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Nursing Students' Knowledge of and Attitudes Towards Near-Death Experiences

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NURSING STUDENTS' KNOWLEDGE OF AND ATTITUDES TOWARDS NEAR-DEATH EXPERIENCES

by

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DEDICATION

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Incidence of reported near-death experiences (NDEs) has increased over decades; however, they continue to be inappropriately pathologized or dismissed. These types of responses to disclosures of NDEs by patients can potentially lead to them having problems integrating the experience into their lives. The purpose of this study was to assess undergraduate nursing students' levels of accurate knowledge of and attitudes towards NDEs and to determine the predictors of nursing students' knowledge of and attitudes toward NDEs. Additionally, I explored the sources in which nursing students acquire NDE knowledge. I accomplished this by using a cross-sectional, correlational research study design. I obtained data from students enrolled in an undergraduate BSN program at a 4 year university using an online questionnaire to gather quantitative and qualitative data. I selected nursing students as the focus of this study due to the proximity and interaction these students will have with patients when they become nurses.

Study participants had a low level of accurate NDE knowledge. In addition to the low knowledge level, just under two-thirds of participants could not identify at least one strategy to use when caring for patients who have or are suspected of having an NDE. The lack of sufficient knowledge and inability to identify appropriate strategies indicates a lack of preparedness to provide proper care to NDErs. Furthermore, participants had neutral to positive leaning attitudes towards NDEs. These positive leaning attitudes were evident in participants' expressed desire to learn more about NDEs and their belief that the topic should be included in nursing education.

The consensus among participants was a lack of formal education on NDEs within their nursing program. I concluded that the identified lack of preparedness has the potential to have a negative impact on patients' NDE disclosures and overall care.

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Introduction to the Research

Approximately one in five individuals who come close to death report having a near-death experience (NDE; Holden, 2017; Zingrone & Alvarado, 2009). NDEs are:

> The unusual, often vivid and realistic, and sometimes profoundly life-changing experiences occurring to people who have been physiologically close to death, as in cardiac arrest or other life-threatening conditions, or psychologically close to death, as in accidents or illnesses in which they feared they would die. (Greyson et al., 2009, p. 213)

Forty years ago, Gallup and Proctor (1982) estimated that over 8 million people in the United States have had an NDE, which accounted for approximately 5% of the adult population at the time. Advances in medical technology in recent decades have increased since this national poll was completed (Gallup & Proctor, 1982; Parnia et al., 2022) and have led to an increase in successful resuscitations and, thus, an increase in instances for the possibility of an NDE to occur (Holden et al., 2009; Parnia et al., 2022; van Lommel, 2004). Despite the high number of NDEs reported in the past several decades, NDEs are regularly pathologized (Greyson & Harris, 1987; Samoilo & Corcoran, 2020). Consequently, patients that are pathologized are not appropriately treated following their NDEs; this lack of treatment has the potential to hinder the integration of the experience into their lives (Hoffman, 1995a; Hoffman, 1995b; Samoilo & Corcoran, 2020; Stout et al., 2006).

Statement of the Problem

NDEs have a significant and lasting impact on the experiencer's life (Corcoran, 1988; Hoffman, 1995a; Hoffman, 1995b; Parnia et al., 2022; Samoilo & Corcoran, 2020; Stout et al., 2006). It is, therefore, vital for NDErs to receive appropriate support after their experience, without which, they may not be able to fully integrate their NDEs into their lives (Bush, 2002, 2009; Corcoran, 1988; Foster et al., 2009; Hoffman, 1995b; James, 2004; Morris, 1998; Morris & Knafl, 2003; Noyes et al., 2009; Samoilo & Corcoran, 2020).

The estimated 20% of individuals who come close to death and report having an NDE is thought to be an underestimation of the actual amount of NDEs that occur due to the reluctance of some individuals to report their experiences (Greyson, 1997; Holden, 2017; Zingrone & Alvarado, 2009). Additionally, as advances in medical technology are made and resuscitation outcomes are improved, the frequency of NDE reports are likely to increase (Parnia et al., 2022), Thus, leading to an increase in the number of healthcare professionals that will encounter a patient who has had an NDE (Hayes & Orne, 1991; Sartori, 2014).

NDErs are often too afraid to discuss their experiences due to a stigma and disbelief associated with NDEs (Corcoran, 1988; Hoffman, 1995a, 1995b; Morris & Knafl, 2003; Samoilo & Corcoran, 2020; Stout et al., 2006). NDErs often fear being labeled as crazy or receiving some other type of negative reaction if they share their experience (Corcoran, 1988; Hoffman, 1995b; Morris & Knafl, 2003; Stout et al., 2006). Experiencers are often concerned about whether or not others will believe them (Hoffman, 1995a). Nevertheless, the need to disclose the experience is intense because of the need to seek validation and to process the experience (Hoffman, 1995b; Morris & Knafl, 2003; Samoilo & Corcoran, 2020; Stout et al., 2006).

Disclosure of these types of personal experiences can have both physical and psychological benefits (Pennebaker & Susman, 1988); whereas not disclosing such experiences can have the opposite effect (Pennebaker, 1989). The response the NDE patient receives after disclosing an NDE may significantly influence how the patient integrates the experience into their lives, which can have an impact on how the NDEr is able to process the experience (Greyson & Harris, 1987; Samoilo & Corcoran, 2020). When an NDE is disclosed, it is at times dismissed as a side effect of medication or a hallucination (Corcoran, 1988; Foster et al., 2009). A rejection or dismissal of the experience can cause the NDEr to suppress the experience and go

into “communicative isolation for decades afterwards” (Hoffman, 1995b, p. 249). This suppression can lead to depression, anxiety, and problems integrating the experience into one’s everyday life (Brumm, 2006; Bush, 2012; Samoilo & Corcoran, 2020).

If NDErs do decide to disclose their experiences, they are more likely to disclose them to nurses over other types of healthcare professionals (Hoffman, 1995a; Oakes, 1981; Walker, 1989). Yet after decades of NDE research, nurses continue to lack the requisite knowledge needed to provide adequate care to NDErs despite the recommendations for NDE education (Mandalise, 2013). This lack of knowledge prevents nurses from properly identifying and supporting NDErs who might disclose to them (Mandalise, 2013). This problem might be attributed to health profession training programs neglecting the recommendation to include the topic of NDEs in their curriculums (Holden et al., 2014).

The lack of inclusion of NDEs in the curriculum has left healthcare providers to seek out information on NDEs on their own. In two separate studies, Hayes and Orne (1991) and Hayes and Waters (1989) found that the majority of information learned about NDEs by those in the caring professions was reported to have come overwhelmingly from lay media and press. This source of information can potentially be problematic, because reports from these sources can sensationalize and misrepresent facts and information about NDEs (Hayes & Orne, 1991; Hayes & Waters, 1989). Actual knowledge of NDEs by those in the caring professions has been shown to be lower than perceived knowledge of NDEs when the main source of information was lay media and the press (Hayes & Orne, 1991; Hayes & Waters, 1989).

Sartori (2014) argues that it is of great importance that those working in healthcare are properly educated about NDEs, so that they are able to provide appropriate care and support to NDErs. While there is existing research that measures the attitudes and knowledge of

professional nurses and nursing school faculty toward NDEs (Barnett, 1991; Bucher et al., 1997; Cunico, 2001; Hayes & Orne, 1991; Moore & Pate, 2013), there has yet to be research done that assess the knowledge and attitudes of nursing students. This is problematic because nursing students are very likely to care for a patient the has had an NDE when they enter their careers in the medical field. The only way to determine if they are prepared to care for NDErs is to assess their knowledge of and attitudes towards NDEs. It is, therefore, necessary to assess nursing students' preparedness to care for NDErs by measuring their accurate knowledge of and attitudes towards NDEs, so that they are able to properly treat patients who have had this life altering experience.

Purpose of the Study and Rationale

The purpose of this cross-sectional, correlational research study was to assess undergraduate nursing students' levels of accurate knowledge about and attitudes towards NDEs and to determine if nursing students' knowledge of NDEs is a predictor of their attitudes towards NDEs. Additionally, I sought to explore in what ways nursing students obtain knowledge about NDEs and find out if medical field experience and personal NDE experiences predict accurate knowledge of and attitudes toward NDEs. Nursing students surveyed were enrolled at a faith-based, private university located in south-central Texas.

The rationale for measuring the level of knowledge and attitudes toward NDEs of university nursing students was to understand how prepared nursing students are to work with patients who have experienced NDEs prior to entering the healthcare field as a professional nurses. According to Simpson (2001), nurses must be educated about NDEs in order to provide better patient care and to prevent the diagnosis of confusion or ICU psychosis by hospital staff. Given the recommendations for the inclusion of NDE studies in healthcare education (Barnett,

1991; Moore, 1994; Samoilo & Corcoran, 2020; Sheeler, 2005), it would be beneficial for nursing program educators and administrators to know students' accurate knowledge of and attitudes towards NDEs. It would also be essential for them to assess if this knowledge is being attained as a result of being enrolled in a nursing program.

Nursing students were selected as the focus of this study due to the proximity and interaction of nurses with patients and the increased likelihood that patients who have NDEs will disclose to nurses rather than other types of medical professionals (Oakes, 1981; Walker, 1989). The response the NDEr receives after disclosing an NDE can have a long-lasting effect, because it can significantly influence how the NDEr integrates the experience into their lives (Greyson & Harris, 1987; Samoilo & Corcoran, 2020). Holden et al. (2014) found a persistence of negative initial NDE disclosure experiences after decades of research. According to Holden et al. (2014), that "indicates that current research-based information about NDEs is not reaching health professionals, at least in ways that make them less prone to doing harm" (p.285).

Research Questions

1. What level of accurate knowledge do nursing students have about NDEs?
2. What are nursing students' attitudes toward NDEs?
3. Does the source of information in which nursing students gain their knowledge about NDEs make a difference in the level of nursing students' accurate knowledge about and attitudes towards NDEs?
    a. What sources of information do nursing students draw their knowledge of NDEs from?

4. Are the number of years prior experience in the medical field and personal experience with NDEs predictors of nursing students' accurate knowledge of NDEs (KANDES-K score)?
5. Are the number of years prior experience in the medical field, personal experience with NDEs, and accurate knowledge of NDEs (KANDES-K score) predictors of nursing students' attitudes toward NDEs (KANDES-A score)?
6. Can nursing students accurately identify strategies for caring for patients who have experienced an NDE?

Significance of the Study

In this study, I examined to what extent nursing students' level of knowledge about NDEs is related to their attitudes towards NDEs. Only three other studies examine this particular relationship among professional nurses (Hayes & Orne, 1991; Orne, 1986; Walker & Russell, 1989). Pace et al. (2016) recommend further research to examine the relationship between knowledge and attitudes toward NDEs. I also used this study to directly address the lack of research regarding nursing students' level of knowledge and attitudes toward NDEs. Up until this point in time, no other study has attempted to assess these two areas among nursing students. Assessing nursing students' level of knowledge and attitudes toward NDEs provides nursing program faculty and administration with a measure of how much nursing students know about the phenomenon and how they perceive it in order to assess if nursing students are prepared to treat patients who have experienced an NDE. Thus, the findings of this study can aid in determining the need to develop nursing curriculum that incorporates the topic of NDEs.

Theoretical Framework

McEvoy (1990) developed a model to be used to teach the subject of NDEs to nursing students, which consists of a list of objectives for nursing students to meet to be prepared to provide care to patients who have experienced an NDE. The objectives are:

1. The student should have an understanding of the nature of the near-death experience and subsequent impact on patients.
2. The student should have an understanding of his or her personal beliefs and attitudes relating to the paranormal and transcendental aspects of the NDE.
3. The student should develop strategies to assist the patient in discussion of the NDE. (p. 54)

Nursing students' knowledge and attitudes towards NDEs relate directly to McEvoy's first and second objectives, whereas objective three relates to nursing students' readiness to work with patients who have experienced an NDE. This type of care of patients who have had an NDE is part of the holistic care of the patient. McEvoy's (1990) model for teaching the subject of NDEs to nursing students was utilized to interpret study findings by assessing if the objectives set forth in the model are being met in nursing education.

In addition to McEvoy's (1990) NDE learning objectives, I used Samoilo and Corcoran's (2020) Standard Operating Procedure (SOP) for NDE patients to further interpret study findings. The SOP consists of seven recommended guidelines to be used to prevent the "Gap of Care" that exists when NDErs' disclosures are dismissed or pathologized by healthcare providers (Samoilo & Corcoran, 2020). These guidelines relate to the NDE knowledge and attitudes of the partitioner. The integration of McEvoy's (1990) learning objectives and Samoilo and Corcoran's (2020) SOP provide a clearer picture for the expected outcomes of effective NDE education.

Organization of the Study

I used a cross-sectional, correlational research design for this study. According to Fink (2013), surveys are used as a means to gather information used to "describe, compare, or explain individual and societal knowledge, feelings, values, preferences, and behavior" (p. 2). Therefore, I used a survey instrument for this study to collect data on knowledge and attitudes, as recommended by Fink (2013). The KANDES survey instrument, along with demographic and open-ended questions I developed, was used to collect data from undergraduate nursing students. I then prepared the data and entered it into IBM SPSS Statistics 27 for analysis. In addition, I analyzed data from open-ended questionnaire items using qualitative coding methods. I then interpreted the results from the analysis in dialogue with the theoretical framework to provide recommendations.

Literature Review

Historical Background of the Near-Death Experience

Reports of occurrences that are similar to what are now labeled as NDEs can be traced back to ancient texts, including the *Bible*, *Plato's Dialogues*, the *Egyptian Book of the Dead*, and the *Tibetan Book of the Dead* (Holden et al., 2009). Historical accounts of experiences similar to NDEs can also be found across cultures, in multiple recorded accounts in Western culture and across non-Western literature. For example, similar experiences have been retold through the folk tales of East and Central Asian, South Pacific Islander, and Native American cultures (Sheils, 1978). The oldest NDE report to be validated using Greyson's NDE Scale dates back to 18th century France (Charlier, 2014).

Beginning in the 19th century, accounts of incidences that can be described as NDEs began appearing in both literary prose and medical and psychical literature. The focus of the medical literature was on the effects of such events and to warn physicians not to be hasty in declaring patients dead (Holden et al., 2009). Within the psychical literature, the focus was on exploring the relationship between the mind and body while trying to find evidence to support the theory that humans, in some form, survive bodily death. Additionally, during this time, researchers began analyzing patterns and themes across multiple recorded cases of NDEs (Holden et al., 2009).

The amount of published work on NDEs began to dissipate in the 20th century, with the exception of a collection of articles by James Hyslop during the 1910s and 1920s. A resurgence of interest in NDEs occurred in the 1970s due to the advances in medical technology that allowed the number of patients being brought back from the brink of death to dramatically increase (Holden et al., 2009). In 1975, Johann Christoph Hampe, a German theologian,

published a book in which the major phenomenological features of NDEs were examined (Holden et al., 2009). Later in the same year, Raymond Moody published his seminal work *Life After Life,* which investigated over 150 case studies of individuals who were revived after experiencing clinical death and coined the term "near-death experience" (Moody, 1975). Prior to the publication of Moody's work, over 30 articles on the topic of NDEs had existed in Western scholarly literature (Holden & Christian, 2005). However, it was Moody's (1975) work that was the catalyst for a renewed interest in NDE research (Holden et al., 2009).

Characteristics of a Near-Death Experience

In order to understand what an NDE is, it is useful to know the contents that make an experience identifiable as an NDE. In an informal study conducted by Moody (1975), several common characteristics were identified as being part of an NDE. Moody (1975) studied three distinct categories of experiences, which were:

1. The experience of persons who were resuscitated after having been thought, adjudged, or pronounced clinically dead by their doctors.
2. The experience of persons who, in the course of accidents or severe injury or illness, came very close to physical death.
3. The experience of persons who, as they died, told them to other people who were present. Later, these other people reported the content of the death experience to me. (p. 8).

The characteristics within the three categories included linguistic limitations in the ability to articulate the experience during and after the experience, the ability to hear what is happening around oneself while unconscious, feelings of peace and quiet, atypical auditory sensations, the sensation of being pulled through a dark tunnel, the experience of being out-of-body, the feeling of being around other spiritual beings, a vision of a being of light, a review of one's life, and encountering a border or limit of some kind (Moody, 1975).

Following Moody's (1975) initial study, Ring (1980) developed the sequential stages of an NDE, which include feelings of peace, separating from one's body, entering a tunnel, encountering a light, and entry into a transcendental realm. Ring's (1980) NDE stages and Moody's (1975) characteristics of the experience of dying share common features, including feelings of peace, separation from one's body, the passage through a tunnel, and the presence of light. Additional evidence was published to support the out-of-body experience (OBE) mentioned by Moody (1975) as a characteristic of NDEs (Ring & Cooper, 1997; Ring & Lawrence, 1993).

For decades researchers and medical professionals have attempted to determine an explanation for NDEs (Greyson et al., 2009; Mays & Mays, 2015; Nelson, 2017). Mays and Mays (2015) argue that NDEs are not attributable to physiological or psychological causes, because neither cause can fully explain or account for the phenomenon. Even without the identification of an explanation for the cause of NDEs, they are still very real experiences for the experiencers that require validation and nonjudgement (Samoilo & Corcoran, 2020).

NDE Scales

Greyson (1983) developed the Near-Death Experience Scale, which is a 16-item scale with the purpose of quantifying the NDE to differentiate legitimate NDE claims from false NDE claims or experiences that were inaccurately labeled as an NDE. Greyson's scale is comprised of four components: cognitive, affective, paranormal, and transcendental. The cognitive component concerns individuals' perception of time and clarity of thought, affective deals with individuals' level of pleasant feelings, the paranormal component has to do with individuals' hypersensitive senses and separation from one's body, and the transcendental component concerns individuals'

perception of otherworldliness. According to Greyson (1983), the scale can be used in the clinical setting in order to verify the occurrence of an NDE.

Decades after the development of Greyson's (1983) NDE scale, Martial et al. (2020) developed an updated NDE scale, the Near-Death Experience Content (NDE-C) scale. The purpose of creating a new scale is to address the weaknesses of the original NDE scale (Martial et al., 2020). Furthermore, the revised NDE-C takes into account diversity in both experiencers' emotions and cultures. The resulting scale contains 20 items encompassing five factors, including: beyond the usual, harmony, insight, border, and gateway (Martial et al., 2020). In addition to reassessing scales to measure NDEs, researchers have begun to revisit the meaning and appropriateness of the phrase "near-death experience" (Parnia et al., 2022).

