8%40sdc-v-sessmgr03>
- OdASanté. (2015). *Compétences des professionnels de la santé dans le domaine des soins palliatifs de base. Organisation faîtière nationale du monde du travail santé*

- [Competencies of health professionals in the area of basic palliative care]. <http://www.sbfh.admin.ch>
- Paillé, P., & Mucchielli, A. (2012). *L'analyse qualitative en sciences humaines et sociales* [Qualitative analysis in human and social sciences]. Armand Colin.
- Parry, M. (2011). Student nurses' experience of their first death in clinical practice. *International Journal of Palliative Nursing, 17*(9), 448–453. <https://doi.org/10.12968/ijpn.2011.17.9.448>
- Paul, S. S., Renu, G., & Thampi, P. T. (2019). Creating a positive attitude toward dying patients among nursing students: Is the current curriculum adequate? *Indian Journal of Palliative Care, 25*(1), 142–146. https://doi.org/10.4103/IJPC.IJPC_148_18
- Peters, L., Cant, R., Payne, S., O'Connor, M., McDermott, F., Hood, K., Morphet, J., & Shimoinaba, K. (2013). How death anxiety impacts nurses' caring for patients at the end of life: A review of literature. *The Open Nursing Journal, 7*, 14–21. <https://doi.org/10.2174/1874434601307010014>
- Powell, R. A., & Single, H. M. (1996). Methodology matters-V focus groups. *International Journal for Quality in Health Care: Journal of the International Society for Quality in Health Care, 8*(5), 499–504.
- Ricot, J. (2016). Histoire et éthique des soins palliatifs [History and ethics of palliative care]. *Cités, 66*(2), 49–58. <https://doi.org/10.3917/cite.066.0049>
- Ronayne, C. (2009). A phenomenological study to understand the experiences of nurses with regard to brainstem death. *Intensive & Critical Care Nursing, 25*(2), 90–98. <https://doi.org/10.1016/j.iccn.2008.06.001>
- Rotter, B., & Braband, B. (2020). Confidence and competence in palliative care: A comparison of traditional and nontraditional transfer nursing students' lived learning experiences. *Journal of Hospice and Palliative Nursing: The Official Journal of the Hospice and Palliative Nurses Association, 22*(3), 196–203. <https://doi.org/10.1097/NJH.0000000000000643>
- Sakai, M., Naruse, T., & Nagata, S. (2013). Home visiting nurses' attitudes toward caring for dying patients, and related workplace factors. *International Journal of Palliative Nursing, 19*(4), 195–204. <https://doi.org/10.12968/ijpn.2013.19.4.195>
- Wallace, M., Grossman, S., Campbell, S., Robert, T., Lange, J., & Shea, J. (2009). Integration of end-of-life care content in undergraduate nursing curricula: Student knowledge and perceptions. *Journal of Professional Nursing, 25*(1), 50–56. <https://doi.org/10.1016/j.profnurs.2008.08.003>
- Wang, L., Li, C., Zhang, Q., & Li, Y. (2018). Clinical nurses' attitudes towards death and caring for dying patients in China. *International Journal of Palliative Nursing, 24*(1), 33–39. <https://doi.org/10.12968/ijpn.2018.24.1.33>
- Wessel, E. M., & Rutledge, D. N. (2005). Home care and hospice nurses' attitudes toward death and caring for the dying: Effects of palliative care education. *Journal of Hospice and Palliative Nursing, 7*(4), 212–218. <https://doi.org/10.1097/00129191-200507000-00012>
- Wong, W. Y. (2017). The concept of death and the growth of death awareness among university students in Hong Kong: A study of the efficacy of death education programmes in Hong Kong universities. *Omega, 74*(3), 304–328. <https://doi.org/10.1177/0030222815598461>

Xu, F., Huang, K., Wang, Y., Xu, Y., Ma, L., & Cao, Y. (2019). A questionnaire study on the attitude towards death of the nursing interns in eight teaching hospitals in Jiangsu, China. *BioMed Research International*, 2019, 3107692. <https://doi.org/10.1155/2019/3107692>

Author Biographies

Typhaine Maïko Juvet, MSc, is a scientific assistant at the University of Applied Sciences and Arts Western Switzerland.

Marc-Antoine Bornet, MD, is a physician at the Lausanne University Hospital, in Switzerland.

Jean-François Desbiens, PhD, is a professor of nursing at the Laval University, in Canada.

Diane Tapp, PhD, is a professor of nursing at the Laval University, in Canada.

Pauline Roos, PhD, is a professor of nursing at the University of Applied Sciences and Arts Western Switzerland.