The Impact of Medical Assistance in Dying (MAiD) Education on the Knowledge and the Beliefs of Students in a French Undergraduate Nursing Program

by

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Abstract

Medical Assistance in Dying (MAiD) can bring out positive and negative emotions in nurses. Nurses must feel comfortable with their role, be knowledgeable, and practice their skills according to the laws and regulations. Literature shows that education positively impacts nursing students' knowledge, beliefs, and comfort about MAiD. Although Canadian nurses' have been involved with MAiD since 2016, education in undergraduate programs wasn't implemented until 2020. This study explored the impact of an education program about MAiD on the knowledge and beliefs of students in the French undergraduate nursing program. A longitudinal quasi-experimental design was used, which was informed by the Theoretical Domains Framework. Findings showed that some sociodemographic factors were significantly associated with knowledge levels. The educational intervention resulted in an increase in knowledge and retention, and impacted beliefs. These results can inform nursing practice, future research, as well as policy development.

Key Words

Medical Assistance in Dying / MAiD, Nurse / RN, Family, Implementation, Healthcare Providers / HCP, Physician Assisted Suicide / PAS, Education, Palliative Care, Theoretical Domains Framework

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Table of Contents

List of Tables

List of figures

List of Appendices

Chapter 1: Introduction

In 2016, the Canadian Federal Government enacted a new law giving eligible Canadian adults the ability to request Medical Assistance in Dying [MAiD]. According to the Ministry of Health and Long-Term Care (2021), MAiD is an option for patients suffering from a serious and incurable disease, which gives them the possibility to end their life before the suffering becomes unbearable and impossible to control. Many people may be involved throughout the process of MAiD including the patient, family members, friends, pharmacists, physicians, nurse practitioners [NP] as well as registered nurses [RN]. Although the roles and responsibilities of regulated healthcare professionals have been established by law, there has been minimal education for nurses through governing bodies or nursing programs.

Between its legalization in 2016 and 2021, there were 9,798 MAiD-related deaths in Ontario, and 31,664 in Canada (Government of Canada, 2022b). In 2021 alone, there were 3,102 MAiD-related deaths in Ontario and 10,064 in Canada (Government of Canada, 2022b). In 2021, the most common underlying medical condition prompting the MAiD process was cancer (65.6 %) followed by cardiovascular disease (18.7%), chronic respiratory conditions (12.4%), and neurological conditions (12.4%) (Government of Canada, 2022b). Men represented 52.3% of MAiD-related deaths (Government of Canada, 2022b). In Canada, the average age for MAiD was 76.3 years old, while in Ontario the average age was 76.9 years old (Government of Canada, 2022b). The main reasons for requesting MAiD were loss of the ability to participate in activities (86.3%), being unable to do activities of daily living (83.4%), and concern/or inadequate pain control (57.6%) (Government of Canada, 2022b). In 2021, MAiD was provided in hospitals

(28.6%), palliative care facilities (19.6%), private residences (44.2%), and residential care facilities (6.1%) (Government of Canada, 2022b).

Since MAiD is relatively new, minimal research has been conducted. The majority of published research has focused on the experiences of patients, families, physicians, NPs, nurses, and other health professionals. Low competence and confidence levels have been reported by physicians and other healthcare professionals who had not received formal education on MAiD (MacDonald et al., 2018).

Despite these challenges, the personal experiences of healthcare providers delivering MAiD were positive (Beuthin et al., 2018). However, beliefs about MAiD often depended upon whether the healthcare provider had received education about MAiD before being involved in the process. Mallory (2003) used Quint's theory of the Nurse and the Dying Patient (1967) in her study, suggesting that when nursing students do not have the education focused on caring for dying patients, they experience anxiety. Studies confirm that education is essential in caring for the dying and those receiving MAiD. One study showed that providing education about MAiD to Canadian nursing students improved knowledge and comfort levels in post-semester surveys (Canning & Drew, 2022). In another study, Jafari et al. (2015) showed that education about death and dying had a positive effect on nursing students' care for the dying. Mallory (2003) had similar results, where nursing students scored more positively towards the care of the dying post-educational intervention.

Nurses have important new responsibilities related to MAiD and these are listed in the College of Nurses of Ontario [CNO] (2021) Guidance for Nurses on MAiD Practice. A nurse has the responsibility to provide education to the patient and families about MAiD and answer any questions they have, all while adhering to the laws and regulations and not encouraging patients to pursue MAiD (Canadian Nurses Protective Society [CNPS], 2021; CNO, 2021). Nurses must provide support to the patients and comfort to the families before, during, and after the MAiD process, as well as conduct post-mortem care (CNO, 2021). If patients request/speak to nurses about MAiD, they must notify the physician of the request/discussion. During the process, nurses are considered to be participating in MAiD if they insert an IV line that will be used to administer the medication (CNO, 2021). Two intravenous lines are typically inserted to ensure the continuous flow of the process if one line stops working (CNO, 2021). Nurses may also act as independent witnesses to the patient's written request (CNO, 2021). During the MAiD process, the nurse is to continue providing all other care to the patient not related to MAiD.

Nurses are called upon to prepare to meet this new and important role in interdisciplinary teams offering MAID. Even newly graduated nurses are expected to be able to competently work through their obligations in the MAiD process. Since nurses spend a considerable amount of time with patients, they are the ones with whom patients most often discuss and seek answers regarding care and treatment (Canadian Nurses Association [CNA], 2017). Nurses are often the first professional with whom a patient will address the idea of MAiD. Therefore, nurses need to be comfortable and knowledgeable on this topic (CNA, 2017).

When this study commenced, there was a lack of research regarding MAiD. Most of the research has been conducted in other countries where euthanasia has been legal since the early 2000s. Research has been done on the impact of MAiD on healthcare workers, however, very few studies were conducted in Canada (Beuthin et al., 2018). A review of the literature failed to yield any studies that have been conducted to explore nursing students' knowledge and beliefs regarding MAiD.

1.1 Research Problem

Medical professionals who are involved in delivering MAiD must follow the Criminal Code of Canada, under section 241(b), otherwise, they can be found guilty of a criminal act (Government of Canada, 2022a). MAiD is a complex process and includes various steps relevant to each healthcare discipline.

The CNO (2019) has a document listing 101 competencies nurses must assume when providing care to patients. All competencies are classified under the different roles nurses can assume, such as clinician, professional, communicator, collaborator, coordinator, leader, advocate, educator, and scholar (CNO, 2019). In 2020, the CNO made it mandatory for nursing education bodies to introduce the topic of MAiD in the Bachelor of Science in Nursing [BScN] curricula. The topic of MAiD was added to the CNO Registered Nurses Entry-To-Practice Competencies (CNO, 2019). The new competency follows: The clinician will "*1.15 Incorporate knowledge about ethical, legal, and regulatory implications of medical assistance in dying (MAiD) when providing nursing care"* (CNO, 2019, p 5). Nurses have a new set of skills they must adhere to unless practicing conscientious objection (CNO, 2021). However, even if practicing conscientious objection, nurses must still understand MAiD and its ethical, legal, and regulatory implications.

Before 2020, MAiD was not a requirement for entry-to-practice knowledge for nurses, however once legalized, nurses were expected to participate, regardless of whether or not they had received education related to it. Nurses who had graduated prior to 2020 were required to educate themselves regarding MAiD by accessing online self-teaching, reading workplace policies, or attending in-services. Nursing organizations, such as the CNPS, the Canadian Association of Schools of Nursing [CASN], the CNA, and the CNO have continued to revise their policy and regulatory documents to offer RNs guidance as the understanding of MAiD processes and the legislation continue to evolve. To adhere to this new competency, baccalaureate nursing programs are now providing MAiD education to students.

The CASN (2012) explains the importance of knowledge regarding end-of-life care prioritizing comfort, pain, and symptom management. At first, there was no mention of MAiD in CASN's National Nursing Education Framework document (CASN, 2012). However, a new updated Framework was published in November 2022 defining that end-of-life care is "end-of-life care encompasses all the options that are available at that stage in life, including palliative care and medical assistance in dying" (CASN, 2022, p. 24).

In addition to the updated competency related to MAiD, the CNO identifies that nurses must demonstrate specialized knowledge for palliative or end-of-life care where the nurse *“Provides pain and symptom management, psychosocial and spiritual support, and support for significant others to meet clients’ palliative care or end-of-life care needs”* (CNO, 2018, p 8). However, it is important to note that MAiD offered in the end-of-life phase is different from palliative care. Although palliative care and MAiD are both offered in the end-of-life phase, they are two separate processes. They are often mistakenly used interchangeably when teaching end-of-life care. MAiD is a different way of dying, resulting in sudden death, which is different from palliative care, where the patient is supported while deteriorating over time (CNA, 2015). The nursing role in these two instances is very different and therefore there is a need for separate guidelines and unique teaching.

The nursing profession is in constant evolution. Nursing graduates and novice nurses must know the legal, ethical, professional, and personal implications of their participation in MAiD. The education novice nurses receive on this subject during their undergraduate education is considered pertinent since they have an important role during end-of-life care (Pftizinger Lippe & Becker, 2015). Since MAiD competencies are now a part of undergraduate nursing curricula it is important to evaluate the impact of education about MAiD on the knowledge and beliefs of students as this is expected to have an impact on their future practice and the quality of care offered.

1.2 Research Question

There has been limited research evaluating the impact of MAiD education programs on the practice of students in a baccalaureate nursing program. MAiD is a potentially controversial and difficult topic for nursing students and all nurses involved, however, education has been shown to positively impact nursing students' knowledge and beliefs towards their participation in MAiD (Barrere et al., 2018; Pfitzinger Lippe & Becker, 2015). The literature review conducted thus far reveals that all members involved; patients, families, and healthcare workers have many different beliefs and values about MAiD and their experiences (Beuthin et al., 2018; Dransart et al., 2017; Francke et al., 2015; Ganzini et al., 2009; Holmes et al., 2018; MacDonald et al., 2018; Nuhn et al., 2018; Wagner et al., 2011; Wright et al., 2017). In addition, the minimal amount of research conducted with students must be addressed.

Given the complexities of MAiD, the lack of knowledge that undergraduate BScN students may have regarding MAiD, and the new requirement for schools of nursing to ensure the attainment of this competency, there is a need to explore this topic within nursing education. The goal of this research was to explore the impact of a MAiD education program on the knowledge and beliefs of students in an undergraduate nursing program

The research question guiding this study was: *What is the impact of an education program about Medical Assistance in Dying (MAiD) on the knowledge and beliefs of students in the French undergraduate nursing program at Laurentian University?*

The null hypothesis for this research was the following: H0 – An education program of MAiD will not have a significant impact on the knowledge and beliefs of students. The alternative hypothesis was H1 – An education program of MAiD will have a significant impact on the knowledge and the beliefs of students.

1.3 Methodology

The target population for this study was French undergraduate nursing students at Laurentian University in years one to four. Ethics approval was received, and from there the researcher sought support from the program's faculty as well as consent from the students who wished to participate. A quasi-experimental study was conducted. Sociodemographic factors are explained in further chapters, however, a population of students in an undergraduate university program has the potential to vary with respect to sociodemographic factors. There were 105 potential participants in the targeted undergraduate program.

The knowledge and beliefs of students were evaluated with a questionnaire that was informed by the theoretical framework of Cane et al. (2012). This framework assumes that there are links between certain factors and behaviors of healthcare professionals. These factors include knowledge, skills, social/professional role and identity, beliefs about capabilities, optimism, beliefs about consequences, reinforcement, intentions, goals, memory/attention and decision processes, environmental context and resources, social influences, emotions, and behavioral regulation (Cane et al., 2012). This framework has been used by researchers in various healthcare professions to address problems with the implementation of evidence-based practice and of interventions to modify behaviours (Cane et al., 2012). It was therefore helpful with a complex subject like MAiD. This framework helped guide the preparation of an education program that targets each of the factors that are linked to MAiD.

Students participated in two different sessions, one month apart, with one Pre-Test, an education piece, and two Post-Tests in total. The education intervention is found in Appendix D. The administered questionnaires evaluated the students' knowledge and beliefs about MAiD; it is found in Appendix G. No incentives were given for participation.

1.4 Significance or Aim of the Research

Nurses are most often the first professional with whom patients will start the discussion about receiving MAiD (Francke et al., 2015; Wright et al., 2017). In addition, MAiD care is different from traditional end-of-life care (McMechan et al., 2019). Nurses require education during their baccalaureate degree to develop competency and to provide compassionate care (Pfitzinger Lippe & Becker, 2015).

The goal of this study was to evaluate the effectiveness of an educational intervention on the knowledge and beliefs of undergraduate students about MAiD. Without MAiD education at the undergraduate level, patients and their family members could be at risk of not being adequately and properly supported. It is possible that nurses could lack confidence in their role and not be able to provide high-quality MAiD care. Nurses need to know about the legal aspects of MAiD and be comfortable and knowledgeable while providing patient care associated with MAiD. Nurses' comfort and knowledge are essential during the MAiD process since they play an important role in supporting patients and their family members and supporting quality care (CNA, 2017).

Chapter 2 of this thesis is a narrative literature review that explores a range of topics about MAiD. This includes nursing organization policies and guidelines and their influence on baccalaureate nursing program curricula, the difference between palliative care and MAiD, the experience of all members involved in the process, and finally the impact of education on the knowledge and beliefs of students. Chapter 3 describes several nursing theoretical frameworks related to MAiD. The theoretical framework which was utilized for the development of the questionnaires is explained in depth. Chapter 4 outlines the methodology of the study, including limitations encountered during the research, and identifies areas of potential research bias. Analysis of the data and findings are shared in Chapter 5. Discussion about the findings, as well as nursing implications is reviewed in Chapter 6.

Chapter 2: Literature Review

Since MAiD is new to practice and research in Canada, a narrative literature review was conducted, to explore what is currently known. The literature review was updated with new regulations and organizational policies, as the MAiD legislation changed over the years since its legalization. According to Green et al. (2006), "the purpose of a literature review is to objectively report the current knowledge on a topic and base this summary on previously published research" (p. 102). In particular, the literature review was conducted to determine what was known about the experience of individuals involved in the MAiD process. This included the patients who requested MAiD and their reason for doing so, as well as the experience of the family members and close friends (their feelings, acceptance, participation, and outcomes following the death). Next, since nurses play a large role in the delivery of care to these patients and caregivers, such as friends and family, their experience, among the other healthcare workers involved, was examined. MAiD is a new and added role to the scope of practice of nurses and, for that reason, needed to be integrated into undergraduate education. Therefore, the impact of education on nursing students was also explored.

2.1 Methodology for Narrative Review

An unsystematic narrative review was conducted to summarize previously published research results related to MAiD (Green et al., 2006). Narrative reviews are “helpful in presenting a broad perspective on a topic and often describe the history or development of a problem or its management” (Green et al., 2006, p. 103).

The quality of articles was analyzed using the Joanna Briggs Institute [JBI] analytic tools (JBI, 2017; JBI, 2020a; JBI, 2020b; and JBI, 2020c). The purpose was to ensure that the articles included in the final review met recognized research standards. The JBI (2022) is a global organization that promotes evidence-based decision-making to help health service delivery. JBI was established in 1996 as a research institute in South Australia and was created to inform clinical decision-making (JBI, 2022). The JBI (2020) created critical appraisal tools to "assess the methodological quality of a study and to determine the extent to which a study has addressed the possibility of bias in its design, conduct and analysis" (p. 2). Used for analysis of the articles were checklists for qualitative research (JBI, 2020a), cross-sectional studies (JBI, 2020b), quasi-experimental studies (JBI, 2017), and case control studies (JBI, 2020c).

Articles were categorized during the critical appraisal (Green et al., 2006). After this, the findings of the research were reviewed and then synthesized into a meaningful discussion concerning the purpose of this research study (Green et al., 2006).

2.2 Literature Search Method

Green et al., (2006) state that the “first step in writing a narrative overview is to perform a preliminary search of the literature” (p 105). To complete this narrative literature review, five databases were used. These included the Cumulative Index to Nursing and Allied Health Literature [CINAHL], Google Scholar, Medline, PubMed, and ProQuest Nursing & Allied Health Premium. Keywords used were: Medical Assistance in Dying, nurse, family, implementation, healthcare providers [HCP], physician-assisted suicide [PAS], end-of-life /palliative care, and education.

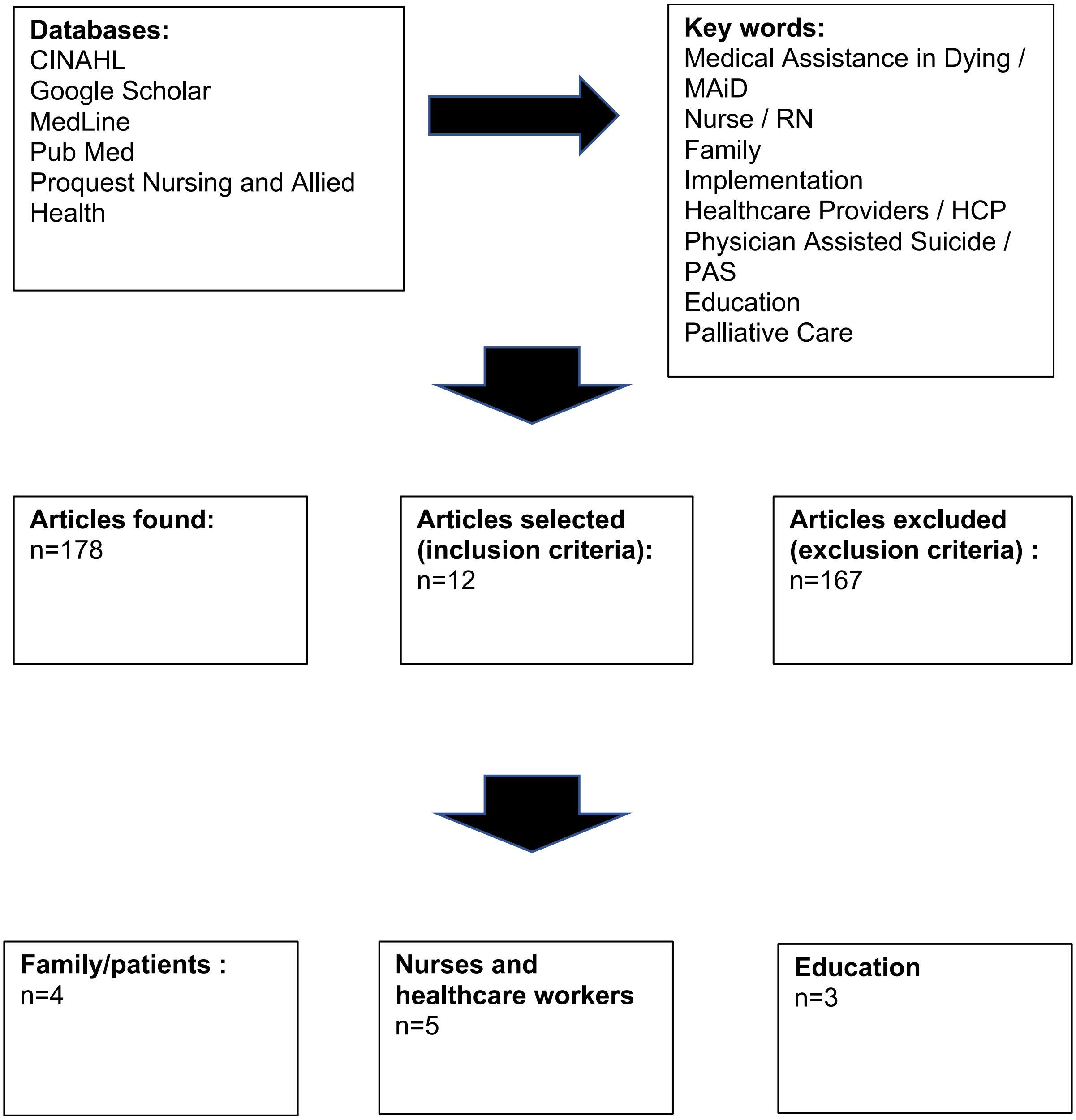
2.2.1 Inclusion and Exclusion Criteria

Within the inclusion criteria were studies that explored experience and education of MAiD or end-of-life/palliative care, that had the keywords included, available electronically, and published between 2005-2022. A search was repeated after data collection to see if any new publications had been made. Articles published in English and in French were both accepted in the literature review. The goal was to have studies that were published after the legalization of MAiD and preferably Canadian. However, due to the limited quantity of conducted studies, articles included in the final review were published after 2005 and from other countries where physician-assisted suicide and euthanasia have been legal for years.

This search yielded 178 articles that were thoroughly read and analyzed. Articles were excluded from the literature search if they dated before 2005. Excluded from the literature review were 167 articles as they did not meet the inclusion criteria. The final analysis of articles consisted of 12 selected articles.

Figure 1

Published Literature Database Search



2.2.2 Critical Appraisal of Selected Literature

As per Green et al. (2006), multiple articles were yielded from the search, and they were categorized by the target population. These target populations were either families and patients, nurses and healthcare workers, or education; as seen in Figure 1. To evaluate the articles, the Critical Appraisal tools from the JBI were used for all twelve articles chosen. Each Critical Appraisal tool kit has a series of 8-10 questions which were used while reading the articles to guide the appraisal (JBI, 2017; JBI, 2020a; JBI, 2020b; and JBI, 2020c). Four checklists were used, and they are each listed in Appendices: Appendix H – JBI Critical Appraisal of Case Control Studies, Appendix I – JBI Critical Appraisal of Qualitative Studies, Appendix J – JBI Critical Appraisal of Cross-Sectional Studies, and Appendix K – JBI Critical Appraisal of Quasi-Experimental Studies. A series of questions are listed in each of the checklists with an option to answer 'Yes' 'No' 'Unclear' and 'Not Applicable'. To score and rate the articles, a number was associated with each option. 'Yes' was accorded a score of 3, 'No' a score of 2, 'Unclear' a score of 1, and 'Not Applicable' a score of 0. Therefore, a higher score is associated with a higher-quality article. For the article (Ganzini et al., 2009) appraised with the Case Control Checklist, the highest score possible is 30. For the six articles (Nuhn et al., 2018; Holmes et al., 2018; Wright et al., 2017; Dransart et al., 2017; Beuthin et al., 2018; and McMechan et al., 2019) appraised the Qualitative Checklist, the highest score possible is again 30. The three articles (Wagner et al., 2011; MacDonald et al., 2018; Francke et al., 2015) appraised with the Cross-Sectional Checklist have a potential of scoring 24. Finally, the two articles (Pfitzinger Lippe et al., 2015; Barrere et al., 2008) appraised with the Quasi-Experimental Checklist can score up to 27. For each checklist, if the question is Not Applicable to the study for any reason, the question was removed and the maximum score total was modified. *Table 1, Critical Appraisal of Literature Review Articles,* demonstrates each article and the associated checklist used to appraise the article as well as the potential score and actual score total.

Table 1

Critical Appraisal of Literature Review Articles

Checklist Used	Author, year	Maximum Potential Score	Modified Maximum Score	Actual Score
Case Control	Ganzini et al., 2009	30	27	23/27
Qualitative	Nuhn et al., 2018	30	N/A	26/30
	Holmes et al., 2018	30	N/A	25/30
	Wright et al., 2017	30	N/A	26/30
	Dransart et al., 2017	30	N/A	28/30
	Beuthin et al., 2018	30	N/A	27/30
	McMechan et al., 2019	30	N/A	27/30
Cross Sectional	Wagner et al., 2011	24	N/A	21/24
	MacDonald et al., 2018	24	N/A	17/24
	Francke et al., 2015	24	N/A	21/24
Quasi-Experimental	Pfitzinger Lippe & Becker, 2015	27	N/A	26/27
	Barrere et al., 2008	27	N/A	26/27

The quality of the articles was analyzed using the JBI Checklists previously explained and placed into three subsections according to the target population of the study. All articles achieved over 80% of the possible score in the quality appraisal except for MacDonald et al. (2018), which scored 73% of the possible quality score. After reflection, this study was kept in the narrative synthesis because it was Canadian and reviewed healthcare providers' experiences with MAiD that was reflected in other articles which would support the findings of this study.

The first subsection was articles that focused on the patient receiving MAiD and/or his or her family members and close friends. Four articles were included in this group: Ganzini et al., 2009; Holmes et al., 2018; Nuhn et al., 2018; Wagner et al., 2011. Nurses and other healthcare professionals who provided MAiD were the participants in the second subsection of the articles. Five articles were appraised for this group: Beuthin et al., 2018; Dransart et al., 2017; Francke et al., 2015; MacDonald et al., 2018; Wright et al., 2017. The third subsection was articles that focused on the importance and impact of education on nursing students and nurses. Three articles were appraised for this group: Barrere et al., 2008; McMechan et al., 2019; Pfitzinger Lippe & Becker, 2015.

The final literature review included articles dating from 2008 to 2019. Six of these articles were qualitative and six were quantitative. The next step of the narrative review was to synthesize the articles within these subsections. Green et al. 's (2006) principles were considered for this process: the ability to answer the research question, the purpose of the study, differences and similarities between samples, methods, and major findings. The articles are summarized in Table 2.

Table 2

Overview of Literature

Authors	Title	Location, Year	Study objective	Design / Features	Participants	Main findings
Wagner, B. Müller, J. Maercker, A.	Death by request in Switzerland: posttraumatic stress disorder and complicated grief after witnessing assisted suicide.	Switzerland, 2011	Assess the grief reactions and PTSD symptoms of bereaved family members and friends of terminally ill cancer patients who died by euthanasia	Quantitative, cross-sectional survey	85 family members (partner, parent, child, or sibling), and close friends	13% met the criteria for full PTSD 4.9% met the criteria for complicated grief 16% had depression and 6% had anxiety
Nuhn, A. Holmes, S. Kelly, M. Just, A. Shaw, J. Wiebe, E.	Experiences and perspectives of people who pursued medical assistance in dying.	Vancouver, BC, Canada, 2018	To explore the experiences, wishes, fears, and beliefs of people who requested and were eligible for MAiD in Canada in the first year after legalization	Qualitative descriptive, Semi-structured interviews	11 patients who received MAiD, 18 family members/friends	Patients believed it was important to be autonomous and have control over the end of their life. Mainly half of people believed they could discuss the matter with family. Reasons for requesting MAiD: loss or fear of loss of independence, mobility, communication, and sense of purpose. Pain was not a main cause of suffering.

Authors	Title	Location, Year	Study objective	Design / Features	Participants	Main findings
Ganzini, L. Goy, E. Dobscha, S. Prigerson, H.	Mental Health Outcomes of Family Members of Oregonians Who Request Physician Aid in Dying	Oregon, 2009	Describe how patients' end of life choices affected family caregivers of Oregonians who requested aid in dying and to measure severity of grief symptoms, use of mental health services and depression in these family caregivers. To then also compare these to those of family caregivers who had not pursued hastened death.	Quantitative, Surveys	95 family members of PAS patients, 63 family members of natural death	11% of PAS families had a major depressive disorder, 2% prolonged grief and 38% had received mental healthcare. There was no significant difference between both families. PAS family members felt more prepared for the death and accepted it.
Holmes, S. Wiebe, E. Shaw, J. Nuhn, A. Just, A. Kelly, N.	Exploring the experience of supporting a loved one through a medically assisted death in Canada	Vancouver, BC, Canada, 2018	Examine the journey of family and close friends who supported a loved one through the process of MAiD	Qualitative, semi-structured interviews	18 family members and close friends	Some families were initially opposed, however had a change of heart when seeing the suffering of their loved ones. Families found the death peaceful

Authors	Title	Location, Year	Study objective	Design / Features	Participants	Main findings
MacDonald, S. LeBlanc, S. Dalgarno, N. Schultz, K. Johnston, E. Martin, M. Zimmerman, D.	Exploring family medicine preceptor and resident perceptions of medical assistance in dying and desires for education.	Queen's University family medicine residency program in Southeastern Ontario, 2018	Examine the perspectives of family medicine preceptors and medical residents including their interests and intent to participate in and their knowledge and willingness to teach or learn about MAiD to inform MAiD-related revisions to the residency training curriculum	Quantitative, Anonymous online surveys	71 preceptors 62 medical residents	Low competence levels were seen throughout preceptors and residents. Many residents were willing to be a part of MAiD, however did not feel safe discussing MAiD in clinical environments. They noted the importance of MAiD education in the curriculum
Francke, A.L. Albers, G. Bilsen, J. Veer, A.J.E. Onweteaka-Philipsen, B.D.	Nursing staff and euthanasia in the Netherlands. A nation-wide survey on attitudes and involvement in decision making and the performance of euthanasia.	Netherlands, 2015	Views, attitudes, and involvement of Dutch nursing staff in decision making about and involvement in the performance of euthanasia. Relationship between the background characteristics of nursing staff and attitudes and	Quantitative, surveys	587 RNs and Certified Nursing Assistants (CNA)	83% of nurses discussed euthanasia decision with physicians 69% state physicians should discuss with them 46% feel that the patient is more likely to speak with nurses about euthanasia first 43% feel they know their authorized actions of nurses thought they cou

			involvement euthanasia.			inister lethal medication.
Authors	Title	Location, Year	Study objective	Design / Features	Participants	Main findings
Wright, D.K. Chirchikova, M. Daniel, V. Bitzas, V. Elmore, J. Fortin, M-L.	Engaging with patients who desire death: Interpretation, presence, and constraint.	Canada, 2017	Explore how oncology nurses understand and respond to their patients with advanced cancer who may desire death, and to better understand nurses' own perspectives about their therapeutic relationships in this context.	Qualitative, interviews	11 oncology nurses	Theme 1: Interpreting the patients' desire for death Theme 2: Enacting therapeutic presence Theme 3: Forces that constrain engagement
Dransart, D.A.C. Scozzari, E. Voélin, S.	Stances on Assisted Suicide by Health and Social Care Professionals Working With Older Persons in Switzerland	Switzerland, 2017	Understand the range of nurses' experience in providing care for someone choosing MAiD, whether directly aiding, providing supportive care, or declining to participate.	Qualitative design of narrative inquiry and thematic analysis, Semi-structured interviews	40 health and social professionals (physician, directors, head nurses, nurses, nursing assistants or care assistants, sociocultural animators	About half of the professionals involved themselves in the care 14/41 had feelings of sorrow, rage, powerlessness 22/40 felt properly equipped and supported by their institution
Pfitzinger Lippe, M. Becker, H.	Improving Attitudes and Perceived	Texas, 2015	Assess changes in BScN students'	Quasi-experimental, Quantitative simulations	128 nursing students	After the simulation, significantly more students had higher

	Competence in Caring for Dying Patients: An End-of-Life Simulation.		attitudes and perceived competence following exposure to and end of life simulation.			perceived competence and attitudes
Authors	Title	Location, Year	Study objective	Design / Features	Participants	Main findings
McMechan, C. Bruce, A. Beuthin, R.	Canadian Nursing Students' Experiences with Medical Assistance in Dying	Canada, 2019	Understand students' perceptions of their educational preparation regarding MAiD and to identify potential gaps in existing knowledge and skills.	Qualitative, narrative inquiry, semi structured interviews	9 nursing students, fourth year	Students were confused about their role, had a fear of saying the wrong thing which could affect their nursing license. Students felt they had to honour patients' autonomy, as they were not there to judge the patient and that MAiD can be a normal part of the nursing role Students felt personal and professional tension with their emotions of hidden values that were surfacing. Students recommended the use of clinical simulation for MAiD education and noted the importance of providing clear

						education on nurse's role.