Reconsidering the NDE Name

The need to distinguish between NDEs and NDEs-like—i.e., experiences that are like NDEs but lack a serious threat to the experiencer's life or health (Martial et al., 2020)—has become an area of focus (Martial et al., 2020; Parnia et al., 2022). Parnia et al. (2022) recommend that a new term be used to refer to what they call an "authentic NDE." The new proposed term is the recalled experience of death (RED). RED is defined as "a specific cognitive experience occurring during a period of LOC (loss of consciousness) in relation to a life-threatening event, including cardiac arrest" (Parnia et al., 2022, p. 15). Parnia et al. (2022) argue that the new term will help alleviate the confusion around the original NDE term, which due to its lack of formal definition, has allowed it to be used to describe a multitude of unrelated experiences in an unsystematic manner.

Aftereffects of Near-Death Experiences

Experiencers of NDEs generally report transformational and life-changing aftereffects (Greyson, 2022; Noyes et al., 2009; Samoilo & Corcoran, 2020). According to Moody (1975), some individuals experience changes in attitudes and personal values after an NDE. Notably, many individuals commonly reported no longer having a fear of death and having a reinforced belief in survival (Greyson, 1981; Greyson, 2006; Noyes et al., 2009; Tassell-Matamua & Lindsay, 2016). Greyson (1989) suggests that aftereffects can be easily studied and observed independently as opposed to the actual NDE itself. In the first study dedicated to examining the aftereffects of NDEs conducted by Noyes (1980), approximately two-thirds of participants reported some degree of change in attitude regarding life and death after experiencing an NDE. Additional aftereffects include an increase in spiritual beliefs and a decrease in religious beliefs; an increased level of compassion for others, the self, and the environment; increased connectedness to others; increased altruism and decreased self-absorption; and increased meaning and purpose in life (Greyson, 2006; Greyson, 2014; Rominger, 2009; Sutherland, 1990). Major changes in attitude about life and death following an NDE have been found to persist well past the experience (Greyson, 2022). Furthermore, these types of aftereffects are typically not present in individuals who come close to death without having an NDE; they appear to be unique to those who have experienced NDE (Klemenc-Ketis, 2013).

While there have been many identified positive aftereffects, not all NDE aftereffects are positive in nature. According to Greyson (1997), individuals have reported feelings of depression, anger, second guessing their sanity, marital problems, and difficulty going about their everyday lives within society after experiencing an NDE. These types of negative changes have been most common among individuals who are unable to discuss their NDEs. This inability

to speak about their NDEs typically occurs because family and friends do not understand the experience and may avoid the individual altogether (Greyson, 1997). If NDErs attempt to share their experiences and they are met with rejection or dismissal, they are likely to suppress their experiences (Hoffman, 1995b), potentially leading to depression, anxiety, and problems integrating the experience into daily life (Brumm, 2006; Bush, 2012; Samoilo & Corcoran, 2020). Moreover, not having an outlet to express the multitude of emotions associated with the experience can hinder NDErs' ability to experience positive transformations (Greyson, 1997).

Distressing NDEs

As I discussed in the previous section, not all NDE aftereffects are positive; similarly, not all NDEs are positive experiences. Although not often the focus of NDE research, there are a minority of NDErs who report having a distressing NDEs (Bush, 2009; Bush, 2016; Cassol et al., 2019). A distressing NDE is an experience "dominated by disturbing emotions" described as "negative," "frightening," and "hellish" (Bush, 2009, p. 65). Emotions include those of guilt, despair, fear, and terror (Bush & Greyson, 2014). While reports of distressing NDEs are less frequent than those that are not distressing, it is believed that they are extremely underreported due to experiencers increased reluctance to disclose their negative experience (Bush, 2009; Bush & Greyson, 2014; Hoffman, 1995a). This hesitancy is due to concerns over stigma, shame, and avoidance of having to recount the experience (Bush, 2009; Hoffman, 1995a).

Disclosure of Near-Death Experiences in the Medical Setting

The number of NDEs that is actually reported may not reflect the actual number of individuals that have experienced NDEs (Simpson, 2001). This is due to a reluctance on behalf of the NDEr to disclose their experience (Hoffman, 1995a; Hoffman, 1995b; Stout et al., 2006). Because many NDEs are reported to healthcare professionals (DuBois, 2020; Hoffman, 1995a;

James, 2004), these providers, including physicians and nurses, should have knowledge about NDEs to be prepared to meet the needs of NDErs when they disclose their experiences (Holden et al., 2009; Holden et al., 2014). A medical professional that has a well-informed and accurate knowledge base is better equipped to care for patients that report NDEs (Fremit, 1989; Parnia & Fenwick, 2002). If a patient's experience is ignored or dismissed as a hallucination by healthcare professionals, it might cause the patient to feel rejected and hinder the sharing of their NDE with anyone else (Mandalise, 2013; Stout et al., 2006). Healthcare professionals that know how to respond to reports of an NDE in a knowledgeable and nonjudgmental way are more likely to provide the patient with a sense of validation in regards to the experience (Foster et al., 2009).

Holden et al. (2014) found that the majority of NDE disclosures occur more than a year after the experience. While some NDErs might attempt to disclose their experience immediately after it occurs, they potentially could become discouraged from fully disclosing based on the initial reaction received (Hoffman, 1995b; James, 2004; Mandalise, 2013; Samoilo & Corcoran, 2020; Stout et al., 2006). Some experiencers do not attempt to disclose at all, at least not soon after their experiences, because they are fearful of the reactions they might receive (Benning & Rominger, 2016; Hoffman, 1995a; Hoffman, 1995b; Stout et al., 2006). Therefore, it is vital that medical professionals have enough knowledge to be prepared to respond to any disclosure attempt in a manner that is not discouraging or dismissive to the experiencer.

Knowledge and Attitudes Towards NDEs

Healthcare professionals' knowledge and attitudes towards NDEs are an essential element in the effectiveness of their response to patients who disclose NDEs (Foster et al., 2009). Thornburg (1988) developed the first instrument to assess nurses' knowledge of and attitudes toward NDEs. The instrument also measures nurses' attitudes towards caring for patients who

have experienced NDEs. The name of Thornburg's instrument is the Near-Dear Phenomena Knowledge and Attitudes Questionnaire (NDPKAQ). The NDPKAQ consists of three scales: the knowledge scale, the attitude toward near-death phenomena scale, and the attitude toward patient care scale.

Thornburg tested her instrument on a convenience sample of registered nurses working in the medical special care unit, the burn special care unit, and the surgical intensive care unit within a large Midwestern medical center. The total sample size used for testing the instrument was 20. Thornburg constructed the instrument based on the existing NDE literature and consultation with experts in the fields of nursing, sociology, and psychology. The original instrument consisted of 29 knowledge statements in a true/false/undecided format, 29 attitude towards NDE statements in Likert scale format, and 25 attitude towards patient statements in Likert scale format. Demographic and open-ended questions were also included in the original instrument design. The purpose of the open-ended questions was to draw out further information regarding participants' current knowledge of NDEs, given a lack of nursing literature pertaining to NDEs. Additionally, the open-ended questions were used to allow participants to share any questions or thoughts brought on by the questionnaire. Findings from the open-ended questions were mixed. Participants were either interested in learning more about NDEs or did not understand why the topic was even important for nurses to have knowledge of at all. The revised and current version of the NDPKAQ consists of the same three aforementioned scales containing 23, 23, and 20 items, respectively (Thornburg, 1988).

While Thornburg's instrument has been utilized or adapted in many of the published studies regarding NDE knowledge and attitudes (Barnett, 1991; Bechtel et al., 1992; Cunico, 2001; Moore, 1994; Moore & Pate, 2013; Walker & Russell, 1989), Goedhart (2011) expressed

concerns about the instrument's validity due to the "small, homogenous population" that was originally used to validate the instrument (p. 8). Goedhart (2011) also found Thornburg's instrument to be out-of-date, particularly the knowledge portion of the instrument. Similarly, Moore and Pate (2013) noted the need for an updated instrument that takes into account recent NDE research findings. Goedhart (2011) consulted with NDE experts to create a new instrument to measure attitudes towards NDEs that she found to be reliable. However, Pace et al. (2016) noted that Goedhart's instrument was not widely useable due to it being in Dutch and Goedhart's failure to perform a factor analysis on the data obtained from using the instrument. Furthermore, the instrument does not assess knowledge about NDEs. Thus, Pace et al. (2016) developed the Knowledge and Attitudes About Near-Death Experiences Scale (KANDES) to meet the need for a psychometrically strong instrument that assesses healthcare professionals' knowledge and attitudes toward NDEs. The KANDES consists of two subscales, the KANDES-Attitude (KANDES-A) subscale and the KANDES-Knowledge (KANDES-K) subscale. The subscales contain 23 items in Likert scale format (Pace et al., 2016).

Assessment of NDE Knowledge and Attitudes

Researchers have conducted studies assessing NDE knowledge and attitudes among the healthcare professions (Barnett, 1991; Bechtel et al., 1992; Bucher et al.,1997; Cunico, 2001; Fracasso et al., 2010; Hayes & Orne, 1991; Moore, 1994; Moore & Pate, 2013; Orne, 1986; Royse, 1985; Walker & Russell, 1989). However, Hayes and Waters (1989) conducted the first and only study that assesses NDE knowledge and attitudes of healthcare providers across multiple professions. Specially:

- the knowledge level and attitudes towards NDEs;
- sources of NDE knowledge;

- the ability to identify appropriate interventions to use when caring for NDErs,
- degree of interest in learning more about NDEs;
- the relationship between knowledge of and attitudes toward NDEs; and
- the number of suitable interventions identified were examined in this study (Hayes & Waters,1989).

Hayes and Waters (1989) revealed a disparity between participants' perceived knowledge and actual knowledge. Seventy percent of study participants reported that they were familiar with NDEs; however, participants' levels of actual knowledge were low across participant groups. This disparity is important because it means that participants overestimated their level of knowledge and were unaware of a deficiency. Another noteworthy finding was that the majority of participants reported that they obtained their knowledge of NDEs through the lay press and media.

Nurses. The majority of the existing NDE knowledge and attitude studies have involved nurses (Barnett, 1991; Bucher et al., 1997; Cunico, 2001; Moore & Pate, 2013; Orne, 1986). Existing research shows a positive correlation between level of NDE knowledge and attitude towards NDEs (Bucher et al., 1997; Hayes & Orne, 1991; Orne, 1986). However, nurses have been shown to have positive attitudes towards NDEs without having sufficient knowledge about the phenomenon (Cunico, 2001; Hayes & Orne, 1991; Moore & Pate, 2013). Furthermore, nurses reported that the disclosure of an NDE would have little to no impact on the care they provide to a patient (Orne, 1986).

In early studies assessing nurses' knowledge of and attitudes towards NDEs, a large portion of participants indicated that they obtained their knowledge of NDEs from the lay media (Hayes & Orne, 1991). While not specifically identified as a source of information, personal

encounters with NDErs can be considered a source of information. Cunico (2001) found that nurses who had a personal encounter with someone who had an NDE had higher levels of knowledge compared to participants who had not encountered NDErs. Additionally, nurses who had encounters with NDErs also had more positive attitudes towards NDEs compared to their counterparts (Cunico, 2001).

A large proportion of nurse participants, 96%, in a study conducted by Hayes and Orne (1991), reported that they felt that they did not have adequate knowledge of NDEs. Nursing study participants have expressed an interest in learning more about NDEs (Barnett, 1991; Hayes & Orne, 1991; Hayes & Waters, 1989), and researchers have determined that many nurses support the inclusion of the topic of NDEs in the curriculum of nursing education programs (Barnett, 1991; Moore & Pate, 2013). There is a need for the topic of NDEs to be included in nursing preparation programs and continuing education programs (Moore & Pate, 2013).

Physicians. There is only a single study that examines physicians' knowledge of and attitudes towards NDEs. Moore's (1994) survey of 143 hospital staff physicians to examine their knowledge of and attitudes toward NDEs found that study participants were familiar with the NDE phenomenon but lacked a well-informed knowledge base on the topic. Most of the participants had a positive attitude toward NDEs and expressed an interest in learning more about them through professional development opportunities. The participants also thought it would be beneficial for nursing staff to learn about NDEs, as well.

Mental Healthcare Providers. Walker and Russell (1989) found that psychologists had an inadequate level of NDE knowledge and a modestly positive attitude toward NDEs, with an interest in learning more about NDEs. However, their research did find that some psychologists were more closed off towards learning more about the phenomenon. A comparison study was

conducted by Fracasso et al. (2010) to examine what changes, if any, had occurred in psychologists' knowledge and attitudes in the 20 years since the original study took place. Fracasso et al. (2010) found that the results were not significantly different from the results obtained by Walker and Russell (1989). This means that psychologists' knowledge of and attitudes toward NDEs have not meaningfully changed in over two decades.

Spiritual Care Providers. Members of the clergy have been found to generally have positive attitudes towards the topic of NDEs (Bechtel et al., 1992; Royse, 1985). Clergy reported that it is common for individuals to disclose their NDEs to them (Royse, 1985). Yet, clergy members lacked a broad understanding of the NDE phenomenon, and their perceived knowledge was greater than their actual knowledge (Bechtel et al., 1992). In addition to having a positive attitude, members of the clergy have an interest in learning more about NDEs (Bechtel et al., 1992). Royse (1985) found that clergy members took the initiative to learn more about the phenomenon.

Teaching About NDEs

Knowledge of NDEs among healthcare professionals is lacking due to a deficiency of formal education on the topic (Sartori, 2014). It is essential that this phenomenon is included in the education of healthcare professionals so that they can provide proper care and avoid harm to patients who have an NDE (Samoilo & Corcoran, 2020; Sartori, 2014). As the researchers who have studied the knowledge and attitude towards NDEs of healthcare professionals have noted, there is a recognition and support of the need to include the topic of NDEs in the curriculum of healthcare education programs among experts in the NDE field (Barnett, 1991; Foster et al., 2009; Moore, 1994; Moore & Pate, 2013; Samoilo & Corcoran, 2020; Walker & Russell, 1989).

The incorporation of NDEs into educational programs in the health and spiritual care professions is recommended by NDE researchers to improve the knowledge of the phenomenon in the caring professions (Foster et al., 2009). However, Foster et al. (2009) acknowledge that a reason that this integration has yet to occur is due to the fact that there are not enough NDE teaching models. Currently, there are only two models for teaching NDEs in professional training programs. One model provides guidelines for teaching NDEs in nursing education programs (McEvoy, 1990), while the other model focuses on teaching NDEs in medical schools (Sheeler, 2005). Additionally, Foster et al. (2009) note the lack of educational resources available to use when teaching about NDEs.

According to McEvoy (1990), NDEs should be taught in conjunction with other topics related to death and dying in nursing education programs, because knowledge of NDEs is essential when caring for patients who have experienced NDEs and also in understanding patients' expectations and fears about NDEs based on the sensationalized coverage of the topic in the lay media. By knowing about and understanding NDEs, nurses are better able to reassure patients who might fear being labeled crazy as a result of having an NDE. Likewise, nurses that know accurate information about NDEs are also better able to address the concerns of patients and their families who might have certain fears or expectations during the dying process based on what they might have heard or read about NDEs in the lay media (McEvoy, 1990).

To meet the need for the inclusion of NDEs into the nursing curriculum, McEvoy (1990) developed learning objectives and teaching methods to utilize in nursing education. The learning objectives for nursing students include: an understanding of the NDE phenomenon and its impact on patients, an understanding of one's own beliefs and attitudes towards the paranormal and transcendental elements of NDEs, and the development of strategies to help patients discuss their

NDEs. McEvoy recommends the use of didactic and video presentations and the incorporation of seminal NDE texts, such as those by Ring (1980) and Sabom (1982). The integration of NDEs into the nursing curriculum not only improves nursing students' knowledge of NDEs; it also improves nursing students' knowledge of the dying process as a whole (McEvoy, 1990).

In agreement with McEvoy (1990), Sheeler (2005) also notes the importance of including the topic of NDEs in the education of healthcare professionals. However, Sheeler focuses on the incorporation of NDEs into the medical school curriculum. A large proportion of physicians are not prepared and might also not be willing to provide care that is beyond their professional training (Moore, 1994). In addition to improving medical students with knowledge about the NDE phenomenon, the inclusion of the topic of NDEs in the medical school curriculum has the potential to also teach medical students how to maintain professionalism when working with individuals whose beliefs are at odds with their own, particularly in relation to areas in which the "scientific and psychological/spiritual realms" collide (Sheeler, 2005, p. 240).

Sheeler (2005) conducted a study using the model of teaching professionalism to 1st year medical students to teach about NDEs. Sheeler's goal was to utilize the teaching NDEs as an opportunity to also teach about professional relationships between physicians and their patients and among physicians themselves. Sheeler found that teaching about NDEs in the context of professionalism to be successful in keeping the process cordial, as opposed to prior attempts to teach NDEs, which resulted in divided responses from students that were either strongly negative or strongly positive. Successful methods of teaching about NDEs include using a video media component, a classroom lecture component, and online and classroom discussion to be successful (Sheeler, 2005). The medical students participating in the study were able to move past the "strident scientific standpoint to a patient-centered approach" (Sheeler, 2005, p. 246).

Furthermore, when the topic of NDEs was successfully incorporated into the education of medical students, the result was that students were more open and respectful of patients reporting NDEs (Sheeler, 2005).

Holden et al. (2011) had similar findings to Sheeler (2005) on the use of video media to teach students about NDEs. The effectiveness of using the documentary *The Day I Died: The Mind, the Brain, and Near-Death Experiences* (Broome, 2002) was evaluated by Holden et al. (2011) in a quasi-experimental pretest-posttest study. *The Day I Died: The Mind, the Brain, and Near-Death Experiences* is a British Broadcasting Corporation (BBC) documentary that is considered to be a valuable educational tool by the International Association for Near-Death Studies (IANDS) in introducing the topic of NDEs (Holden et al., 2006). Holden et al. (2011) found that the use of the documentary significantly improved the knowledge level of undergraduate psychology students participating in the study based on the improvement in their scores on a 20-item NDE knowledge questionnaire compared to the pretest and posttest results of a control group of students who did not view the documentary. *The Day I Died: The Mind, the Brain, and Near-Death Experiences* was shown to be an effective and efficient way to teach students accurate knowledge "about the characteristics and aftereffects of NDEs, the circumstances under which they occur, and the diversity of people who experience them" (Holden et al., 2011, p. 382).

Loseu and Holden (2017) and Tassell-Matamua and Lindsay (2017) had similar results to earlier research regarding the use of educational interventions. Loseu and Holden (2017) used online and video NDE educational materials as an intervention in a quasi-experimental pretest-posttest study using licensed professional counselors as study participants. The results indicated that exposure to educational materials significantly increased participants' knowledge and

attitudes about NDEs and that there was a significant positive correlation between knowledge and attitudes. Similarly, Tassell-Matamua and Lindsay (2017) also used online and video NDE educational materials as an intervention in a quasi-experimental pretest-posttest study. However, instead of professional counselors, they used undergraduate psychology students as study participants. Like the previous study, Tassell-Matamua and Lindsay (2017) found that exposure to educational materials increased participants' knowledge and attitudes about NDEs. Loseu and Holden (2017) and Tassell-Matamua and Lindsay (2017) both used the Knowledge and Attitudes About Near-Death Experiences Scale (KANDES; Pace et al., 2016) to measure the attitudes and knowledge of study participants in their pre- and posttests.