Authors	Title	Location, Year	Study objective	Design / Features	Participants	Main findings
Barrere, C. Durkin, A. LaCoursiere, S.	The Influence of End-of-Life Education on Attitudes of Nursing Students	University of Connecticut, 2008	Evaluate the influence of end-of-life education content integrated into a BScN program curriculum, on students' attitudes toward caring for dying patients	Quantitative, Quasi-experimental, longitudinal design	73 nursing students	Education about end-of-life positively affected the attitudes of nursing students toward the care of patients who are dying. Age and previous experience had a positive impact on attitude change Previous education and gender did not have an impact on attitude change "New beliefs, values, and assumptions are considered and tested as learners become self-aware and allow change to occur" (page 4)

2.3 Experience of Individuals Involved in the MAiD Process

Individuals that participated in the MAiD process included, amongst others, the patient, family members and close friends, nurses, and other healthcare professionals (physicians, nurse practitioners, pharmacists, social workers). With the legalization of MAiD, many patients, family members, and close friends had their first experience with a MAiD death (Nuhn et al., 2018). Some patients preferred to not include family members while others preferred to have family members and close friends involved throughout the whole process (Nuhn et al., 2018). Every individual experienced different emotions throughout the process, which is demonstrated in each of the subsection discussions.

Due to the lack of Canadian research, studies that originated from outside of Canada were utilized. However, Wright et al. (2017) did explain that even in areas where MAiD is legal, there is still a sparse amount of literature. It is also important to note that to include as many articles as possible regarding nurses' scope of practice in Canada, some of the accepted articles included physicians.

2.3.1 Experience of Patients and Family Members / Close Friends

Four articles were analyzed to understand the experience of patients and family members or close friends who have experienced MAiD. The first study was by Nuhn et al. (2018) which scored 26/30 on the JBI Qualitative Study Checklist (JBI, 2020a). These authors conducted a qualitative descriptive study with semi-structured interviews to explore the experiences, wishes, fear, and beliefs of people who requested and were eligible for MAiD in Canada in the first year after legalization. This demonstrated congruity between the research question and the method used. In this study, 11 patients and 18 family members and friends (on behalf of 12 patients) were interviewed for a total of 29 participants (n=29). Family members and friends included support persons, spouses, sons/daughters, friends, and siblings. The majority of patients were suffering from organ failure, malignancies, or neurological diseases. The study was informed by the theories of Bruner (1986), Sarbin (1986), and Dewey (1986) and analysis guided by the Braun and Clarke process (Braun & Clarke, 2006). It was unclear what exactly participants were asked in the interviews and whether the researchers structured their interviews to answer the research question. Ethics approval was received for this study from the University of British Columbia Behavioural Research Ethics Board.

Participants were properly represented within this study; many respondents identified a desire for autonomy and control over their lives as reasons for choosing MAiD. They explained that their quality of life was unacceptable due to the constant struggle with health and deterioration of functions such as the inability to participate in meaningful activities or loss of sense of purpose. In addition, they described a loss of independence, physical ability (such as walking or use of limbs), or ability to speak/communicate. Most patients and family members described that they (themselves or the patient) did not have any fears regarding their decision with MAiD. They appreciated having the opportunity to choose the time of their death to be able to be with loved ones and prepare. Pain was not mentioned as a determining factor in pursuing MAiD. Their primary concerns touched on barriers that would prevent them from accessing MAiD. One potential barrier was the need to justify their decision to others resulting in them only revealing their wishes to a few. Current suffering and/or fear of future suffering was also explained as participants wanted to end their life before reaching a point in their disease where they could no longer pursue MAiD and face an unpleasant natural death.

The second article analyzed was a qualitative study by Holmes et al. (2018) that scored 25/30 on the JBI – Qualitative Study Checklist (JBI, 2020a). It examined the journey of family and close friends who had supported a loved one through the process of MAiD. Eighteen participants, including support people, children, spouses, friends, and siblings (n=18) shared their experiences in semi-structured interviews. No examples of sample questions were given to demonstrate what the interviewers were going to talk about. It was unclear if the researchers had any influence on the research itself or vice-versa, as the authors did not state. However, it was stated that the resident physicians who did the interviews did not work at the clinic, therefore this would eliminate any bias. Ethical approval was received by the University of British Columbia Research Ethics Board.

Patients who had received MAiD were suffering from organ failure, cancer, and/or neurological diseases. Participants described their reactions to first learning about their loved one's interest in MAiD. Some were not surprised as it was congruent with their loved one's values. Some participants, although describing the tension between the need to support their loved ones and their values, did eventually understand and support their loved ones, describing them as very brave and courageous. Other participants did not discuss their loved ones' decisions with others out of fear of having to justify their choices. Also, participants noted that the sadness of their loved one's death was temporarily alleviated by a peaceful ending to their suffering.

Most participants explained the emotional impact on them resulting from aiding their loved ones in preparation for their death. Although they did find it strange and overwhelming, the importance of reconnecting with family and friends and celebrating their loved ones' life with them before their death was described. Finally, despite the sadness of the unusual and stressful experience, families explained that it was peaceful and graceful. The authors noted that support persons who did not want to participate in the research may hold different opinions and experiences with MAiD, leading to different results and understandings of this journey.

The third study reviewed was a quantitative study by Ganzini et al. (2009) which scored a 23/27 on the JBI-Case Control Study Checklist (JBI, 2020c), and examined the impact of patients' end-of-life choices on family caregivers. Conducted in the United States, the researchers measured the three variables of the severity of grief symptoms, use of mental health services, and depression with two groups: family members of persons who requested aid in dying and those of persons who had died of natural causes. Interviews were conducted with 95 family members of patients who requested physician aid in dying [PAD] and 63 family members of natural death patients for a total of 158 participants (n=158). The case and control groups had similar experiences, which is why they were chosen. They were chosen out of the same database registries. Exposure time was also measured in a standard, valid and reliable way, as the family members of aid in dying had lost their loved ones 14 months prior, and the comparison families had lost their loved ones 15 months prior.

Appropriate, valid, and reliable scales were used to assess the participants. Prolonged grief was measured using the Inventory of Complicated Grief-Revised [ICG-R] scale (Prigerson & Jacobs, 2001) and depression severity was measured by the Beck Depression Inventory [BDI] scale (Beck et al., 1988). Major depressive disorder was assessed by a psychologist using the Structured Clinical Interview for Disorders-Revised Version.

Family members of people who pursued PAD were found to exhibit a prolonged grief disorder (2%), major depressive disorder (11%), depression score (5.9%), and prolonged grief (7.4%). Comparatively, family members of people who died of natural causes had no prolonged grief disorder (0%) but did have a higher major depressive disorder (14%), higher depression score (7.8%), and higher prolonged grief (8.8%). PAD family members were 44% less likely to access mental health services compared to natural death family members (52%). Interestingly, over 90% of family members of PAD procedures felt at peace with being able to say goodbye before the death, felt that their loved ones and wishes were honored, and felt included in the decision process. Eleven percent of these families had regrets about how their loved ones died. The authors suggested that "family members have a pivotal role in planning and implementing hastened death; yet they must live with moral, psychological and social consequences of whatever level of participation they choose" (p. 813). They also explained that whereas not participating could result in conflict and feelings of failure for not aiding to alleviate suffering, participating could itself result in "believing they had murdered their loved ones" (p. 813). The authors did not identify any confounding factors that could have affected the results and it was unclear what statistical analysis tool they used.

The fourth study included in the narrative review was by researchers Wagner et al. (2011). Scoring a 21/24 on the JBI – Cross sectional Study Checklist (JBI, 2020b), this cross-sectional survey assessed the grief reactions and post-traumatic stress disorder [PTSD] symptoms of bereaved family members and friends of cancer patients who died by assisted suicide [AS]. Participants were 85 family members (partners, parents, children, and siblings) and close friends (n=85). The authors did not state specific inclusion and exclusion criteria for their participants, simply that they were included if their loved ones were found in the death records of a Right-To-Die Organisation.

The outcomes were measured in a valid and reliable way using first, the DSM-IV (Statistical Manual of Mental Disorders, 1994) to define “an event as traumatic if it includes the experience of or confrontation with actual or threatened death, as is the case for relatives and friends who witness an assisted suicide” (p. 4). This is considered a risk factor for the development of PTSD and depression. The scales used were the ICG-R (assessing complicated grief) (Prigerson et al., 1995), Impact of Event Scale-Revised [IES-R] (assessing PTSD) (Weiss & Marmar, 1997), Brief Symptom Inventory [BSI] (assessing depression and anxiety) (Derogatis, 1992), and SF-12 (assessing general physical and psychological functioning) (Ware et al., 1996). Patients were diagnosed with cancer, age-related non-fatal medical conditions, cardiac diseases, Alzheimer's/dementia, and mental disorders.

Results were measured appropriately using the Statistical Package for the Social Sciences [SPSS] -Version 15.0, where frequencies, standard deviations, Chi-Square tests, and correlations were completed. These tests demonstrated that 13% of participants suffered from PTSD, 4.9% from complicated grief, and 16% from depression. The authors suggested that "relatives and family members who witness assisted suicide need to be better informed about and prepare for its possible consequences for their mental health" (p. 13). In addition, the authors stipulated that witnessing this death could lead to severe mental health problems 14-24 months after the loss.

To summarize the critical appraisal of all the articles in the first subsection, *experience of patients and family members / close friends*, some similarities and differences are noted and then a summary of the results is done. Ganzini et al. (2009) and Wagner et al. (2011) conducted quantitative research and surveyed their participants. Holmes et al. (2018) and Nuhn et al. (2018) both conducted qualitative research by completing semi-structured interviews. Both studies were clear when explaining the congruency between the research method and research question and data collection method, however, did not specify the sample questions they used to guide the interviews (Holmes et al., 2018; Nuhn et al., 2018). Samples were family members of people who passed from aid in dying, as well as their comparison families, who passed from a natural death (Ganzini et al., 2009). Wagner et al. (2011) did not use a comparison group. Participants

were found due to being in a registered database (Ganzini et al., 2009; Wagner et al., 2011) and loved ones had passed away approximately 14-15 months prior (Ganzini et al., 2009).
Ganzini et al. (2009) and Wagner et al. (2011) used standard, valid, and reliable assessment methods and used the DSM-IV for proper terminology. Tools used included the ICG-R and the BDI scales (Ganzini et al., 2009; Wagner et al., 2011) as well as IES-R (Wagner et al., 2011). Ganzini et al. (2009) did not identify what statistical analysis tool they used. However, other authors did explain that they used SPSS-Version 15.0 to complete their statistical analysis (Wagner et al., 2011).

A summary of the results identified that patients, family members, and friends go through a challenging experience, that a range of emotions and consequences occur throughout the process from contemplation of MAiD to the grieving period post-death, and that the support of these individuals by the professionals involved in the journey is important. The notion of time was highlighted in the first three studies where participants described the advantage of being able to prepare and say their goodbyes to their loved ones before death (Ganzini et al., 2009; Holmes et al., 2018; Nuhn et al., 2018). Time was also perceived as a barrier by Nuhn et al. (2018), where patients had to make a rapid decision to qualify for MAiD. Holmes et al. (2018) described the difficult journey for family and close friends, and the initial tension of colliding beliefs and values with the patient. However, eventual understanding and acceptance were achieved when death brought an end to the suffering (Ganzini et al., 2009; Holmes et al., 2018; Nuhn et al., 2018).

The reasons for requesting MAiD, the stigma related to that choice, and the subsequent hiding of one's decision to avoid the need to justify to others were explained by both patients and family members (Holmes et al., 2018; Nuhn et al., 2018). The two last articles speak to the fact that for family members and close friends who participated in PAD and AS, there are moral, psychological, and social consequences, including complicated grief, depression, and PTSD, which may be different and longer lasting from those experienced in a natural death (Ganzini et al., 2009; Wagner et al., 2011). This knowledge highlights the importance of understanding the experience of all stakeholders involved, including health professionals, before, during, and after the MAiD process.

2.3.2 Experience of Nurses and Other Healthcare Workers

Five articles were analyzed to understand the experiences of nurses and other healthcare workers involved in the MAiD process including physicians, nurse practitioners, mental health providers, pharmacists, and social workers. The first article analyzed for this subsection was a qualitative study done by Beuthin et al. (2018) who scored 27/30 on the JBI Qualitative Study Checklist (JBI, 2020a). They conducted a qualitative narrative inquiry to understand the range of nurses' experiences in providing care to someone choosing MAiD, whether directly, providing supportive care, or declining to participate. According to the authors, "nurses across Canada are directly impacted by changes to the Criminal Code that now allow medical assistance in dying (MAiD) under clearly defined legal and regulatory circumstances" (p. 512). Included were Canadian nurses (n=17), 15 who already had experienced MAiD, and two who had no prior MAiD involvement and/or reported a conscientious objection. In this study, nurses worked across multiple healthcare settings including acute, residential, primary, and community care as well as palliative care services. These nurses had practiced between 10 to 38 years.

Semi-structured interviews were conducted in this narrative inquiry. This allowed for congruity between the research question and the method used. Sample questions were provided by the interviewers; however, it was unclear if these interviewers had any influence on the research or participants. Ethical approval was received by the Joint University and Health Authority Ethical Review Board.

Beuthin et al. (2018) used the narrative method of Riessman (2008) to guide the narrative approach and Braun & Clarke's (2006) guide for thematic analysis. The result was three main themes: profession of nursing, personal impact, and practice of nursing. In the first theme, Profession of Nursing, nurses demonstrated a desire to provide holistic care without judgment, where all nurses agreed that "to be a nurse is to not judge patients or their choices" (p. 4). Most nurses accepted that MAiD was within their nursing scope and that holistic care could still be provided during a controlled death. Conversely, some nurses expressed that MAiD was not part of nursing and went against their practice. Nurses also explained the importance of advocating for patient's choice of care and that offering a range of end-of-life options, and promoting patients' right to choose their care pathway was more humane. Within this theme, nurses also explained that they wanted to support a good death and that MAiD allowed them to provide comfort care, mitigate suffering and broaden the idea of what death could be.

In the second theme, Personal Impact*,* nurses spoke about being pioneers as MAiD was a new role for them and all nursing colleagues. Some nurses were strongly opposed to participating due to religious values, fear of stigma, and being judged or pressured into participating as they were the minority. They explained a lack of support from management/administration for those practicing conscientious objection and confusion surrounding the legal and professional requirements for nurses. Most nurses reported uncertainty due to fear/confusion about their role and the legal, ethical, and professional policies they were receiving. Furthermore, most expressed a lack of confidence, as well as a lack of time to provide the proper care needed and/or take the required education. Nurses felt overwhelmed, although they “found that patients’ readiness and clarity had an uplifted quality to the experience” (p. 7). Practice of Nursing, the third theme*,* described the importance of mastering the skill of inserting an intravenous line [IV] and maintaining its patency. This gap was apparent for community nurses who, already in an established therapeutic relationship with the patient and family, wanted to participate but could not as they had not yet mastered this skill. The importance of good communication and relational care was also explained, as "nurses identified compassionate listening, engaging, attuning, and being comfortable with intense emotion as the key to effective communication with patients and families" (p. 8).

The second article reviewed was by Francke et al. (2015) who scored 21/24 on the JBI – Cross Sectional Study Checklist (JBI, 2020b). They conducted a quantitative survey in the Netherlands with 587 participants composed of RNs and Certified Nursing Assistants [CNA] who were already part of a pre-existing national research database. The authors did not specify inclusion and exclusion criteria; however, they did mention that their participants were found in this database. These nurses worked in general or academic hospitals, home care, nursing homes, and elderly care homes. Although the term euthanasia versus MAiD was used in this article, the processes were similar. Three main goals were identified by Francke et al. (2015); 1. What views did the participants have regarding involvement in decision-making and participation in the actual performance of euthanasia? 2. To what extent are the participants involved in the decision-making and the procedure of euthanasia 3. What the relationship is between the sociodemographic characteristics and the findings of #1 and 2? A survey was sent out by mail to all participants to complete a sociodemographic form and a questionnaire. These surveys were developed and tested in research in Flanders, however, the authors didn’t specify what the name of the survey was to be able to ensure validity and reliability. To analyze the data, SPSS - Version 16.0 was used.

As noted, nurses often have closer contact with the patient at the end of life. Therefore, they "could be one of the first people with whom the patient discusses the euthanasia request" (Francke et al., 2015, p. 784). Forty-six percent of participants agreed with this statement and 38% confirmed that they have been approached first regarding the request before the physician. Also, 35% of participants stated that they had informed a physician about a patient's request at least once before. The authors then explained that it is important that nurses be involved in the decision-making process, as they are involved in the daily care of the patient. Sixty-nine percent of participants agreed with this statement. However, 24% of participants stated that a physician has involved them in the decision making and only 12% stated that they've been in a situation where a physician has not involved them whatsoever for their patient.

Although the Francke et al., 2015 study was with nurses in the Netherlands, it relates to the research question for this study. Nurses must have a clear understanding of what their role is, in both euthanasia and MAiD. The authors examined that only 43% of participants agreed that they knew which actions they were allowed to do and what they were allowed to be involved in, during their cases of euthanasia. More specifically, 75% of participants correctly answered a statement indicating that nurses are not allowed to administer the medication in the case of euthanasia. Seven percent of nurses incorrectly believed they were allowed to administer the medication and interestingly, 18% gave a 'neutral' answer, which was nurses who were unsure of the correct answer. This solidified the authors' recommendations, as well as this current research argument of the need for training and continuing education about euthanasia/MAiD for nurses, to ensure they know their roles and boundaries. Any confounding factors were identified as limitations to the study, and no strategies were given to deal with them.

The third study reviewed was a qualitative descriptive study conducted by Wright et al. (2017) which scored 26/30 in the JBI - Qualitative Study Checklist (JBI, 2020a). This study was completed in Canada before the legalization of MAiD and published shortly after its legalization. Participants included 11 oncology nurses, who worked in diverse palliative care divisions, including specialized consultation services, inpatient bedside care, and outpatient care clinics. Congruity was found between the research question and method, as group interviews were conducted to determine how oncology nurses understood and acknowledged their patients when they spoke about death and to see nurses' perspectives on their therapeutic relationships with the patients. Sample interview questions were identified in the article. Consistent with the previous study, the authors explained that "nurses share an emotional proximity to patients and families in end-of-life care… and, as such, maybe the first health professional to whom a patient confides his or her desire to die" (Wright et al., 2017, p. 56). It was not known if the researchers had any influence on the interviewees, or vice-versa. The article did not include whether ethics approval was received.

It is again important to note that this data collection was completed before MAiD being legalized in Canada. Although nurses in this study engaged with their patients regarding their desire for death and dying and not a request for MAiD, the nurses’ experiences can be comparable in both situations. In MAiD cases, patients can now request this process, to identify their interest in death and dying. However, the difference now is that patients can request and proceed with MAiD, whereas in this study, the patients could just speak about their wishes of death and dying and transition from curative oncology care to palliative care. Nurses going through MAiD processes have similar experiences as those in this study. Nurses' personal beliefs about having difficult conversations about death, had the potential to interfere with their involvement with the patient’s care. However, when patients decided to withdraw treatment, it was seen by nurses as a natural progression of their disease and was viewed as an acceptable end-of-life decision. Lack of time was a factor that interfered with their ability to speak with patients in depth about their desire for death. Nurses strived to create these therapeutic relationships with their patients; however, this was difficult because they also believed speaking about death and dying was outside of their scope of practice, and they did not want to mislead their patients.

The fourth study reviewed was conducted by Dransart et al. (2017), scoring a 28/30 on the JBI - Qualitative Study Checklist (JBI, 2020a). This study involved 41 health and social care professionals located in Switzerland: physicians, directors of sociomedical institutions or organizations, head nurses, nurses, nursing assistants or care assistants, and sociocultural animators. The goals of this qualitative study were to determine the position of organizations regarding MAiD and participants' knowledge of the legal and ethical implications. As well, it explored situations where participants faced issues, challenges, and dilemmas related to MAiD and their values and reactions observed during MAiD. Semi-directed interviews were conducted and questionnaires were answered by participants. There was congruity between the research question and methods used, and sample questions that were used in the interviews were provided in the article. Ethics approval was received from the Ethical Commissions.

It was shown that professionals who were more trained, knowledgeable, and had more support from their organizations were able to create a more open environment for the patient to make their informed decision. The results showed that approximately half of the participants (20/41) found themselves fully involved in the whole process of MAiD and 11/41 considered themselves moderately involved. About two-thirds (12/21) stated they never had any negative impact following MAiD. Some professionals (6/21) stated that they would experience many emotions such as sorrow, rage, and powerlessness for many days after the MAiD process and organizational interventions and/or support were limited. Also, 8/41 participants had negative emotional experiences after MAiD, such as intrusive images, avoidance behavior, general distress, and anxiety. They also questioned the relevance and quality of their care. However, the results also showed that when they felt supported by their organization, 22/40 of the participants felt their participation was sufficient, however, some (9/40) still felt that the resources were appropriate but there was still too little.

The fifth study reviewed in this grouping, by MacDonald et al. (2018), scored 17/24 in the JBI - Cross Sectional Study Checklist (JBI, 2020b). The authors conducted a quantitative study examining the perspectives of family medicine preceptors and medical residents about their interests and intent to participate in, and their knowledge and willingness to teach or learn about MAiD. A secondary goal was to use these results to inform MAiD-related revisions to the residency training curriculum. It was not made clear what the inclusion and exclusion criteria of participants were in the study, only that the surveys were delivered to preceptors and residents at Queen’s University Family Medicine Residency Program in Southeastern Ontario. This study included 71 preceptors and 62 residents for a total of 133 participants (n=133). The Dillman method (2014) was used for data collection of 2 separate anonymous online surveys which examined knowledge, experience, comfort and confidence, willingness to participate, team relationships, and curriculum and resident education.

The SPSS - Version 24.0 was used for statistical analysis. Only 38% of preceptors and 25.8% of residents reported having received any formal education about MAiD and felt confident that they understood Bill C-14. This Bill C-14 was passed by the Government of Canada in 2016, an act to amend the Criminal Code and to allow people to request MAiD. Bill C-14 clearly stated all of the requirements that needed to be met by healthcare workers and patients to be able to proceed with MAiD. Perceived self-competence levels were low measuring only 33.8% for preceptors and 11.3% for residents. Confidence levels were also low at 43.7% for preceptors and 21% for residents. Conscientious objection was practiced by 18.3% of preceptors and 9.7% of residents, whereas age was related to an increased willingness to participate. Preceptors and residents felt safe discussing their values on MAiD with their respective colleagues. However, few preceptors (21.1%) reported that they had formal discussions or meetings about MAiD. Finally, 67.6% of preceptors and 75.68% of residents demonstrated "a need to develop a residency curriculum that addresses MAiD, with faculty development or continuing professional development for preceptors" (p. 406). The authors included limitations to their study which could have affected their results, however, do not offer strategies to deal with these.

All the articles above have participants working in the healthcare field (Beuthin et al., 2018; Dransart et al., 2017; Francke et al., 2015; MacDonald et al., 2018; and Wright et al., 2017). However, three are qualitative (Beuthin et al., 2018; Dransart et al., 2017; and Wright et al., 2017), and two are quantitative (Francke et al., 2015 and MacDonald et al., 2018). Semi-structured interviews were completed, and sample questions were provided to ensure congruity between the research question and the data collection (Beuthin et al., 2018; Dransart et al., 2017; Wright et al., 2017). The thoughts and beliefs of all participants in these articles were well explained and their concerns were properly demonstrated with clarity (Beuthin et al., 2018; Dransart et al., 2017). Ethics approval was also received (Beuthin et al., 2018; Dransart et al., 2017; Wright et al., 2017), except for Wright et al. (2017).

Francke et al. (2015) explained well how they included their participants in the research, as they were already part of a database. However, MacDonald et al. (2018) did not explain the inclusion criteria. Similarly, confounding factors were explained in the limitations, however, no strategies were explained to deal with these factors (Francke et al., 2015; MacDonald et al., 2018). Also, both articles developed their surveys or used pre-developed surveys and stated that they were credible, however, they did not provide metrics for validity and reliability (Francke et al., 2015; MacDonald et al., 2018). SPSS was used for statistical analysis (Francke et al., 2015; MacDonald et al., 2018).

To summarize the results of the articles regarding healthcare workers' experiences, and specifically regarding nurses' experience with MAiD, Francke et al. (2015) explained that nurses are most often the first professional with whom patients will start the discussion about receiving MAiD. This was also found by Wright et al. (2017), who interviewed eleven nurses between September 2012 and January 2013, who believed they were often the first ones who their patients approached about their desire for death. This was already mentioned before MAiD legalization. Therefore, nursing practice is directly impacted by this new legislation. MAiD not only represents a change in their professional scope of practice, but it also deviates from nurses' traditional socialized role of caregiving (McMechan et al., 2019) and undergraduate education and training are needed to develop this competence and to provide compassionate care (Pfitzinger Lippe & Becker, 2015). To properly prepare them to care for all members involved in the MAiD process, it is important to know what are the different experiences of all of those involved.

Nurses and all other healthcare workers involved, amongst others, physicians, and NPs play an important role in the deliverance of a MAiD experience. Despite the different research designs used in the four articles analyzed in the second subsection *Experience of nurses and other healthcare workers*, some commonalities were identified. Beuthin et al. (2018) and Wright et al. (2017) highlighted the therapeutic relationship nurses strive to establish with their patients, while role ambiguity was identified by other members of interprofessional teams (Francke et al., 2015). The moral and personal challenges related to MAiD were particularly described in the studies with nurse participants (Beuthin et al., 2018; Dransart et al., 2016).

Similarly, Beuthin et al. (2018) described the fear of legal ramifications that was reported by the nurses if they did not participate. Lack of comfort, confidence, and competence with MAiD was reported by nurses, physicians, and other professionals in all of the studies above. Despite this, Beuthin et al. (2018) explained the positive impact MAiD implications can have on nurses open to participating. These nurses could advocate a good death for their patients and mitigate their suffering (Beuthin et al., 2018). Finally, the absence of supporting policies and regulations guiding professionals with this emerging and evolving competence was commonly described (Beuthin et al., 2018; Francke et al., 2015). With this, there is an important lack of knowledge and need for education that was reported by all professionals involved (Beuthin et al., 2018; Francke et al., 2015; MacDonald et al., 2018).

2.4 Importance of MAiD Education

Three articles were reviewed that focused on understanding the impact of education on nursing students. The first article in this subgroup, a quantitative quasi-experimental study conducted by Pfitzinger Lippe & Becker (2015), scored a 26/27 on the JBI - Quasi-Experimental Study Checklist (JBI, 2017), and aimed to assess changes in BScN students' attitudes and perceived competence following exposure to an end-of-life simulation. The cause and effect of the study were clear. There was no control group although there were three cohorts of students who participated (n=128). The first cohort was a group of students in a critical care nursing elective course in their first year of a traditional baccalaureate program (n=19). The second and third cohorts were fourth-year students in their final semester enrolled in an adult health clinical course (n=53 and n=56). The study used an end-of-life simulation consisting of three main stages, namely the continuation of care, change in status, and withdrawal of care, followed by a final stage of debriefing. The stage 'process of observational learning' in Social Cognitive Theory was utilized to create these simulation stages (Bandura, 1986).

According to the authors, “a lack of adequate education on end-of-life care in undergraduate nursing programs might account for the lack of confidence and anxiety that students report about providing care to dying patients” (p. 372). The Perceived Competence in Meeting End-of-Life Nursing Education Consortium [ELNEC] Standards survey was created and validated for this study. The students' attitudes were measured on the Concerns about Dying scale and the Frommelt Attitudes Towards Care of the Dying Scale [FATCOD] (Frommelt, 1991). All three surveys were measured on Likert scales. Statistical analysis was done using SPSS - Version 21.0.