While NDE educational resources are limited (Foster et al., 2009), the International Association for Near-Death Studies (IANDS; 2015, 2020) has worked to fill the void in available resources by offering programs designed to improve healthcare professionals' knowledge of NDEs. IANDS sponsored the development of an NDE medical training video and corresponding teaching materials to be used in both professional and educational settings. IANDS also offers continuing education credits in conjunction with the University of North Texas for health and spiritual care professionals (IANDS, 2015). In addition to these resources, Foster et al. (2009) emphasize the value of utilizing a variety of approaches to teach about NDEs in professional and educational settings. These approaches included the use of printed materials, multimedia, guest speakers, and discussion.

Theoretical Framework

McEvoy's (1990) model for teaching the subject of NDEs to nursing students consists of three objectives that nursing students need to accomplish to be prepared to care for patients who have had an NDE. The objectives are:

1. The student should have an understanding of the nature of the near-death experience and subsequent impact on patients.
2. The student should have an understanding of his or her personal beliefs and attitudes relating to the paranormal and transcendental aspects of the NDE.
3. The student should develop strategies to assist the patient in discussion of the NDE. (p. 54)

McEvoy's (1990) model is based on thanatology education. Thanatology is "the science that studies the events surrounding death, as well as the social, legal, and psychological aspects of death" (Nemeh & Longe, 2021, p. 4434). NDEs are an important part of thanatology because having an understanding of NDEs allows one to understand the process of dying more deeply (McEvoy, 1990).

The emergence of NDEs as a topic of research and attention after the publication of Moody's (1975) foundational work followed the death awareness movement of the 1950s (McCord et al., 2021). In 1963, the first course in death education was offered at the University of Minnesota (Pine, 1977; Corr, 2015). Later, similar courses began to emerge at other institutions of higher education (McCord et al., 2021). In addition to being part of university elective offerings, death education has a place in healthcare education (McCord et al., 2021).

However, death education in medical and healthcare education remains unstandardized, lacks assessment, and is typically overlooked and not well defined (Dickinson, 2017; Dickerson & Paul, 2015). Nursing students seek to be more prepared to experience patient death (Hagan et al., 2018). The American Nurses Association (ANA) and the Hospice and Palliative Nurses Association (HPNA) call for the standardization of palliative and end-of-life care (2017). According to Hagan et al. (2018), "Both palliative and nursing care emphasize comprehensive

care supporting the holistic needs of patients and their caregivers including the assessment and treatment of physical, emotional, and spiritual health" (p. 217). Palliative care competencies should be integrated into nursing education across all specializations (Hagan et al., 2018).

In addition to McEvoy's (1990) model for teaching the subject of NDEs to nursing students, I used Samoilo and Corcoran's (2020) Standard Operating Procedure (SOP) for NDE patients as part of my theoretical framework. The SOP was developed to address what Samoilo and Corcoran (2020) refer to as the medical "Gap of Care." The "Gap of Care" refers to inadequate or incomplete care provided to NDEs (Samoilo & Corcoran, 2020).

The SOP consists of seven recommended guidelines for all healthcare professionals. Samoilo and Corcoran's (2020) guidelines include:

1. Know the characteristics and after-effects of an NDE.
2. Following surgery or trauma, ask patients if they experienced anything unusual. If so, collect their report.
3. Listen to patients without judging, demeaning, or challenging with your personal views.
4. To validate patients: "Patients report having these types of events. They are called near-death experiences."
5. To educate patients: Offer an NDE questionnaire, educational materials, and resources to share with loved ones.
6. To support patients: "We have NDE-trained staff and clergy. Would you like to speak to someone?" Facilities should provide an NDE-trained staff and clergy.
7. Direct patients to IANDS.org for education and support and ACISTE.org for NDE counseling. (p. 41)

In conjunction with one another, McEvoy's (1990) model and Somoilo and Corcoran's (2020) SOP provide clear and specific guidelines for NDE education outcomes.

Summary

In this chapter, I provided the history of reported incidence of the NDE phenomenon and a discussion of the foundational research conducted to give further insight into what an NDE is and its specific characteristics. I explored further research on the life altering aftereffects of NDEs and how the disclosure of the experience can be just as important as the experience itself for NDErs (Holden et al., 2014; Mandalise, 2013; Stout et al., 2006). Knowledge of and attitudes towards NDEs are critical to effectively responding to NDE disclosures (Foster et al., 2009); therefore, I examined these elements within the context of the healthcare professions. Lastly, I discussed how the topic of NDEs is taught in the educational setting and provided a framework based on existing models (McEvoy, 1990; Samoilo & Corcoran, 2020) to offer a lens through which my research was analyzed. In the proceeding chapter, I will discuss the methods I utilized to conduct my present study.

Methodology

The purpose of this cross-sectional, correlational research study was to assess undergraduate nursing students' levels of accurate knowledge about and attitudes towards NDEs and to determine if nursing students' knowledge of NDEs is a predictor of their attitudes towards NDEs. Additionally, I sought to explore in what ways nursing students obtain knowledge about NDEs and find out if medical field experience and personal NDE experiences predict accurate knowledge of and attitudes toward NDEs. The setting for this research study was a 4 year private, faith-based university located in south central Texas. I chose the institution selected for this study due to its specific nursing program goal outcome for graduates to be able to demonstrate an understanding of the interconnectedness of health, wellness, and quality of life.

Research Questions and Design

1. What level of accurate knowledge do nursing students have about NDEs?
2. What are nursing students' attitudes toward NDEs?
3. Does the source of information in which nursing students gain their knowledge about NDEs make a difference in the level of nursing students' accurate knowledge about and attitudes towards NDEs?
    a. What sources of information do nursing students draw their knowledge of NDEs from?
4. Are the number of years prior experience in the medical field and personal experience with NDEs predictors of nursing students' accurate knowledge of NDEs (KANDES-K score)?

5. Are the number of years prior experience in the medical field, personal experience with NDEs, and accurate knowledge of NDEs (KANDES-K score) predictors of nursing students' attitudes toward NDEs (KANDES-A score)?
6. Can nursing students accurately identify strategies for caring for patients who have experienced an NDE?

To explore these questions, I chose a cross-sectional, correlational research design, because my goal was to examine the strength of relationships between variables within a single point in time. The variables I utilized were the scores on the knowledge and attitude sub-scales of the KANDES survey instrument, demographic data, and the quantified responses of a portion of the open-ended questionnaire items. Additionally, I used select open-ended responses to expand upon quantitative findings.

Sample

The target population for the study was students enrolled in the traditional Bachelor of Sciences in Nursing (BSN) program at the institution selected for this study. Nursing students were selected as the focus of this study due to the proximity and interaction of nurses with patients and the increased likelihood that the patients who have an NDE will disclose to a nurse rather than another type of medical professional (Bucher et al., 1997; Mandalise, 2013; Oakes, 1981; Walker, 1989). Nursing students were selected instead of professional nurses due to the focus on the preparedness of students to care for NDErs prior to entering the nursing profession.

I used convenience sampling to sample the targeted population, because it provided me with the best opportunity to meet the needed sample size within the constants set by the research site. The sample size was determined using Tabachnick and Fidell's (2013) recommended sample size formula for testing multiple correlations, which is $N \geq 50 + 8m$. In this formula, m =

the number of independent variables. In the present study, $m = 3$, therefore; $N \geq 50 + 8(3)$, which means the minimum sample for the study was determined to be $N \geq 74$. Based on earlier research that used online administration of the survey instrument, like in the present study, the response rate was anticipated to be around 15% (Moore & Pate, 2013). If the minimum sample size was to be met, a minimum of 494 potential participants needed to be invited to participate in the study. I sent the survey invitation via email to all 559 students identified as nursing majors at the university with the assistance of the research site's institutional effectiveness office. There were initially 81 respondents (response rate of 14.5%). However, six respondents completed less than half of the survey, and I removed those cases. This left 75 cases with a response rate of 13.4%. This response rate was slightly less than anticipated but still produced a larger enough sample to meet the needed threshold of 74 cases.

Participant Demographics

In the following section, I will provide an overview of participant demographics, including distribution of age, sex, ethnicity, and medical license/certification status. This information is indented to give the audience a better understanding of the demographic characteristics of the sample population. Additionally, I compared the demographics of the sample population to the available demographics of the target population to identify how well the sample represented the target population.

Seventy-two participants out of a total of 75 provided their ages. The age of the respondent had a mean of 23 and a standard deviation of 6.77. The median was 20. The mean and median were not equal but were close in value given the range of 30, which indicates some symmetry in distribution. An assumption of normality is supported by the standard deviation that was .226 of the range. The skewness score of 2.276 supported an assumption of normality, while

the kurtosis score of 4.916 did not. As shown in Table 1, the Kolmogorov-Smirnov Test of Normality showed that the p-value < .000, indicating non-normal distribution. The histogram did not support normality (see Figure 1). The Q-Q plot also did not support normality, as shown in Figure 2. Considering all the evidence together, the age of the respondent variable does not appear to be normally distributed. However, if the five participants that identified themselves as 40 or over are considered outliers, the histogram does appear to resemble a normal distribution.

Figure 1

Histogram of the Age of Respondents Within the Sample Not Supporting Normality

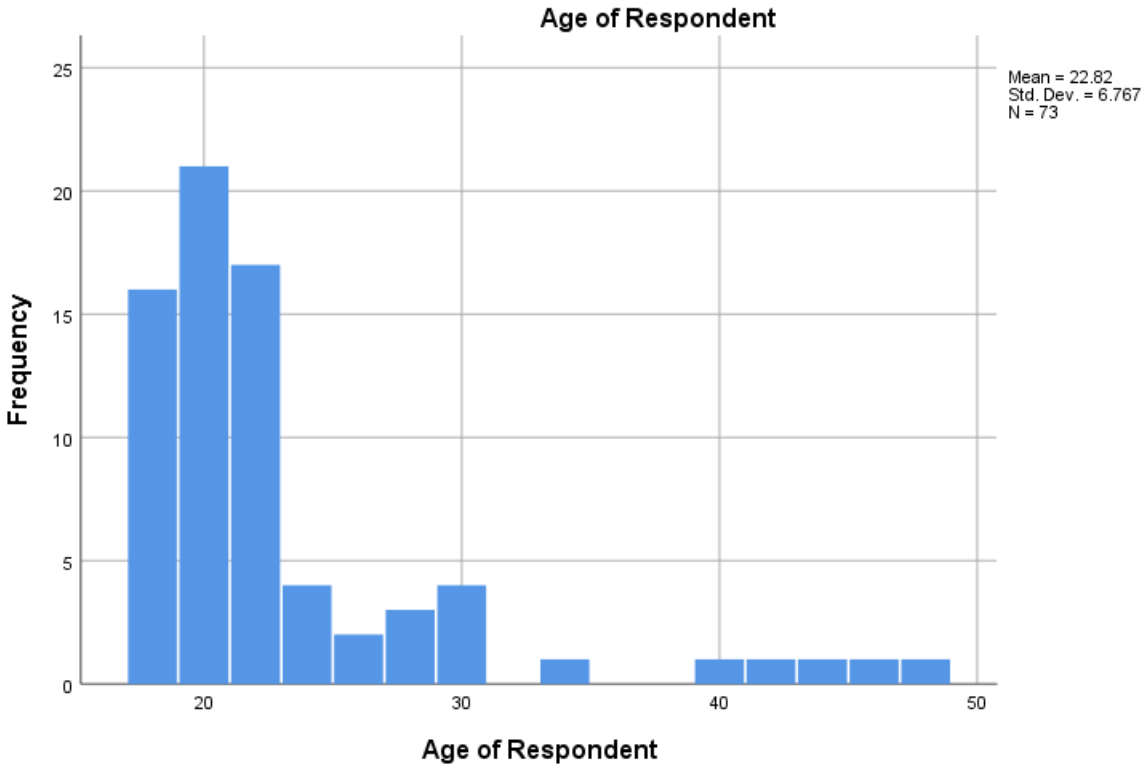


Figure 2

Q-Q Plot of the Age of Respondents Within the Sample Not Supporting Normality

Table 1

Statistics for Age of Respondent

	Age of Respondent
Mean	22.8
Median	20
Minimum	18
Maximum	48

I asked respondents to indicate their sex as either female or male. Participants were limited to these two options because I mirrored the options available in the institution's existing demographic data; however, I am aware that individuals identify outside the binary. Based on the responses from the options provided, the frequency of females is much higher than males. The frequencies of the sex of respondent variable are shown in Table 2. The sample distribution was

similar to the actual population distribution within the BSN program at the university site for this study, which was 81.9% female and 17.6% male.

Table 2

Frequency Table of Sex of Respondent

		frequency	%
Valid	female	63	84.0
	male	9	12.0
	prefer not to answer/no response	3	4.0
	Total	75	100

The race/ethnicity variable represents the race/ethnicity the participant identifies with at the time of the survey. There is an uneven distribution among categories, with a large portion of the participants self-identifying as Hispanic. The frequencies of the ethnicity variable are shown in Table 3. Like the previous variable, this distribution resembled the distribution of the actual population, which was 1.9% Asian, 4.2% Black, 68% Hispanic, 15.7% White, 2.3% other.

Table 3

Frequency Table of Ethnicity of Respondent

		frequency	%
Valid	Asian	3	4.0
	Black	3	4.0
	Hispanic	53	70.7
	White, European heritage	14	18.7
	Other	1	1.3
	Prefer not to answer	1	1.3
	Total	75	100

The medical license or certification variable represents whether the participant has had or currently has a medical license or certification or not. The frequency of non-medical license or certification holders is notably higher than medical license or certification holders. The frequencies of the medical license or certification variable are shown in Table 4. A medical license or certification is not a prerequisite for admission into the nursing program. Additionally, upon completion of the program, students will be granted permission to sit for the nurse licensing exam.

Table 4

Frequency Table of Medical License or Certification

		frequency	%
Valid	yes	24	32.0
	no	44	58.7
	no response	7	9.3
	Total	75	100

Instrumentation

Knowledge and Attitudes toward Near-Death Experiences (KANDES)

The survey instrument utilized for this research study is the Knowledge and Attitudes toward Near-Death Experiences (KANDES). KANDES was developed by Pace et al. (2016) with the intention to provide researchers with a means to measure healthcare professionals' knowledge and attitudes toward NDEs. The KANDES is a self-administered instrument that consists of two sub-scales: an attitude scale (KANDES-A) and a knowledge scale (KANDES-K). The KANDES-A and K subscales each have 23 Likert-type scale items. KANDES-A includes a vignette to be read prior to completing the questionnaire.

The items for the KANDES-A were developed based on Holden's, one of the co-authors, expertise in NDEs and mental healthcare (Pace et al., 2016). Holden determined that healthcare providers' responses to the disclosure of an NDE had the potential to be helpful or harmful. Furthermore, common healthcare provider responses fell into at least one of the following factors:

> *(a) label*, whether or not, when clients/patients disclosed NDEs to an HP [healthcare professional], the HP recognized and labeled the experiences as NDEs; (b) *spiritual*, whether the HP considered NDEs to be actually or potentially spiritually benevolent or malevolent; (c) *diagnosis*, whether the HP considered NDEs to be unrelated to or an indication of mental disorder; and (d) *real*, whether or not the HP considered NDEs might be objectively real rather than imaginary or hallucinatory. (Pace et al., 2016, p. 176).

The items for the KANDES-K were developed based on a critical review of the NDE literature and, as with the KANDE-A, co-author Holden's expertise. Items were categorized into one of two domains: "NDE Content, common elements that NDErs encounter during their NDE; and NDE Aftereffects, common post-NDE psychological, spiritual, physical, and social changes among NDErs (Holden, 2012; Holden et al., 2009)" (Pace et al., 2016, p. 177).

Pace et al. (2016) utilized a focus group consisting of NDE experts across healthcare disciplines to establish both content and face validity. The feedback from focus group participants resulted in revisions to both KANDES-A and K. The *real* factor in the KANDES-A subscale was divided into two factors: *real*/*truth* and *dream*/*hallucination*. Additional items were also added to each new factor. This change was due to focus group members' concern that the word real was too vague. A new factor was added to KANDES-A based on expert recommendations; the factor was labeled *therapeutic* and deals with the actual response of healthcare professionals. The KANDES-K was also altered to include two additional domains

due to the feedback from the focus group, which are the Experiencer Characteristics domain and the Close-Brush with Death domain.

Pace et al. (2016) used a sample composed of 127 master-level counselor students, 121 professional counselors, and eight unspecific individuals from accredited counselor education programs at universities across the United States. Members of two professional counseling organizations, the Association for Creativity in Counseling and the Association for Spiritual, Ethical, and Religious Values in Counseling, were also invited to participate in the study. After analysis of the data to determine reliability, the KANDES-A was modified to include the following factors: Real, Spiritually Beneficial Experience; Believe and Encourage to Talk; Mental Health Implications; and Recognizable Phenomenon. The Close-Brush with Death domain was removed from the KANDES-K after the domain was found to have low reliability (Pace et al., 2016, p.183). The reliability testing results indicated a Cronbach's alpha of .909 for KANDES-A with the lowest among the four factors being .736. The Cronbach's alpha for the KANDES-K was .908 with the lowest among the three domains being .631. Pace et al. (2016) also assessed the reliability of each sub-scale by computing the inter-item correlations for each factor in the KANDES-A and domain in the KANDES-K. The KANDES instrument was re-administered by Pace et al. (2016) to a portion of the original study participants approximately a week after the initial administration to determine the test-retest reliability, which was found to be acceptable. Pace et al. (2016) established face and content validity by conducting a focus group with content experts. The validity of the KANDES-A sub-scale was further verified through exploratory factor analysis.

I developed and included 15 additional items with the KANDES instrument, consisting of three multiple choice questions and 12 open-ended questions. The purpose of the added items

was to gain both demographic and qualitative data that was not included in the KANDES instrument. The demographic data was collected to gain insight into the makeup of the sample population and to measure how closely it matched the target population. The qualitative data collected included information about participants' exposure to the topic of NDEs, to include personal experiences, sources of information, awareness of how to care for NDErs, and opinions on NDE education. This additional data, along with the data for the KANDES scales, was used to answer the research questions.

Reliability

The Cronbach's alpha was calculated for both of the 23-item Attitude (KANDES-A) and Knowledge (KANDES-K) scales. The Cronbach's alpha determines the internal consistency of a scale; this is important to ensure that the scale is consistent in its measurement (Creswell & Creswell, 2018). KANDES-A Cronbach's alpha was .867 and the KANDES-K Cronbach's alpha was .713, which are both in the optimal range. Therefore, KANDES-A is an acceptable measure of attitude toward NDEs and KANDES-K is an acceptable measure of knowledge of NDEs.

Data Collection Procedures

I collected data using the KANDES self-administered questionnaire in electronic format through an emailed invitation to participate in the study, along with the Survey Monkey link to the questionnaire. Emails were sent through the research site's Institutional Effectiveness office's email account. Participants had the option to be entered into a random drawing for a chance to win one of four $50 Visa gift cards as an incentive to participate in the study. A reminder email invitation to participate in the study was be sent to potential participants at the midway point of data collection.

Data Analysis Techniques

Quantitative Data

I analyzed data using quantitative statistical analysis methods, first by coding completed questionnaires, including reverse coding when necessary, and then entered into IBM SPSS Statistics for Windows, Version 27. Once all data from the questionnaires was entered into SPSS, it was screened for missing values and outliers. Cases with missing values will be left in the dataset for analysis only if the values appear to be missing at random and account for less than 5% of the data points for each variable, as recommended by Tabachnick and Fidell (2013). However, these cases were excluded from analysis that included the variable with the missing values by utilizing the exclude cases pairwise option in the SPSS. Boxplots were constructed to assess numerical data for outliers. All cases with outliers were retained for further analysis unless the outliers were determined to be unplausible. In the present study, all identified outliers were inspected and found to be likely numeric values; therefore, they were all retained. Additionally, the normality of numerical variables was assessed by using a combination of the measures of central tendency and dispersion, skewness and kurtosis scores, the Kolmogorov-Smirnov Test of Normality, and both a histogram and Q-Q plot. Frequencies for categorical variables were calculated, as well (Tabachnick & Fidell, 2013).

For research questions one and two, descriptive statistics were generated for the two variables denoting the knowledge scale score and attitude scale score. The measures of central tendency and dispersion provided the necessary results needed to answer research questions one and two, because I sought the overall scores from each scale to determine nursing students' level of knowledge and attitudes towards NDEs. This resulted in a single score for both knowledge

and attitude for each participant and a description of the overall scores for all participants as a whole group.

For research question three, participants' responses from the open-ended questions inquiring about the sources of information where they have obtained their knowledge about NDEs were grouped into categories based on the responses from study participants that were not predetermined. The categories identified answered the sub-question. For the main question, a MANOVA was performed to determine the proportion of KANDES-K and A scores' variability that is attributed to the source of NDE information.

For research questions four and five, a standard multiple regression was conducted to determine the relationship between the number of years of prior experience in the medical field and personal experience with NDEs (IVs) in predicting the nursing students' KANDES-K score (DV). After the initial regression, I determined that attitudes toward NDEs (KANDES-A score) had the potential to be a predictor of accurate knowledge of NDEs (KANDES-K score). Therefore, an additional standard multiple regression was conducted to determine the strength of the relationship between attitudes toward NDEs (KANDES-A score) in addition to number of years prior experience in the medical field and personal experience with NDEs as independent variables in predicting accurate knowledge of NDEs (KANDES-K score). According to Tabachnick and Fidell (2013), regression analysis "allows one to assess the relationship between one dependent variable and several independent variables" (p. 117), which was the intent of research questions four and five. A standard multiple regression is suitable for smaller sample sizes as is the case with the sample in the present study. Prior to conducting the standard multiple regression assumptions for the analysis were assessed. Transformations did not need to be performed on the variables to reduce skewness, the number of outliers, and/or the normality,

linearity, nor to improve the homoscedasticity of residuals. The resulting model revealed the strength of each independent variable as a predictor of the knowledge scale score (Tabachnick & Fidell, 2013). The exact process was repeated to answer research question five with the KANDES-A score used as the independent variable in place of the KANDES-K score and the addition of the KANDES-K as a dependent variable. Furthermore, the alpha level was adjusted for significant findings using a Bonferroni correction. This was done to control Type I error rate (Tabachnick & Fidell, 2013).

For research question six, participants' responses from the open-ended question asking participants if they were aware of strategies used when caring for patients who have had an NDE were grouped into two categories, those who responded yes and those who responded no. The strategies identified were then categorized into appropriate strategies and inappropriate strategies. The extracted information was then broken down into percentages to determine how many correct strategies participants were able to identify correctly.

Qualitative Data

The inclusion and analysis of the collected qualitative data was intended to supplement quantitative findings by adding information about the source of participants' NDE knowledge and opinions on NDE education. Data pertaining to NDE information source was categorized by specific source. A second cycle of coding was done to further organize the identified sources of information. The initial identified sources were further grouped with like sources to form three distinct categories. I was able to gain insight into how participants' consumed information within each category by doing two stages of coding, which allowed me to further interpret the quantitative findings. Next, the data regarding the inclusion of the topic of NDEs in nursing education was coded for themes using concept coding. This resulted in the identification of four

themes within the data relating to NDEs and nursing education. By identifying the four themes, I was able to provide a deeper understanding of participants' opinions and beliefs about the inclusion of NDEs in nursing education.

Limitations

The sample size is limited to the population of nursing students enrolled at a private university in south central Texas. The majority of students enrolled in the BSN program at the university that served as the site for this research were female and Hispanic, which do not reflect the demographics of all nursing programs. The specificity of the target population also limits the results and generalizability of the study. The rationale to limit this study to one institution was due to the uniqueness of university cultures, particularly faith-based institutions versus public institutions. The curricula of nursing programs are not standardized from institution to institution (Smith Glasgow et al., 2019), which means that course offerings can vary from program to program. Additionally, study participants were self-selected which carries the risk for selection bias.

Ethical Considerations

I submitted a research plan following institutional protocol to the institutional review board (IRB). The anticipated risks to study participants were minimal. The participants' interaction with the research topic had the potential to cause an emotional reaction. Due to the potentially sensitive nature of the topic, participants were provided with the contact information and website address for their university's counseling center. Special populations were not used within the study sample. All study participants were notified of their rights and were asked to provide informed consent prior to data collection. Additionally, raw data was kept confidential

and was only be seen by the researcher. Survey data was kept in a secure and locked location for the duration of the study and will be destroyed 6 months after the completion of the study.

Findings

In this chapter, I present the findings from the descriptive and inferential statistical analysis conducted on the data collected from study participants. Prior to the presenting the findings, I will provide an overview of the research design and an explanation of the data collection and preparation process. Additionally, I will present the findings from the analysis of supplemental qualitative data at the end of the chapter. These analyses will answer the study research questions and provide further insight into the participant responses.

Research Design

I used a cross-sectional, correlational research design for this research study. According to Creswell and Creswell (2018), "survey design provides a quantitative description of trends, attitudes, and opinions of a population…by studying a sample of that population" (p. 147). The variables I utilized were the scores on both the knowledge and attitude sub-scales of the KANDES survey instrument (Pace et al., 2016), demographic data, and the quantified responses of a portion of the open-ended questionnaire items. Additionally, I used qualitative data from select open-ended responses to further interpret and expand upon quantitative findings.

Data Preparation

I distributed the survey invitation to 559 nursing students via email with the assistance of the university's Institutional Effectiveness office. There were 81 respondents (response rate of 14.5%). Data from the online survey tool was downloaded into Microsoft Excel. I removed all extraneous data, such as IP addresses. Of the 81 respondents, six completed less than half of the survey leaving 75 cases for a response rate of 13.4%. I then exported data into IBM SPSS Statistics 27, a statistical tool, for analysis.

Table 5 shows the mean and standard deviation for KANDES-K and A scales, which provides insight into the overall distribution of participant scores on the KANDES-K and KANDES-A. The scores of the KANDES-A were more variable compared to the scores of KANDES-K, illustrated by the larger standard deviation. This means that participants' attitude towards NDEs varied more than their level of knowledge. Table 6 displays the mean and standard deviations for each of the scales by race and gender, illustrating the distribution of KANDES-K and KANDES-A scores by race and sex. From this we see that participant attitudes toward NDE by race and sex group tend to be more varied than knowledge, except for black participants whose knowledge has more variability than their attitudes.

Table 5

Means and Standard Deviations for KANDES Scores

Measure	*M*	*SD*
KANDES-K	81.87	7.76
KANDES-A	125.92	16.14

Table 6

Means and Standard Deviations for KANDES Scores by Race and Sex

	Measure	n	KANDES-K		KANDES-A	
			M	*SD*	*M*	*SD*
Race	Asian	3	80.33	12.42	129.67	20.60
	Black	3	74.33	14.57	125.00	10.58
	Hispanic	53	82.83	7.53	126.89	16.07
	White, non-Hispanic	14	80.00	5.88	122.21	15.98
	Other	1	88.00	-	146.00	
	Prefer not to answer	1	78.00	-	98.00	-
Sex	Female	63	82.65	7.26	126.92	15.87
	Male	9	76.44	10.18	123.11	17.59
	Prefer not to answer	3	81.67	5.51	113.33	17.24

Data Analysis

Quantitative Findings

I will now present the findings to each individual research question asked in my present study. Each question was answered using quantitative data analysis. Additional, qualitative data was used to supplement the quantitative findings and will be presented after each question has been addressed.

Research Question 1. What level of accurate knowledge do nursing students have about NDEs? The KANDES-K scale, measuring accurate knowledge about NDEs, has a possible minimum score of 23 and a possible maximum score of 115. The actual scores among participants ranged from 59 to 107. A higher score indicates a higher level of knowledge about NDEs; likewise, a lower score indicates a lower level of knowledge about NDEs.

The KANDES-K score from the sample of 75 has a mean of 81.87 and a standard deviation of 7.76. The median is 82.00. The mean and median are not equal, but are very close in value, which indicates some symmetry in distribution. This indicates that the KANDES-K scores, measuring NDE knowledge, are evenly distributed on each side of the average score. An assumption of normality is supported by the standard deviation that is .162 of the range. The skewness score of .149 and kurtosis score of 1.131 both support an assumption of normality. The Kolmogorov-Smirnov Test of Normality shows that the p-value >.05, indicating normal distribution. The histogram does not perfectly support normality, but does resemble a bell curve (see Figure 3). The Q-Q plot supports normality given that the data points mostly remain close to the line, as shown in Figure 4. This indicates that the majority of KANDES-K scores are concentrated around the average score. Considering all of the evidence together, the KANDES-K score variable will be considered as normally distributed.

The range of participant scores is quite broad and illustrates a varied level of knowledge among the entire sample, from minimal knowledge to deeply knowledgeable. For example, some participants were able to correctly answer the majority of questions with a high degree of certainly, while other participants were unable to do so. However, the standard deviation indicates that the variability in scores is smaller among the majority of participants. The mean of 81.87 and standard deviation of 7.76 indicate that the majority of the participants' knowledge scores fell within a range that is aligned with participants from a prior study scores prior to receiving NDE education (Loseu & Holden, 2017). The subsequent post NDE education scores from the same study are approximately 20 points greater, which falls beyond two standard deviations from the mean. Therefore, participant KANDES-K scores are similar to individuals who have not received NDE education and lower than those that have received NDE education. This tells us that the participants, who were current nursing students, had the same amount of knowledge as individuals who had no prior NDE education.

Research Question 2. What are nursing students' attitudes toward NDEs? The KANDES-A scale, measuring attitude towards NDEs, has a possible minimum score of 23 and a possible maximum score of 161. The actual scores among participants are 94 to 161. A higher score indicates a more positive attitude toward NDEs; likewise, a lower score indicates a more negative attitude toward NDEs.

The KANDES-A score from the sample of 75 has a mean of 125.92 and a standard deviation of 16.14. The median is 126. The mean and median are not equal, but are very close in value, which indicates some symmetry in distribution. This indicates that the KANDES-A scores, measuring attitude toward NDEs, are evenly distributed on each side of the average score. An assumption of normality is supported by the standard deviation that is .241 of the

Figure 3

Histogram of the KANDES-K Score Within the Sample Not Supporting Absolute Normality

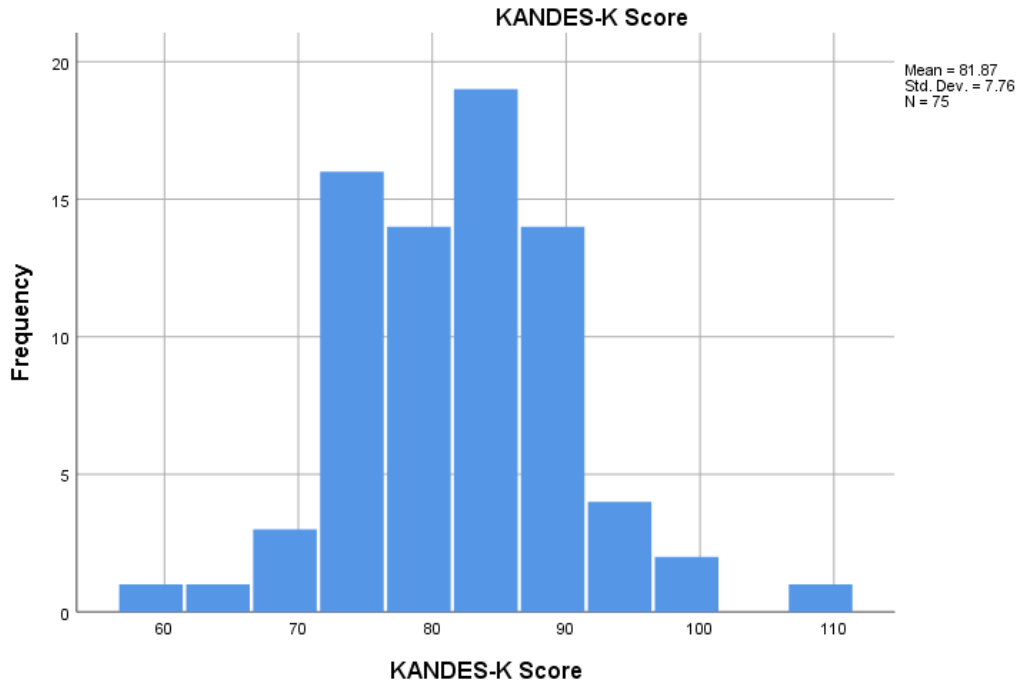
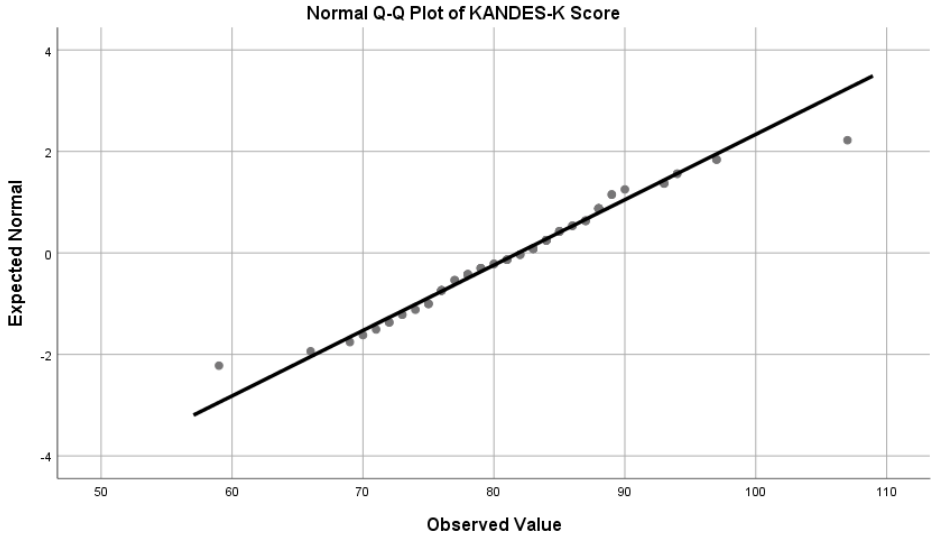


Figure 4

Q-Q Plot of the KANDES-K Score Within the Sample Support Normality



range. The skewness score of .044 and kurtosis score of -.724 both support an assumption of normality. The Kolmogorov-Smirnov Test of Normality shows that the p-value >.05, indicating normal distribution. The histogram does not support absolute normality but does resemble an imperfect bell curve (see Figure 5). The Q-Q plot supports normality given that the data points mostly remain close to the line, as shown in Figure 6. This indicates that most of the KANDES-A scores are concentrated around the average score. Considering all the evidence together, the KANDES-A score variable will be considered normally distributed.

The range of participant scores reveals wide variability in attitude among the entire sample. Furthermore, the standard deviation supports this variability among KANDES-A scores. All study participant attitude scores fell into the neutral to positive attitude range. This tells us that participants' overall attitudes toward NDEs lean on the positive side. Compared to an existing study performed by Loseu and Holden (2017), participants in the current study had a lower mean attitude score than participants' scores both pre and post NDE education in the earlier study. Additionally, the variability among scores in the present study and the existing study are consistent.