At the end of the Post-Test, more than 75% of each cohort responded positively, reporting increased self-awareness, a higher confidence level with their communication skills and understanding of the nurse's role, as well as lower anxiety levels. Furthermore, competence level scores increased in all three cohorts. Two of the cohorts, who were not exposed to end-of-life care in prior clinical placements, showed positive changes toward caring in the end-of-life phase compared to their Pre-Test. The cohort who had prior experience with end-of-life, and already positively viewed this type of care, did not have any significant changes.

The second article analyzed, a quantitative quasi-experimental study by Barrere et al. (2018), scored 26/27 on the JBI - Quasi-Experimental Study Checklist (JBI, 2017). This study was conducted with registered nursing students (n=73). The purpose of the study was to evaluate the impact of the integration of end-of-life education content into a BScN program curriculum. The cause and effect were made clear by the authors. More specifically, students' beliefs about caring for dying patients were measured. Participants included n=39 nursing students from a traditional 4-year baccalaureate program and n=34 students from an accelerated program. The authors reasoned that "most nurses will encounter patients who are at the end-of-life stage, consequently, including material about this topic in nursing curricula is essential" (p. 1). The Transformative Learning Theory (King, 2007; Mezirow, 1991) was the framework used during this study. The intervention was delivered in the appropriate courses of the traditional and accelerated BScN programs. There was no control group.

The SPSS - Version 15.0 was used to complete statistical analysis. The FATCOD Likert scale administered pre and post intervention, demonstrated that the integration of this education positively increased students' attitudes by 30.3%. While gender, prior academic degree, and education, were not influencing factors, younger students and students who had not yet had experience with terminally ill patients showed a greater change towards caring for the dying by 18.2%. Conversely, older students who had previous experience with terminally ill patients, were already positive towards end-of-life care, making their score change unremarkable.

Finally, the third article analyzed, by McMechan et al. (2019), scored 27/30 on the JBI - Qualitative Study Checklist (JBI, 2020a). They conducted a qualitative narrative inquiry with fourth-year undergraduate nursing students (n=9). Using semi-structured interviews, their goal was to understand students' perceptions of their educational preparation regarding MAiD and to identify potential gaps in existing knowledge and skills. Five sample questions were provided in the article to guide the interviews. It was unclear if there was any influence on the participants or the research from the interviewer, as they were fourth-year students. Ethics approval was granted by the University's Human Ethics Research Board. These researchers explained that nursing students may be asked to contribute directly or indirectly to the care of a MAiD patient, requiring them to practice their role of health promotion and life-prolonging care, while also providing care, which in opposition, will hasten death. "This development adds an ethical dimension to the already fragile and at times trying experience of student nurses witnessing death, often for the first time" (p. 1). Interviews with these students lasted approximately 35-50 minutes and were thematically analyzed guided by Braun & Clarke (2006).

Participants were well represented in these four main themes: role confusion, honoring patient autonomy, personal-professional tensions, and students' recommendations for education. In the first theme (role confusion) some participants expressed confusion and misconceptions about their role as a nursing student as well as the roles they would carry as a graduated nurse in the MAiD process. The students explained that they wanted to be present during the MAiD process for the educational portion of it, however, they feared that their presence may be inappropriate due to the intimacy of the death. The students felt that many nurses still did not know their roles and guidelines to follow and were unable to explain these to the students. The students were therefore also afraid to speak about MAiD to their patients for fear of legal ramifications.

The second theme (honoring patients' autonomy) was their main reason for supporting MAiD as they explained the importance of facilitating patient autonomy with their care decisions and not passing judgment on these, regardless of their personal beliefs. Some students had strong contradictory feelings about participating in MAiD believing that they were aiding in suicide and that this assistance did not align with their nursing role. However, they explained the importance of not letting their belief system interfere with their nursing care and of supporting their patient's autonomy.

The third theme (personal-professional tension) demonstrated students' difficulties with supporting MAiD. Personal values and professional responsibilities contributed to discomfort and entangled emotions. For some students, hidden values related to their current religious affiliation or religious upbringing surfaced, which were in direct conflict with MAiD. Some students also expressed moral distress with certain factors such as questioning the eligibility of the patient and wanting to ensure they had been offered all other options before consenting. These students felt uneasy about future participation with MAiD.

The fourth and final theme (students' recommendations for education) showed that students that felt well prepared had pursued their learning and education, outside of their curriculum. Furthermore, students who had prior MAiD experience showed less fear to care for these patients. Many suggestions were made for their undergraduate education such as including lectures and workshops from people with first-hand experience, providing clear instructions on the roles and responsibilities of every healthcare professional involved, providing opportunities to clarify and work through feelings about MAiD, and incorporating clinical simulations with MAiD deaths.

To summarize the articles, differences, and similarities are explained. One article was qualitative (McMechan et al., 2019) and two articles were quantitative (Barrere et al., 2008 and Pfitzinger Lippe & Becker, 2015). The cause (independent variable) and effect (dependent variable) were clear for both articles (Barrere et al., 2008 and Pfitzinger Lippe & Becker, 2015) and the congruity was clear between the research question and methodology for McMechan et al. (2019). No control groups were used in both quantitative studies, as they were nursing students who needed the specific education, therefore it was unethical to only provide the education to certain groups (Barrere et al., 2008; Pfitzinger Lippe & Becker, 2015). Proper measurement tools were used, which were already validated and reliable; such as the FATCOD and the Concerns about Dying Scale (Barrere et al., 2008 and Pfitzinger Lippe & Becker, 2015).

In this subsection, *Importance of MAiD education,* three articles demonstrated the importance of education regarding death and care for these patients in the undergraduate nursing curriculum (Barrere et al., 2008; McMechan et al., 2019; Pfitzinger Lippe & Becker, 2015). Educational programs were shown to improve knowledge about caring for dying patients, whether that be end-of-life care or MAiD, demonstrating the importance of this competence for undergraduate education: "Nurses are being called upon to be competent in providing care to dying patients to ensure that patients die peacefully" (Pfitzinger Lippe & Becker, 2015, p. 378). Learning skills such as compassionate care, good communication, and empathy toward patients and family members are essential components to this competence.

Another commonality to all three studies was that prior exposure to this type of clinical experience influenced students’ beliefs and competence. This knowledge highlights the importance of clinical and simulation experiences for nursing programs. In terms of differences, Pfitzinger Lippe & Becker (2015) and Barrere et al. (2008) were quantitative studies that implemented an intervention focused on end-of-life education (palliative care) and measured outcome using the same instrument, the FATCOD (Frommelt, 1991).

Given the depth of knowledge available on the topic of end-of-life (palliative care) in the literature, the ability to measure outcomes of beliefs and competence is possible. However, the qualitative design of McMechan et al. (2019) is appropriate given the dearth of available knowledge on MAiD, and the need to understand this new experience for nurses, whose socialized role has traditionally reflected caring and health promotion. These concepts are in direct opposition to hastening death, which has raised concerns and fears of participation for nursing students. This study also highlights the influence of personal and cultural beliefs on the nurse's ability to practice this new competence as well as a continuously evolving scope of practice.

2.5 Empirical Context

As MAiD legislation is newer, research carried out on this subject is minimal and its implementation in the baccalaureate programs has just recently been established in 2020 (CNO, 2019). As the CNO (2019) added MAiD competencies to its Entry-to-Practice guide, nursing students now must be prepared to face situations where they will be approached with MAiD requests by their patients. This literature review explains the positive and negative outcomes from the experiences of the people involved in MAiD, whether that be family members, close friends, nurses, or other healthcare workers (Beuthin et al., 2018; Dransart et al., 2017; Francke et al., 2015; Ganzini et al., 2009; Holmes et al., 2018; MacDonald et al., 2018; Nuhn et al., 2018; Wagner et al., 2011; Wright et al., 2017). Also examined is the positive impact that education can have on the knowledge, beliefs, and comfort of nursing students (Barrere et al., 2008; McMechan et al., 2019; Pfitzinger Lippe & Becker, 2015). Nursing students need to receive the proper education and training to ensure they follow the legislation and nurse within their scope of practice. All articles analyzed throughout this literature review had one common goal; to gain knowledge about the experience of all individuals involved in the MAiD process and to bring attention to the need for further support and education for these members. Nurses' comfort and knowledge are essential during the MAiD process as they play a fundamental role in supporting the patients and their family members (Beuthin et al., 2018). It was therefore important to develop an educational program to ensure that graduating baccalaureate nurses were knowledgeable about MAiD. This type of educational program will have a positive impact on the advancement of nursing practice.

Gaps in the literature can be identified based on the review. Very few studies were conducted in Canada, with most of them from the Netherlands and Switzerland, where physician-assisted suicide has been legal since 1942 (Beuthin et al., 2018). Also, many of the articles yielded in this search were dated from the late 1900s to the early 2000s and only a small number of them have been conducted recently. Only one article was found for MAiD with Canadian nursing students, the remaining were for palliative care. Given the dearth of studies on MAiD, research about end-of-life and physician-assisted suicide was utilized.

The articles analyzed all helped in answering the research question in their way. The articles in the first subsection of *Experience of Patients and family members / close friends* demonstrated that patients and family members/close friends, all have their own experiences and must be supported through the MAiD process. This support comes directly from nurses and healthcare workers and workers must be equipped to be able to provide that support. The articles in the second subsection of *Experience of nurses and other healthcare workers* will help to answer the research question as it is important to understand healthcare workers' experience with MAiD to determine participation and factors that could influence this. The articles in the third subsection of *the Importance of MAiD education,* all helped to answer the research question as it is again important to know the impact of education on MAiD.

2.6 Policy Changes Since the Start of This Study

Health reform and policy changes are a constant in the healthcare system. However educational offerings for nursing students in baccalaureate programs should be enhanced to include relevant content and clinical training before implementation. Nursing organizations have a potential impact on the content of information that is taught in the baccalaureate nursing programs, including the CASN, CNO, CNA and the Registered Nurses Association of Ontario [RNAO]. It is important to note that MAiD is new legislation, therefore, inevitably, there were more frequent policy changes throughout this research.

2.6.1 History of Nursing Organization Policies on MAiD in Ontario and Canada

This first literature review was conducted in 2019, before some legislative changes and further research carried out on MAiD. During the data collection phase of this research in 2020, the CNO added a requirement to the Entry-to-practice competencies for nurses, leading to its implementation in the curriculum (CNO, 2019). As per the CNO (2019), a nurse “incorporates knowledge about ethical, legal, and regulatory implications of medical assistance in dying (MAiD) when providing nursing care” (p. 5). With this, changes to the legislation occurred and further research has been conducted.

When starting the initial literature review for this study in 2018, MAiD was not discussed or mentioned by most nursing regulatory bodies mentioned above. CASN (2015) presented the importance of knowing end-of-life nursing care that prioritizes comfort and pain and symptom management, however, there was no mention of MAiD. The CNO lists the requirements for nurses for Entry-to-Practice Competencies for Registered Nurses. The 2014 guideline at the time, had one competency noted, to care for patients in end-of-life stages, however, there was no mention of MAiD. The RNAO (2011) offered extensive detail and information regarding end-of-life care; however, the document mentioned was specifically for palliative care and not for MAiD. The one document created by the RNAO on MAiD gives a brief description of the process and the nursing role (2016).

It is important to note that despite MAiD being offered in the end-of-life phase, it differentiates drastically from palliative care. The World Health Organization [WHO] (2020) explains that the goal of palliative care is to ensure comfort, relieve pain, and improve the quality of every step toward death. On the other hand, MAiD is requested due to loss of autonomy, dignity, and of dependence (Al-Awamer, 2015). The nursing role in these two instances can be similar in some ways but differs in others. Each type of care requires its guidelines. The Canadian Medical Association (2017) encouraged health programs to integrate theoretical education and clinical experience about MAiD with their students. Also, this organization “acknowledges the importance of understanding that other acts within the realm of end-of-life care are distinct from the practice of medical assistance in dying” (CMA, 2017, p1).

The CNPS explained in 2016 that nurse who participates in MAiD must have the knowledge to do so, have a reasonable skill set, and must work in accordance with the laws and regulations. It was also important to note that, at that time, MAiD was new legislation from 2016, and nursing regulatory organizations simply had not developed regulations for MAiD direction just yet. However, nurses had and still have the right and need to know about the legal aspects regarding MAiD to protect themselves and their nursing license as well as become comfortable with their role within MAiD.

2.6.2 Current Nursing Organization Policies on MAiD in Ontario and Canada

In 2020, when data collection started for this research, the CNO modified the Entry-to-Practice Competencies to add the requirement of MAiD. Nurses now must “incorporate knowledge about ethical, legal and regulatory implications of MAiD when providing nursing care” (CNO, 2019, p 5). The CNO (2021) also published a detailed guideline on nurses’ role in providing MAiD. According to CNO (2021) “Registered Nurses (RNs) and Registered Practical Nurses (RPNs) can participate by providing nursing care and supporting an NP or physician to provide a person with medical assistance in dying, in accordance with the law” (p. 5).

According to the CNA (2017), the nurse's role during the provision of MAiD is to provide safe, compassionate, competent, and ethical care; and to promote health and well-being. It is also to promote and respect informed decision-making; preserve dignity; maintain privacy and confidentiality; promote justice; and be accountable for one's actions. As shown, nurses have immense responsibility during the process of MAiD. The CNA expresses that "Canada's nurses will continue to have a significant role in providing high-quality, person-centered end-of-life care that includes palliative care and natural death or MAiD" (2017, p. 3). They explain that nurses are at the center of patient care, and they interact directly and closely with the patient the most, thus reinforcing why nurses need to know about MAiD and feel comfortable answering questions.

The CASN updated its National Framework in 2022, to add MAiD into the definition section of end-of-life care. They define end-of-life care as care that “encompasses all the options that are available at that stage in life, including palliative care and medical assistance in dying”

(p. 24). As previously explained, CASN has a large selection of documents and policies for palliative care, however, has very few documents for MAiD. It is important to note that palliative care and MAiD merit their separate definitions and guidelines. The CNPS maintains the same position as they previously did within their document: What every nurse should know; updated in 2021 to answer questions regarding nurses’ positions and legal implications.

Chapter 3: Theoretical Framework

The Theoretical Domains Framework [TDF] is a framework that was created to assist in identifying behaviours and factors that influence the implementation of a new policy (Cane et al., 2012). Atkins et al. (2017) created a guideline on how to use the TDF to understand the influences on behaviour for practice implementation using seven steps. The TDF was found useful for this research because MAiD was new and represented a new subject for nursing students to learn and a new competency for their practice. In September 2020, MAiD education was just added to the curriculum of the BScN program included in the study, therefore this education intervention was the first MAiD education students had received. Barriers that influence behaviour change, for example, implementation and participation in MAiD, are already known and have been discussed in the literature review. It was already known that nurses have a large role in the process of MAiD and their preparation for this new role is important.

The TDF helps determine these influences, as well as help create policies and interventions to implement. Using the TDF to help during multiple processes of this research helped determine whether knowledge and beliefs are impacted by education. The fourteen domains of the TDF, described below in this chapter, influenced the literature review by modifying the current related constructs to the MAiD topic. Question creation was influenced by the constructs, to then research within the databases. The domains and constructs solidified the importance of researching and knowing certain topics about MAiD. The intervention with the participants and the questionnaires were influenced by each domain from the TDF. In this chapter, links are made and explained between the TDF domains and constructs and their relation to this study.

Knowledge and beliefs are the two variables examined in this research. The TDF defines knowledge as “an awareness of the existence of something” (Cane et al., 2012, p. 13). To continue knowledge can be explained as procedural knowledge, skills, knowledge of task environment, and psychological capability. The TDF defines beliefs of capabilities as "acceptance of the truth, reality or validity about an ability, talent or facility that a person can put to constructive use" (Cane et al., 2012, p. 13). This can also be seen as self-confidence, perceived competence, self-efficacy, perceived behavioural control, beliefs, self-esteem, empowerment, and professional confidence (Cane et al., 2012). The TDF then defines beliefs of consequences as an “acceptance of the truth, reality, or validity about outcomes of a behaviour in a given situation" (Cane et al., 2012, p. 13). This can be explained as beliefs, outcome expectancies, characteristics of outcome expectancies, anticipated regret, and consequences (Cane et al., 2012).

During the first phases of this research, two other theories were analyzed; Jean Watson’s theory of caring and Kolcaba’s theory of comfort (Nursing Theory, 2023b; Nursing Theory, 2023a). All ten carative factors of Watson’s theory could be related to the nursing role with MAiD (Nursing Theory, 2023b). Nurses respect and promote patients' rights, all while providing holistic care without judgment with MAiD. Nurses respect the wishes of the patients pursuing MAiD and they control their own emotions and do not share their values and beliefs with the patients. These are all roles’ nurses have during MAiD, and they all tie into Watson's Caring theory (Nursing Theory, 2023b). Although Watson's theory addresses caring and respecting patients' experiences, it did not address nursing knowledge and beliefs and how those influence behaviour change.

Also, Kolcaba's Comfort theory was compared with MAiD, where comfort is seen to be the fundamental need of all humans, in all four contexts of life: physical, psychospiritual, environmental, and sociocultural contexts (Nursing Theory, 2023a). During the MAiD process, nurses help patients that are suffering from terminal diseases with pain management, and social support, provide patients with a calm environment, and help the patients have a peaceful death. These are all similar to Kolcaba's Comfort theory, however, it does not provide a theoretical base for knowledge and beliefs, as did the TDF.

The TDF was used over different models and theories as it was the only framework found that included healthcare professionals' knowledge and beliefs as a factor of behaviour change during intervention implementation (Cane et al., 2012). Also, the TDF has been successfully used in other studies such as; identifying barriers and implementing interventions with hand hygiene, providing tobacco use prevention and cessation counselling, and blood transfusion protocols (Cane et al., 2012).

3.1 Questionnaires

Included in this study was a sociodemographic form and questionnaire, which was administered on three different occasions, evaluating knowledge and beliefs about MAiD. Items addressing the goals of this research study were developed into a self-administered questionnaire, which was provided to the participants (Bhandari, 2023). The questions were standard to ensure that all participants received the same questioning (Bhandari, 2023). This ensured that all participants had a fair and similar chance to answer the questions. The knowledge items contained twenty-one True or False questions, as well as an "I don't know" choice for each question. The beliefs portion of the questionnaire contained ten statements with three options each, on a Likert Scale. These options were: *Agree, Indifferent, or Disagree.* Closed-ended questions were used to collect data on quantitative variables (Bhandari, 2023). As explained in the data analysis subsection, the knowledge questions were quantitative variables, as the goal was to determine participant scores.

A Likert Scale was used to assess participants' beliefs about MAiD (Burns & Grove, 2005). Subramanian (2012) explains that Likert-Scales used to assess beliefs and behaviours tendencies are becoming more popular within nursing research, as it can be an instrument of data collection that is cost-effective and easy to administer to collect baseline data. Three main components needed to be included in a Likert scale: cognitive, conative, and affective components (Subramanian, 2012). All these components were used when creating the Likert-Scale statements. The cognitive component is the mental component, "consisting of opinion or belief" (Subramanian, 2012, p. 66). This was touched upon in the sociodemographic questionnaire when asked if participants were against MAiD, as well as in the questionnaire. The cognitive component is the emotional component (Subramanian, 2012). This was used within the questionnaire multiple times, for example, asking if participating in MAiD would elicit negative or positive emotions. The affective component refers to the behavioural aspect, which was also used in this research (Subramanian, 2012). For example, it could be hypothesized that if participants didn't believe in MAiD, they might not want to participate and have negative feelings about the statements.

Within the Likert scale, there was an unbalanced framing of questions, such as *I believe that nurses who participate will become victims of intimidation,* and *I believe that nurses who practice conscientious objection will become victims of intimidation.* The author described that it is best to provide both sides of the argument within the same statement, to reduce any influence on how participants answer the one-sided statement (Bhandari, 2023). However, within the remaining statements in the Likert-Scale, there was always the counter-argument statement. This was done to eliminate any type of research bias and to make sure that participants had different opportunities to state their beliefs with different questions (Bhandari, 2023).

The beliefs section was completed using the eleven steps of Subramanian (2012) to create assessment Scales, which are explained next. The first step is the informal *Discussion* of the issue with people who could have some input on the subject, which was done with professors within the Master of Nursing program. The *Review* of related literature was to follow, which was done during the initial literature review of the research. Next, is the *Writing of Statements,* which should be simple and easy to understand to elicit a quick response. Twenty-four statements were written to *Create an item pool*, which was step number four. The fifth and sixth steps involved the *Editing* and *Ranking* of the items. Statements that were removed from the item pool were those that were either irrelevant, were double negative statements, were confusing, or had monotonic answers. The next step was *Scoring* each statement to be able to complete the analysis. To enter data into SPSS, the scoring was from 0-2: agree– 2, indifferent – 1, and disagree – 0. Instructions *were* provided at the start of the questionnaire to explain to participants how to properly select the answer they chose and the *Formatting of the scale* was easy to follow. To ensure *Validity* and *Reliability,* the full questionnaire was pre-tested by the writer, as well as two colleagues that had no relation to the study to ensure it was legible.

For this research, it was recognized that typically using a tool that’s validity and reliability have already been tested and used in different studies is important. Some researchers could adapt a tool to their specific research; however, this was not done for this research. Mainly because one of our goals was to assess if the educational intervention had an impact on the specific knowledge of students. To help with validity and reliability, the TDF and Subramanian's steps were followed, as well as pre-testing the questionnaires many different times with colleagues and modification as per their recommendations (Cane et al., 2012; Subramanian, 2012).

Face validity is important as it measures the general validity of a test or technique; in this case, the questionnaires (Bhandari, 2022). To ensure face validity received, the questionnaire was relevant to what it was measuring, appropriate for the participants, and adequate for the purpose (Bhandari, 2022). Many people were asked to review the measurement instrument, such as experts in the topic of MAiD, experts in research, and nursing colleagues. Content validity was done to evaluate how well the questionnaire measures the constructs needed; such as knowledge and beliefs. (Nikolopoulou, 2022a). Data was collected using the theoretical framework as a base, then a judging panel consisting of 4 reviewers (one expert on the topic, research, and two nursing colleagues) reviewed and evaluated the content of the questionnaire (Nikolopoulou, 2022a). Cronbach's alpha test of internal consistency was conducted to determine reliability (Laerd Statistics, 2018a). This is commonly used when having multiple Likert questions in a questionnaire, which formed the beliefs section scale which included 10 belief statements.

The TDF was also helpful while developing the sociodemographic form and questionnaire. The TDF and its influence on the process of development within this research are explained below.

3.2 Theoretical Domains Framework

Multiple theories were analyzed and compared to explore the key concepts guiding this study; knowledge and beliefs. A decision was made to focus on the TDF; a framework that provides twelve specific domains that aid in evaluating the effects of behaviours on the implementation of interventions or introduction to new policies (Cane et al., 2012). It was created "to simplify and integrate a plethora of behaviour change theories and make the theory more accessible to, and usable by, other disciplines" (Cane et al., 2012, p. 2) and represents the key concepts of a variety of change theories.

The TDF was the result of a collaboration by a team of 18 health psychological theorists in collaboration with 16 healthcare service researchers and 30 health psychologists (Michie et al., 2005). This team carried out their project by adhering to the six following stages: identifying theories and theoretical constructs, simplifying into theoretical domains, evaluating the importance of the theoretical domains, interdisciplinary evaluation, validating the domain list, and pilot interview questions (Michie et al., 2005). The outcome, the TDF, was created using 33 theories and 128 key theoretical constructs related to behaviour change (Cane et al., 2012). The initial TDF was composed of the following 12 domains: (1) knowledge, (2) skills, (3) social/professional role and identity (self-standards), (4) beliefs about capabilities (self-efficacy), (5) beliefs about consequences (anticipated outcomes), (6) motivation and goals (intention), (7) memory, attention and decision processes, (8) environmental context and resources (environmental constraints), (9) social influences (norms), (10) emotion, (11) behavioural regulation, and (12) nature of the behaviour (Michie et al., 2005). The original group tested their theory by doing three pilot interview sessions, as well as doing backward validation within their team to ensure the constructs were placed with the proper domains (Michie et al., 2005).

Cane et al. (2012) provided a structured validation of the TDF concluding that the framework had a strengthened empirical base and provided a method for assessing implementation and the effects of behaviours on intervention development. This led to the refined framework of Cane et al. (2012). Compared to the original framework, the following domains were maintained. The numbering corresponds to its respective order in the theoretical domains table: (1) knowledge,

(2) skills, (3) social/professional role and identity, (7) memory, attention, and decision processes, (8) environmental context and resources, (9) social influences, (10) emotion, and (11) behavioural regulation (Cane et al., 2012). The following domains were also retained, however, divided into six new domains: (4) beliefs about capabilities, (5) beliefs about consequences, and (6) motivation and goals (Cane et al., 2012). The domain (12) nature of behaviours was removed from the refined framework (Cane et al., 2012).

The refined TDF of Cane et al. (2012) is a framework that contributes to the understanding of relationships between certain factors and the behaviors of healthcare professionals. Cane et al. (2012) state that "behaviour change is key to improving healthcare and health outcomes" (p. 1). Briefly, the domains are knowledge; skills; social/professional role and identity; beliefs about capabilities; optimism; and beliefs about consequences (Cane et al., 2012). To continue, the remaining domains are reinforcement; intentions; goals; memory, attention, and decision processes; environmental context and resources; social influences; emotions; and behavioural regulation (Cane et al., 2012). *Table 3* provides a summary of the 14 domains in this framework that are helpful when having difficulty with implementing change in clinical practice (Cane et al., 2012).