Research Questions 3 and 3a. Does the source of information in which nursing students gain their knowledge about NDEs make a difference in the level of nursing students' accurate knowledge about and attitudes towards NDEs? What sources of information do nursing students draw their knowledge of NDEs from? I asked study participants to identify a single source of information that has been the most influential to their overall knowledge of NDEs. This question was asked to determine what proportion of participants identify academic sources, including their formal nursing education, as a meaningful contributor to their knowledge of NDEs. Responses were gathered in an open-ended format and categorized by source. The three different

Figure 5

Histogram of the KANDES-A Score Within the Sample Not Supporting Absolute Normality

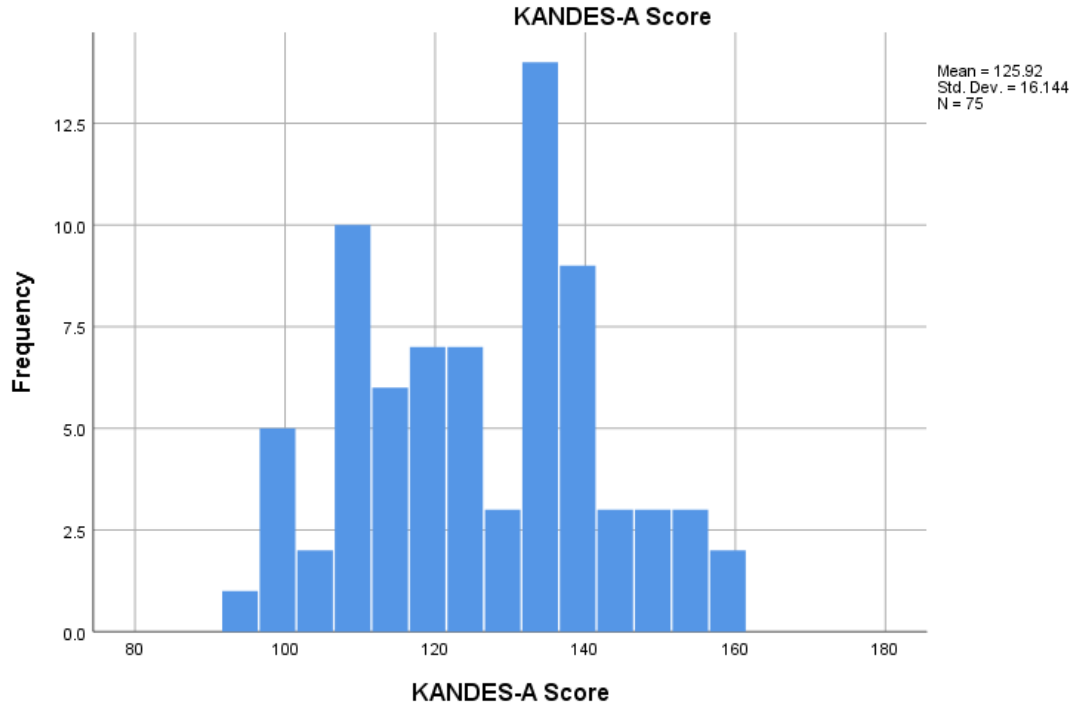
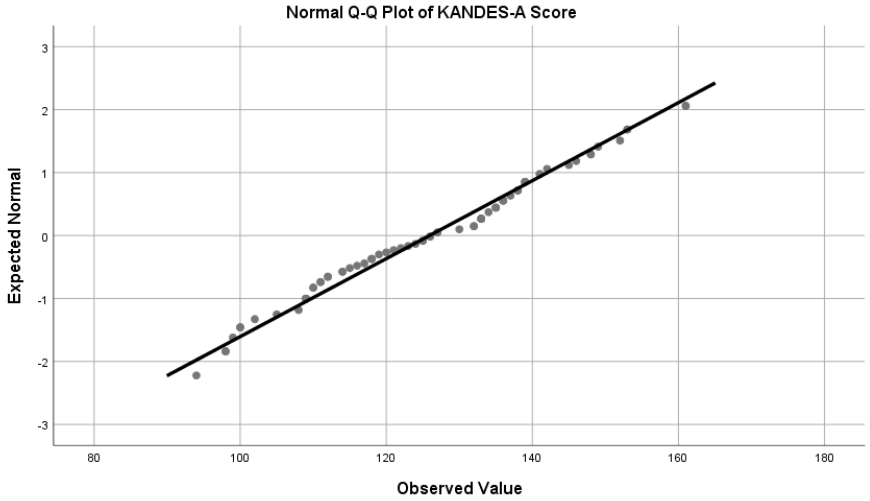


Figure 6

Q-Q Plot of the KANDES-A Score Within the Sample Support Normality



sources of information identified were: lay media, academic, and personal accounts (see Table 7).

Table 7

Frequency Table of Source of NDE Information

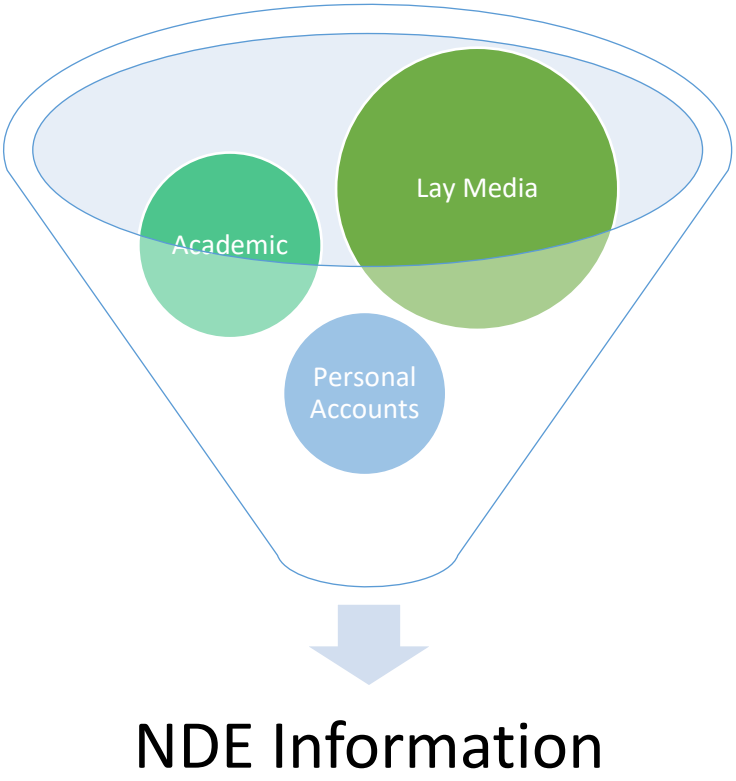
	Source of NDE Information	frequency	%	KANDES-K *M* Score	KANDES-A *M* Score
Valid	Lay Media	39	52.0	83.49	128.46
	Academic	14	18.7	80.79	120.86
	Personal Accounts	13	17.3	82.08	134.54
	Total	66	88.0		
	Missing	9	12.0		
	Total	75	100		

To determine the categories of sources of NDE information for the quantitative analysis above, I used descriptive coding to code participants' responses to identify their sources of NDE information. A second cycle of descriptive coding was used to further categorize the sources of information, which revealed the final categories used for the quantitative analysis. According to Saldaña (2016), the primary purpose of second cycle coding is to give order to a wider array of codes from the initial cycle. By using a second cycle of coding, I condensed the range of codes into more concise categories. The three categories identified above were: lay media, academic, and personal accounts (see Figure 7). I will examine each of these three sources of information further in a later section of this chapter.

I conducted a one-way multivariate analysis of variance (MANOVA) to determine the source of NDE information category differences in accurate knowledge about and attitudes towards NDEs. Two dependent variables were used: KANDES-K score and KANDES-A score.

Figure 7

Sources of NDE Information

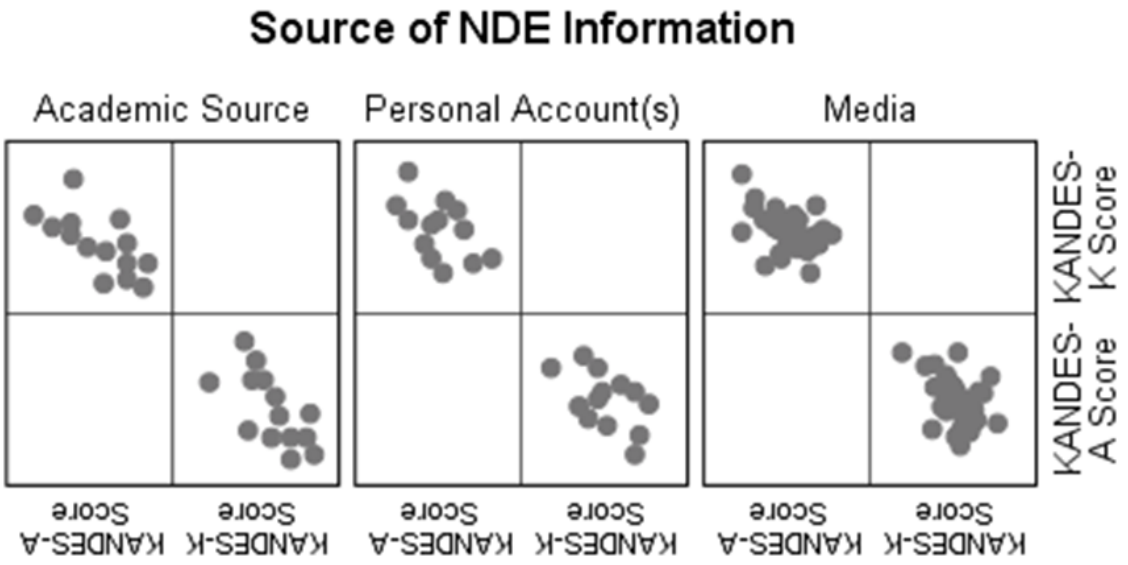


The independent variable was source of NDE information. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with no serious violations noted. The dependent variables were assumed normal with a linear correlation of r = .517, $p < .001$. Scatterplots did not reveal any obvious evidence of non-linearity among each pair of variables (refer to Figure 8), this indicates a linear relationship between sources of NDE information KANDES-K and A scores. Neither variable had extreme outliers and Mahalanobis distance was less than the critical value, indicating that there were no substantial multivariate outliers. Box's M = 4.115, $p = .696$, shows that the equality of covariance is met. There was not a statistically significant difference between sources of NDE information (lay media, academic, and personal

accounts), Wilks' $\Lambda = .89$, F (4, 124) = 1.90, $p = .12$, partial $\eta^2 = .06$. Based on these results, there was insufficient evidence to conclude that participants' level of accurate knowledge (KANDES-K score) and attitude towards NDEs (KANDES-A score) significantly differed based on the participates' cited source of NDE information. Individual one-way ANOVAs were performed for each dependent variable and did not produce statistically significant results. Thus, the source of information nursing students cited as being most influential does not make a significant difference on nursing students' level of accurate knowledge and attitude towards NDEs.

Figure 8

Plots Not Showing Evidence of Non-Linearity



Research Question 4. Are the number of years prior experience in the medical field and personal experience with NDEs predictors of nursing students' accurate knowledge of NDEs (KANDES-K score)? I conducted a standard multiple regression to determine the relationship between number of years prior experience in the medical field and personal experience with

NDEs as independent variables in predicting accurate knowledge of NDEs (KANDES-K score). Preliminary data screening did not lead to the elimination of any of the cases. Initial analysis revealed that neither of the variables significantly contributed to the model (see Table 8). Regression results indicate that the overall model does not significantly predict attitudes toward NDEs (KANDES-K score), $R^2 = .036$, $R^2_{adj} = .009$, $F(2, 72) = 1.343$, $p > .05$. This means that number of years prior experience in the medical field and personal experience with NDEs are not significant at predicting NDE knowledge within this model, which implies that there is not a significant relationship between the selected variables and NDE knowledge within this model.

Table 8

Regression Analysis Summary for Student Variables Predicting Student's Accurate Knowledge of NDEs

Variable	B	Std. Error	β	*t*	*p*
(Constant)	85.227	4.229		20.151	.000
Yrs. Medical Field Exp.	-1.064	.675	-.184	-1.576	.119
Personal NDE Exp.	-1.497	2.252	-.078	-.665	.508

Note. Adjusted $R^2 = .009$ ($N = 75$, $p > .05$)

After further consideration, I determined that attitudes toward NDEs (KANDES-A score) might be a predictor of accurate knowledge of NDEs (KANDES-K score) based on the finding from the subsequent research question. Therefore, an additional standard multiple regression was conducted to determine the accuracy of attitudes toward NDEs (KANDES-A score) in addition to number of years prior experience in the medical field and personal experience with NDEs as independent variables in predicting accurate knowledge of NDEs (KANDES-K score). The

addition of another independent variable has the potential to improve the prediction of the dependent variable (Hair et al., 2019).

The second standard multiple regression revealed that two of the three independent variables significantly contributed to the model, as shown in Table 9. Regression results indicate that the overall model significantly predicts accurate knowledge of NDEs (KANDES-K score), $R^2 = .346$, $R^2_{adj} = .318$, $F(3, 71) = 12.51$, $p < .001$. This model accounts for 31.8% of the variance in participants' KANDES-K score. Attitude towards NDEs (KANDES-A score) is the strongest predictor of accurate knowledge of NDEs (KANDES-K score) based on the value of beta (see Table 9). A summary of regression coefficients for the multiple regression is presented in Table 9. As illustrated in Figure 9, the histogram and P-P plot of the standardized residuals do not reveal any extreme outliers among the residuals. However, the histogram and P-P plot of residuals show some slight violation of the normality assumption, but not enough to warrant concern (see Figure 9). Therefore, number of years prior experience in the medical field and attitude toward NDEs (KANDES-A score) are significant predictors of accurate knowledge of NDEs (KANDES-K score). This means that there is a relationship between both variables and the level of knowledge. In this case, as the positivity level of attitude increases, so does the level of knowledge and as the years of prior experience in the medical field increase, the level of knowledge decreases. It is important to note the negative relationship between years of prior experience in the medical field and NDE knowledge. This might be due to the possible lack of proximity to patients in previous roles, which may not have provided the same type of relationship that is shared between a nurse and a patient.

Table 9

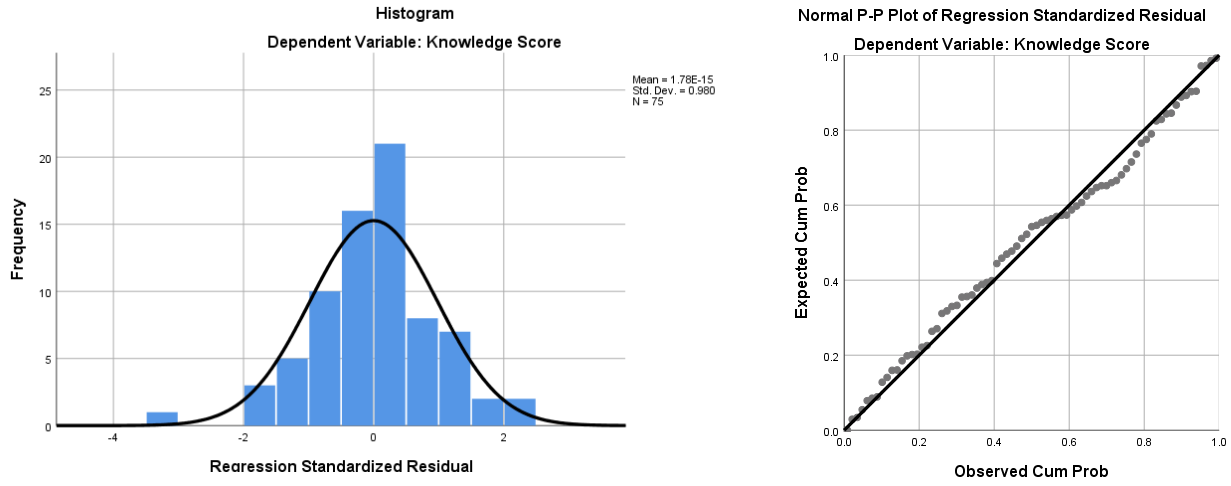
Regression Analysis Summary for Student Variables Predicting Student's Accurate Knowledge of NDEs

Variable	B	Std. Error	β	*t*	*p*
(Constant)	44.657	7.827		5.706	.000
Yrs. Medical Field Exp.	-1.543	.566	-.267	-2.725	.008*
Personal NDE Exp.	1.481	1.938	.077	.764	.447
Attitude Score	.282	.049	.587	5.799	.000**

Note. Adjusted R^2 = .318 (N = 75, p <.05)
*p<.01, **p <.001

Figure 9

Histogram and P-P plot of Residuals



Research Question 5. Are the number of years prior experience in the medical field, personal experience with NDEs, and accurate knowledge of NDEs (KANDES-K score) predictors of nursing students' attitudes toward NDEs (KANDES-A score)? Like the previous

research question, this question is attempting to determine if and which variables are able to predict attitudes toward NDEs. I conducted a standard multiple regression to determine the accuracy of number of years prior experience in the medical field, personal experience with NDEs, and accurate knowledge of NDEs (KANDES-K score) as independent variables in predicting attitudes toward NDEs (KANDES-A score). Preliminary data screening did not lead to the elimination of any of the cases. The analysis revealed that all three independent variables significantly contributed to the model, as shown in Table 10. Regression results indicate that the overall model significantly predicts attitudes toward NDEs (KANDES-A score), $R^2 = .389$, $R^2_{adj} = .363$, $F(3, 71) = 15.072$, $p < .001$. This model accounts for 36.3% of the variance in participants' KANDES-A score. Accurate knowledge of NDEs (KANDES-K score) is the strongest predictor of attitudes toward NDEs (KANDES-A score) based on the value of beta (see Table 10). A summary of regression coefficients for the multiple regression is presented in Table 10. As illustrated in Figure 10, the histogram and P-P plot of the standardized residuals do not reveal any outliers among the residuals. The histogram and P-P plot of residuals show some slight violation of the normality assumption, but not enough to warrant concern (see Figure 10). However, once the alpha level was adjusted using the Bonferroni adjustment ($\alpha adj=.0125$), it resulted two of the predictor variables, number of years prior experience in the medical field and personal experience with NDEs, no longer contributing significantly to the model. Accurate knowledge of NDEs (KANDES-K score) is statistically significant predictor of attitudes toward NDEs (KANDES-A score). This means that as the level of knowledge increases, the positivity level of attitude towards NDEs also increases.

Table 10

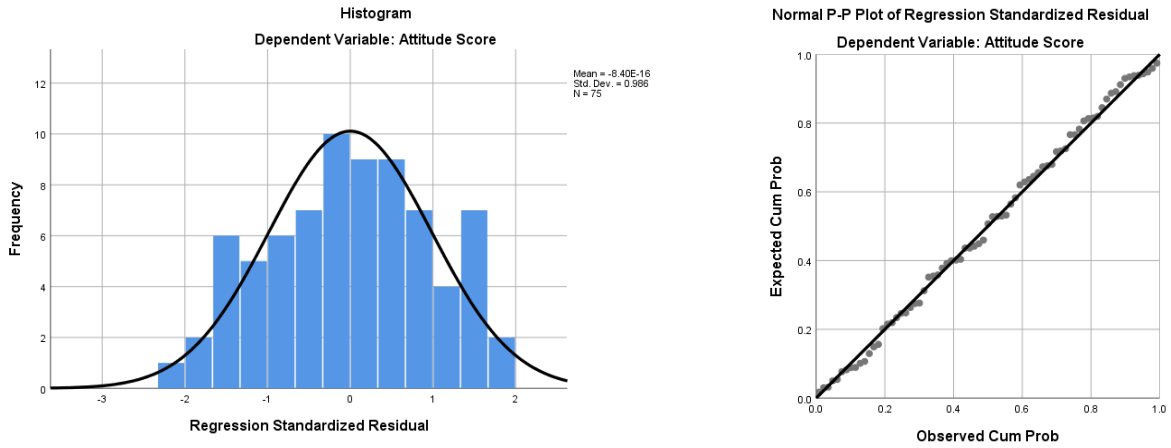
First Regression Analysis Summary for Student Variables Predicting Student's Attitude Toward NDEs

Variable	B	Std. Error	β	*t*	*p*
(Constant)	46.370	18.174		2.571	.012
Yrs. Medical Field Exp.	2.910	1.145	.242	2.541	.013*
Personal NDE Exp.	-8.852	3.767	-.221	-2.350	.022*
Knowledge Score	1.140	.197	.548	5.799	.000**

Note. Adjusted R^2 = .363 (N = 75, p <.05)
*p<.05, **p <.001

Figure 10

Histogram and P-P plot of Residuals



Research Question 6. Can nursing students accurately identify strategies for caring for patients who have experienced an NDE? Participants were asked if they were aware of any strategies for caring for patients who have experienced an NDE. Responses were first grouped by participants that answered yes and those who answered no. Next, the responses were categorized

into appropriate strategies and inappropriate strategies. Foster et al.'s (2009) list of best practices compiled from the recommendations in the literature by nursing researchers and practitioners was used to determine appropriate strategies among the responses. Participants were also allowed to list the strategies they were aware of in their responses.