The guideline from Atkins et al. (2017) explains that researchers must first select and specify the target behaviours and for this research, it was the impact of education on knowledge and beliefs and some predisposing factors that may influence this, such as prior education and personal beliefs. The second step was to select the study design, which was a quasi-experimental study with questionnaires. The third stage was developing study materials and Atkins et al. (2017) explain that "materials should be adapted to be appropriate to the specific behaviours and context" (p. 6). This was done for this study, as the domains of Cane et al. (2012) were used to develop the education piece and the questionnaires. The remaining steps pertain to data collection, analysis, and reporting of the findings. Those next steps are detailed now when explaining the fourteen domains with their constructs, associated with this research

Table 3

Cane et al.'s *Theoretical Domains Framework in Relation to MAiD*

Domain	Constructs	Influence of domain on literature review (Research topics)	Influence of domain on intervention with participants	Items in Sociodemographic form and Questionnaire related to specific domain
1. Knowledge	Knowledge (including knowledge of condition/scientific rationale) Procedural knowledge Knowledge of task environment	What are the nursing guidelines (CNO, CNA, RNAO, etc) ? What is the government's position on MAiD? What are the educational positions on MAiD? (CNO, CASN) What is the current position/beliefs of Canadian nurses practicing MAiD? What are the current concerns among nurses practicing MAiD?	Conducted a presentation about MAiD to increase knowledge	Knowledge questions in questionnaire related to history, process of MAiD, patient request and admissibility, nurse's role and documentation (#1 - 16)
2. Skills	Skills Skills Development Competence Ability Interpersonal skills Practice Skill Assessment	Do nurses and nursing students know their role in MAiD? Have nurses had the right training to do so? Do nurses feel competent practicing MAiD? Are there adequate opportunities to practice MAiD and assess their skills?	Assessing their knowledge of their role with MAiD Assessing their comfort levels pre and post presentation Assessing their communication skills	Knowledge questions in questionnaire related to history, process of MAiD, patient request and admissibility, nurse's role and documentation (#1 - 16) Beliefs about MAiD (# 17)

Domain	Constructs	Influence of domain on literature review (Research topics)	Influence of domain on intervention with participants	Items in Sociodemographic form and Questionnaire related to specific domain
3. Social / Professional Role and Identity	Professional identity Professional role Social identity Identity Professional boundaries Professional confidence Leadership Group identity Organizational commitment	What are nurses' beliefs about the professional role with MAiD? How many nurses practice conscientious objection? How confident are nurses with their practice? Are management/organizations supporting their personal choices regarding MAiD?	Sociodemographic factors for personal and professional identity Questioned their views regarding the nurse's role in MAiD. Questions about scope of practice?	Sociodemographic questionnaire questions related to age, sexe, ethnic origin, marital status, years of study and beliefs about MAiD (# 1-12) Knowledge questions about scope of practice (# 10-12, 15-16). Beliefs about MAiD (# 17)
4. Beliefs about Capabilities	Self-confidence Perceived competence Self-efficacy Perceived behavioural control Self-esteem Beliefs Empowerment Professional confidence	What would help current nurses and nursing students to feel competent with MAiD? Do nurses have to practice MAiD? Do nurses feel good about themselves after participating in MAiD? Do nurses feel like they can fulfill their role in MAiD even if they don't believe in it?	Sociodemographic questionnaire Questioned their personal beliefs about MAiD pre and post teaching intervention	Sociodemographic questionnaire questions related to age, sexe, ethnic origin, marital status, years of study, previous experience and education, and beliefs about MAiD (# 1-12) Beliefs about MAiD (# 17)
5. Optimism	Optimism Pessimism Unrealistic optimism Identity	How optimistic or pessimistic are nurses about introducing MAiD to their practice? What influences nurses to practice MAiD or conscientious objection?	Questioned their beliefs about their participation in MAiD and what they think would influence them.	Socio Demographic question about beliefs (# 11) Beliefs about MAiD (# 17)

Domain	Constructs	Influence of domain on literature review (Research topics)	Influence of domain on intervention with participants	Items in Sociodemographic form and Questionnaire related to specific domain
6. Beliefs about Consequences	Outcome expectancies Characteristics of outcome expectancies Beliefs Anticipated regret Consequents	Do nurses agree with the MAiD legalization? What do nurses expect from the legalization? Do nurses feel they may regret participating or not participating? What do they believe the consequences could be of not participating? Do cultural or religious beliefs influence attitudes toward MAiD?	Sociodemographic questionnaire Questioned their beliefs about MAiD	Socio Demographic question about beliefs (# 11) Beliefs about MAiD (# 17)
7. Reinforcement	Rewards Incentives Punishment Consequents Reinforcement Contingencies Sanctions	Are there any incentives for nurses to participate? What are the consequences (if any) of not participating? How do nurses feel if they participate or if they don't participate? Do nurses believe that the benefits of participating outweigh the costs?	Received certificate for participating in research Questions asked regarding conscientious objection	Socio Demographic question about beliefs (# 11) Beliefs about MAiD (# 17)
8. Intentions	Stability of intentions Stages of change model Trans. model /stages of change	How strong are nurses' beliefs about participating and not participating? Do organizations intend on	Within the questionnaire, left an option for “do not know” and “indifferent” for knowledge and	All questions in Sociodemographic and questionnaire had an option for either “Prefer to not

		starting training for nurses? Do teaching institutions intend on implementing MAiD education in the curriculum?	beliefs Asked about ‘intent’ upon graduation?	answer, other, i don’t know” (# 1-12, # 1-17) Sociodemographic questionnaire about intent upon graduation (# 12(

Domain	Constructs	Influence of domain on literature review (Research topics)	Influence of domain on intervention with participants	Items in Sociodemographic form and Questionnaire related to specific domain
9. Goals	Goals (distal/proximal) Goal Priority Goal/ Target setting Goals (autonomous/controlled) Action planning Implementation intention	Has a plan been implemented to introduce MAiD to students and nurses currently practicing? What could interfere with nurses' participation in MAiD?	Conducted the first teaching and research with students about MAiD once it was added to the curriculum from CNO Research to show how effective teaching is for students and their preparedness for MAiD	N/A
10. Memory, Attention and Decision Processes	Memory Attention Attention control Decision making Cognitive overload / tiredness	Will nurses know their role in MAiD when the time arises? How do nurses decide if they will participate or not? And how do they notify other staff?	2nd Post-Test (delivered one month after presentation) to analyze knowledge retention	N/A
11. Environment Context and Resources	Environmental stressors Resources / material resources Barriers and facilitators Organizational culture / climate	Do nurses believe they have the time to add this new legislation to their practice? Are their resources available for nurses? Do their organizational policies	Questioned students on the factors that affect their conscientious objection	Knowledge questions about conscientious objection (# 16) Beliefs questions about conscientious objection (#

	Person x environment interaction Salient events / critical incidents	support them?		17)

Domain	Constructs	Influence of domain on literature review (Research topics)	Influence of domain on intervention with participants	Items in Sociodemographic form and Questionnaire related to specific domain
12. Social influences	Social pressure Social norms Group conformity Social comparisons Group norms Social supports Intergroup conflict Power Group identity Alienation Modeling	What are barriers to participating or not participating? Is there pressure from staff or organizations? Is it important to nurses that they follow what other nurses do? What types of support are in place for nurses?	Presented about conscientious objection and what to do if this is what they choose to do Questioned about beliefs of participation	Knowledge questions about conscientious objection (# 16) Beliefs questions about conscientious objection (# 17)
13. Emotion	Anxiety Fear Affect Stress Depression Positive / negative affect Burn-out	What are nurses feeling with participating or conscientious objection? Are these experiences positive or negative?	Questioned about their personal beliefs	Beliefs questions about conscientious objection (# 17)
14. Behavioural Regulation	Self-monitoring Breaking habit Action planning	Are there debriefing sessions with staff after participating?	Presented about personal and professional follow ups with staff and family.	Consent form had options for psychological resources if students needed to pursue

3.3 The Refined Theoretical Domains Framework in Relation to MAiD

When applying the TDF to nurses' experience with MAiD, behaviours can be a variety of things, such as any factors that influence the decision of participation or of conscientious objection, beliefs about MAiD, or implementation of MAiD teaching in organizations (Cane et al. 2012). *Table 3:* Cane et al.'s *Theoretical Domains Framework concerning MAiD,* describes the 14 domains of behavioural change, the related constructs, as well as their influence on this research. Each domain in the framework informed the focus of the literature review, helped to establish what would be included in the presentation, and contributed to the creation of questionnaires administered before and after the presentation to the nursing students. Each domain will now be discussed highlighting how the authors defined the domain and how it applies to MAiD. For each following domain, it will also be explained how it influenced this research.

3.3.1 First Domain: Knowledge

Knowledge is explained by an "awareness of the existence of something" (Cane et al., 2012, p. 13). The authors included that knowledge is considered general knowledge of the task, its environment, the procedures related, and the scientific rationale (Cane et al., 2012).

This domain influenced the literature review to help research in databases what was known about MAiD and position statements from nursing associations and its governing bodies, along with their current positions and those of practicing nurses. Of particular interest were articles regarding the current position/beliefs of nurses practicing MAiD or practicing conscientious objection, as well as their concerns. This became the foundation of a presentation for nursing students, to teach them about the history and legalization of MAiD, the process of MAiD from the initial request to the passing, admissibility, consent, and reflection period, nursing role, aftercare post MAiD, documentation, and special circumstances, such as conscientious objection, the role of the family, and ethical dilemmas.

This first domain also influenced the creation of the questions asked in the questionnaire. Since knowledge is an important domain to evaluate behavioural changes, there were 16 questions in the questionnaire that reflected knowledge about MAiD. Questions # 1 through 16 evaluated knowledge about MAiD's history, the process of MAiD, patients' requests for MAiD and admissibility, the nurse's role within MAiD, and documentation. For example, question #12 *True or False. A Registered Nurse (RN) can act as an independent assessor for patient admissibility.* This evaluates the knowledge level of participants with MAiD before and after the education.

3.3.2 Second Domain: Skills

The next domain is (2) skills, defined as a capability obtained through practice, with the following constructs: skills and the development of skills, competence in a skill and the ability to perform and practice them, skill assessment, and interpersonal skills (Cane et al., 2012, p. 13).

This domain influenced literature research to determine what knowledge nurses and nursing students have on their role in MAiD and if they have the proper training to do so. It also created research on nurses and nursing students' competencies when practicing MAiD and if they have adequate opportunities to practice MAiD and assess their skills, in school, laboratory or at work.

This second domain is like the first, as we assessed their knowledge of their role with MAiD, from questions #1 through 16 in the questionnaire. Their beliefs about MAiD were also questioned (question #17). Developed in the belief section were Likert Scales to assess the comfort levels of nursing students and their beliefs about their skills and communication, which are constructs for this domain (Cane et al., 2012). For example Question 17a) *After obtaining my degree, I will feel comfortable speaking about MAiD with my patients.* According to Burns and Groves (2005), Likert Scales "is the most commonly used of the scaling techniques" (p. 402). It is created to determine the opinion of the participant (Burns & Groves, 2005).

3.3.3 Third Domain: Social/Professional Role and Identity

The third domain is (3) social/professional role and identity, which is defined by an individual's qualities or behaviours that they display in a public setting (Cane et al., 2012). The domains include professional identity and role, social identity, self-identity, professional boundaries and confidence, group identity, and leadership, as well as organizational commitment (Cane et al., 2012).

The third domain influenced the literature search to determine what previous studies revealed about nurses' beliefs about the professional role with MAiD and how many were confident with their role or how many practiced conscientious objections. Also researched were what organizations were doing to support their staff with their personal choices regarding MAiD participation.

This domain influenced the discussion with participants during the education piece, about what nurses' beliefs were about their professional role with MAiD, how many nurses practiced conscientious objection and their confidence in their practice, and the support of management/organizations regarding their personal choices with their participation. All of these discussion topics can be related to Cane et al., (2012) constructs of professional identity, role and confidence, organizational leadership, and commitment.

The sociodemographic questionnaire asked participants about their general characteristics, as well as the area of nursing where they preferred to work once they graduated

(Questions # 1 through 12); which can tie into professional identity as per Cane et al. (2012). The knowledge questionnaire asked about nurses' scope of practice (specifically Questions # 10-12 and 15-16). They were also asked specific statements on their beliefs about the nurse's role during MAiD (Question # 17), as it was thought to be interesting to see if any link could be made between these factors and their beliefs.

3.3.4 Fourth Domain: Beliefs About Capabilities

The fourth domain is (4) beliefs about capabilities, which is the “acceptance of the truth, reality, or validity about an ability, talent, or facility that a person can put to constructive use" (Cane et al., 2012, p. 13). The constructs for this domain are professional confidence, self-confidence and self-esteem, perceived competence and perceived behavioural control, self-efficacy, beliefs, and empowerment (Cane et al., 2012).

This domain motivated the literature review about the needs of nurses and nursing students to help their confidence levels, as well as any emotions nurses felt after participating; both relating to specific constructs of confidence and self-efficacy (Cane et al., 2012). More research was done to see if nurses felt fulfilled during and after participation in MAiD, as this could influence empowerment; a construct of the fourth domain.

Again, their beliefs were questioned in the sociodemographic form (Questions #1 - 12) and in the beliefs section of the questionnaire (Question # 17). For example 17j) *I believe that participating in MAiD will bring out positive emotions within myself.* This question is to see if participants believe they would feel fulfilled after participating in MAiD.

3.3.5 Fifth Domain: Optimism

The fifth domain is (5) optimism which is explained by the confidence that something will happen or that a goal will be achieved, with the constructs of optimism, pessimism, unrealistic optimism, and identity (Cane et al., 2012).

This domain influenced the research about nurses' level of optimism and what influenced their decision to participate in MAiD or their decision to practice conscientious objection. To determine this, it was thought that identity, a construct, plays an important role in the decision to participate or not in MAiD.

This domain also influenced the sociodemographic form and the beliefs portion of the questionnaire. In the sociodemographic form, Question # 11 *Are you opposed to MAiD?* was asked to determine the initial opinion on MAiD of the participant before completing the questionnaires. Participants' beliefs were also questioned in the beliefs portion, specifically question # 17.

3.3.6 Sixth Domain: Beliefs About Consequences

The sixth domain (6), beliefs about consequence is the "acceptance of the truth, reality, or validity about outcomes of a behaviour in a given situation" (Cane et al., 2012, p.13). The following are the constructs associated with this domain: beliefs, outcome expectancies, and its characteristics, anticipated regret, and consequences (Cane et al., 2012, p. 13).

This domain influenced the research about what nurses believed, how they felt, and what they expected from the legalization of MAiD. It also led to questions about whether nurses would regret participating or not and if any consequences would arise from their conscientious objection. The nurses' cultural and religious beliefs were then researched to see if this was a factor in participation.

This domain is similar to the fifth domain, as questions were asked in the sociodemographic form (specifically question 11) as well as in the beliefs portion of the questionnaire; specifically, question # 17f): *After obtaining* my degree, I will practice *conscientious objection because of my cultural, spiritual and/or my emotional beliefs.*

3.3.7 Seventh Domain: Reinforcement

The seventh domain (7), reinforcement, is achieved by increasing the possibility of a response by arranging a relationship or contingency between the response and a stimulus, which is explained by incentives, punishment, consequents, reinforcement, contingencies, sanctions, and rewards (Cane et al., 2012).

This domain influenced the research about incentives and/or benefits for participating, consequences for choosing conscientious objection, and if nurses believe that the benefits of participating outweigh the costs.

This domain influenced the interaction with the participants, as they all received a certificate after finishing the Post-Test Two, for participating in the research. As stated in the consent form, which was signed by all participants, there were no incentives to participate in this research. However, they could strongly benefit from participating in the education piece, as it was new legislation and was required in the curriculum.

Question # 11 in the sociodemographic questionnaire asked participants if they were opposed to MAiD, which was again done to see the initial beliefs of participants. Beliefs were questioned in the statement section of the questionnaire, regarding beliefs about consequences for participating or practicing conscientious objection. This was specifically asked in question # 17d) *I believe that nurses who practice conscientious objection can become victims of* *intimidation or discrimination since they do not want to participate*; which is related to the constructs' punishments and consequences (Cane et al., 2012).

3.3.8 Eighth Domain: Intention

The eighth (8) domain is intentions, the decision to behave a certain way or to resolve a situation in a certain way, with the constructs of stability of intentions, stages of change model, and a transtheoretical model (Cane et al., 2012).

This domain influenced the decision to research how strong nurses' beliefs were about participating or practicing conscientious objection, and if those beliefs can be changed. Also of interest were the intentions of organizations and teaching institutions to implement training and education for nurses and nursing students. As we already know, the CNO added MAiD to its Entry-To-Practice competencies and MAiD education was to be added to BScN curriculums by September 2020 (CNO, 2019).

This domain influenced the sociodemographic questionnaire, where it was asked in what field of work nursing students wanted to work (Question # 12). It was believed that a nurse's choice in the field of work could potentially influence their intentions on participating in MAiD.

3.3.9 Ninth Domain: Goals

The ninth domain is (9) goals, described as the "mental representations of outcomes or end state that an individual wants to achieve" (Cane et al., 2012. p. 14). This domain is explained by goals, priorities, target setting, action planning, and the intention to implement (Cane et al., 2012).

Similar to the eighth domain, this domain brought up research questions regarding if there was a plan in place to implement MAiD training and education to nurses and nursing students, as well as if anything could interfere with nurses' participation in MAiD. It is important to know the goals and priorities of nursing institutions regarding education implementation, for not only nursing students but also nurses.

This research became the first introduction to MAiD for some years of study as explained in previous chapters as it was recently added to the teaching curriculum at Laurentian University in September 2020 (CNO, 2019). This domain did not influence the questionnaires.

3.3.10 Tenth Domain: Memory

Also, within the domains, the tenth is (10) memory, attention, and decision processes described as the capacity to retain information, focus directly on aspects of the environment and choose between multiple alternatives (Cane et al., 2012). The constructs for this domain are memory, attention, and attention control, decision-making, and cognitive overload/tiredness (Cane et al., 2012).

This domain influenced the research focus regarding how nurses decided to participate or not, and how they approached their patients, co-workers, and management about this decision. This domain also assisted with research about whether nurses and nursing students would be able to retain and apply their knowledge about their role in MAiD as necessary.

To determine if participants could retain their knowledge related to the construct of the capacity of retaining information, Post-Test One and Post-Test Two were administered a month later with the nursing students to analyze knowledge retention (Cane et al., 2012). This domain also did not influence the questionnaires.

3.3.11 Eleventh Domain: Environmental Context and Resources

The eleventh domain is (11) environmental context and resources which encompasses circumstances of a situation or environment that either encourage or discourage a person to develop skills and abilities, social competence, and how they adapt to their environment (Cane et al., 2012). This is explained by environmental stressors, resources, the organizational culture/climate, salient events/critical incidents, the way they interact with the environment, and barriers and facilitators (Cane et al., 2012).

This domain influenced research to determine which resources and policies available to nurses in nursing organizations assist them with knowledge, skill, and procedure. Another interesting question was whether the nurses believed they had the time to incorporate this new role into their nursing practice. Organizational barriers and environmental stressors were researched to determine influences on the decision to participate in MAiD.

This domain influenced the presentation about MAiD as we did a case study about conscientious objection with the participants to hear their opinions. In the knowledge section of the questionnaire, question #16 asked a question about conscientious objection. In the beliefs section, question # 17 also questioned participants' beliefs about conscientious objection.

3.3.12 Twelfth Domain: Social Influences

The twelfth domain, (12) social influences, is demonstrated by processes that cause someone to change their thoughts, feelings, or behaviors caused by social pressure, social norms, group conformity, social comparisons, group norms, social support, power, intergroup conflicts, alienation, group identity and modeling (Cane et al., 2012).

This domain influenced the research regarding barriers, conflicts, pressure, and support nurses had that influenced their participation. Conscientious objection was explained to the students and what they should do if they decide to practice this.

Again, this domain influenced the questionnaires to ask about knowledge about conscientious objection (Question # 16) and beliefs about conscientious objection, for example, Question # 17h) *I believe that most nurses will practice conscientious objection.* As well as

Question # 17f) *After obtaining* my degree, I will practice *conscientious objection because of my cultural, spiritual, and/or emotional beliefs.* This can be related to social pressure/norms, and group identity, all constructs of this domain (Cane et al., 2012).

3.3.13 Thirteenth Domain: Emotion

The thirteenth domain is (13) emotion, defined as “a complex reaction pattern, involving experiential, behavioural, and physiological elements, by which the individual attempts to deal with a personally significant matter or event" (Cane et al., 2012, p. 14). This is influenced by fear, anxiety, positive/negative affect, stress, depression, and burnout (Cane et al., 2012).

This domain influenced the literature review to support research about the nurses' positive, negative, and neutral feelings about their choice in participating in MAiD. This domain influenced questions in the beliefs portion of the questionnaire, specifically question # 17i) *I believe that participating in MAiD will bring out negative emotions within me.* This can be related to the construct of positive/negative affect, due to the participant already believing they will have negative emotions from participating (Cane et al., 2012).

3.3.14 Fourteenth Domain: Behavioural Regulation

Lastly, the fourteenth domain is (14) behavioural regulation, which is “anything aimed at managing or changing objectively observed or measured actions” (Cane et al., 2012, p. 14). The constructs for this domain are self-monitoring, breaking a habit, and action planning (Cane et al., 2012).

This final domain was interesting and influenced the literature review to research what type of debriefing policies organizations had in place for nurses after participating in MAiD. This influenced the presentation to speak to students about proper follow-up and debriefing sessions with staff. As well, this also influenced a page in the consent form where all the psychological resources, which are available to the participants, were listed given the sensitivity of the topic of MAiD.

All of these fourteen domains from the refined TDF of Cane et al. (2012) influenced questions included in the sociodemographic questionnaire, as well as the Pre- and Post-Tests, included in Appendix A and Appendix G. All of these questionnaires were carefully planned to ensure that a proper analysis of influencing factors/behaviours could be undertaken.

Chapter 4: Method

The literature review highlighted the challenges nurses face concerning MAiD, such as legal uncertainties, evolving scope of practice, moral and ethical dilemmas as well as lack of confidence (Beuthin et al., 2018; Dransart et al., 2017; Francke et al., 2015; MacDonald et al., 2018; Wright et al., 2017). A lack of research focusing on Canadian nurses and their relationship with MAiD and the relevant legislation has been noted (Beuthin, Bruce & Scaia, 2018; Wright et al., 2017). There are limited studies done on the knowledge and beliefs about MAiD of Canadian nursing students and nurses. This study was based on Cane et al.'s Theoretical Domains Framework (2012). Using this framework, as well as documents from nursing regulating and guiding bodies, a questionnaire was created, and an educational intervention was delivered to increase nursing students' knowledge and beliefs regarding MAiD. This chapter will describe the study design used to provide this education and evaluate its effectiveness in a baccalaureate nursing program.

4.1 Design

This study was conducted using a one-group longitudinal quasi-experimental design (Gregorich, 2016) to assess the impact of an education intervention on the two dependent variables of knowledge and beliefs. A single group pretest-posttest design (Grove et al., 2015) allowed for the assessment of the effectiveness of the education (Fortin & Gagnon, 2022), and a second Post-Test demonstrating the reliability of the effect (Mortada, 2021), was carried out in the fall of 2020.

4.2 Ethical Review

Prior to initiating this study, an ethics review was conducted by the Research Ethics Board of Laurentian University. All corrections and modifications were completed, and ethics approval was received on May 8th, 2020 (Appendix C). The few key changes included editing language in the sociodemographic questionnaire to eliminate the risk of discrimination. In addition, a page was added to the consent form to provide psychological resources, as there was a risk of potential psychological and emotional distress after a presentation about MAiD. Participants were reminded that their participation was voluntary, which was important as they were students. The consent form stated they could leave at any time and that there was no incentive for their participation. Finally, the participants were allowed to request the results of the study by ticking a box on the consent form. Also, once published, the research was to be shared with participants and the School of Nursing.

4.3 Population and Setting

Using non-probabilistic sampling, a convenience sample consisting of all nursing students in each of the four years of the nursing baccalaureate Francophone program was created (Grove et al., 2015). The use of convenience sampling permitted the inclusion of all nursing students of all four years of the program, and the delivery of the education intervention within the existing curriculum. Despite the absence of a control group, this method did not necessarily introduce serious biases (Grove et al., 2015). University students tend to have diverse characteristics; therefore, this sample could be similar to the targeted population, students of a BScN program. It was therefore considered a representative sample, appropriate to permit generalization to the target population (Fortin & Gagnon, 2022). The results of this study could then possibly be read by other undergraduate nursing programs to use as evidence for the implementation of MAiD education.

Eligibility criteria were the following: an active student status in the Francophone BScN program at Laurentian University and enrolled in all the mandatory courses with the class code

SCIN. The only exclusion criterion was not being part of the undergraduate Francophone nursing program at Laurentian University.

Burns and Grove (2005) explain that the deciding factor to determine if the sample size is adequate for your study is if the *power* of the study is adequate. The authors state that “power is the capacity to correctly reject a null hypothesis” (Burns & Grove, 2005, p. 354). A power analysis was conducted and a total sample size of 45 was required to obtain adequate power of 0.95 (Faul et al., 2007). The sample size in this study was over 100, therefore the sample was large enough to obtain adequate power. Data from incomplete cases could not be analyzed. Ethnicity was also diverse. All students had an institutional affiliation with Laurentian University, however, there was a possibility that some nursing students may have affiliations with other programs or universities. Participant characteristics are described further in Chapter 5.

4.4 Execution of Study

To execute this study, the coordinator of the Francophone nursing program was first contacted and their approval and permission to conduct this study in the program and invite the students to participate were received. At the beginning of the school year 2020-2021, discussions occurred with the coordinator and course professors to decide which courses, in each of the four years, were appropriate for the delivery of the education intervention.

The researcher ensured that each group of participants (years 1, 2, 3, 4) would receive the same instruction, intervention time, and questionnaire writing time to prevent any bias. Therefore, consistency was maintained in the delivery of the intervention with each year group (Grove et al., 2015). Originally, the study was going to take place in the student's classrooms during one of their mandatory courses. However, due to the COVID-19 pandemic in 2020, education was moved to online learning, and the study was modified to be conducted via the video conferencing platform Zoom Video Communications Software [Zoom]. Professors agreed to not provide any education about MAiD until the research was completed to reduce any threats to validity and eliminate any potential bias (Fortin & Gagnon, 2022). Professors also agreed to temporarily leave the virtual classroom during the session to reduce the possibility that students feel pressure to participate. One hour was allotted to complete the research; 25 minutes for introduction, receiving consent, and completing the sociodemographic form and Pre-Test questionnaire. The education presentation was approximately 20 minutes. It was followed by 15 minutes for the students to complete the Post-Test One questionnaire.

4.4.1 Data Collection: Round 1

Once students entered the Zoom sessions, the process of the study was explained to them. All students were invited to participate in the study, as well as to stay for the presentation, regardless of their decision to take part in the study. It was recommended that students stay even if they decided not to participate, as MAiD education had been added to the curriculum. However, as was explained in the consent form, there was no obligation to attend the session.

To reduce prior exposure to the content, students did not receive documents ahead of time. After the introduction of the research, and what participation would entail, the following documents were sent to the students in the chat section of the Zoom session: consent form, sociodemographic form, and Pre-Test questionnaire. The students were to download these documents to their computers, complete them, and re-save them as Portable Document Format [PDF] files and name the document with their last name as the title. It was important that students re-named the document before sending it so that the document could be properly identified to the participant and re-named with the participant number when the researcher saved the completed documents to Google Drive. Students' names were not found within the document; therefore, the only identifier was the documents sent in the group chat. They would then send their documents back in the Zoom chat privately so that no other students could see their documents, only the researcher. It was asked of the participants to make sure no questions were left unanswered, as this could affect the results. Instead, if they didn't know the answer, there was an area for each question to check '*I don't know*' or '*I prefer not to answer'*.

The consent form (see Appendix B) was read out to the students and questions related to their participation were answered. The consent included a brief description of the study and what was expected of them as participants. Also explained were any risks or benefits to participating. No incentives were offered to the students, however, it was explained that participating would increase their knowledge about MAiD, as well as assist them in its integration into their future practice. Processes to maintain the confidentiality of data were explained and students were asked to refrain from any discussions about MAiD with their professors until the second part of the study was completed. A list of school, community, and online resources was provided at the end of the consent form which was meant for the students to keep if they required psychological support related to participation in the study. Finally, participants signed the last page consenting to participate in the study. There was also a box to check off if they wanted to receive the results of the study. After questions related to the consent form were answered, students proceeded to the demographic questionnaire.

The sociodemographic questionnaire (see Appendix A) included age, gender, ethnic origin, marital status, number of children if any, current year of study, and the completion of any previous post-secondary education programs. Participants were asked if they had any previous personal or clinical experience with MAiD, and if they had already received any education about

MAiD, as this could influence their results. Then, the inquiry was made as to their stance on MAiD, and the field of nursing they wished to pursue when they graduated. Again, for most of these questions, there was an area to check off *prefer not to answer.*

Once finished, the participants completed the Pre-Test questionnaire and sent it back in the chat privately. This was followed by a presentation of approximately 20 minutes. Three case studies were reviewed during the presentation. All the answers to the questionnaires were found in the educational presentation.

Following the presentation, the Post-Test One questionnaire was sent to all participants via the chat box. The Post-Test One questionnaire was a replica of the Pre-Test questionnaire, to assess for changes in their knowledge and beliefs about MAiD. They followed the same steps as previously explained, completed the questionnaire, and sent it back privately in the chat.

Students were asked not to insert their names in any documents, only to entitle the document, and once received, the researcher entered a code in the document that was associated with the participant to identify their documents together and removed the identifying name from the document. Once the session was completed, the course professor was then asked to return to the Zoom class.

To create a master list allowing the connection of individual participants' Pre-Test and Post-Tests, a list of all the students enrolled in the course was provided to the researcher before going into the class. When the students were completing their questionnaires, a list of those present in the Zoom session was created. Once the research documents were received, the participant's name was checked off in the list and a participant code was associated with their name. This master list was saved in a separate location from the questionnaires on the secure

Google Drive of Laurentian University, only accessible by the researcher and protected by a 2-Step Verification process.

Once downloaded onto the secure Google Drive of Laurentian University, the documents were renamed to include only their associated code. This was completed for all documents sent in the Zoom chat during the sessions to ensure no identifiers were included in the documents to ensure confidentiality.

4.4.2 Data Collection: Round 2

One month after the first session, a second session was held with the classes for approximately 20 minutes to assess how information was retained and if the effect of the intervention was maintained. The same procedure was followed as the first session with the participants and the documents were sent in the chat section of the Zoom session. A new consent form was signed and read by the participants to ensure they agreed to keep participating (Appendix E). This was followed by the Post-Test Two questionnaire, which was again a replica of the Pre-Test and Post-Test One questionnaires administered a month prior. Once completed, they sent these documents back in the chat privately.

To reduce risks to the validity of the findings, questions about the presentation were not permitted regarding MAiD during the first session, as it was explained that this could influence their responses to the Post-Test Two questionnaire. Therefore, all questions were answered after this second session with the participants. The course professor re-entered the Zoom session once the research was completed.

The emails of all the participants were indicated on the consent forms. Therefore, following the second session, a certificate of participation was provided to all participants via their private school emails (Appendix F). This process was conducted with all four years of nursing students, therefore in total, there were eight sessions in the classrooms. Once again, with the help of the master list, the documents were downloaded into the Google Drive of the Laurentian University account with the associated participant code.

4.5 Data Analysis

Before analyzing the data, all participant documents were carefully scanned for missing items and the data were added to an Excel file. The dataset was then uploaded to the SPSS statistical software - Version 28 for analysis. We ran frequencies to check for abnormalities and to clean the dataset. Missing items were given a code of 999. Descriptive analysis was conducted for the sociodemographic questions as well as the Pre and Post-Tests, and findings were reported.

The second part of the questionnaire included items that tested knowledge about MAiD (general knowledge, nurses' role, documentation, legal aspect, etc). The possible responses to each question were 'True', 'False', or 'I don't know'. A score of 2 was allotted to the correct answer, 1 for the incorrect answer, and 0 for I don't know. The knowledge questions were quantitative variables, as it represented amounts and, in this study, the goal was to determine participant knowledge scores (Bevans, 2022). A total score was calculated for the Pre-Test, Post-Test One, and Post-Test Two for the cases from all nursing year groups. With a total of 21 responses, the possible range of total scores was 0-42. The total scores represented a snapshot of the extent of the student's knowledge about MAiD. A test of normality was conducted for the total scores for each test (LaerdStatistics, 2013). As they were not normally distributed, non-parametric tests were used in the analysis (Fortin & Gagnon, 2022).

The second part of the questionnaire included ten items that evaluated the participant's beliefs about MAiD. Frequencies of the responses were calculated for each item and each test

(Pre, Post, and Post 2). Chi-square test of independence was used to determine if there was a significant difference in the estimated vs observed 'disagree' responses between the Pre and Post-Test.

4.6 Limitations

Potential for research bias existed within this study, however many strategies were utilized to reduce the risk of these affecting the participants and the results of the research. The single-group pretest-posttest design of this study could have been strengthened with the addition of a control group (Grove et al., 2015). This would have permitted the comparison of the intervention effect between the intervention and control group and therefore truly have established a cause-and-effect relationship (Fortin & Gagnon, 2022). Despite the potential threats to internal validity resulting from this design, it was decided that all students from all four years of the program could greatly benefit from this education. In addition, given the pressures of course delivery during the COVID-19 pandemic, class time was limited and would not have permitted a second delivery of the education to the control group after the study.

This design introduced the possibility of threats to internal and external validity between the Pre-Test and Post Test and modifying the effect of the intervention (Mortada, 2021). These include historical factors, such as previous clinical experience with death, palliative care, or MAiD; maturation including internal changes such as growing, becoming wiser, and learning; and testing effect, where having been previously exposed to the test might improve performance on the posttest (Fortin & Gagnon, 2022). To reduce these threats, the Pre-Test, teaching intervention, and Post-Test were conducted in the same first session (Wood & Ross-Kerr, 2006). Also, a request was made with course professors to not discuss MAiD with their students until Post-Test Two was completed. Lastly, extraneous variables, such as different prior knowledge, clinical experiences, and personal experiences did pose a risk to the validity of the results (Burns & Grove, 2005). For example, the student population was from first year to fourth year, therefore first-year students would have less prior education and less clinical experience compared to fourth-year students. This could affect test scores, which is why it was included in the analysis to determine if there was a difference between the test scores of first-year students to fourth-year students.

These potential threats to internal validity do limit the generalizability of the study results (Fortin & Gagnon, 2022). However, as the sample is believed to be representative of the target population, the results of this study could be useful to other Bachelor of Science in Nursing (BScN) programs.

4.6.1 Limitations Encountered During the Research

Certain limitations were encountered during this research and have the potential to influence the results of the study. The first main limitation encountered was that the study was forced to be conducted online due to the COVID-19 pandemic. Therefore, all the documents had to be changed to online versions and new steps had to be determined to ensure confidentiality and a smooth process for the participants.

During the first session, some participants had difficulty downloading the file to their computers and resending them in the chat privately. Therefore, these students were instructed to send their emails privately in the chat to the researcher, and from there, the required documents were sent to their emails. Some participants were not able to send documents back in the chat. This required extra time that was unaccounted for during the study.

During the second session, the only limitation encountered was the absence of some students, or the choice of others to not participate in this session. This influenced the results as explained in the discussion chapter. Despite this challenge, 105 of the 122 students did complete the Post-Test Two, resulting in a retention rate of 86 %.

Finally, the use of Zoom technology may have reduced the impact of the education intervention. Factors such as fatigue, environmental factors, and technological challenges may have influenced findings (Fortin & Gagnon, 2022) even when every effort was made to provide a clear, interesting, and consistent approach.

This chapter detailed the method utilized to investigate the impact of an education intervention about MAiD on the knowledge and beliefs of nursing students enrolled in a four-year BScN program. The development of the intervention and questionnaires was based on the theoretical framework chosen for this study as well as nursing literature. Despite challenges in carrying out the study, almost all students participated and the findings from the study were positive. The next chapter will present the analysis and findings of this study.

Chapter 5: Results

All findings of the analysis are presented in this chapter. To begin, participant characteristics are explained using their sociodemographic questionnaire. This is followed by the analysis of the participant's knowledge in association with their sociodemographic characteristics and then a comparison of any increase in knowledge between their Pre-Test, Post-Test One, and Post-Test Two. Finally, the participants' beliefs are explained about 10 different statements asked in their questionnaires and then analyzed to determine if there are statistically significant differences in the responses to the 'belief' items of the questionnaire. Data were analyzed using the SPSS – Version 28 software.

5.1 Participant Characteristics

While some characteristics were common to the participants from the same undergraduate nursing program at Laurentian University, other characteristics varied. Frequency distributions were assessed using the Chi-Square Test to determine patterns for each variable. Participant characteristics are described below. If there was a question left unanswered in the questionnaire, the participant was not counted. The participant characteristics are explained below and can be found in Table 4: Participant Characteristics.

Table 4

Participant Characteristics

Sociodemographic Factors	Frequency (n=122)	Percentage (100%)
Age		
17	1	0.8
18	21	17.2
19	22	18
20	28	23
21	18	14.8
22	13	10.7
23-41	18	15.3
42	1	0.8
Mean	21	
Range	17-42	
Gender		
Male	11	9.1
Female	110	90.9
Missing	1	
Ethnic origins		
Canadian	52	48.5
Caucasian	24	22.4
African	8	7.4
French Canadian	7	6.5
Metis and Indigenous	4	3.7
French Canadian Indigenous	1	0.9
Italian	2	1.8
Native American	2	1.8
Cameroon	2	1.8
Burundi	1	0.9
Kongo	1	0.9
Haiti	1	0.9
Moroccan	1	0.9
Portuguese	1	0.9
French Portuguese	1	0.9
Missing	14	
Marital status		
Single	85	73.9
Married	5	4.3
Divorced	2	1.7
Widowed	0	0
Other	23	20

Missing	7	

Sociodemographic Factors	Frequency (n=122)	Percentage (100%)
Number of children		
Zero	110	92.4
One	4	3.4
Two	3	2.5
Three	2	1.7
Missing	3	
Year of study in BScN		
First	27	22.1
Second	25	20.5
Third	35	28.7
Fourth	35	28.7
Years of study other than BScN, if applicable		
One	16	13.1
Two	4	3.2
Four	2	1.6
Five	3	2.4
Missing/Zero	97	79.7
Previous personal experience		
Yes	15	12.4
No	106	87.6
Missing	1	
Previous clinical experience		
Yes	17	14
No	104	86
Missing	1	
Previous education on MAiD		
Yes	65	54.2
No	55	45.8
Missing	2	
Beliefs about MAiD		
Against MAiD	2	1.6
Not against MAiD	92	75.4
Uncertain	28	23

Planned field of work after graduation		
Emergency	5	4.1
Oncology	1	0.8
Intensive Care	3	2.5
Orthopedics	2	1.7
Neurology	1	0.8
Maternity	9	7.4
Cardiac Care	4	3.3
Other	17	14
Multiple options	79	65.3
Missing	1	

The population was 1st to 4th year nursing students in the French Undergraduate Nursing Program. The total possible cohort was 149 participants. Due to absences, that potential sample was reduced to 131 students. Nine students chose not to participate. The first session included 28 students from the first year, 24 students from the second year, 35 students from the third year, and 35 students from the fourth year. There were n=122 participants in the first session of this study. In the second session which included administration of the Post-Test Two, 105 were present and all participated.

Of the 131 students present in the courses during the first session, n=122 (93%) answered the sociodemographic questionnaire. The remaining students remained in the course to listen to the presentation. It wasn't mandatory to remain in the class, to reduce any potential bias. However, it was explained to the students that it was recommended they stay as it was now part of their curriculum. The sociodemographic questionnaire was only administered before the Pre-Test. Described below are the findings from the sociodemographic questionnaire.

The mean age of the students reflects that most nursing students start their degree out of high school. However, some return to school or change careers. The nursing profession remains predominantly female, which was reflected in the gender of participants. The marital status and the number of children also reflected that many of these are mature students. A study demonstrated that in Brazil the characteristics of the nursing students are similar to Canada (Bublitz et al., 2015). The majority of nursing students were female, aged 20-24, single, and had no children; which is what represented the larger population of this study (Bublitz et al., 2015). Various ethnic origins were represented in the sample including many from Africa, Cameroon, Burundi, Moroccan, French Portuguese, and other French-speaking nations. This is not surprising given the program is one of few nursing baccalaureate degree programs available in French in Ontario.

There were approximately 25-35 students in each class. Many students had received education before the BScN program ranging from 1 year to 5 years. These programs varied drastically, from Health and Sciences, Psychology and Social work, Engineering, and Aesthetics. It is common to see prior education in Health and Sciences subjects, however, it's interesting to see aesthetics as previous education completed.

Participants either had no previous personal and/or clinical experience or did. It was believed that previous experience could potentially have an impact on levels of knowledge. Some participants stated they had some previous experience, which was not surprising as MAiD is new to Canada. Canning and Drew (2022) explained in their research that previous experience with MAiD can have an impact on confidence levels.

A minimum number of participants were against MAiD, this was a minority. Prior beliefs about MAiD could potentially have an impact on student nurses' willingness to learn about MAiD. The Sociodemographic questionnaire was only administered once at the beginning of the research. It would have been interesting to repeat the beliefs question to see if these participants still did not believe in MAiD.

To understand if there was a link between one's planned work in nursing and beliefs about MAiD, participants were asked where they wanted to work after graduation. Participants wanted to work in various fields of nursing, however, interestingly no participants wanted to work in palliative care or psychiatric care. This question was asked to see if there were potentially any links between students who decided to practice conscientious objection and what profession they decided to pursue. Out of the two participants who stated they were opposed to MAiD, one participant stated they wanted to work in the emergency department and the other participant chose *another.*

5.2 Knowledge Test Scores

The test for students that were given pre and post educational intervention was identical. There were two sets of items, those that assessed knowledge about MAiD and those that assessed beliefs. Items assessing knowledge or beliefs were considered separately in the analysis.

There were twenty-one True or False questions meant to assess knowledge levels. For each knowledge question, participants had the opportunity to score either a 0, 1, or 2. Zero was accorded if the participant chose, *I don't know,* which was asked instead of leaving the answer blank. A score of 2 was awarded if the participant chose the correct answer and a 1 for the incorrect answer. The sum of the answers to the knowledge items provided a total score for each participant. The minimum score was zero if the participant chose "I don't know" to every question; 21 if the participant answered every question incorrectly (scoring 1 point/item), and 42 if all questions were answered correctly (scoring 2 points/item). Knowledge test counts could be lower than 21 if participants answered *I don't know* for some questions. Unfortunately, if participants left a question blank due to not knowing the answer instead of choosing, *I don't know,* their case was not counted in the analysis.

Prior to the educational presentation regarding MAiD, the participants completed a Pre-Test Questionnaire. Cases with missing data were excluded from the analysis n=8 (6.5%). Therefore, the final number of participant questionnaires analyzed for the knowledge section of the Pre-Test was n=114 (93% of the Pre-Test questionnaires). The mean Pre-Test total score was 27.30.

After the education presentation, the participants completed the Post-Test One which was identical to the Pre-Test. The same number (n=122) of participants completed Post-Test One as Pre-Test, for a retention rate of 100%. However, n=14 (11.5%) cases were excluded due to missing data resulting in n=108, or 88.5% of the Post-Test One questionnaire. The mean Post-Test One total score was 35.39. Scores ranged from 18 to 42. This shows that there was an increase in knowledge after receiving education about MAiD. This was expected, as there was a knowledge intervention between both tests (Zieber & Sedgewick, 2018) and is consistent with the study conducted by Canning and Drew (2022) where students did a pre-semester survey and a post-semester survey, before and after learning about MAiD. At the beginning of the semester, 90% of students perceived their knowledge levels about MAiD as low and after the semester, 88% perceived their knowledge levels about MAiD high after receiving education about MAiD.

One month after the presentation, the participants completed their Post-Test Two, which was identical to the Pre-Test and Post-Test One completed a month prior. This was to assess knowledge and belief change and/or retention. During this session, there were 105 students present in class, compared to 131 for the first session (when Pre-Test and Post-Test One were completed). Of the n=105 students present, all n=105 participated and answered the Post-Test Two questionnaire (retention rate of 86%). However, 10 questionnaires (9.5%) were excluded due to missing data, and n=95 (90.5%) were counted for analysis. The mean score was 34.62, which is lower than the Post-Test One, which was 35.39. This implies that there was a retention in knowledge after the educational intervention as the mean score was close to the Post-Test One and higher than the Pre-Test.

Zieber and Sedgewick (2018) explain that most authors state that knowledge retention can only be gained by clinical simulations. However, it was interesting in their study, which is like this one, the participants demonstrated knowledge retention over time. The "topic was sufficiently motivating that the knowledge was retained" (Zieber & Sedgwick, 2018, p. 20). The results of their study demonstrated that even though the students weren't able to practice their skills, knowledge retention was maintained.

The results of all Tests are demonstrated in *Table #5: Participant Knowledge Questionnaire Results.*

Table 5

Participant Knowledge Questionnaire Results

	Pre-Test		Post-Test One		Post-Test Two	
Test Score	Scoring Participants	Scoring Percentage	Scoring Participants	Scoring Percentage	Scoring Participants	Scoring Percentage
	(n=)	(%)	(n=)	(%)	(n=)	(%)
7	1	0.9	/	/	/	/
10	2	1.8	/	/	/	/
11	1	0.9	/	/	/	/
13	1	0.9	/	/	/	/
14	1	0.9	/	/	/	/
15	3	2.6	/	/	/	/
16	1	0.9	/	/	/	/
17	2	1.8	/	/	/	/
18	/	/	1	0.9	/	/
19	3	2.6	/	/	/	/
20	3	2.6	/	/	/	/
21	4	3.5	/	/	/	/
22	2	1.8	/	/	1	1.1
23	5	4.4	2	1.9	1	1.1
24	3	2.6	1	0.9	/	/
25	9	7.9	/	/	/	/
26	6	5.3	1	0.9	/	/
27	4	3.5	3	2.8	3	3.2
28	6	5.3	2	1.9	2	2.1
29	7	6.1	/	/	2	2.1
30	6	5.3	4	3.7	40	4.2
31	6	5.3	1	0.9	5	5.3
32	9	7.9	9	8.3	8	8.4
33	9	7.9	7	6.5	10	10.5
34	3	2.6	8	7.4	8	8.4
35	8	7.0	7	6.5	8	8.4
36	7	6.1	11	10.2	7	7.4

37	1	0.9	11	10.2	12	12.6
	Pre-Test	Post-Test One	Post-Test Two		Pre-Test	Post-Test One
Test Score	Scoring Participants	Scoring Percentage	Scoring Participants	Test Score	Scoring Participants	Scoring Percentage
	(n=)	(%)	(n=)	(%)	(n=)	(%)
38	1	0.9	10	9.3	7	7.4
39	/	/	9	8.3	10	10.5
40	/	/	13	12.0	4	4.2
41	/	/	6	5.6	2	2.1
42	/	/	2	1.9	1	2.1

Note. Total count for Pre-Test participants (n=144) with a mean score of 27.30

Note. Total counted participants (n=108) with a mean score of 35.39

Note. Total counted participants (n=95) with a mean score of 34.62

5.3 Relationship Between Knowledge Scores and Participant Characteristics

The total scores for the knowledge questions were not normally distributed variables as assessed by Shapiro-Wilk’s test ($p>0.05$), so non-parametric tests were chosen to analyze them with the participant characteristics.

To start, a Pearson’s correlation was conducted to analyze age and total scores for the Pre-Test to determine if there were any differences in knowledge based on age. Although the data are not normally distributed, Pearson's correlation is robust enough for deviations from normality (Laerd Statistics, 2018c). There was no correlation between age and total Pre-Test score $p>0.05$. This was similar to the study by Amankwaa et al. (2015), where age did not have a significant effect on better passing grades for undergraduate nursing students. However, in Zahran et al. (2021), age and year of study were found to be positive predictors of caring for dying patients.

Next, a Spearman correlation test was run to determine if there were differences in Pre-Test knowledge scores and two variables. No significant correlation was detected between Pre-test total scores and marital status $p= .286$, $r_s= -.104$, or between Pre-Test total scores and nursing field preferences of study participants after graduating $p = .526$, $r^{s}= .060$.

Mann Whitney U test was run to determine if there were differences in Pre-Test total scores between males and females. The distribution of the knowledge test scores for males and females was similar, as assessed by visual inspection. The median Pre-Test knowledge score was not statistically significantly different between males and females $U = 567.000$, $z = 98.764$, $p = .599$, using an exact sampling distribution for U (Laerd Statistics, 2013).

Mann Whitney U was also used to see if there were differences in the Post-Test One knowledge score between males and females. The distribution of the knowledge test scores for males and females was similar, as assessed by visual inspection. Median Post-Test One knowledge score was not statistically significantly different between males and females U = 509.500, z = 88.784, p = .440, using an exact sampling distribution for U (Dineen & Blakesley, 1973). Again, the nursing profession and gender in classrooms are mainly female, as it was for Amankwaa et al. (2015). The authors state that gender did not have an impact on knowledge levels, therefore both females and males have an equal chance of scoring the same on tests.

Pre-Test knowledge total scores and prior clinical experience with MAiD were analyzed with a Mann Whitney U. Distribution of knowledge scores for participants with and without prior personal experience with MAiD were similar, as assessed by visual inspection. The median Pre-Test knowledge score was not significantly different between those with and without prior clinical-experience with MAiD $U= 549.500, z = 100.941, p = .839$. Canning and Drew (2022) found that prior clinical experience was associated with higher comfort levels related to MAiD, however, they did not assess knowledge levels.

Pre-Test knowledge scores and prior personal experience with MAiD were analyzed with a Mann-Whitney U. Distribution of knowledge scores for participants with and without prior personal experience with MAiD were similar, as assessed by visual inspection. The median Pre-Test knowledge score was not significantly different between those with and without prior personal experience with MAiD $U= 636.000, z = 114.076, p = .839$.

There has been a lack of research regarding nurses' knowledge of MAiD. Zahran et al. (2021) explain that prior personal or clinical experience can influence nursing students' perceptions of caring for the dying. If nursing students can accept their frame of mind towards caring for the dying, they will be equipped to enhance their knowledge (Zahran et al., 2021). However, in a study done by Ozguler et al. (2020) comparing first and fourth-year nursing students' knowledge about infection prevention, it was determined that fourth- year nursing students answered the knowledge questions correctly more frequently than first- year students. This can be due to fourth -year students having previous education and more knowledge on the subject already.

Pre-Test knowledge scores and prior education with MAiD were analyzed with a Mann Whitney U. Distribution of knowledge scores for participants with and without prior education for MAiD were similar, as assessed by visual inspection. The median Pre-Test knowledge score was significantly different between those with and without prior education for MAiD *U= 1089.500, z = 158.752, p = .044.* This shows that those with prior education in MAiD had significantly higher knowledge scores. This was interesting because Mallory (2003) found that previous death education did not have a significant effect on the participants. However, the author also administered tests and the students who had previous death coursework did much better in their test than students who did not have any previous death education (Mallory, 2003). Again, Ozguler et al.'s (2020) demonstrated that fourth-year students had higher levels of knowledge about infection control compared to first years due to previous education.

A one-way ANOVA was conducted to determine if the mean Pre-Test knowledge score was different for participants if they were opposed, in agreement with, or indifferent to MAiD. The test demonstrated a significant difference between the groups (p = .025). We were unable to run a Tukey post hoc test because there were only 2 participants in the opposed category (92 not opposed; 28 uncertain).

A one-way ANOVA was conducted to determine if the mean Pre-Test knowledge score was different for participants depending on their year of nursing study. A significant difference was found: p = .015. A post hoc Tukey test was conducted identifying that year one participant had significantly lower Pre-Test scores than year two participants. Ozguler et al. (2020) and Zahran et al. (2021) found that first- year participants in their nursing programs had negative beliefs toward dying patients, which can affect levels of knowledge. However, as stated above, it was shown in Ozguler, et al. (2020) that knowledge levels decreased in first- year nursing students compared to fourth- year students.

Using one way ANOVA again, no significant difference was seen in the mean scores of participants based on the number of children they had (p = .131) or years of post-secondary study other than the BScN (p = .680).

5.4 Participant Beliefs About MAiD

The ten belief questions were analyzed separately from the knowledge questions. Also, each statement was analyzed individually with no total score so that each belief about MAiD could be considered individually. Each belief statement was assessed on a Likert scale, with scores of 0, 1, or 2. Zero was attributed if the participant chose, *Disagreed.* A score of 1 was associated if the participant chose, *Indifferent,* and a score of 2 for, *In agreement* with the statement. The following statements are listed in *Table #6 Participants' beliefs towards statements,* inquired about beliefs.

Analysis was conducted to determine if there were significant changes in beliefs about MAiD as a result of the education intervention. A dichotomous variable was created for each item by combining the responses *In agreement* and *indifferent* into one response and leaving *disagree* as the other response. The Chi Square test of independence was conducted to determine if there were significant differences in observed and expected responses for disagreement between the Pre and Post Tests. As seen below in Table 7, all the statements were statistically significant.

Table 6

Participants Beliefs Towards Statements

Statements	Beliefs	Pre-Test (n=)	Post-Test One (n=)	Post-Test Two (n=)
1. After obtaining my degree, I will feel comfortable to speak about MAiD with my patients	In agreement	61	77	60
	Indifferent	31	23	28
	Disagreed	18	10	7
2. I believe that MAiD is a part of a nurse's professional role	In agreement	75	66	55
	Indifferent	19	26	20
	Disagreed	16	18	20
3. I believe that only the nurses who feel comfortable with MAiD and their professional role within this scope should participate	In agreement	77	89	76
	Indifferent	23	12	15
	Disagreed	9	8	4
4. I believe that nurses who practice conscientious objection can become victims of intimidation or discrimination since they do not want to participate	In agreement	44	53	43
	Indifferent	31	30	26
	Disagreed	34	26	24
5. I believe that nurses who want to participate in MAiD can become victims of intimidation or discrimination since they want to participate	In agreement	55	60	56
	Indifferent	25	22	23
	Disagreed	30	28	16

Statements	Beliefs	Pre-Test	Post-Test One	Post-Test Two
		(n=)	(n=)	(n=)
6. After obtaining my degree, I will practice conscientious objection because of my cultural, spiritual and/or my emotional beliefs	In agreement	11	11	16
	Indifferent	28	28	20
	Disagreed	69	69	59
7. After obtaining my degree, I will practice MAiD because of my cultural, spiritual and/or my emotional beliefs	In agreement	57	61	53
	Indifferent	34	34	28
	Disagreed	17	13	12
8. I believe that most nurses will practice conscientious objection	In agreement	15	11	13
	Indifferent	61	67	64
	Disagreed	34	32	21
9. I believe that participating in MAiD will bring out negative emotions within myself	In agreement	22	23	25
	Indifferent	34	32	25
	Disagreed	53	54	46
10. I believe that participating in MAiD will bring out positive emotions within myself	In agreement	27	34	31
	Indifferent	61	60	48
	Disagreed	20	14	19

Table 7

Actual Count and Expected Count of Participants Beliefs Towards Disagreement Statements Post Test

Statement	Actual Count	Expected Count	Value
	(n=)	(n=)	(p=)
1. After obtaining my degree, I will feel comfortable to speak about MAiD with my patients.	7	1.6	<0.001
2. I believe that MAiD is a part of a nurse’s professional role.	10	2.6	<0.001
3. I believe that only the nurses who feel comfortable with MAiD and their professional role within this scope should participate.	5	0.7	<0.001
4. I believe that nurses who practice conscientious objection can become victims of intimidation or discrimination since they do not want to participate.	20	8.1	<0.001
5. I believe that nurses who want to participate in MAiD can become victims of intimidation or discrimination since they want to participate.	21	7.6	<0.001
6. After obtaining my degree, I will practice conscientious objection because of my cultural, spiritual and/or my emotional beliefs.	63	44.1	<0.001
7. After obtaining my degree, I will practice MAiD because of my cultural, spiritual and/or my emotional beliefs.	10	2.0	<0.001
8. I believe that most nurses will practice conscientious objection	22	9.9	<0.001
9. I believe that participating in MAiD will bring out negative emotions within myself	47	26.3	<0.001
10. I believe that participating in MAiD will bring out positive emotions within myself.	13	2.6	<0.001

In the first statement, ‘*After obtaining my degree, I will feel comfortable speaking about MAiD with my patients’,* significantly more participants believed they wouldn't feel comfortable speaking about MAiD with their patients after receiving the education. McMechan et al. (2019) participants explained that their BScN education made them feel like they couldn't speak with their patients about MAiD, found under the theme of *fear of saying the wrong thing* and jeopardizing their nursing license.

In the second statement, *I believe that MAiD is a part of nurses' professional role,* significantly more participants believed that MAiD was not part of a nurse's professional role after receiving the education. This was echoed by Beuthin et al. (2018) where a participant stated "For me euthanizing a patient is not a part of nursing... It's the opposite of everything that I've been doing or wanting to do" (p. 514). However, this finding contrasts with what was expected as it was hypothesized that nurses would see it as part of their role. McMechan et al. (2019) found that nurses viewed MAiD as an addition to end-of-life care already provided in their day-to-day role.

The third statement was: *I believe that only the nurses who feel comfortable with MAiD and their professional role within this scope should participate.* Significantly more people believed that even if nurses are not comfortable with MAiD and their role within this process, they should still participate. This is interesting because in the second statement, it was believed that MAiD was not a part of the nurse's role. However, McMechan et al. (2019) and Beuthin et al. (2018) agree that it is a new role for all nurses, and although they may feel uneasy while being pioneers and leading the way for the future generation of nurses, they want to do it for the patients.

The fourth statement was: *I believe that nurses who practice conscientious objection can become victims of intimidation or discrimination since they do not want to participate.* Significantly more participants disagreed that nurses who practice conscientious objection will not become victims of intimidation or discrimination. This was demonstrated by McMechan et al. (2019), where a participant that was strongly opposed to MAiD spoke about her fear of bullying.

The fifth statement was: *I believe that nurses who want to participate in MAiD can become victims of intimidation or discrimination because they want to participate.* Significantly more participants disagreed and that nurses who participate will not become victims of intimidation or discrimination. This is interesting because the fourth statement was a similar statement for conscientious objection. It is encouraging that participants appear to believe that whichever avenue they chose, there won't be any intimidation or discrimination.

The sixth statement was: *After obtaining my degree, I will practice conscientious objection because of my cultural, spiritual, and/or emotional beliefs*. Significantly more participants stated they wouldn't practice conscientious objection because of their cultural, spiritual, and/or emotional beliefs. Beuthin et al. (2018) shared that some nurses practiced conscientious objection due to their religious beliefs and that there was a lack of support within their hospital for these nurses.

The seventh statement was: *After obtaining my degree, I will practice MAiD because of my cultural, spiritual, and/or emotional beliefs*. Significantly more people disagreed that they would practice MAiD because of their cultural, spiritual, and/or emotional beliefs. McMechan et al. (2019) spoke about how one participant originally chose to practice conscientious objection due to her religious beliefs. However, now this participant feels that MAiD is justified in the Christian faith, as it supports patient choice.

The eighth statement was: *I believe that most nurses will practice conscientious objection*. Significantly more participants disagreed that most nurses would practice conscientious objection.

The ninth statement was: *I believe that participating in MAiD will bring out negative emotions within myself.* Significantly more people disagreed that MAiD would bring out negative emotions. This was interesting to see, as many nurses in different studies explained how MAiD brought up feelings of discomfort, unease, rage, and powerlessness (McMechan et al., 2019 Dransart et al., 2017). However, Beuthin et al. (2018) state that nurses also felt positive emotions of peace and they felt honored and privileged to be a part of MAiD. This can strengthen the importance of education about MAiD to nurses so that they can be equipped and prepared to face MAiD deaths with their patients. Early MAiD education can also allow them to reflect and decide if they want to participate or practice conscientious objection.

The tenth statement was: *I believe that participating in MAiD will bring out positive emotions within myself.* Significantly more participants disagreed that MAiD would bring out positive emotions. This was also interesting, as it is contradicting the ninth statement. However, in the literature, nurses believed that participating in MAiD brought up positive emotions of peace and amazement and they felt honored and privileged to be a part of the process with the patient (Beuthin et al., 2018).

These findings are all considered important as they demonstrate that a presentation on MAiD influenced and changed some participants' beliefs, as most variables had statistically significant differences between pre and post-intervention test scores. Discussed in the following chapter are an analysis of all the findings and their relevance to the research question.

Chapter 6: Discussion

BScN programs are important as they prepare student nurses for entry-to-practice requirements by providing them with a knowledge base and skills needed to succeed (CASN, 2022). The goal of this research was to explore the impact of a MAiD education program on the knowledge and beliefs of students in an undergraduate nursing program. When initiating this study in 2018, MAiD education was not required in the undergraduate curriculum in Ontario. However, the research was well-timed and started at the beginning of the school semester in 2020 when MAiD education became a requirement. As a brief reminder, the CNO added MAiD competencies for nurses' Entry-To-Practice requirements in 2019, for September 2020 (CNO, 2019). Therefore, most students had no previous education in MAiD. Zieber and Sedgewick (2017) stated that all nursing baccalaureate programs must prepare graduates with the knowledge, skills, and beliefs to meet Entry-to-Practice Competencies. Thus, highlights the importance of ensuring that undergraduate programs are preparing students for practice by teaching them all they need to know about MAiD.

When considering the results, it is important to re-introduce the research question and the hypothesis. The research question was the following: *What is the impact of an education program about Medical Assistance in Dying (MAiD) on the knowledge and beliefs of students in the French undergraduate nursing program at Laurentian University?* The null hypothesis for this research was the following: H0 – An education program of MAiD will not have a significant impact on the knowledge and beliefs of students. The alternative hypothesis was H1 – An education program of MAiD will have a significant impact on the knowledge and the beliefs of students. The following sections will discuss the findings and limitations of the study.

Implications for broader nurse education are explored. Finally, recommendations for future research are made.

6.1 Main Findings

Through data analysis, many important findings were identified and are described below. The three main findings are as follows:

1. Participants had an increase in knowledge levels after receiving education about MAiD.
2. Participants showed knowledge retention one month after receiving education about MAiD.
3. Education about MAiD was shown to have an impact on participant beliefs towards MAiD.

To discuss all findings, participant knowledge increases and retention, and the impact of education on beliefs, the Theoretical Domains Framework of Cane et al. (2012), is used. The TDF helped in the guidance of the literature review, the creation of the questionnaire, and the interventions with the participants. The TDF helped identify barriers and behaviors that influence implementation; in this case, MAiD (2012). Many barriers and behaviors were already identified through the review of previous studies conducted with nursing students and nursing staff. From there, the TDF helped to implement an intervention in education about MAiD and evaluate its impact on the knowledge and beliefs of nursing students. Discussed below is an elaboration of the three main findings, including; knowledge increase, knowledge retention, and the positive and/or negative impact that education had on belief changes.