Sixty-eight percent of participants stated that they were not aware of any strategies for caring for NDErs. However, 4% of participants that stated that they were unaware of strategies were still able to identify at least one strategy. The results are displayed in Table 11. These findings illustrate that the majority of participants were unable to identify at least one strategy used to care for patients that have had an NDE and no participant was able to identify more than two strategies. Meanwhile, Foster et al. (2009) identified 24 recommended best practices and strategies for caring for patients. The top strategies identified by participants, which are also identified in the existing literature were allowing patients to tell their stories and remaining nonjudgmental toward patients, respectively.

Table 11

Number of Appropriate Strategies for Caring for Patients Who Have NDEs That Nursing Students Are Able to Identify

	%	*n*
One strategy	29.3	22
Two strategies	5.3	4
Unable to identify strategies	65.3	49

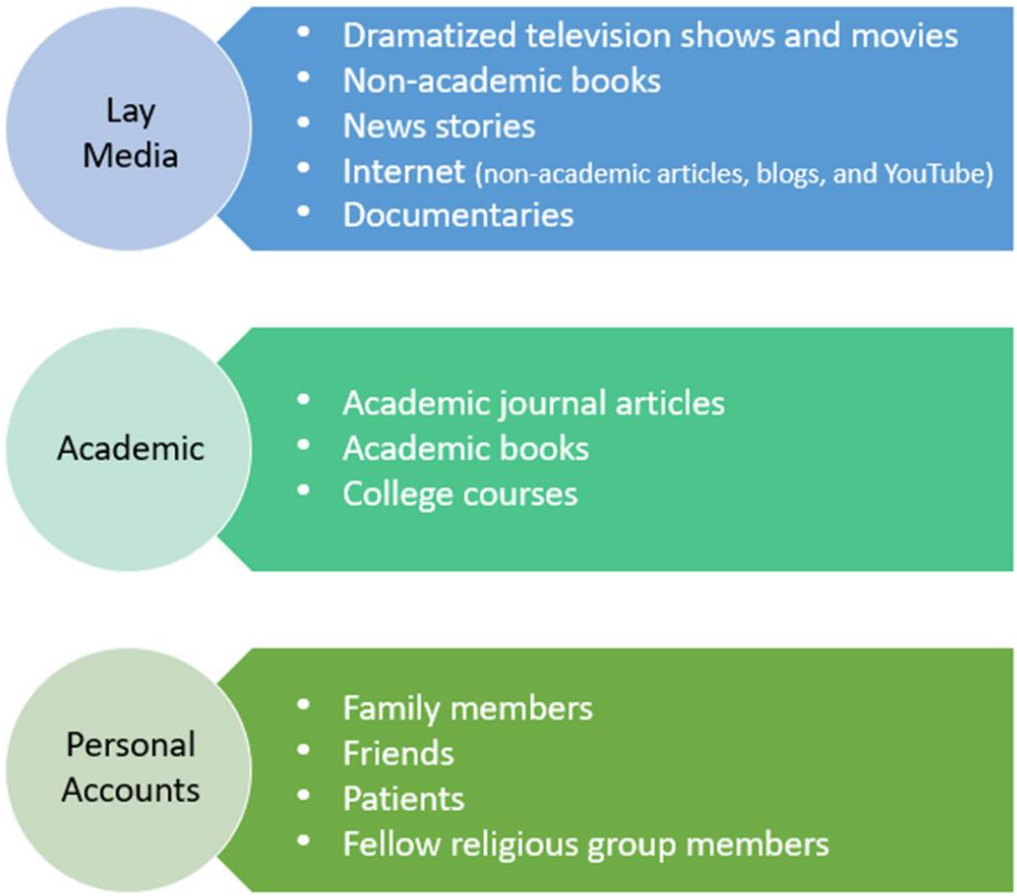
Qualitative Findings

In the following section, I will provide the findings from the qualitative study data to supplement the previously presented quantitative findings, which found three sources of NDE

information (refer to Figure 11). First, I will discuss the participant cited sources of NDE information. This refers to research question three, which pertains to the relationship between NDE information source and level of knowledge and attitude towards NDEs. The sources of information were organized into three categories, which will be further discussed below. The responses give insight into the specific sources of data within each category. Additionally, I will provide examples of participant responses as to why they thought NDE education should be included in nursing education to provide further insight into attitudes towards NDEs.

Figure 11

Organization of Source NDE Information



Sources of NDE Information. While a significant difference was not revealed among the sources of information nursing students cited as being most influential to NDE knowledge and their level of accurate knowledge and attitude towards NDEs in the study findings, the participants' responses to the open-ended questionnaire items inquiring about sources of NDE information did provide further insight into the types of information obtained from each of the cited sources. For example, if a participant cited lay media as their most influential source of NDE information, that information could be from a fictionalized book or from an online video of an interview with an NDEr. While both sources are categorized as lay media, the type of information can be varied within each specific source. In the first example, information obtained from a work of fiction carries with it the risk of being overly dramatized, while the latter example provides information that is recounted by someone who has actually experienced an NDE. This tells us that when compared the earlier research (Hayes & Orne, 1991; Hayes & Waters, 1989) the way information is consumed and type of information consumed has changed. Higher quality information is now accessible from sources that were once considered low in quality (Hayes & Orne, 1991; Hayes & Waters, 1989).

Within the group of participants who cited lay media as their most influential source of NDE information, participants identified dramatized movies and television shows, books, news stories (print and broadcast), the internet (online non-academic articles, blogs, and YouTube videos), and documentaries as sources of information.

> Television as [in] listening to people's stories or their family members stories.
>
> I've always found it interesting how people report the afterlife in NDEs so various books, and magazines and news articles online.
>
> [Watching online] interviews with people who have had near-death experiences have been the most influential to my overall knowledge of them.

> YouTube videos because you get to see the actual person who had a near-death experience and truly get to see his/her emotions.
>
> I saw a documentary where multiple people recalled their experiences with NDEs. I do not recall the name of the film.
>
> "Heaven is for Real" and the account helped me grasp near-death experiences in depth.

Among the participants that identified lay media as an influential source, several mentioned media sources that involve the recounting of an NDE by an experiencer. These types of sources included interviews found on YouTube and documentaries in which NDErs recount their experience. These types of interviews allow the viewer to hear the experience being told in the NDEr's own words and voice.

Additionally, over 10% of participants specifically mentioned either the 2010 book or 2014 film version of *Heaven is for Real* (Burpo & Vincent, 2010; Wallace, 2014) as a source of information. The book and subsequent film share the story of a 3-year-old boy's NDE, as retold by his father. *Heaven is for Real* has an overtly evangelical Christian perspective (Brown, 2015; Sanford, 2015). This particular source can be limiting, given that NDEs are not exclusively Christian experiences. Additionally, the experience in the 2010 book is a retelling of a child's NDE by the child's father, and the creators of the feature film took further creative liberties with the story to make it more appealing to a wider audience (Brown, 2015); both of these filters can weaken the integrity of the account and bring into question its authenticity.

Among the group of participants who cited academic sources as their most influential source of NDE information, participants identified college courses, academic journal articles, and academic books.

> The instruction I received in class about NDEs consisted of a short lecture and a video about a neurologist who had one. It was all rather subjective in nature and only touched on what it means for nursing care. I would not view this training as meaningful.
>
> My Spirituality and Prayer course at [my university].
>
> I've read an article in an academic journal for a project a few years back.
>
> A book titled "Life after Life" by Raymond Moody, and the author was someone who was in the field of psychiatry and was intrigued by near death experiences. He interviewed 150 people who had this kind of experience.

Although a mass-produced book, Moody's (1975) "Life After Life," is considered to be the first official NDEs study (Holden et al., 2009). Therefore, for the purpose of categorization in the present study it is categorized as an academic source.

Responses in the academic source category revealed a lack of meaningful academic instruction, even when it was cited as the most influential source of NDE information. This instruction was reported to have occurred in both nursing and non-nursing courses by a small number of participants. Additionally, participants reported sources of academic information they sought out on their own outside of classroom instruction.

Within the group of participants who identified personal accounts as their most influential source of NDE information, participants noted personal accounts from family members, friends, patients, and members of religious groups.

> My mom had a Near-Death Experience last year while in the hospital. She was losing too much blood and had been seeing "the light" and a visual representation of my great-grandmother who had passed on. She would send her back to reality, but my mom wanted to be with her. She is alive and healthy today. My mom is my source of information. It has been the most influential because, of course, that is my mom, but also it gave me the motivation to want to be in the medical field to help others whose parents or loved ones understand why their families say things about "the light" or seeing someone who has passed. I look at it as something new learned to make it into helpful information to others.

It is important to note that the characteristics of the aforementioned account shared by a participant are more closely aligned to what is referred to as near-death awareness (NDA) rather than a full NDE. An NDA refers to a person's experience of the dying process, which can include end-of-life visions (Marks & Marchand, 2015), such as the one described by the participant's mother above. However, NDAs tend to be part of a longer dying process, (Callanan & Kelley, 1992), which differs from the described experience.

> My friend from high school was hit by a drunk driver, flew out of the Jeep, and the Jeep crushed him. He flatlined three times and miraculously made it out alive without any broken bones but had to undergo seven surgeries back in October. He's currently in rehab. While talking to him, he described being able to see the paramedics and the people around him lift up the Jeep. He remembered being in pain and seeing his body. He never talked about being able to remember surgery nor does he remember what happened after flatlining on his way to the hospital and/or in the hospital.
>
> Personal stories from members of a church group…Hearing personal testimonies from other individuals who I can relate to and are familiar with make it easier for me to welcome the reality of NDEs.

While personal accounts from experiencers is categorized as an individual source of information, the remaining two sources cited by participants also included hearing personal accounts to some degree. For the purposes of the current study, personal accounts refer to face-to-face interactions and does not include recorded content. However, given that no difference was found in the accurate knowledge and attitudes toward NDEs among sources, it can be assumed that this is due to overlapping of personal accounts among the cited sources of knowledge. Previous research regarding sources of knowledge was conducted prior to the popularity of online media platforms and expresses concern over the sensationalizing and distorting of NDE information in lay sources, such as tabloid publications and television talk shows (Bucher, 1997; Hayes &

Orne, 1991; Ring, 1995). However with the changing format of lay media, recorded personal accounts are much more accessible. The same type of content is also recommended for use in teaching environments (Holden et al., 2011; Loseu & Holden, 2017; Ring, 1995; Sheeler, 2005; Tassell-Matamua & Lindsay, 2017).

NDEs and Nursing Education. Study participants were asked if they believed the topic of NDEs should be included in nursing education. Among the participants that replied, 90.3% thought that the topic of NDEs should be included in nursing education, while 6.9% were unsure if the topic should be included, and 2.8% thought the topic should not be included. In addition to their yes or no response, participants were asked to explain why they believed the topic of NDEs should or should not be included in nursing education.

Responses of participants that thought the topic of NDEs should be included in nursing education revealed the following themes: preparedness, holistic care, communication, and long-term therapeutic outcomes.

Preparedness was a major theme in participant responses. Responses related to preparedness were focused on the best interest of the patient.

> I think near-death experience[s] should be included in the nursing education. This information can teach us how to handle this situation if a patient does inform us of this happening. We are there to help them and not make the patient regret telling the nurse because they did nothing about it.
>
> Yes, because it does happen and we need to know how to care for the patients who have experienced [an] NDE. Some people have never heard of NDEs and may associate it with a mental health issue. If we are taught this subject we can better serve our patients.
>
> Yes, it would give us as students a better understanding of what it is and be able to understand where the patient is coming from. It would also give us a better understanding on how to deal with the situation.
>
> Yes, because sometimes some people do not know how to react when a patient is telling them about near-death experiences and it is very easy to say the wrong thing and upset the patient.

Holistic care was another recurring theme in responses of participants who thought the topic of NDEs should be included in nursing education.

> Yes, I do think it should be included in nursing education because of how common an experience it is. Anyone could have this experience at a point in their lives. I believe that healthcare should not only be about the physical but also the spiritual and emotional. Those parts are just as important and also have an effect on our physical lives and bodies.
>
> I think nurses should be taught that NDE[s] happen and that they have an impact on how patients perceive their injury or illness, as well as how they approach recovery. Nursing care should be holistic in its approach, including NDE[s].
>
> Yes…we can't give holistic care if we write off their spiritual needs.

Communication was also revealed as a theme among participants who stated that they are in favor of including the subject of NDEs in nursing education.

> Yes, because it would help nurses connect better with the patients who have had NDE's. As nurses we should strive to make the patient comfortable and that includes connecting with them and talking to them.
>
> Yes. I believe this topic should be involved with the nursing education because we as nurses will be responsible for building that communication with the patient…for nursing education to teach us about Near Death Experience[s] it would be an eye opener and also helpful when hearing about it from their prospective.
>
> Yes, it will help when we come in contact with a patient who has experienced it whether they are elderly, [have] come out of surgery, in an accident. Whatever the case is, we should know how to communicate with them and make sure their feelings are validated.

Therapeutic/long-term outcomes was the final theme revealed among participants who thought NDEs should be taught within nursing education.

> Yes. [It] could be helpful in helping those patients to understand their experiences and use them to better their lives.
> Yes, because I believe near-death experiences have a lasting effect on people that needs to be overseen.
>
> Yes, because it helps the patient cope with their experience and current situation by reflecting on what has happened to them.

Additionally, some study participant responses had overlapping themes.

> I think it should be because we need to be equipped to handle these situations. I also feel as though we should be knowledgeable on how to converse with a patient who has had an experience like this in a therapeutic way. I would never want someone to feel like they are not understood.

> Yes, because it isn't uncommon that when medical attention is needed patients go through NDEs. Educating students and even current nurses in the topic of it only provides a more comfortable and welcoming environment for the patients themselves. Knowing that they are in a judgement free zone can help the healing process. The nurses themselves can think clearly and stay from distractions or confusion when prepared with how to handle situations involving NDEs.

Summary of Findings

The study findings reveal that participants have a low level of NDE knowledge and a positive leaning attitude towards the phenomenon. Likely due to this low level of knowledge on the topic, nearly two-thirds of study participants were unable to identify at least one appropriate strategy for caring for NDErs. These findings show a lack of overall preparedness to provide care to a patient who has had an NDE. However, the positive leaning attitude and subsequent desire to want to learn more about NDEs and belief that the topic should be included in nursing education imply an openness to the topic in general.

The participants' cited academic sources, personal accounts, and lay media as influential sources of their NDE information. However, the category of the source did not make a statistically significant difference in knowledge level or attitude towards NDEs. This is potentially due to the overlapping types of information available within each category. For example, firsthand accounts are not limited to one-on-one personal accounts, they can also be gained through video and narrative format from both academic and lay media sources.

Participants' prior experience in the medical field and attitude towards NDEs were found to be significant predictors of accurate knowledge of NDEs. However, the negative relationship between prior medical experience and NDE knowledge level should be noted. Nothing in the

existing literature can account for this finding; however, a possible reason discussed was patient proximity in prior medical roles. On the other hand, the only statistically significant predictor of attitudes towards NDEs was NDE knowledge level. This implies that there is a strong positive relationship between level of NDE knowledge and attitude towards NDEs.

Discussion

The recorded incidence of experiences with characteristics fitting NDEs can be traced back to ancient times (Holden et al., 2009; Moody, 2017). The topic of NDEs gained scholarly attention when the term *near-death experience* was coined by Raymond Moody in the mid-1970s (Holden et al., 2009; Moody, 1975). NDEs have the potential to be profound life altering events that are experienced by approximately 20% of individuals who come close to death (Holden, 2017; Zingrone & Alvarado, 2009).

It is vital for those working closely with patients to have knowledge of this phenomenon because it is possible for NDErs to experience a "Gap of Care," which occurs when patients' self-reported NDEs are disregarded or pathologized (Samoilo & Corcoran, 2020). This can result in patient hesitancy to reattempt to disclose the experience in fear of being stigmatized. This type of initial negative disclosure experience can have lasting and detrimental consequences leading to isolation, confusion, and difficulty processing and integrating the experience (Stout et al., 2006; Samoilo & Corcoran, 2020). Subsequently, the care gap is further widened when validation and proper resources, including education and support, are not provided (Samoilo & Corcoran, 2020). Thus, to circumvent harm to the patient who has had an NDE, healthcare professionals should be able to readily recognize an NDE when disclosed (Holden & Moore, 2014).

In the processing chapter, I examined nursing students' knowledge of and attitudes towards NDEs through a theoretical lens to examine students' preparedness to recognize NDEs and care for experiencers. Predictors of accurate knowledge and attitudes were also explored to further understand their impact on the implications for patients; implications were also addressed

in relation to nursing students' knowledge and attitude levels. Lastly, I made recommendations for NDE education and future research.

Theoretical Framework

I utilized McEvoy's (1990) model for teaching the subject of NDEs as the theoretical lens to interpret my findings. In the present study, I focused on nursing students' knowledge of and attitudes towards NDEs. I selected McEvoy's (1990) model because it addresses each of these areas and is specific to nursing education.

McEvoy's (1990) model is grounded in thanatology education. Thanatology is "the science that studies the events surrounding death, as well as the social, legal, and psychological aspects of death" (Galeotti, 2021, p. 4434). Healthcare professionals, particularly those who are in direct contact with patients that are dying, can be more prepared and effective when they have adequate training in thanatology (Narayanan, 2021). NDEs are an essential part of thanatology because the topic allows the learner to gain a deeper understanding of the dying process and what it might be like to die (McEvoy, 1990). Thus, learning about NDEs helps healthcare professionals, especially nurses, become more effective in their roles.

McEvoy's (1990) model for teaching the subject of NDEs to nursing students consists of three objectives for nursing students to meet in order to be prepared to care for patients who have had an NDE. The objectives are:

1. The student should have an understanding of the nature of the near-death experience and subsequent impact on patients.
2. The student should have an understanding of his or her personal beliefs and attitudes relating to the paranormal and transcendental aspects of the NDE.

3. The student should develop strategies to assist the patient in discussion of the NDE. (p. 54)

To examine my findings, I will first refer back to research questions one, two, and six. These research questions are: 1) What level of accurate knowledge do nursing students have about NDEs?, 2) What are nursing students' attitudes toward NDEs?, and 6) Can nursing students accurately identify strategies for caring for patients who have experienced an NDE? Each question is directly related to a corresponding objective identified by McEvoy's (1990) model. By doing this, I was able to gauge how well current nursing students are able to meet each model objective. Consequently, providing insight into how prepared they will be at providing care to NDErs. Additionally, this will also allow for the identification of areas that need improvement.

Research question one addresses nursing students' level of accurate knowledge; this question corresponds to the first objective of McEvoy's (1990) model concerning the students' understanding of the nature and impact of NDEs. The knowledge measured included knowledge of the content, aftereffects, and occurrences of NDEs (Pace et al., 2016). Study participants' accurate knowledge level varied from low to high. However, the majority of participants' level of accurate knowledge was similar to those that had not received NDE education and lower than those that have received NDE education (Loseu & Holden, 2017; Tassell-Matamua & Lindsay, 2017). Participants can be characterized as having a low level of accurate NDE knowledge, which falls short of meeting the first objective in McEvoy's (1990) model and reveals a need for improvement. Therefore, students in the current study need to fill this gap in knowledge to become more prepared to care for patients who have potential to experience an NDE. Without

closing this gap, these future nurses are at-risk of not providing optimal care for patients who have had NDEs, even if unintentional (Samoilo & Corcoran, 2020).

Research question two measures nursing students' attitudes toward NDEs, which parallels the second objective of McEvoy's (1990) model which addresses the students' understanding of their beliefs and attitudes as they relate to the paranormal and transcendental features of NDEs. The assessed elements of attitude toward NDEs included: attitude toward an NDE being a real, spiritual experience; belief and encouragement of experiencer to talk; understanding of mental health implications; and recognizability of the phenomenon (Pace et al., 2016). The attitudes of participants lean toward positive, with the majority of attitudes landing between neutral to positive. While participants' attitudes were highly variable, which is consistent with existing research (Loseu & Holden, 2017), participants revealed an open attitude toward learning more about NDEs. Thus, if provided with the appropriate resources, participants exhibit the potential to meet McEvoy's (1990) second objective.

McEvoy's (1990) third objective relates to nursing students' preparedness to work with patients who have experienced an NDE by having the ability to develop strategies to care for patients who have had an NDE, which is addressed by research question six of the present study. This type of care provided to patients who have had an NDE is part of holistic patient care. The majority of participants in the present study were unable to identify strategies used to care for NDErs. In a compilation of best practices for assisting NDErs by Foster et al. (2009), the most frequently recommended practice is to remain nonjudgmental when a patient is expressing what they have experienced. In agreement with this recommendation, Samoilo and Corcoran (2020) found that most NDErs expressed the need for healthcare professionals to listen to what they had to say without judgement. This practice of nonjudgement was frequently identified by study

participants second to attentively listening to patients, which is also identified as a best practice in the research (Foster et al., 2009). Even though participants were able to successfully identify the aforementioned best practices, the majority of best practices and strategies, 24 in total, were not mentioned. Therefore, improvements need to occur in order to meet McEvoy's (1990) third objective.

McEvoy's (1990) model for teaching NDEs is recognized as the only known NDE teaching model for nursing students (Foster et al., 2009). However, over 3 decades have passed since its development. There have been many advances in NDE research since that time. Yet, McEvoy's (1990) model has not been updated or expanded upon. While the core of the model is basic enough to accommodate for changes in the field, it would be beneficial to expand on the model to provide nursing school faculty with a more specific guide to incorporating NDEs into their curriculum. McEvoy's (1990) model alone only offers enough information to provide nursing educators with the expected outcomes of NDE education but does not inform educators on what should be included and provides minimal information on how to achieve those outcomes.

Furthermore, none of the core objectives of nursing NDE education were met by students in the current study. This leads to an increased likelihood that these participants will not be well prepared to care for NDErs upon completion of their program of study. As I discussed in chapter two, this lack of preparation can result in a gap in care for those who have experienced the phenomenon.

Samoilo and Corcoran's (2020) "Gap of Care," mentioned earlier in this chapter, is an area that essential to improve to provide proper care to NDErs. To accomplish this, Samoilo and Corcoran (2020) formulated guidelines for and recommend the use of a standard operating

procedure (SOP) to be used by healthcare professionals when caring for NDE patients. Samoilo and Corcoran's (2020) guidelines include:

1. Know the characteristics and after-effects of an NDE.

2. Following surgery or trauma, ask patients if they experienced anything unusual. If so, collect their report.

3. Listen to patients without judging, demeaning, or challenging with your personal views.

4. To validate patients: "Patients report having these types of events. They are called near-death experiences."

5. To educate patients: Offer an NDE questionnaire, educational materials, and resources to share with loved ones.

6. To support patients: "We have NDE-trained staff and clergy. Would you like to speak to someone?" Facilities should provide an NDE-trained staff and clergy.

7. Direct patients to IANDS.org for education and support and ACISTE.org for NDE counseling. (p. 41)

While this SOP is intended to be used by practicing healthcare professionals (Samoilo & Corcoran, 2020), it can help supplement McEvoy's model. Somoilo and Corcoran (2020) acknowledge the need for NDE content to be included in healthcare education. However, the authors do not go as far as to say that their SOP should be incorporated into the curriculum or used as a model for such a curriculum. Yet, McEvoy's (1990) model and Somoilo and Corcoran's (2020) SOP, if used in tandem, can provide clearer and more specific guidelines for the expected outcomes of NDE education.

I will once again revisit research questions one, two, and six, but with the addition of Somoilo and Corcoran's (2020) SOP to the lens. By doing this we can see not only which objectives are not being met, but what specific areas are not being met. As I previously stated, study participants did not fully meet all three of McEvoy's (1990) objectives. However, when we refer to the seven guidelines of the SOP we can pinpoint areas of need. Each guideline relates back to one or more of the three educational objectives. For example, guideline one relates directly to objective one pertaining to knowledge. Moreover, the remaining six guidelines focus primarily on strategies for caring for NDErs; however, they all overlap with knowledge and attitude to some degree.

When we look at the study findings again, we see that participants need to improve in all areas. Though, it is possible for students to not meet McEvoy's (1990) objectives, but still have some competency with Somoilo and Corcoran's (2020) SOP. However, that is not the case with the participants of the present study. Thus, we are able to clearly see a deficiency when it comes to NDE education in the participants' nursing education. This is emphasized by the participants' cited sources of NDE information. Only a small minority of participants who cited an academic source, said that academic source of NDE information was part their nursing education. Instead, academic sources included coursework and independent study outside their nursing program.

Predictors of Accurate Knowledge and Attitude

To gain further understanding into possible predictors of NDE knowledge and attitude, I examined the relationship between knowledge, attitude, years of experience in the medical field, and personal experience with NDEs. I found that accurate knowledge of NDEs and attitude toward NDEs are positively correlated and likely predictors of one another. While existing literature makes an argument that a higher level of knowledge results in a more positive attitude

(Allum et al., 2008; Khader et al., 2010; Mallory, 2003; Sung et al., 2015; Sura et al., 2011), participants of the present study have limited knowledge with a positive leaning attitude toward the phenomenon and a desire to learn more. This finding is in agreement with the results from similar studies that reveal a positive attitude toward NDEs with limited knowledge among the nursing population. (Barnett, 1991; Bucher et al., 1997; Cunico, 2001; Hayes & Waters, 1989; Moore & Pate, 2013). This means that while NDE knowledge level and attitude towards NDEs are predictors of one another, a foundation of accurate knowledge is not necessary to have a positive attitude towards the phenomenon. This has implications in practice, because it can be speculated that students might be open and willing to learn about a topic of which they have minimal knowledge. Study participants sought out information outside of their formal nursing education to learn more about NDEs and the overwhelming majority stated that they wanted to learn more about the topic and thought it should be included in nursing education. These findings support an openness and positive attitude in the absence of a high level of knowledge.

Personal experience with NDEs was another possible predictor of NDE knowledge and attitude examined in the present study that was not found to be a meaningful predictor. Although earlier research found that nurses who had firsthand experience with NDErs had higher knowledge of and more positive attitudes toward NDEs (Cunico, 2001), I did not find this to be consistent with the findings of the present study. Participants with direct experience with NDErs did not have a higher level of knowledge or more positive attitudes when compared to participants who did not have direct experience. This is potentially due to the increased availability of firsthand NDE accounts that are accessible to the public in mediums such as online video, an example of this type of resource is the IANDS YouTube account (IANDS, 2022). These available video resources have the ability to provide viewers with in-depth personal

accounts that are similar to hearing them first-hand, which can overlap and blur the line when sources of information are considered.

Additionally, number of years of prior experience in the medical field was examined as a possible predictor of NDE accurate knowledge and attitude. My decision to explore this variable was based on the rationale that individuals working in healthcare would be more likely to have encountered an NDEr the longer that they have worked in the field. However, years of experience was revealed as a significant predictor of accurate knowledge, but not attitude. While the years of experience was revealed as a predicator of knowledge, it was not a positive relationship as anticipated. As the years of experience increased, participants' NDE knowledge decreased. No previous studies have assessed nursing student knowledge; therefore, there is no established reason for this outcome. Although, it could be because the participants consisted of nursing students who may not have the same proximity to patients in their prior experience as someone working as a nurse. This means that a significant amount of experience does not necessarily mean a substantial amount of direct contact with patients, particularly those who have had NDEs.

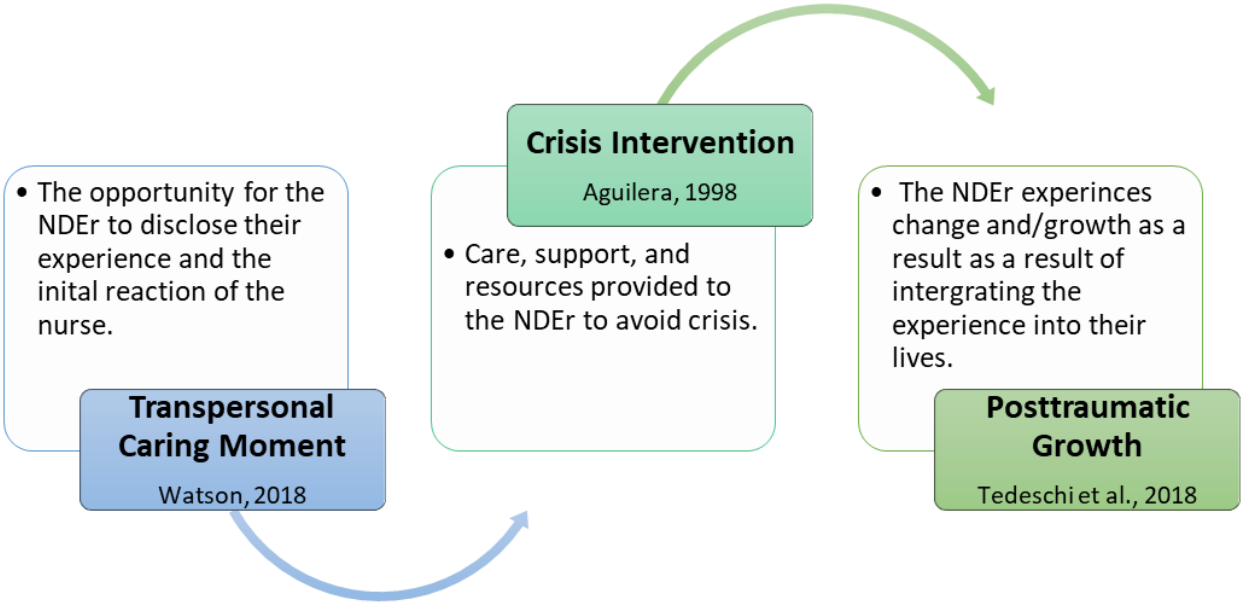
Implications

The findings of this study have significant implications for the care of patients who have had an NDE, specifically patient NDE disclosures. Nurses must be able to appropriately respond to disclosures, which means they must be prepared for their occurrence. The NDE disclosure experience is extremely important because a negative disclosure experience can result in a breakdown of proper processing of the experience (Samoilo & Corcoran, 2020). Therefore, I will use theory from outside the field of NDEs to examine the milestones in the disclosure experience to provide additional perspective to this crucial experience. I selected and applied a theory to

each milestone of the disclosure experience, which is illustrated in Figure 12. The theories used for this purpose are Watson's (2018) transpersonal caring moment, crisis intervention (Aguilera, 1998), and posttraumatic growth (Tedeschi, et al., 2018).

Figure 12

Theory and NDE Disclosure



NDEs can have meaning for both the patient and the patient's nurse (Morris & Knafl, 2003). Given the significance of such an experience in the context of a caring relationship between a nurse and patient, it is appropriate to view the shared experience and disclosure through the lens of Watson's transpersonal caring moment (Sitzman & Watson, 2018; Watson, 2018). According to Sitzman and Watson (2018):

> A caring moment involves an action and choice by both the nurse and the other. The moment of coming together presents an opportunity to decide how to engage in the moment. If the caring moment is transpersonal, each feels a connection with the other at the spirit level, thus human connection at a deeper level than physical interaction." (p. 19)

The caring moment involves the nurse making the conscious decision to see the patient by being present in the moment while displaying compassion and an openness to connect to the patient. The nurse and patient become sources of knowledge for one another (Watson, 2018). In the instance of an NDE, it is important that the nurse is able to contribute and take part in this moment. To be an active participant at this stage, a nurse needs to have a foundational knowledge of and a nonjudgmental attitude towards NDEs. When caring for NDErs, it is vital for one to keep an open mind while maintaining an awareness of one's own beliefs and being mindful not to minimize the experience or its impact (Rawlings & Devery, 2015).

Between the occurrence of an NDE and the later integration of the experience into the patient's life, the patient is faced with the outcome of either disclosing, attempting to disclose, or not disclosing their NDE. The experience, or crisis-precipitating event, has a high likelihood of causing a disturbance in the patient's equilibrium, which occurs when the patient is faced with a problem or stressful situation which can turn into a crisis and lead to an unhealthy behavioral response if the appropriate balancing factors are not present (Aguilera, 1998; Caplan, 1964). The progression toward positive integration of the NDE into the experiencer's life is impacted by whether their needs were met at the time of disclosure; moreover, lack of validation can cause the experiencer to go into "communicative isolation" (Hoffman, 1995b, p. 249).

According to Aguilera's crisis intervention theory (1998), there are specific balancing factors that contribute to the restoration of the patient's equilibrium, they are: a realistic perception of the event, adequate situational supports, and available coping mechanisms. Within the context of an NDE disclosure, nurses have the ability to strengthen the patient's balancing factors in the context of the NDE phenomenon. A patient's ability to have a realistic perception can either be weakened through a negative disclosure experience that can distort their perception

of the event increasing the stress or unease about the experience. On the other hand, a positive disclosure experience can enable the patient to have a realistic perception of the event, which in this instance, can mean a more positive perception, as well. Adequate situational supports are a particularly important factor in the nurse's role in the event of an NDE, because they are a result of external support from the patient's environment. Situational supports refer to those "who are available in the environment," which is likely to be a nurse due to their proximity to the patient when providing care, and those "who can be depended on to help solve the problem" (Aguilera, 1998, p. 37). By having adequate knowledge of the NDE phenomenon and available strategies for caring for NDErs, nurses are positioned to help strengthen this balancing factor. Lastly, available coping mechanisms refer to behaviors that apply exclusively to the individual who is in the state of disequilibrium, in this instance the NDEr, that have been developed from past experiences to maintain emotionally stability (Aguilera, 1998; Jones, 2005). Thus, nurses can play a role in both helping provide a realistic perception of the event and situational supports.

When NDE disclosures are met with belief and nonjudgment, the patient is more likely to incorporate the experience in a positive manner into their lives (Foster et al., 2009; Morris & Knafl, 2003; Noyes et al., 2009). According to Khanna and Greyson (2015), NDErs are more likely to experience posttraumatic growth when compared to individuals who came close to death but did not have an NDE. The term posttraumatic growth (PTG) is used to refer to "positive psychological changes experienced as a result of the struggle with traumatic or highly challenging life circumstances" (Tedeschi et al., 2018, p. 3). Thus, NDErs have the potential to experience profound long-term effects after their experience resulting in positive cognitive, emotional, and behavioral changes.

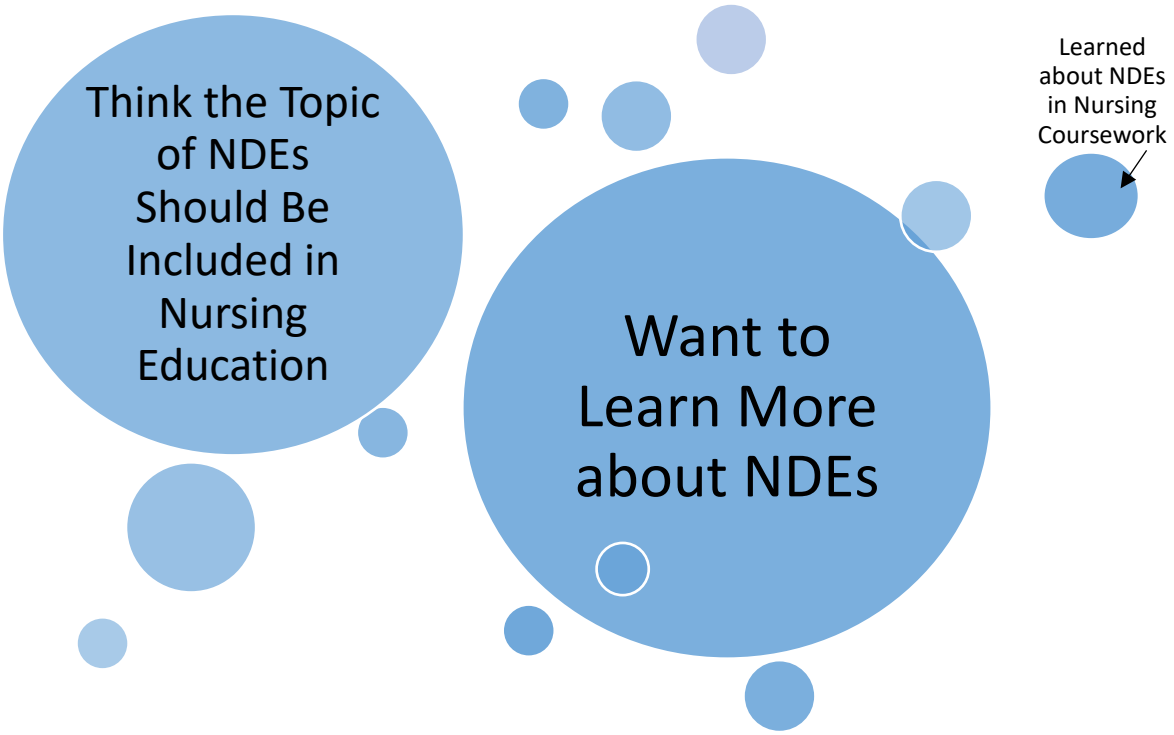
Recommendations

NDE Education and Resources

Study participants were asked if they personally would want to learn more about NDEs, if given the opportunity. While roughly 90% thought the topic of NDEs should be included in nursing education, all but one participant (98.7%) stated that they personally wanted to learn more about the topic. When these numbers are compared to the number of participants who replied that the topic was included in their nursing courses, which was 6.7%, a wide discrepancy between what students' want to learn and consider important to learn verses what is being taught is revealed, which is illustrated by Figure 13. This means that the current curriculum does not fully meet student desires.