6.1.1 Knowledge Increase

There was an important difference found between the Pre-Test Total and Post-Test One Total. The mean score for the Pre-Test was 27.30 and the mean score for the Post-Test One was

35.39. This supports hypothesis H1; that an education program about MAiD will have a significant impact on the knowledge of students. These findings were anticipated as education was provided, and knowledge increase is always anticipated post-education. These results are consistent with those from Pftizinger Lippe and Becker (2015), and Zieber and Sedgewick (2017), where nursing students perceived their competence and knowledge levels had improved post-nursing education. Canning and Drew (2022) identified that 90% of their participant nursing students had low levels of knowledge about MAiD pre-semester, and once education was delivered, 88% felt they had high levels of knowledge post-semester.

Our findings align with the Theoretical Domains Framework of Cane et al. (2012), as we knew that there already was a lack of knowledge or a general understanding of MAiD. Students were then exposed to an educational intervention, which caused a knowledge increase, or a behaviour change, which is in alignment with Cane et al. (2012).

6.1.2 Knowledge Retention

There was knowledge retention among the participants one month after the initial intervention. This is consistent with the theory that the effect of education lasts, found by Zieber and Sedgewick (2017), where a Post-Test One was administered to nursing students 3 months after their intervention, and there was significant knowledge retention. Zieber and Sedgewick (2017) found that students did not participate in activities to maintain their skills after the intervention, which increased the importance of knowledge retention. This was consistent with this study, as teachers were instructed not to speak about MAiD with their students until the study was completed.

Three case studies were used during the education piece with the participants to help with knowledge retention. Seshan et al. (2021) found that "case studies allow them to draw from their own experience leading to the development of high order thinking and retention of knowledge" (p. 2).

6.1.3 Impact on Personal Beliefs

Mallory (2003) stated that education and experience are transformative for nursing students. This resonated with our study, as belief changes were assessed and analyzed post-education. Overall, it appears that education did positively influence nursing students' beliefs about MAiD. This confirms the H1 hypothesis; An education program of MAiD will have a significant impact on the knowledge and the beliefs of students. The Cane et al. (2012) model explains behaviour change can be done with the help of intervention; however, it is important to identify what factors have an impact on this behavior change. Many organizational and personal factors influence healthcare workers' behaviours, which is why the sociodemographic questionnaire was analyzed along with the knowledge questions (Cane et al., 2012). Educational interventions have been shown to positively change beliefs and therefore, create behavior change in our participants.

This was like Pfitzinger Lippe and Becker (2015), Mallory (2003), and Jafari et al. (2015), where nursing students were positively impacted following a simulation or education about caring for dying patients. Mallory (2003) found that nursing students who did not receive education surrounding the care of the dying did not experience change (negative or positive). However, Mallory's study found that previous education about death did not impact care towards the care of the dying. Similarly, Zieber and Sedgewick (2017) found a rise in confidence levels between Pre-Test, Post-Test One and Post-Test two months later. Students in this research felt that even though they did not have a chance to practice what they had learned in clinical practice, simply having the education and knowledge increased their confidence, as well as decreased their anxiety (Zieber & Sedgewick, 2017).

Nursing students believed they would not feel comfortable speaking about MAiD with their patients. Many organizations made their students feel as though they could not speak with their patients about MAiD for fear of legal ramifications (Beuthin et al., 2019). Many participants also did not believe that MAiD was part of a nurse's role, which was also explained by some nurses in Beuthin et al. (2018). However, the authors also explained that nurses want to help patients and will advocate for their patients no matter what (Beuthin et al., 2018; McMechan et al., 2019).

It was interesting that most participants stated that MAiD was not a part of the nurse's role, however, that nurses should still participate even if they don't feel comfortable with it. This unfortunately could reflect the Hawthorne effect, where the participants are answering what they believe they should be answering, and not what they want to be answering (Nikolopoulou, 2022b).

Participants didn’t believe that they would fall victim to intimidation or discrimination if they participated in MAiD or even if they practiced conscientious objection. This demonstrates that the nursing students in this research were comfortable with their decision.

Most participants stated that they wouldn't practice conscientious objection due to cultural, spiritual, and/or emotional beliefs, however, they also stated that they wouldn't participate due to these reasons. This can be perceived in two different ways: that they won't participate due to beliefs, or they will participate but it will not be due to their beliefs. The wording of this statement was vague and can be seen as a limitation of the study, as a potentially missed value. Most participants also stated that participating in MAiD will not bring out negative emotions, however, also will not bring out positive emotions, which can be misleading.

6.2 The Effects of Sociodemographic Factors on Knowledge

All the sociodemographic variables were compared during data analysis and the reader is referred back to Table 4: Participant Characteristics. Many of the variables were not statistically significant showing that there was generally no impact of sociodemographic factors of participants on their knowledge levels. This is consistent with Amankwaa et al. (2015) where age and gender did not have a significant effect on the knowledge of nursing students. However, in Zahran et al. (2021), the opposite was determined, as age and year of study had positive effects on caring for a dying person.

One of the sociodemographic factors was statistically significant with knowledge levels, which was prior education about MAiD. Mallory (2003) demonstrated that previous death education did not have an impact on her participants, however, this was not the case for knowledge. Therefore, future researchers must focus as well on nursing students' knowledge levels.

6.3 Integration of Framework

These results support that high levels of knowledge and modified beliefs lead to higher preparedness and acceptance. It is assumed that this could inform higher levels of implementation of MAiD as per the Theoretical Domains Framework of Cane et al. (2012). The authors explain that "behaviour change is key to improving healthcare and health outcomes" (Cane et al., 2012, p.1). When implementing something new, there are many factors influencing healthcare workers' preparedness, such as availability of evidence, the dissemination of evidence and guidelines, individual motivation, staying up to date with changes in practice, clarity of roles, and the culture of healthcare (Cane et al., 2012).

Researchers using the Theoretical Domains Framework have identified that a lack of knowledge is a barrier to many professional health behaviors, such as improving hand hygiene, modifying transfusion protocols, and initiating tobacco use cessation counseling in dental offices (Cane et al., 2012). Therefore, similarly, knowledge levels about MAiD are important and influential in the confidence and readiness of healthcare workers and/or participants in this research.

6.4 Changes to MAiD

Since MAiD has been legalized, many relevant policies have been evaluated, analyzed, and changed. The Third annual report on MAiD was released in July 2022 (Government of Canada, 2022b). MAiD is now more openly discussed within healthcare establishments and the government. In September 2019, the Superior Court of Quebec ruled in favor of plaintiffs who challenged the Criminal Code for MAiD. This led to modifications in Canada's MAiD framework to include the following:

- *"Removal of the requirement for a person's natural death to be reasonably foreseeable to be eligible for MAiD*
- *Introduction of new and strengthened safeguards introduced for eligible persons whose natural death is not reasonably foreseeable*
- *Temporary exclusion from eligibility for individuals suffering solely from mental illness for 24 months (until March 17, 2023)",* amongst more. (Government of Canada, 2022b, p. 11).

There are newly revised eligibility criteria and more changes may be coming in 2023, depending on the Government's decision about whether mental illness will meet the criteria. This solidifies why it is so important to have proper education about MAiD in the BScN to ensure that nursing students can always stay up to date with the changing policies and perhaps their changing roles. To support the implementation of MAiD across Canada, the Government of Canada stated that nursing bodies and organizations are "responsible for developing and enforcing professional standard protocols, and guidelines which provide directions for health professionals in their jurisdictions" (2022b, p.15). The CNO has released its Entry-To-Practice Components with the inclusion of MAiD and created Guidelines for MAiD Practice for RNs.

6.4.1 General Public's Ideas of Current Legislation

Considering the new changes to the legislation of MAiD, namely removing the fact that patients do not have to have a foreseeable death, as well as the potential changes coming for mental health in 2023, public opinion has shifted. Many people believe it represents a new form of discrimination against people with disabilities and chronic illnesses. However, Dying with Dignity Canada (2021) believes it is not, as Bill C-7 simply removed the eligibility factor where death must be foreseeable and is implementing a new safeguard to ensure proper eligibility is still followed.

Also, some of the general public do believe that MAiD is being offered as a first alternative instead of offering palliative care. However, this is a myth, as 80.7% of people who received MAiD accessed palliative care services at one point during their care (Dying with Dignity Canada, 2021; Government of Canada, 2022b).

6.5 Limitations

Limitations can be found in all studies and can impact results. However, they do allow for improvement in future research. One challenge in this study was participant retention. In the first session, there were n=114 participants. There was a 95% retention rate of participants for the Post-Test One with n=108 participants. There was then an 88% retention rate of participants for the Post-Test Two with n=95 participants. The participant retention could be due to many factors, one being that the study was conducted online due to COVID-19 protocols within the University. The study was created to conduct in class with the participants, however, due to COVID-19, courses were moved to online learning. All documents were changed to PDF, however, technical difficulties occurred during the study and some participant documents were sent back incomplete or participants had difficulties sending their documents back. Similarly, another study conducted on nursing students showed that online learning due to COVID-19 caused great challenges due to technical problems, and unstable internet service in some areas and ultimately influenced student learning outcomes (Hsu & Ho, 2022).

To limit any potential bias, professors were requested not to discuss MAiD with their students until the research was completed. This said, clinical and personal experiences are unavoidable and uncontrollable. Therefore, some participants may have had experience with MAiD between their Post-Test One and Post-Test Two, which could have affected their knowledge.

The results cannot tell us if culture and religion had an impact on MAiD knowledge and beliefs as this information was not collected in the sociodemographic form. There has been some evidence that religion and culture have an impact on nursing students' willingness to participate in MAiD (Canning & Drew, 2022; Jafari et al., 2015). Jafari et al. (2015) explain that "cultural, ethnic, and religious beliefs help to shape people's attitudes toward death and dying." (p.192) Nurses' beliefs toward end-of-life care have an impact on their behavior while caring for terminal patients (Jafari et al., 2015). In their study, nursing students had difficulties dealing with death and felt anxious and unprepared to care for these patients (Jafari et al., 2015). Canning and

Drew (2022) also identified that Canadian nursing students explained that religious beliefs were the foundation of decision-making for their participation in MAiD. However, after education and experience with end-of-life care, students understood the complexity of MAiD and the importance of end-of-life care (Canning & Drew, 2022). Unfortunately, these were not assessed in the sociodemographic questionnaire.

This study lacked psychometric testing, as the questionnaire was created purposefully for this study. To help with validity and reliability, the TDF and Subramanian's eleven steps to creating an assessment scale were followed strictly (Cane et al., 2012; Subramanian, 2012). Also, all information asked in the questionnaire was presented to the participants in the presentation; therefore, all had a fair opportunity to answer correctly. The questionnaires were tested by the researcher and supervisors, as well as two nursing colleagues who were not part of the research.

Statistical limitations encountered during the research were potentially missing tests, such as predictions and regression analysis (Laerd Statistics, 2018b). Linear regressions could have been used to predict if there were any further findings after conducting our correlations, however, it was decided that there were not enough responses to run this regression analysis. Another limitation could have been potentially analyzing all three variables together using ANOVA tests for the Likert questionnaire. However, during the analysis, we were only looking at the responses of people who disagreed with the statements.

Another limitation of the study is the possibility of the Hawthorne effect, which is when participants tend to behave a certain way or answer questions a certain way when they are aware that they are being evaluated and analyzed (Nikolopoulou, 2022b). This could potentially have led to response bias.

These limitations were taken into consideration when completing data analysis and they can be used for any future research that will have an impact on nursing students and nurses.

6.6 Implications

Research can influence the nursing profession, its policies, and nursing education, which can lead to improved nursing care. To start, this research has the potential to inform education policies as it is demonstrated and confirmed that education regarding MAiD had a positive impact on the knowledge and beliefs of undergraduate students. It was already known that Canadian nursing students' felt "that MAiD education needs to be included in a meaningful way in undergraduate nursing curricula" (Canning & Drew, 2022, p.7). Students also felt they needed more education regarding MAiD policies and processes (Canning & Drew, 2022).

Once MAiD is incorporated into the nursing curriculum of undergraduate programs, nursing care, practice, and satisfaction can be improved. As Jafari et al. (2015) state, "Providing end-of-life care with high quality is only possible if nurses are educationally prepared" (p.193). Canning and Drew (2022) also explained that students who had previous end-of-life experiences believed that they could care for a patient pursuing MAiD.

A study by McMechan et al., in 2019 demonstrated that Canadian nursing students felt improvements could be made to their undergraduate nursing program to better prepare them. Research, policy change, and curriculum change have already drastically changed since MAiD was legalized. These implications should be taken into consideration when considering future research; some recommendations are made below.

Within this study, the only intervention used was a PowerPoint presentation for the education piece. After completing this study, more research was done, and different methods of education should be used for future research. It is shown that different methods of education can have a lasting effect on knowledge, as well as a higher level of knowledge gain (RNAO, 2005). The following methods of teaching come from the Nursing Best Practice Guidelines Program of RNAO and it is believed that interactive strategies of teaching can result in the best outcome for students: discussions, case studies, role play, simulations, and programmed learning (RNAO, 2005).

About different methods of teaching, McMechan et al.' (2019) explained that nursing students gave recommendations for their education and requested the use of clinical simulations to role play speaking with a patient about MAiD and play the role of a nurse throughout the process of MAiD for the patient. An example of this strategy is in progress at the University of Windsor in which nursing students can access an online simulation where they navigate as a nursing student through a series of decisions through the MAiD process (Morrell et al., 2022). This simulation would be very beneficial, along with other methods of education, for BScN programs to implement and use within their courses to ensure students are having in-depth quality education where they have better chances of retaining the knowledge (Morrell et al., 2022).

6.7 Recommendation for Future Research

As MAiD is still relatively new legislation, most aspects of it related to the client and healthcare provider roles and responsibilities warrant further study. Future studies about MAiD with health professionals and/or nursing education could use a large sample size from multiple universities that have different curricula. This could help to determine the proper ways to teach about MAiD and to identify which program has the best nursing student outcomes on post-testing. It could also be recommended for future research to conduct a study involving new graduates and experienced nurses and their opinions regarding MAiD education. To add, it would benefit BScN programs, as well as hospitals hiring newly graduated nurses, to research how MAiD education during the BScN can impact practice once they graduate within the first years of work. Also, future research should involve different types of interventions, such as simulations, case studies, and in-person experiences during undergrad.

Cane et al. (2012) explain that the Theoretical Domains Framework is used well alongside the Behaviour Change Wheel to create the questionnaires and identify domains and areas of concern while implementing MAiD education in the curriculum. The Behaviour Change Wheel can be used in junction while designing interventions (Cane et al., 2012). Future research could be conducted using the BCW.

6.8 Conclusion

These study findings can be used and incorporated to influence further research in MAiD with nursing students and newly graduated nurses. This research was conducted during an ideal time frame, as MAiD was recently added to the nursing undergraduate curriculum, and little was known about the effects of MAiD education and experience on nursing students. Our hypothesis was confirmed with this research and revealed important findings. Recommendations have been made for future research to enhance the MAiD education received by BScN students. Nursing students learn all their knowledge base from the curriculum in the undergraduate nursing program they attend. As an academic community, we must provide them with the education required to enter practice safely and competently.

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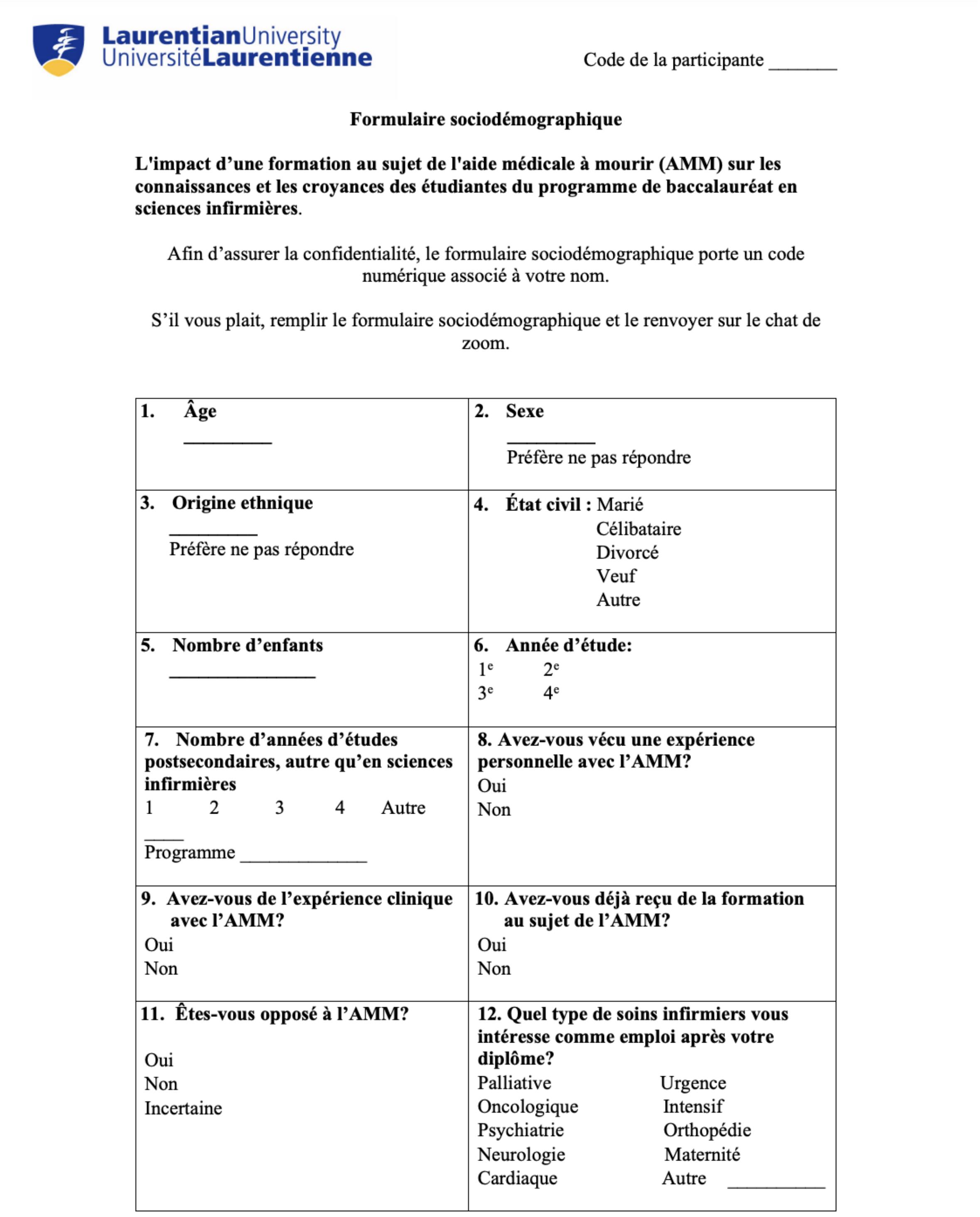
Appendix A

Sociodemographic Questionnaire



Code de la participante _______

Formulaire sociodémographique

L'impact d'une formation au sujet de l'aide médicale à mourir (AMM) sur les connaissances et les croyances des étudiantes du programme de baccalauréat en sciences infirmières.

Afin d'assurer la confidentialité, le formulaire sociodémographique porte un code numérique associé à votre nom.

S'il vous plait, remplir le formulaire sociodémographique et le renvoyer sur le chat de zoom.

1. Âge _________	**2. Sexe** _________ Préfère ne pas répondre
3. Origine ethnique _________ Préfère ne pas répondre	**4. État civil :** Marié Célibataire Divorcé Veuf Autre
5. Nombre d'enfants _______________	**6. Année d'étude:** 1e 2e 3e 4e
7. Nombre d'années d'études postsecondaires, autre qu'en sciences infirmières 1 2 3 4 Autre ____ Programme _____________	**8. Avez-vous vécu une expérience personnelle avec l'AMM?** Oui Non
9. Avez-vous de l'expérience clinique avec l'AMM? Oui Non	**10. Avez-vous déjà reçu de la formation au sujet de l'AMM?** Oui Non
11. Êtes-vous opposé à l'AMM? Oui Non Incertaine	**12. Quel type de soins infirmiers vous intéresse comme emploi après votre diplôme?** Palliative Urgence Oncologique Intensif Psychiatrie Orthopédie Neurologie Maternité Cardiaque Autre __________

Appendix B
Consent Form

LETTRE DE CONSENTEMENT

Titre complet de l'étude : L'impact d'une formation au sujet de l'aide médicale à mourir (AMM) sur les connaissances et les croyances des étudiantes du programme de baccalauréat en sciences infirmières de l'Université Laurentienne.

Chercheur principal :
Monica Lindenbach, BScN. mlindenbach@laurentian.ca

Co - superviseurs:

Dre Elena Hunt, PhD, IA	epopiea@laurentian.ca	705.675.1151 poste 3820
Dr Roger Pilon, PhD, IP-SSP	rpilon@laurentian.ca	705.675.1151 poste 3733

Cette étude est entreprise afin d'évaluer l'impact d'une formation au sujet de l'aide médicale à mourir (AMM) sur les connaissances et les croyances des étudiantes du programme francophone de sciences infirmières à l'Université Laurentienne.

Premièrement, vous serez demandé de remplir un formulaire sociodémographique afin de fournir des caractéristiques pertinentes au sujet des participantes. Par la suite, vous allez compléter un questionnaire pré-test, suivre une formation, et compléter un questionnaire post-test. Aussi, après une période d'un mois, le post-test sera administré à une deuxième reprise afin d'évaluer la persistance des connaissances et des croyances.

Votre participation à cette étude ne présente aucun risque d'atteinte à votre santé. Cependant, il est possible que l'information partagée durant la formation de l'AMM puisse évoquer des émotions telles que la tristesse, la confusion ou même des sentiments contradictoires. Si ceci est le cas, vous serez dirigée vers des services de soutien accessibles gratuitement à toutes les étudiantes de l'Université Laurentienne, ainsi que des services offerts dans la communauté. Une liste qui dresse ces services se trouve vers la fin du formulaire de consentement à la page 3.

Il se peut que vous tiriez des avantages individuels directement reliés à votre participation à cette étude. En tant que participante, vous aurez la possibilité d'augmenter vos connaissances dans le domaine de l'AMM et de possiblement améliorer votre pratique infirmière future.

Votre participation à cette étude est tout à fait volontaire et n'est pas rémunérée. À la page quatre (4) du formulaire de consentement, il est demandé d'inscrire votre courriel de l'Université afin que je puisse vous acheminez votre certificat de participation suite au deuxième post-test.

Toutes les informations recueillies, utilisées ou divulguées dans le cadre de cette étude seront tenues à titre strictement confidentiel, c'est-à-dire que tout ce que vous dites ou faites dans le contexte de l'étude ne vous sera pas attribué personnellement. Votre identité sera conservée à l'aide d'attribution d'un code numérique. Les informations reçues seront conservées dans Google Drive sécurisé par l'Université Laurentienne ou un classeur verrouillé et auquel seules les personnes impliquées dans la recherche auront accès. Les données brutes seront conservées pendant deux (2) ans.

Vous avez le droit d'être informés des résultats de cette étude. Donc, si vous désirez recevoir la synthèse des résultats à la fin ce cette recherche, svp cochez la case « J'aimerais recevoir les résultats de la recherche » à la page quatre (4) du formulaire de consentement. Lorsque la recherche sera terminée, une synthèse sera acheminée par la chercheuse.

Vous avez le droit de recevoir toutes les informations qui pourraient vous aider à prendre une décision concernant votre participation à cette étude. Vous avez le droit de poser des questions sur cette étude, y compris vos droits de participation à la recherche, et de recevoir des réponses satisfaisantes, avant de prendre une décision. Vous avez le droit de poser des questions reliées au déroulement et à votre participation, et de recevoir des réponses tout au long de cette étude.

Afin d'éliminer tout biais dans la recherche, les questions/commentaires reliées au contenu de la formation (AMM) seront seulement répondues suite au deuxième post-test. Aussi, il sera demandé que toutes discussions au sujet de l'AMM avec vos professeures aient lieu suite au deuxième post-test, afin d'éliminer tout biais possibles. Afin que vous n'oubliez pas vos questions/commentaires, vous pouvez les diriger directement à mon courriel, indiqué sur la première (1) page du formulaire de consentement et je vais les répondre directement après notre deuxième visite ensemble.

Pendant la recherche, le terme « étudiante » au féminin sera utilisé, en raison du nombre d'étudiantes majoritairement de genre féminin dans le programme. Si vous avez des questions reliées à cette étude, vous pouvez communiquer avec les responsables de la recherche, énumérés ci-dessus.

Si vous avez des questions sur vos droits en tant que participante à la recherche ou des questions d'ordre éthique liées à cette étude, que vous désirez aborder avec une personne qui n'est pas directement associée à celle-ci, vous pouvez communiquer avec la **conseillère en éthique de la recherche, au Bureau de la recherche de l'Université Laurentienne**. Téléphone : 705-675-1151, poste 3681, 2436, ou 1-800-461-4030 (appel sans frais) ou ethics@laurentian.ca

Liste de ressources en matière de soutien psychologique

Sur le campus de l'Université Laurentienne
Counseling individuel ou en groupe
2e étage de l'édifice Parker
Services offerts de 0900 à 1630 (lundi à vendredi)
705.673.6506
counselling@laurentian.ca

Dans la communauté
Services d'intervention en cas de crises « Crisis »
127 rue Cedar, Sudbury
Heures de bureau de 0830 à 2200 (lundi à dimanche)
705.675.4760 (ligne d'écoute téléphonique 24/7/365)
1.877.841.1101 (ligne sans frais)

Horizon Santé-Nord
41, chemin du lac Ramsey, Sudbury
705.675.4760 (besoin d'une aide immédiate)
705.523.4988, poste 4221 (service central d'admission)

Association canadienne pour la santé mentale
111, rue Elm, bureau 100, Sudbury
Heures de bureau de 0830 à 1630 (lundi, mardi, jeudi et vendredi)
Heures de bureau de 0830 à 1800 (mercredi)
705.675.7252 (ligne téléphonique)
1.866.285.2642 (ligne sans frais)

Santé publique Sudbury & Districts
1300, rue Paris, Sudbury
Heures de bureau de 0830 à 1630 (lundi à vendredi)
705.522.9200 (ligne téléphonique)
1.866.522.9200 (ligne sans frais)

Ligne d'assistance et en ligne
Allo j'écoute
Services en tout temps (24/7/365)
2.1.1
1.866.925.5454

Plus fort ensemble – Laurentienne
https://morefeetontheground.ca/fr/

LaurentianUniversity
UniversitéLaurentienne

***Prière d'enregistrer une copie de ce document pour vos dossiers.**

DOCUMENTATION DU CONSENTEMENT ÉCLAIRÉ

Titre complet de l'étude :

L'impact d'une formation au sujet de l'aide médicale à mourir sur les connaissances et croyances des étudiantes du programme de baccalauréat en sciences infirmières.

Nom de la participante : ____________________ (premier et dernier nom au complet)
Code de la participante : _________ (à remplir par le chercheur)

Participante

En signant ce formulaire, je confirme ce qui suit :

- La recherche m'a été complètement expliquée et j'ai reçu des réponses satisfaisantes à toutes mes questions.
- Je comprends les exigences de la participation à cette recherche.
- J'ai été informée des risques et des avantages, le cas échéant, de participer à cette recherche.
- J'ai été informée des éventualités de la participation à cette recherche.
- J'ai été informée des droits des participants à la recherche.
- J'ai lu chaque page de ce formulaire.

____________________________ ____________________________

Signature de la participante Date

____

Adresse courriel de la participante

J'aimerais recevoir les résultats de la recherche

Appendix C
Ethics Approval

LaurentianUniversity
UniversitéLaurentienne

CERTIFICAT D'APPROBATION DÉONTOLOGIQUE POUR LA CONDUITE D'UN PROTOCOLE IMPLIQUANT LA PRÉSENCE DE SUJETS HUMAINS
Comité éthique de la Recherche de l'Université Laurentienne

Le présent certificat confirme que le projet identifié ci-dessous a obtenu une approbation déontologique du Comité déontologique de l'Université Laurentienne (CÉRUL). La date de votre approbation déontologique, la date de votre prochain rapport, les dates de renouvèlement(s) et modifications (si s'appliquent) ainsi que toute condition particulière sont indiquées dans le tableau qui suit.

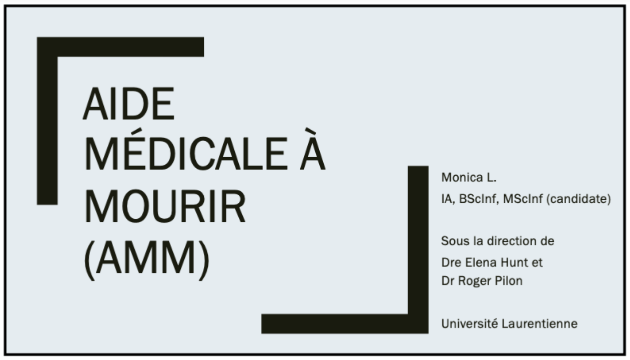
TYPE D'APPROBATION / Nouvelle **X** /Modifications au projet /Demande de prolongation	
Nom(s) du ou des chercheur(s)/collaborateur(s) École/ Département	Monica Lindenbach, superviseurs, Roger Pilon et Elena Hunt, Nursing
Titre de la soumission	L'impact d'une formation au sujet de l'aide médicale à mourir (AMM) sur les connaissances et les croyances des étudiantes du programme de baccalauréat en sciences infirmières de l'Université Laurentienne
Numéro de référence	6020627
Date de l'approbation originale	08 Mai, 2020
Date de l'approbation de l'extension ou des modifications (*si s'applique*)	
Date du prochain rapport	08 Mai, 2021
Condition(s) placée(s) sur le projet	

Un rapport annuel ou final est requis (date indiquée comme étant celle de la fin du projet sur votre demande). Tout projet doit faire l'objet au moins l'objet d'un rapport annuel soumis au CÉRUL. Si votre projet devait se poursuivre au-delà de la durée de l'approbation déontologique, vous devrez soumettre une demande d'extension auprès du CÉRUL en remplissant le formulaire de suivi annuel. Comme il est indiqué sur le formulaire d'approbation déontologique, il faudra soumettre au Comité toute modification ayant trait aux questions ou aux procédures. Si vous souhaitez modifier le contenu de votre protocole déontologique, vous devrez utiliser le formulaire du suivi annuel. Le CÉRUL vous souhaite de francs succès dans vos entreprises de recherche en vous rappelant de respecter en tout temps les politiques de l'ÉPTC.

Rosanna Langer

____
Rosanna Langer, Présidente
Comité Éthique de la Recherche

Appendix D
Presentation



AIDE MÉDICALE À MOURIR (AMM)

Monica L.
IA, BScInf, MScInf (candidate)

Sous la direction de
Dre Elena Hunt et
Dr Roger Pilon

Université Laurentienne

1

Table des matières

- L'aide médicale à mourir, les médecins, les infirmiers praticiens et les coroners
- Rôle du clinicien et des infirmières autorisées
- Le déroulement du processus de l'aide médicale à mourir (AMM)
- Les implications légales pour les infirmières
- Les circonstances particulières (objection de conscience, écriture de la demande, participation de la famille, etc..)
- Dilemmes éthiques
- Avenir de l'aide médicale à mourir

Clinicien = Médecin ou infirmier praticien

IA = Infirmière autorisée

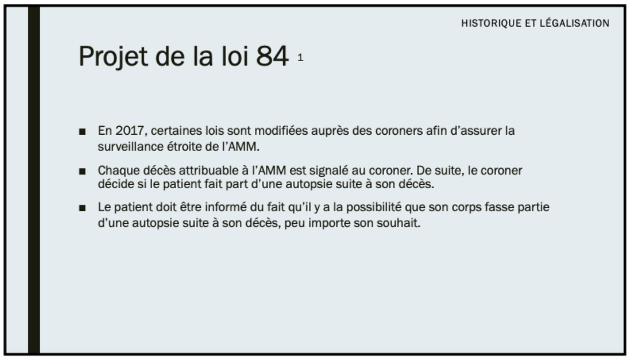
AMM = Aide médicale à mourir

2

Qu'est-ce que l'aide médicale à mourir?[1,2,6,7]

- Lorsqu'un médecin ou un infirmier praticien (clinicien)
  - Administre une substance à une personne, qui cause sa mort
  - Prescrit une substance qui cause la mort, afin que le patient puisse auto-administrer le médicament

3

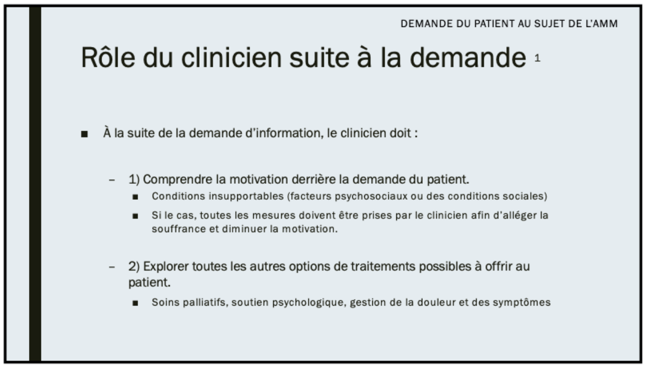


HISTORIQUE ET LÉGALISATION

Projet de la loi 84 [1]

- En 2017, certaines lois sont modifiées auprès des coroners afin d'assurer la surveillance étroite de l'AMM.
- Chaque décès attribuable à l'AMM est signalé au coroner. De suite, le coroner décide si le patient fait part d'une autopsie suite à son décès.
- Le patient doit être informé du fait qu'il y a la possibilité que son corps fasse partie d'une autopsie suite à son décès, peu importe son souhait.

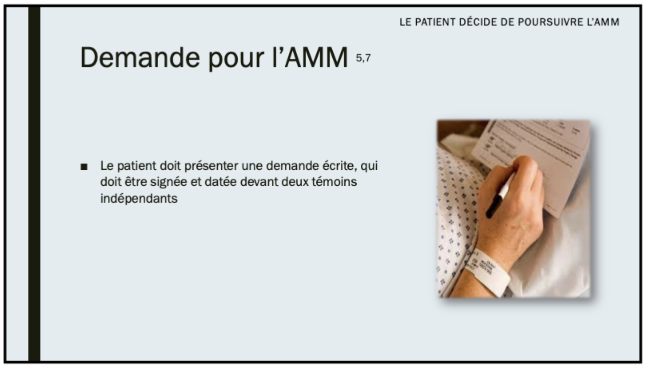
4



DEMANDE DU PATIENT AU SUJET DE L'AMM

Rôle du clinicien suite à la demande [1]

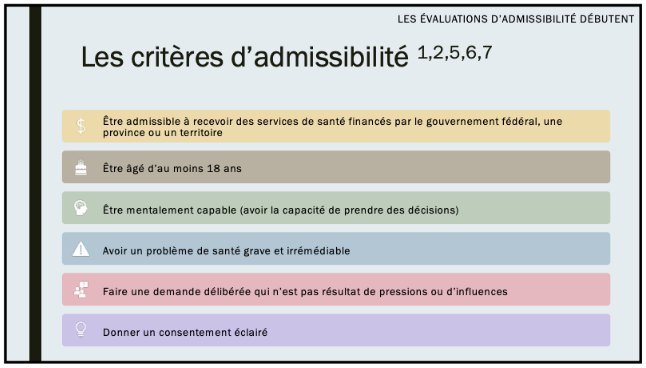
- À la suite de la demande d'information, le clinicien doit :
  - 1) Comprendre la motivation derrière la demande du patient.
    - Conditions insupportables (facteurs psychosociaux ou des conditions sociales)
    - Si le cas, toutes les mesures doivent être prises par le clinicien afin d'alléger la souffrance et diminuer la motivation.
  - 2) Explorer toutes les autres options de traitements possibles à offrir au patient.
    - Soins palliatifs, soutien psychologique, gestion de la douleur et des symptômes



LE PATIENT DÉCIDE DE POURSUIVRE L'AMM

Demande pour l'AMM [5,7]

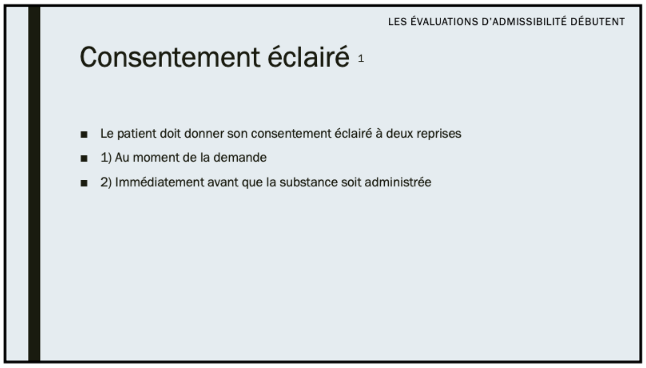
- Le patient doit présenter une demande écrite, qui doit être signée et datée devant deux témoins indépendants



LES ÉVALUATIONS D'ADMISSIBILITÉ DÉBUTENT

Les critères d'admissibilité [1,2,5,6,7]

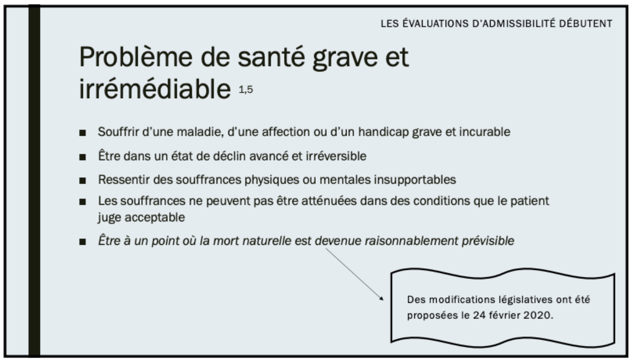
- Être admissible à recevoir des services de santé financés par le gouvernement fédéral, une province ou un territoire
- Être âgé d'au moins 18 ans
- Être mentalement capable (avoir la capacité de prendre des décisions)
- Avoir un problème de santé grave et irrémédiable
- Faire une demande délibérée qui n'est pas résultat de pressions ou d'influences
- Donner un consentement éclairé



LES ÉVALUATIONS D'ADMISSIBILITÉ DÉBUTENT

Consentement éclairé [1]

- Le patient doit donner son consentement éclairé à deux reprises
- 1) Au moment de la demande
- 2) Immédiatement avant que la substance soit administrée



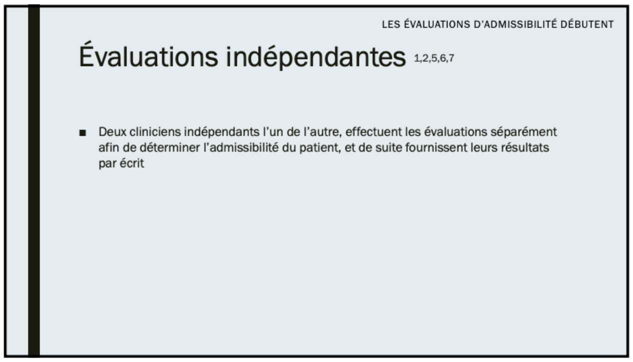
LES ÉVALUATIONS D'ADMISSIBILITÉ DÉBUTENT

Problème de santé grave et irrémédiable [1,5]

- Souffrir d'une maladie, d'une affection ou d'un handicap grave et incurable
- Être dans un état de déclin avancé et irréversible
- Ressentir des souffrances physiques ou mentales insupportables
- Les souffrances ne peuvent pas être atténuées dans des conditions que le patient juge acceptable
- *Être à un point où la mort naturelle est devenue raisonnablement prévisible*

Des modifications législatives ont été proposées le 24 février 2020.

9

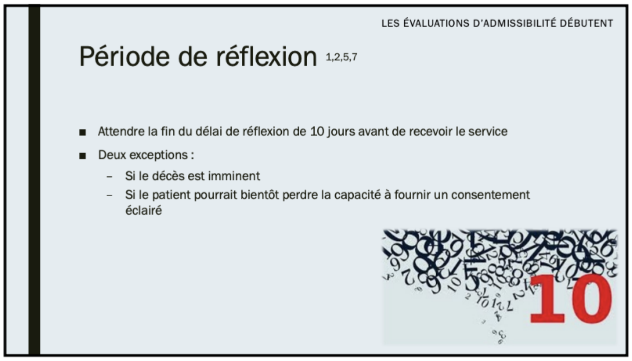


LES ÉVALUATIONS D'ADMISSIBILITÉ DÉBUTENT

Évaluations indépendantes [1,2,5,6,7]

- Deux cliniciens indépendants l'un de l'autre, effectuent les évaluations séparément afin de déterminer l'admissibilité du patient, et de suite fournissent leurs résultats par écrit

10

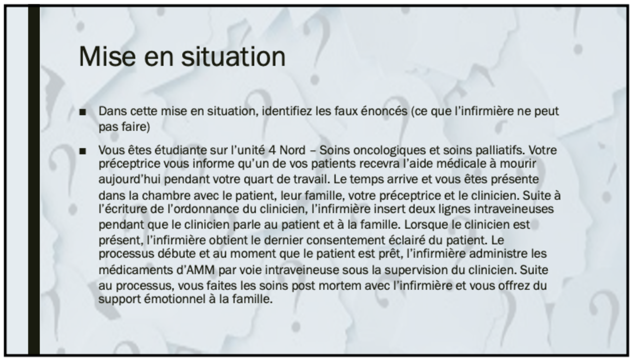


LES ÉVALUATIONS D'ADMISSIBILITÉ DÉBUTENT

Période de réflexion [1,2,5,7]

- Attendre la fin du délai de réflexion de 10 jours avant de recevoir le service
- Deux exceptions :
  - Si le décès est imminent
  - Si le patient pourrait bientôt perdre la capacité à fournir un consentement éclairé

11



Mise en situation

- Dans cette mise en situation, identifiez les faux énoncés (ce que l'infirmière ne peut pas faire)
- Vous êtes étudiante sur l'unité 4 Nord – Soins oncologiques et soins palliatifs. Votre préceptrice vous informe qu'un de vos patients recevra l'aide médicale à mourir aujourd'hui pendant votre quart de travail. Le temps arrive et vous êtes présente dans la chambre avec le patient, leur famille, votre préceptrice et le clinicien. Suite à l'écriture de l'ordonnance du clinicien, l'infirmière insert deux lignes intraveineuses pendant que le clinicien parle au patient et à la famille. Lorsque le clinicien est présent, l'infirmière obtient le dernier consentement éclairé du patient. Le processus débute et au moment que le patient est prêt, l'infirmière administre les médicaments d'AMM par voie intraveineuse sous la supervision du clinicien. Suite au processus, vous faites les soins post mortem avec l'infirmière et vous offrez du support émotionnel à la famille.

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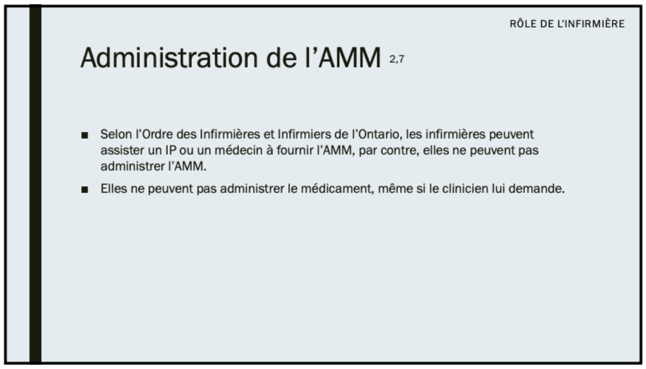


RÔLE DE L'INFIRMIÈRE

Administration de l'AMM [2,7]

- Selon l'Ordre des Infirmières et Infirmiers de l'Ontario, les infirmières peuvent assister un IP ou un médecin à fournir l'AMM, par contre, elles ne peuvent pas administrer l'AMM.
- Elles ne peuvent pas administrer le médicament, même si le clinicien lui demande.

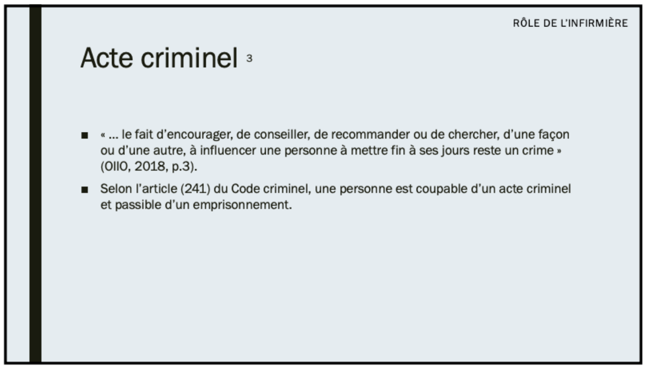
13

RÔLE DE L'INFIRMIÈRE

Qu'est ce que l'infirmière peut faire? [2,7]

- Installation d'une ligne intraveineuse qui servira à l'administration des médicaments.
- Éducation aux patients et à leurs familles
- Fournir un soutien aux patients et leurs familles
- Faire recours à des services interdisciplinaires pour le patient et la famille (psychologues, service social)

14



RÔLE DE L'INFIRMIÈRE

Acte criminel [3]

- « … le fait d'encourager, de conseiller, de recommander ou de chercher, d'une façon ou d'une autre, à influencer une personne à mettre fin à ses jours reste un crime » (OIIO, 2018, p.3).
- Selon l'article (241) du Code criminel, une personne est coupable d'un acte criminel et passible d'un emprisonnement.

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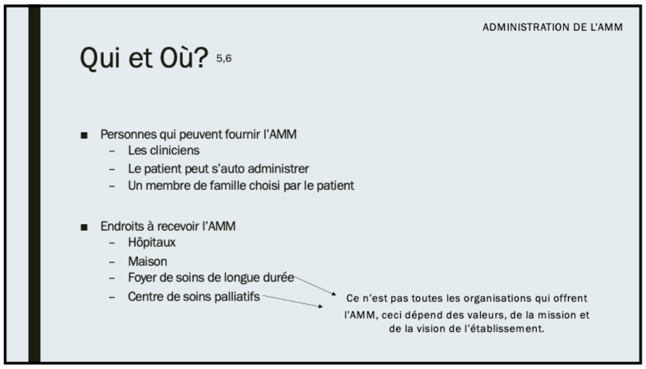

ADMINISTRATION DE L'AMM

Qui et Où? [5,6]

- Personnes qui peuvent fournir l'AMM
  - Les cliniciens
  - Le patient peut s'auto administrer
  - Un membre de famille choisi par le patient
- Endroits à recevoir l'AMM
  - Hôpitaux
  - Maison
  - Foyer de soins de longue durée
  - Centre de soins palliatifs

Ce n'est pas toutes les organisations qui offrent l'AMM, ceci dépend des valeurs, de la mission et de la vision de l'établissement.

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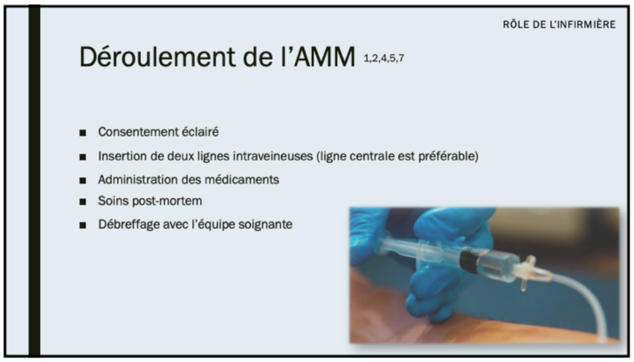
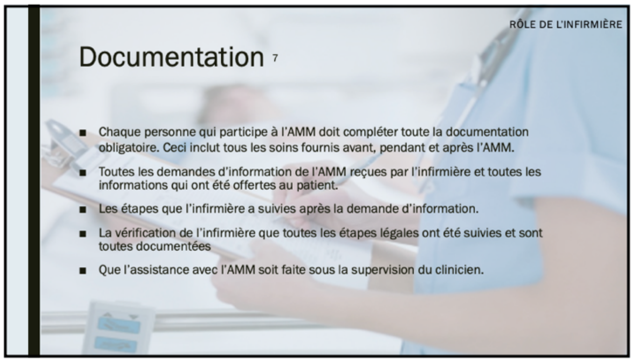


RÔLE DE L'INFIRMIÈRE

Déroulement de l'AMM [1,2,4,5,7]

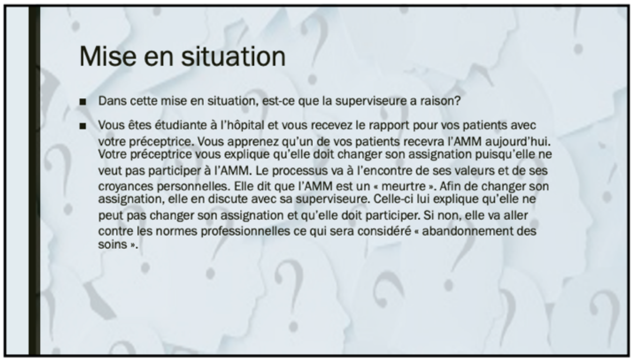
- Consentement éclairé
- Insertion de deux lignes intraveineuses (ligne centrale est préférable)
- Administration des médicaments
- Soins post-mortem
- Débreffage avec l'équipe soignante



RÔLE DE L'INFIRMIÈRE

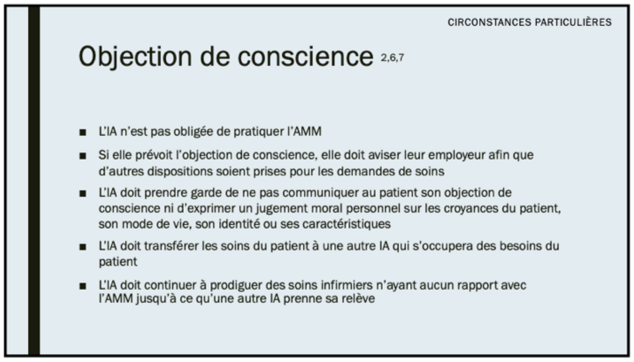
Documentation [7]

- Chaque personne qui participe à l'AMM doit compléter toute la documentation obligatoire. Ceci inclut tous les soins fournis avant, pendant et après l'AMM.
- Toutes les demandes d'information de l'AMM reçues par l'infirmière et toutes les informations qui ont été offertes au patient.
- Les étapes que l'infirmière a suivies après la demande d'information.
- La vérification de l'infirmière que toutes les étapes légales ont été suivies et sont toutes documentées
- Que l'assistance avec l'AMM soit faite sous la supervision du clinicien.



Mise en situation

- Dans cette mise en situation, est-ce que la superviseure a raison?
- Vous êtes étudiante à l'hôpital et vous recevez le rapport pour vos patients avec votre préceptrice. Vous apprenez qu'un de vos patients recevra l'AMM aujourd'hui. Votre préceptrice vous explique qu'elle doit changer son assignation puisqu'elle ne veut pas participer à l'AMM. Le processus va à l'encontre de ses valeurs et de ses croyances personnelles. Elle dit que l'AMM est un « meurtre ». Afin de changer son assignation, elle en discute avec sa superviseure. Celle-ci lui explique qu'elle ne peut pas changer son assignation et qu'elle doit participer. Si non, elle va aller contre les normes professionnelles ce qui sera considéré « abandonnement des soins ».



CIRCONSTANCES PARTICULIÈRES

Objection de conscience [2,6,7]

- L'IA n'est pas obligée de pratiquer l'AMM
- Si elle prévoit l'objection de conscience, elle doit aviser leur employeur afin que d'autres dispositions soient prises pour les demandes de soins
- L'IA doit prendre garde de ne pas communiquer au patient son objection de conscience ni d'exprimer un jugement moral personnel sur les croyances du patient, son mode de vie, son identité ou ses caractéristiques
- L'IA doit transférer les soins du patient à une autre IA qui s'occupera des besoins du patient
- L'IA doit continuer à prodiguer des soins infirmiers n'ayant aucun rapport avec l'AMM jusqu'à ce qu'une autre IA prenne sa relève

CIRCONSTANCES PARTICULIÈRES

Dilemme éthique – AMM et soins palliatifs [9, 13]

- Il y a une certaine confusion entre l'AMM et les soins palliatifs.
- Herx (2015) déclare que « *Si l'AMM va devenir partie des soins palliatifs, plusieurs personnes décideront d'abandonner les soins palliatifs. L'AMM va contre le noyau central des soins palliatifs [traduction libre]* » (p. 83)
- Dr. David Amies déclare que « *Les soins palliatifs et l'AMM sont deux options essentielles pour les Canadiens en fin de vie, et la disponibilité d'une option n'élimine pas le besoin de l'autre. En fin de compte, c'est à chacun de décider quelles sont les interventions qui lui conviennent le mieux au moment même [traduction libre]* » (Dying with Dignity Canada, 2018).

CIRCONSTANCES PARTICULIÈRES

Dilemme éthique – Soins infirmiers [8]

- Une infirmière participante dans une étude qui pratique l'objection de conscience dit

« *... pour moi, l'euthanasie ne fait pas partie des soins infirmiers.... c'est exactement l'opposé de ce que je veux faire [traduction libre]* » (Beuthin et al., 2018, p4)

CIRCONSTANCES PARTICULIÈRES

Dilemme éthique – Être un avocat [8, 14]

- Agir comme avocat pour le choix du patient.
- Deux infirmières expliquent pourquoi elles ne sont pas pour, ni contre l'AMM :

« *Je ne suis pas responsable de la vie du patient. Je suis présente pour l'assister avec ses décisions [traduction libre]* » (Beuthin et al., 2018, p4)

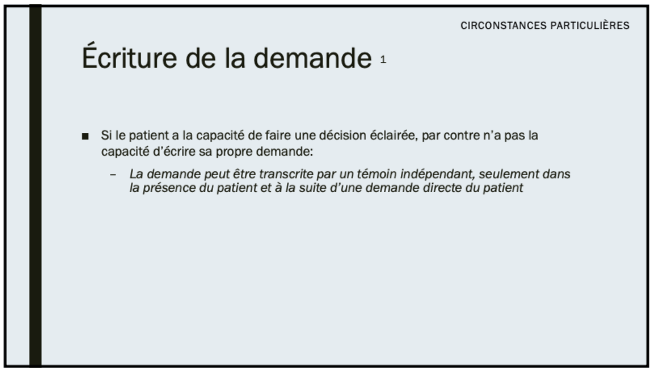
« *Je pense que nous sommes les médiateurs et les avocats. Ce sont les infirmières qui sont là à 3 heure du matin quand le patient est en détresse et commence la conversation de la mort. Je pense donc que nous sommes ceux qui apporterons ces demandes à l'équipe [traduction libre]* » (Sheridan & Lorie, 2017, p44)

CIRCONSTANCES PARTICULIÈRES

Dilemme éthique – Soutenir une mort paisible [8]

- Une participante à une étude dit

« *Il est difficile de regarder les gens mourir, surtout quand ils se débattent. Il semble un peu drôle de dire ceci, mais c'est en fait une expérience très positive.... Il ne souffrait pas, il n'avait pas de la difficulté à respirer, il n'avait aucune expectoration à suctionner.... Il semble que tous les aspects laids de la mort sont partis [traduction libre]* » (Beuthin et al., 2018, p4)



CIRCONSTANCES PARTICULIÈRES

Écriture de la demande [1]

- Si le patient a la capacité de faire une décision éclairée, par contre n'a pas la capacité d'écrire sa propre demande:
  - *La demande peut être transcrite par un témoin indépendant, seulement dans la présence du patient et à la suite d'une demande directe du patient*

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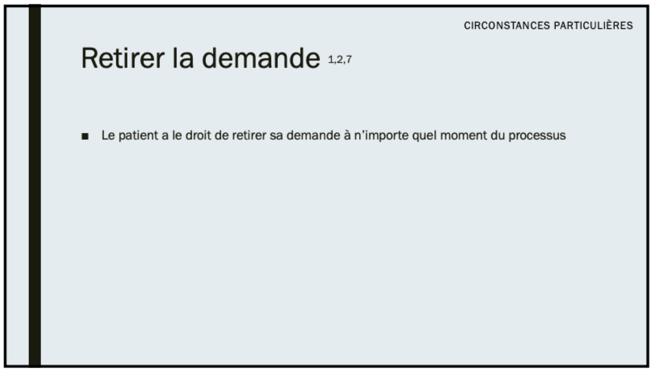

CIRCONSTANCES PARTICULIÈRES

Retirer la demande [1,2,7]

- Le patient a le droit de retirer sa demande à n'importe quel moment du processus

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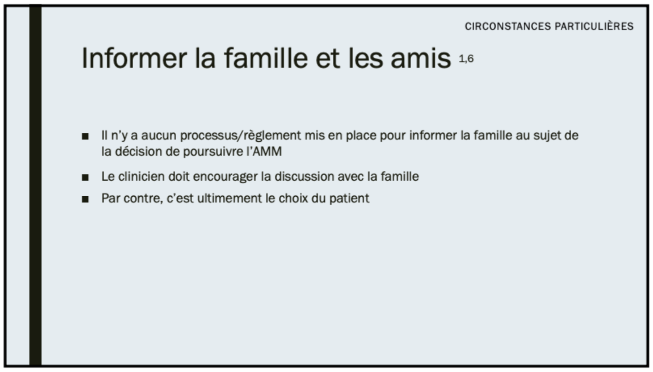

CIRCONSTANCES PARTICULIÈRES

Informer la famille et les amis [1,6]

- Il n'y a aucun processus/règlement mis en place pour informer la famille au sujet de la décision de poursuivre l'AMM
- Le clinicien doit encourager la discussion avec la famille
- Par contre, c'est ultimement le choix du patient

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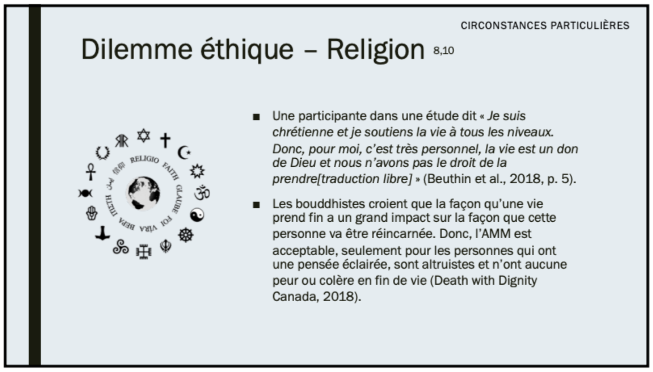
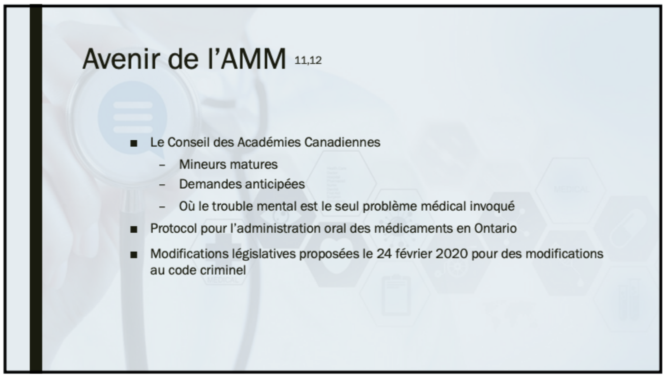


CIRCONSTANCES PARTICULIÈRES

Dilemme éthique – Religion [8,10]

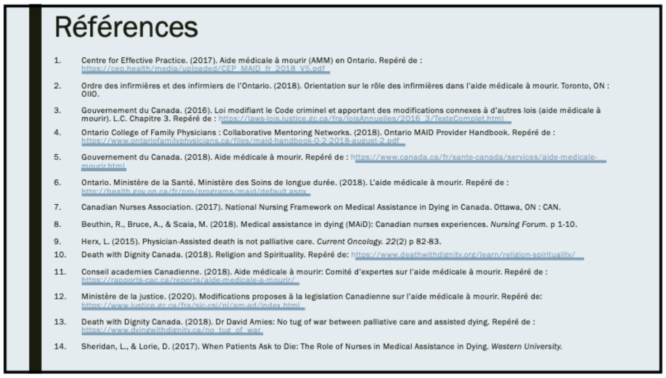
- Une participante dans une étude dit « *Je suis chrétienne et je soutiens la vie à tous les niveaux. Donc, pour moi, c'est très personnel, la vie est un don de Dieu et nous n'avons pas le droit de la prendre[traduction libre]* » (Beuthin et al., 2018, p. 5).
- Les bouddhistes croient que la façon qu'une vie prend fin a un grand impact sur la façon que cette personne va être réincarnée. Donc, l'AMM est acceptable, seulement pour les personnes qui ont une pensée éclairée, sont altruistes et n'ont aucune peur ou colère en fin de vie (Death with Dignity Canada, 2018).

24



Avenir de l’AMM [11,12]

- Le Conseil des Académies Canadiennes
  - Mineurs matures
  - Demandes anticipées
  - Où le trouble mental est le seul problème médical invoqué
- Protocol pour l’administration oral des médicaments en Ontario
- Modifications législatives proposées le 24 février 2020 pour des modifications au code criminel



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Appendix E
2nd Consent Form

LaurentianUniversity
UniversitéLaurentienne

Titre complet de l'étude : L'impact d'une formation au sujet de l'aide médicale à mourir (AMM) sur les connaissances et les croyances des étudiantes du programme de baccalauréat en sciences infirmières de l'Université Laurentienne.

Chercheur principal :

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Co - superviseurs:

Dre Elena Hunt, PhD, IA	epopiea@laurentian.ca	705.675.1151 poste 3820
Dr Roger Pilon, PhD, IP-SSP	rpilon@laurentian.ca	705.675.1151 poste 3733

Ce post-test est la dernière composante de la collecte des données de cette étude. Le but est d'analyser la persistance des connaissances et des croyances au sujet de l'AMM.

N'oubliez pas que votre participation reste toujours volontaire.

S'il vous plait faire référence au formulaire de consentement fournit pendant la première période d'expérimentation pour l'information supplémentaire.

Cette page sera utilisée afin de jumeler ce post-test avec votre premier post-test déjà complété. Aussitôt que ce questionnaire soit jumelé avec votre code numérique, cette page sera conservée séparément afin d'assurer la confidentialité et l'anonymat.

Encore, svp faire parvenir vos questions/commentaires par courriel et elles seront répondues suite à la complétion du deuxième post-test. En retour, vous allez aussi recevoir votre certificat de participation.

____
Nom de la participante (nom au complet)

____
Signature de la participante

____
Date

____
Code de la participante (à remplir par le chercheur)

Appendix F
Certificate of Participation

Université Laurentienne – École des sciences infirmières

Présente ce

CERTIFICAT DE PARTICIPATION

à

____

Participant / Participante

Formation d'introduction à l'aide médicale à mourir

____________________________ ____________________________

Monica Lindenbach B.Sc.Inf.
Étudiante à la M.Sc.N.

Date de formation

Appendix G
Questionnaire

Code de la participante ___________

Questionnaire Pré-Test

Prière de ne pas laissez des réponses vides.

HISTORIQUE ET LÉGALISATION

1) Avant le processus de l'AMM, le patient doit savoir qu'il y a la possibilité d'une investigation par le coroner après son décès.
   a. Vrai
   b. Faux
   c. Je ne sais pas

DEMANDE DU PATIENT AU SUJET DE L'AMM

2) Le clinicien (IP/MD) doit comprendre la motivation derrière la demande du patient de vouloir poursuivre l'AMM. Ceci dit, s'il est découvert que le patient souffre de la solitude reliée à l'isolation sociale, il est encore acceptable à poursuivre l'AMM.
   a. Vrai
   b. Faux
   c. Je ne sais pas

3) Dans une situation où le patient fait une demande directe pour recevoir l'AMM, il n'est pas nécessaire d'offrir autre traitement, p. ex., soins palliatifs.
   a. Vrai
   b. Faux
   c. Je ne sais pas

LE PATIENT DÉCIDE DE POURSUIVRE L'AMM

4) Lorsque le patient décide de poursuivre l'AMM, il doit simplement faire une demande verbale au clinicien (IP/MD) responsable.
   a. Vrai
   b. Faux
   c. Je ne sais pas

LES ÉVALUATIONS D'ADMISSIBILITÉ DÉBUTENT

5) Le patient doit donner son consentement éclairé à deux reprises; le premier au moment de la demande, et le deuxième immédiatement avant que la substance soit administrée.
   a. Vrai
   b. Faux
   c. Je ne sais pas

6) Indiquez si les énoncés ci-dessous sont « Vrai » ou « Faux ». C'est acceptable de mettre « Je ne sais pas ». Chacun des énoncés ci-dessous sont reliés aux critères d'admissibilité pour recevoir l'AMM.

Code de la participante ___________

a. Le patient doit avoir 19 ans.

____

b. Une maladie grave et irrémédiable (mortel) veut dire que le patient est dans un état de déclin avancé qui peut être inversé.

____

c. Dans un cas où le patient dit vouloir l'AMM mais ne peut pas consentir pour lui-même, leur mandataire a le droit de donner son consentement (par exemple; la démence).

____

7) Afin de s'assurer que le patient est admissible à l'AMM, il est obligatoire qu'un (1) seul clinicien (IP/MD) effectue les évaluations.
   a. Vrai
   b. Faux
   c. Je ne sais pas

PÉRIODE DE RÉFLEXION

8) Après qu'il est décidé que le patient est admissible et peut recevoir l'AMM, il y a période de réflexion d'une semaine, sept (7) jours, afin que le patient puisse réfléchir aux conséquences de l'AMM et réellement faire une décision éclairée et volontaire.
   a. Vrai
   b. Faux
   c. Je ne sais pas

9) Si le décès est imminent ou le patient risque de perdre sa capacité à fournir un consentement éclairé avant la fin de la période de réflexion, les cliniciens (IP/MD) peuvent être en accord à diminuer le nombre de jours nécessaires à réfléchir.
   a. Vrai
   b. Faux
   c. Je ne sais pas

ROLE DE L'INFIRMIÈRE

10) Selon l'Ordre des Infirmières et des Infirmiers de l'Ontario (OIIO) et l'Association des Infirmières et des Infirmiers du Canada (AIIC), les infirmières autorisées (IA) sont autorisées à assister les cliniciens (IP/MD) avec l'administration des médicaments utilisés pendant l'AMM en autant que le clinicien (IP/MD) supervise chaque étape.
   a. Vrai
   b. Faux
   c. Je ne sais pas

11) L'infirmière autorisée (IA) a comme rôle de faire l'enseignement avec le patient au sujet de l'AMM. Sous l'article 241 du Code criminel, l'infirmière autorisée (IA) ne peut pas être trouvée coupable d'un acte criminel si elle encourage/conseille à un patient de poursuivre son souhait de recevoir l'AMM.

Code de la participante ___________

   a. Vrai
   b. Faux
   c. Je ne sais pas

12) Indiquez si les énoncés ci-dessous sont « Vrai » ou « Faux ». C'est acceptable de mettre « Je ne sais pas ». Chacun des énoncés ci-dessous sont reliés au rôle de l'infirmière autorisée (IA) avec l'AMM.
   a. L'infirmière autorisée (IA) peut faire l'insertion de la ligne intraveineuse qui servira à l'administration des médicaments.

      ____

   b. L'infirmière autorisée (IA) peut agir comme évaluateur indépendant des critères d'admissibilité.

      ____

ADMINISTRATION DE L'AMM

13) L'AMM peut seulement être offert aux hôpitaux et les foyers de soins de longue durée, sous la supervision d'un clinicien (IP/MD).
   a. Vrai
   b. Faux
   c. Je ne sais pas

14) Si un patient demande à un membre de sa famille à administrer le médicament, ceci est alloué.
   a. Vrai
   b. Faux
   c. Je ne sais pas

DOCUMENTATION

15) Dans un cas où le patient demande à l'infirmière autorisée (IA) au sujet de l'information sur l'AMM, sans faire une demande officielle, l'infirmière autorisée (IA) doit s'assurer de documenter cette discussion.
   a. Vrai
   b. Faux
   c. Je ne sais pas

CIRCONSTANCES PARTICULIÈRES

16) Indiquez si les énoncés ci-dessous sont « Vrai » ou « Faux ». C'est acceptable de mettre « Je ne sais pas ». Chacun des énoncés ci-dessous sont reliés à l'objection de conscience (refuser de participer) de l'infirmière autorisée (IA) à participer à l'AMM.
   a. L'infirmière autorisée (IA) a le droit d'avertir le patient qu'elle pratique l'objection de conscience pour le mettre au courant.

      ____

Code de la participante ___________

b. L'infirmière autorisée (IA) doit continuer à prodiguer des soins au patient qui n'ont aucun rapport avec l'AMM.
____

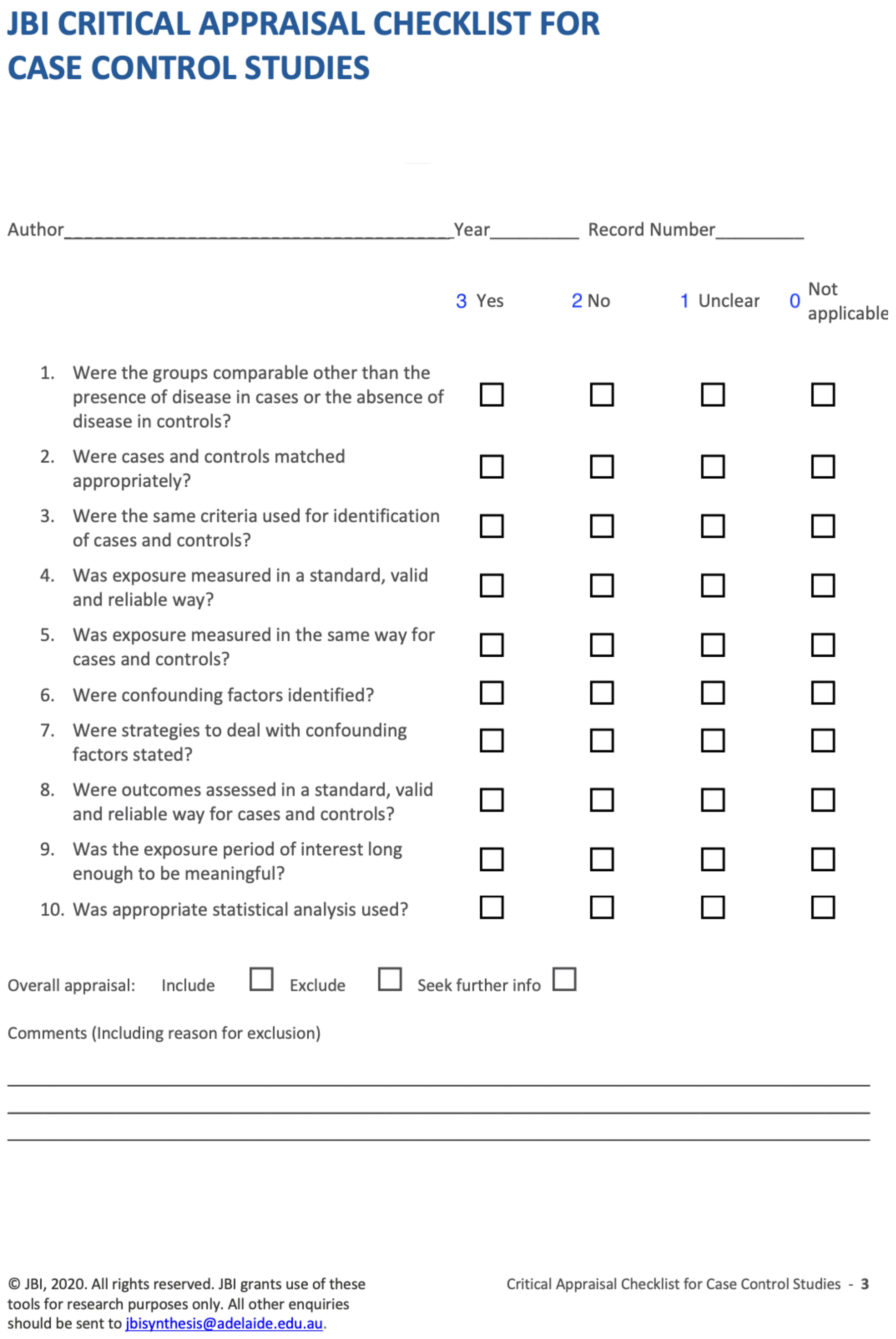
c. L'infirmière autorisée (IA) ne peut pas pratiquer l'objection de conscience, elle doit toujours participer à l'AMM pour ne pas abandonner son patient.
____

CROYANCES

17) Devant chacun des énoncés ci-dessous, indiquez si vous êtes en accord, indifférent, ou en désaccord.

	En accord	Indifférent	En désaccord
Lorsque j'obtiens mon diplôme du programme des sciences infirmières, je serai à l'aise à discuter de l'AMM avec mon patient.	•	•	•
Je crois que l'AMM s'inscrit dans le rôle professionnel des infirmières.	•	•	•
Je crois que seules les IAs qui se sentent à l'aise avec l'AMM et leur rôle dans le processus, devraient y participer.	•	•	•
Je crois que les IAs qui pratiquent l'objection de conscience peuvent devenir victime de l'intimidation ou la discrimination en raison qu'elles ne participent pas.	•	•	•
Je crois que les IAs qui participent à l'AMM peuvent devenir victime de l'intimidation ou à la discrimination en raison de leur participation.	•	•	•
Après l'obtention de mon diplôme du programme des sciences infirmières, je pratiquerai l'objection de conscience en raison de mes croyances culturelles, spirituelles et/ou émotionnelles.	•	•	•
Après l'obtention de mon diplôme du programme des sciences infirmières, je participerai à l'AMM en raison de mes croyances culturelles, spirituelles, et/ou émotionnelles.	•	•	•
Je crois que la majorité des IAs pratique l'objection de conscience.	•	•	•
Je crois que la participation à l'AMM susciterait en moi des émotions négatives.	•	•	•
Je crois que la participation à l'AMM susciterait en moi des émotions apaisantes.	•	•	•

Appendix H
JBI Critical Appraisal of Case Control Studies



JBI CRITICAL APPRAISAL CHECKLIST FOR CASE CONTROL STUDIES

Author_______________________________________Year_________ Record Number_________

	3 Yes	2 No	1 Unclear	0 Not applicable
1. Were the groups comparable other than the presence of disease in cases or the absence of disease in controls?	☐	☐	☐	☐
2. Were cases and controls matched appropriately?	☐	☐	☐	☐
3. Were the same criteria used for identification of cases and controls?	☐	☐	☐	☐
4. Was exposure measured in a standard, valid and reliable way?	☐	☐	☐	☐
5. Was exposure measured in the same way for cases and controls?	☐	☐	☐	☐
6. Were confounding factors identified?	☐	☐	☐	☐
7. Were strategies to deal with confounding factors stated?	☐	☐	☐	☐
8. Were outcomes assessed in a standard, valid and reliable way for cases and controls?	☐	☐	☐	☐
9. Was the exposure period of interest long enough to be meaningful?	☐	☐	☐	☐
10. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

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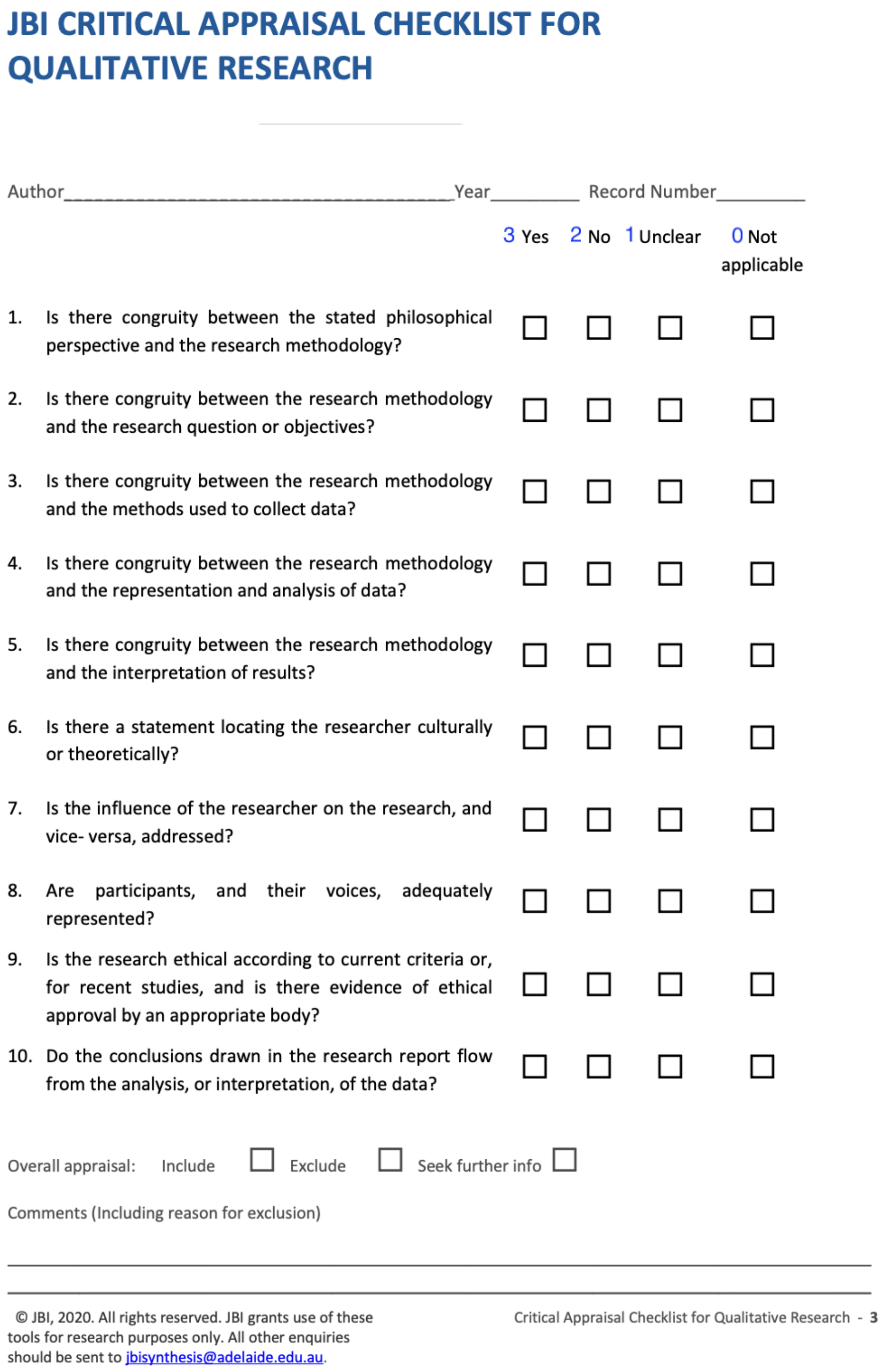
Appendix I
JBI Critical Appraisal of Qualitative Studies



JBI CRITICAL APPRAISAL CHECKLIST FOR QUALITATIVE RESEARCH

Author_______________________________________Year_________ Record Number_________

	3 Yes	2 No	1 Unclear	0 Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2. Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3. Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4. Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5. Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6. Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7. Is the influence of the researcher on the research, and vice- versa, addressed?	☐	☐	☐	☐
8. Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

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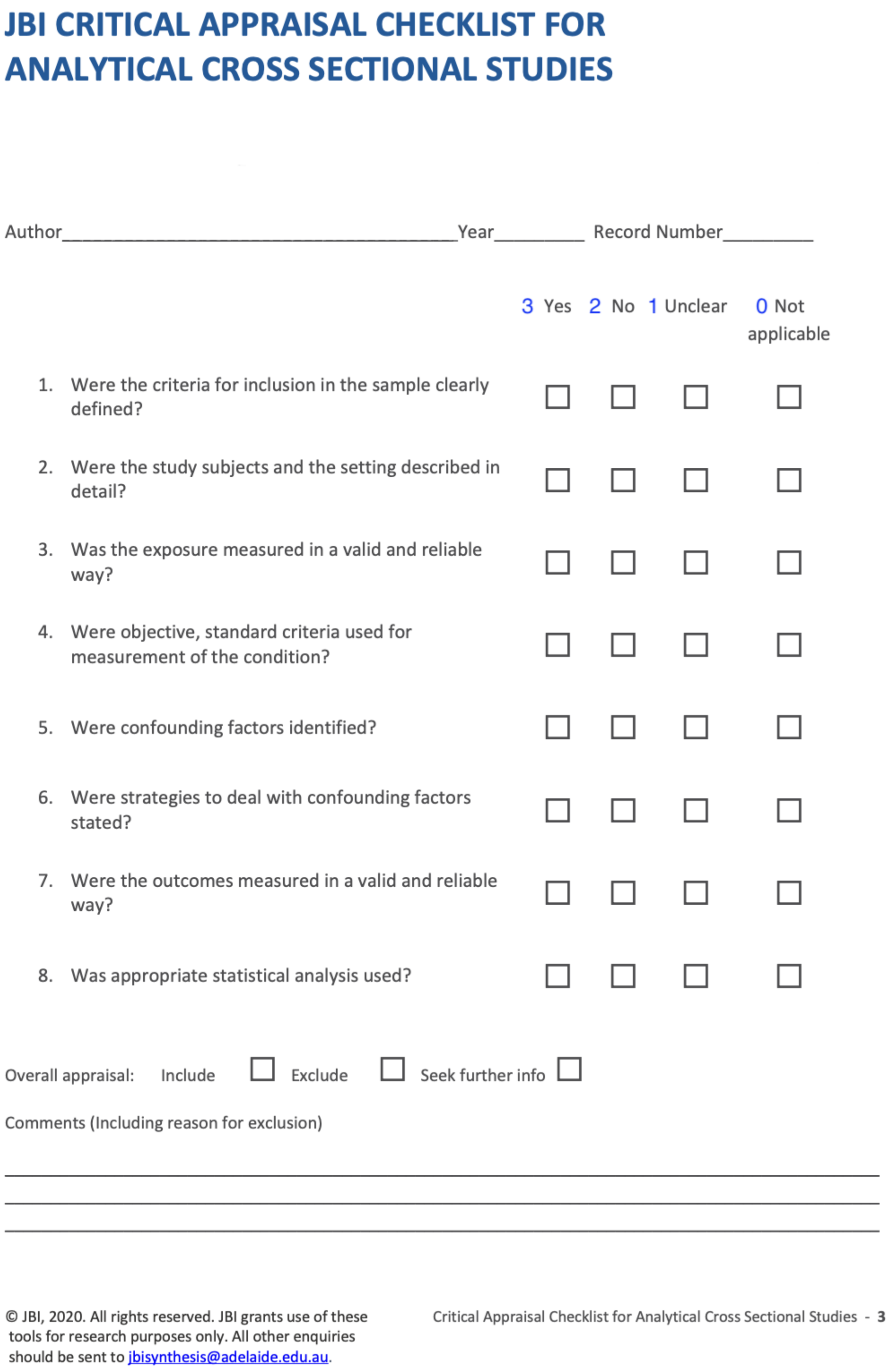
Appendix J
JBI Critical Appraisal of Cross-Sectional Studies



JBI CRITICAL APPRAISAL CHECKLIST FOR ANALYTICAL CROSS SECTIONAL STUDIES

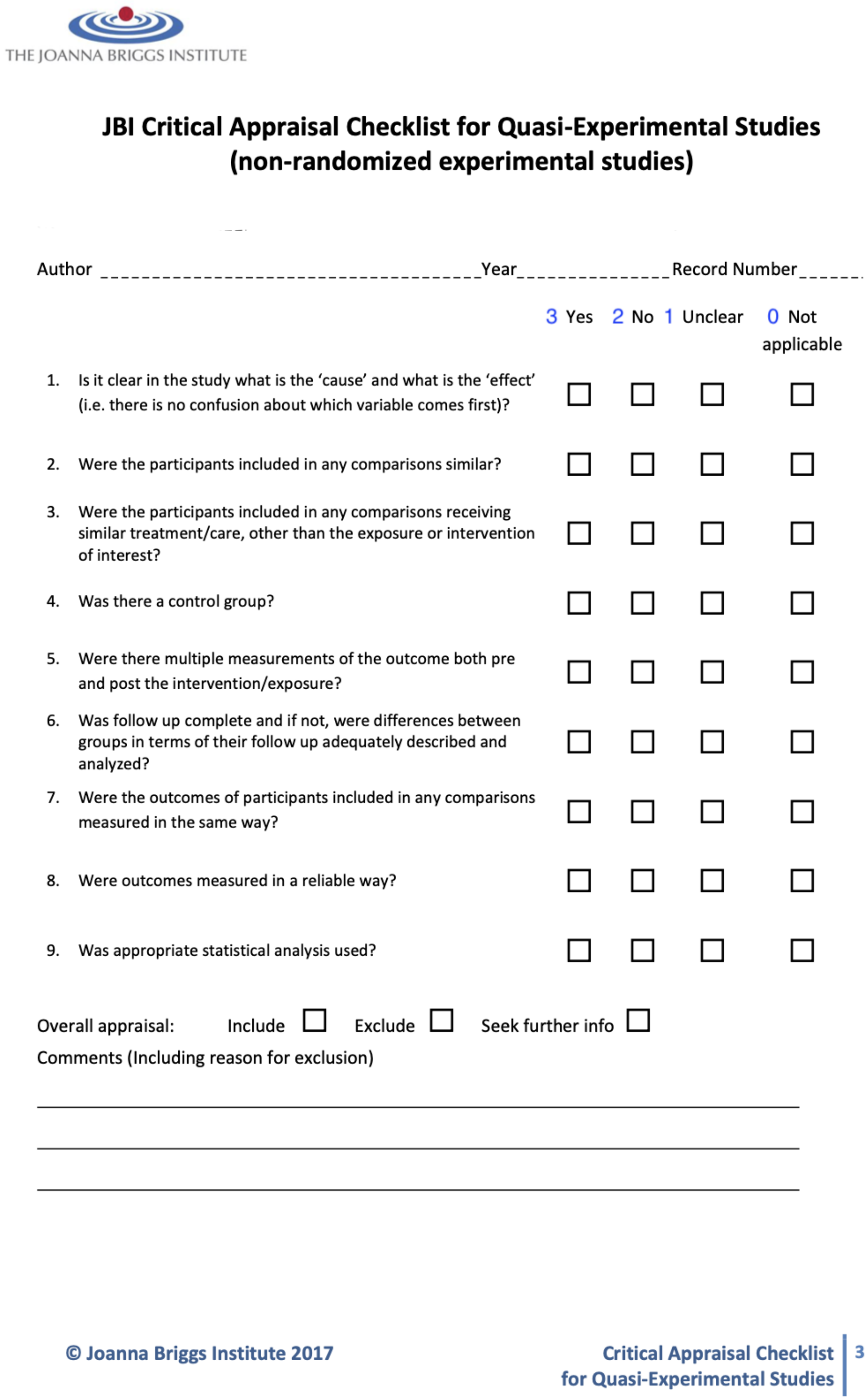
Author____Year_________ Record Number_________

	3 Yes	2 No	1 Unclear	0 Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	☐	☐	☐	☐
2. Were the study subjects and the setting described in detail?	☐	☐	☐	☐
3. Was the exposure measured in a valid and reliable way?	☐	☐	☐	☐
4. Were objective, standard criteria used for measurement of the condition?	☐	☐	☐	☐
5. Were confounding factors identified?	☐	☐	☐	☐
6. Were strategies to deal with confounding factors stated?	☐	☐	☐	☐
7. Were the outcomes measured in a valid and reliable way?	☐	☐	☐	☐
8. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

Appendix K
JBI Critical Appraisal of Quasi-Experimental Studies



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JBI Critical Appraisal Checklist for Quasi-Experimental Studies (non-randomized experimental studies)

Author ____________________________________Year______________Record Number______

	3 Yes	2 No	1 Unclear	0 Not applicable
1. Is it clear in the study what is the ‘cause’ and what is the ‘effect’ (i.e. there is no confusion about which variable comes first)?	☐	☐	☐	☐
2. Were the participants included in any comparisons similar?	☐	☐	☐	☐
3. Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?	☐	☐	☐	☐
4. Was there a control group?	☐	☐	☐	☐
5. Were there multiple measurements of the outcome both pre and post the intervention/exposure?	☐	☐	☐	☐
6. Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	☐	☐	☐	☐
7. Were the outcomes of participants included in any comparisons measured in the same way?	☐	☐	☐	☐
8. Were outcomes measured in a reliable way?	☐	☐	☐	☐
9. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

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