Figure 13

Discrepancy in What Participants Want to Learn Verses What is Being Taught



While all students seeking to become licensed registered nurses (RN) must pass the NCLEX-RN® after graduation from their nursing program, there is no standardized model or curriculum across nursing programs (Smith Glasgow et al., 2019). Consequently, many nursing students do not receive adequate education on the topic of death and dying. The inconsistency in death education results in nursing students being unprepared to provide care to dying patients (Mallory, 2003). While death education has a broader scope, NDEs are part of the overall topic. The university that was the site for the present study does not include a course solely focused on death and dying or palliative care in the required coursework nor is one regularly offered within the available elective coursework.

Given the importance of death education in the nursing profession, the American Nurses Association (ANA; 2016) published a position statement regarding end-of-life care. The statement calls for nursing programs to include the topic of palliative care in the curricula (ANA, 2016). Subsequently, the ANA joined together with the Hospice & Palliative Nurses Association (HPNA; 2017) to release a call to action aimed at calling on nurses to transform and lead palliative care. Recommendations from ANA and HPNA include recognizing the necessity to educate nurses on end-of-life and palliative care skills and the standardization of palliative care education across nursing education programs (2017).

Participants revealed a lack of NDE education in their program of study as well as both a desire to learn more and the recognition of the importance to learn more about NDEs. There are teaching resources available that can be incorporated into existing coursework to fulfill the need for NDE education. The International Association for Near-Death Studies (IANDS; 2020) has many print and video resources available, including training materials for healthcare professionals that can be used in the

educational setting. The use of video has consistently been shown to be an effective NDE teaching tool (Holden et al., 2011; Loseu & Holden, 2017; Ring, 1995; Sheeler, 2005; Tassell-Matamua & Lindsay, 2017) and is a convenient method to use in the classroom. Small group discussions and online learning components were also shown to be effective in teaching NDEs (Loseu & Holden, 2017; Sheeler, 2005; Tassell-Matamua & Lindsay, 2017). These resources and methods can be incorporated into nursing education to fill the absence of NDE content.

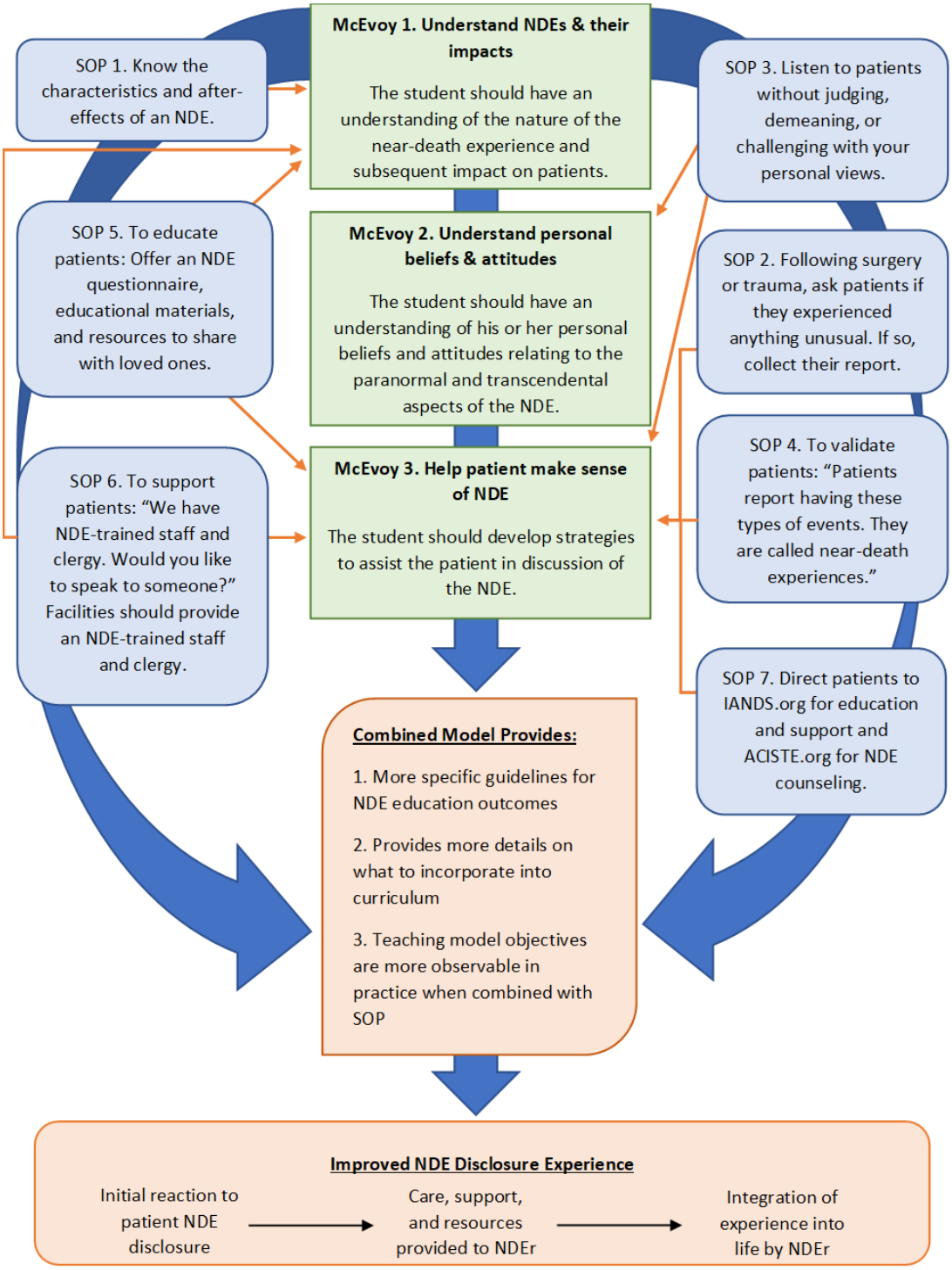
Additionally, a new model combining McEvoy's (1990) model for teaching NDEs and Samoilo and Corcoran's (2020) SOP can be used as a teaching tool (refer to Figure 14). This tool provides clearer guidelines for what should be taught and the expectations of NDE education. This tool can be used by nursing educators and educators of other healthcare and caring profession preparation programs, as well as part of professional development.

Future Research

Current NDE research covers a wide breadth of topics. However, some of the topics lack in-depth research. The topic of knowledge and attitudes toward NDEs is one of the topics lacking a substantial amount of research, especially among healthcare preparation programs. The current study is the first to examine NDE knowledge and attitudes of nursing students. Therefore, I recommended that this study be replicated within other nursing education programs across a broad range of demographics and regions to include both private and public institutions. Future research should include rephrased questionnaire items regarding the year of study in the academic program, to capture the correct information to measure if the length of study has an impact on the level of accurate knowledge and attitude toward NDEs. Lastly, quasi-experimental

Figure 14

NDE Teaching Model Combining McEvoy (1990) and Samoilo & Corcoran's (2020) SOP



studies should be utilized to measure the effectiveness of different NDE teaching methods within the nursing student population.

Conclusion

While the incidence of reported NDEs has increased over recent decades, NDEs are still pathologized or dismissed (Greyson & Harris, 1987; Samoilo & Corcoran, 2020). Consequently, patients that are pathologized or dismissed are not appropriately treated following their NDEs, which can lead to issues integrating the experience into their lives. The purpose of this study was to assess undergraduate nursing students' levels of accurate knowledge about and attitudes towards NDEs and to determine the predictors of nursing students' knowledge of and attitudes toward NDEs. Additionally, I sought to explore the sources in which nursing students acquire NDE knowledge. I accomplished this by using a cross-sectional, correlational research study design. Data was obtained from students enrolled in an undergraduate BSN program at a 4 year university using an online questionnaire. The questionnaire consisted of the KANDES-K and -A scales (Pace et al., 2016), demographic data, and open-ended questionnaire items. Additionally, I used qualitative data from selected open-ended responses to further interpret and expand upon quantitative findings.

I found that the nursing students sampled had a low level of accurate NDE knowledge. In addition to the low knowledge level, just under two-thirds of participants could not identify at least one strategy to use when caring for patients who have or are suspected of having an NDE. The lack of sufficient knowledge and inability to identify appropriate strategies indicates a lack of preparedness to provide proper care to NDErs. Furthermore, participants had neutral to positive leaning attitudes towards NDEs. These positive leaning attitudes were evident in participants' expressed desire to learn more about NDEs and the belief that the topic should be

included in nursing education. The consensus among participants was a lack of formal education on the topic of NDEs within their nursing program, based on participants' cited sources of information.

Study findings were examined through the lenses of McEvoy's (1990) model for teaching NDEs and Samoilo and Corcoran's (2020) standard operating procedures (SOP). I concluded that the lack of preparedness has the potential to have a negative impact on patients' NDE disclosures and overall care. While participants expressed a desire to learn more about NDE, nursing program faculty will ultimately need to meet students' wants by including the topic in their curriculum.

References

American Nurses Association. (2016). *Nurses' roles and responsibilities in providing care and support at the end of life*. https://www.nursingworld.org/~4af078/globalassets/docs/ana/ethics/endoflife-positionstatement.pdf

American Nurses Association, & Hospice & Palliative Nurses Association. (2017). *Call for action: Nurses lead and transform palliative care.* https://test.nursingworld.org/~497158/globalassets/practiceandpolicy/health-policy/palliativecareprofessionalissuespanelcallforaction.pdf

Aguilera, D. C. (1998). *Crisis intervention: Theory and methodology* (8th ed.). Mosby, Inc.

Allum, N., Sturgis, P., Tabourazi, D., & Brunton-Smith, I. (2008). Science knowledge and attitudes across cultures: A meta-analysis. *Public Understanding of Science, 17*(1), 35-54.

Barnett, L. (1991). Hospice nurses' knowledge and attitudes toward the near-death experience. *Journal of Near-Death Studies, 9*(4), 225-232.

Bechtel, L. J., Chen, A., Pierce, R. A., & Walker, B. A. (1992). Assessment of clergy knowledge and attitudes toward near-death experiences. *Journal of Near-Death Studies, 10*(3), 161-170.

Benning, T., & Rominger, R. (2016). Patients' disclosure of near-death experiences and other anomalous death-related phenomena: Perspectives from a general psychiatric clinic. *Journal of Near-Death Studies, 34*(4), 195-223.

Broome, K. (Director). (2002). *The day I died: The mind, the brain, and near-death experiences* [Film]. BBC Bristol.

Brown, C. G. (2015). Heaven is for real and America's fascination with near-death experiences. In T. Cattoi & C. M. Moreman (Eds.), *Death, dying, and mysticism: The ecstasy of the end* (pp. 133-151). Palgrave Macmillan.

Brumm K. (2006). A study of near-death experiences and coping with stress. *Journal of Near-Death Studies, 24*(3), 153-173.

Bucher, L., Wimbush, F. B., Hardie, T., & Hayes, E. R. (1997). Near death experiences: Critical care nurses' attitudes and interventions. *Dimensions of Critical Care Nursing, 16*(4), 194-201.

Burpo, T., & Vincent, L. (2010). *Heaven is for real: A little boy's astounding story of his trip to heaven and back*. Thomas Nelson.

Bush, N. E. (2002). Afterward: Marking meaning after a frightening near-death experience. *Journal of Near-Death Studies, 21*(2), 99-133.

Bush, N. E. (2009). Distressing Western near-death experiences: Finding a way through the abyss. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 63-86). Praeger/ABC-CLIO.

Bush, N. E. (2012). *Dancing past the dark: Distressing near-death experiences*. Parson's Porch Books.

Bush, N. E. (2016). *The Buddha in hell and other alarms: Distressing near-death experiences in perspective*. IngramSpark.

Bush, N. E., & Greyson, B. (2014). Distressing near-death experiences: The basics. *Missouri Medicine, 111*(6), 486-490.

Callanan, M., & Kelley, P. (1992). *Final gifts: Understanding the special awareness, needs, and communications of the dying*. Simon & Schuster Paperbacks.

Caplan, G. (1964). *Principles of preventative psychiatry*. Basic Books, Inc.

Cassol, H., Martial, C., Annen, J., Martens, G., Charland-Verville, V., Majerus, S., & Laureys, S. (2019). A systematic analysis of distressing near-death experience accounts. *Memory, 27*(8), 1122-1129.

Charlier, P. (2014). Oldest medical description of a near death experience (NDE), France, 18th century. *Resuscitation, 85*(9), e155. https://doi.org/10.1016/j.resuscitation.2014.05.039

Corcoran, D. K. (1988). Helping patients who've had near-death experiences. *Nursing, 18*(11), 34-39.

Corr, C. A. (2015). Death education at the college and university level in North America. In J. M. Stillion & T. Attig (Eds.), *Death, dying and bereavement: Contemporary perspectives, institutions, and practices* (pp. 207-219). Springer.

Creswell, J. W., & Creswell, D. J. (2018, January 2). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications, Inc.

Cunico, L. (2001). Knowledge and attitudes of hospital nurses in Italy related to near-death experiences. *Journal of Near-Death Studies, 20*(1), 37-50.

Dickinson, G. E. (2017). A 40-year history of end-of-life offerings in US medical schools: 1975-2015. *American Journal of Hospice & Palliative Medicine, 34*(6), 559-565.

Dickinson, G. E., & Paul, E. S. (2015). End-of-life issues in UK medical schools. *American Journal of Hospice & Palliative Medicine, 32*(6), 634-640.

DuBois, J. M. (2020). Reanimated: Navigating Life After a Near-Death Experience. *Narrative Inquiry in Bioethics, 10*(1), 1-4.

Fink, A. (2013). *How to conduct surveys: A step-by-step guide* (5th ed.). SAGE, Publications, Inc.

Foster, R., James, D., & Holden, J. M. (2009). Practical applications of research on near-death experiences. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 235-258). Praeger/ABC-CLIO.

Fracasso, C., Friedman, H., & Young, M. S. (2010). Psychologists' knowledge of and attitudes about near-death experiences: Changes over time and relationship to transpersonal self-concept. *Journal of Near-Death Studies, 29*(1), 273-281.

Fremit, M. R. (1989). Near-death experiences: A new understanding. *Physician Assistant, 13*(8), 42-50.

Galeotti, S. (2021). Thanatology. In K. H. Nemeh & J. L. Longe (Eds.), *The Gale Encyclopedia of Science* (6th ed., Vol. 8, pp. 4434-4435). Gale. https://link.gale.com/apps/doc/CX8124402453/SCIC?u=txshracd2623&sid=bookmark-SCIC&xid=0e0529f

Gallup, G., & Proctor, W. (1982). *Adventures in immortality: A look beyond the threshold of death*. McGraw-Hill.

Goedhart, S. (2011). *Exploring general and care-specific attitudes of Dutch health care professionals towards the near-death experience* [Unpublished master's thesis]. University of Amsterdam.

Greyson, B. (1981). Near-death experiences and attempted suicide. *Suicide and Life-Threatening Behavior, 11*(1), 10-16.

Greyson, B. (1983). The near-death experience scale. *Journal of Nervous and Mental Disease, 171*(6), 369-375.

Greyson, B. (1989). Can science explain the near-death experience? *Journal of Near-Death Studies, 8*(2), 77-92.

Greyson, B. (1997). The near-death experience as a focus of clinical attention. *The Journal of Nervous and Mental Disease, 185*(5), 327-334.

Greyson, B. (2006). Near-death experiences and spirituality. *Zygon, 41*(2), 393-414.

Greyson, B. (2014). Near-death experiences. In E. Cardeña, S. J. Lynn, & S. Krippner (Eds.), *Varieties of anomalous experience: Examining the scientific evidence* (2nd ed., pp. 333–367). American Psychological Association. https://doi.org/10.1037/14258-012

Greyson, B. (2022). Persistence of attitude changes after near-death experiences: Do they fade over time? *The Journal of Nervous and Mental Disease, 210*(9), 692–696. https://doi.org/10.1097/nmd.0000000000001521

Greyson, B., & Harris, B. (1987). Clinical approaches to the near-death experiencer. *Journal of Near-Death Studies, 6*(1), 41-52. https://doi.org/10.1007/bf01073267

Greyson, B., Kelly, E. W., & Kelly, E. F. (2009). Explanatory models for near-death experiences. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 213-234). Praeger/ABC-CLIO.

Hagan, T. L., Xu, J., Lopez, R. P., & Bressler, T. (2018). Nursing's role in leading palliative care: A call to action. *Nurse Education Today, 61*, 216–219. https://doi.org/10.1016/j.nedt.2017.11.037

Hayes, E. R., & Orne, R. M. (1991). A study of the relationship between knowledge and attitudes of nurses in practice related to the near-death experience. *Loss, Grief & Care, 4*(1-2), 71-80.

Hayes, E. R., & Waters, L. D. (1989). Interdisciplinary perceptions of the near-death experience: Implications for professional education and practice. *Death Studies, 13*(5), 443-453.

Hoffman, R. M. (1995a). Disclosure habits after near-death experiences: Influences, obstacles, and listener selection. *Journal of Near-Death Studies, 14*(1), 29-48.

Hoffman, R. M. (1995b). Disclosure needs and motives after a near-death experience. *Journal of Near-Death Studies, 13*(4), 237-266.

Holden, J. M. (2017). Near-death experiences. In R. D. Foster & J. M. Holden (Eds.), Connecting soul, spirit, mind, and body (pp. 107-118). University of North Texas Libraries. https://doi.org/10.12794/sps.connecting-008-3

Holden, J. M., Christian, R. (2005). The field of near-death studies through 2001: An analysis of the periodical literature. *Journal of Near-Death Studies, 24*(1), 21-34.

Holden, J. M., Greyson, B., & James, D. (2009). The field of near-death studies: Past, present, and future. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 1-16). Praeger/ABC-CLIO.

Holden, J. M., Kinsey, L., & Moore, T. R. (2014). Disclosing near-death experiences to professional healthcare providers and nonprofessionals. *Spirituality in Clinical Practice, 1*(4), 278-287.

Holden, J. M., MacLurg, J., & James, D. (2006). Media review: The day I died: The mind, the brain, and near-death experiences [videorecording]. *Journal of Near-Death Studies, 25*(2), 121-128.

Holden, J. M., Oden, K., Kozlowski, K., & Hayslip, B. (2011). Teaching about near-death experiences: The effectiveness of using The Day I Died. *OMEGA-Journal of Death and Dying, 63*(4), 373-388.

International Association for Near-Death Studies. (2015). Educational programs. https://iands.org/resources/education/17-educational-programs.html

International Association for Near-Death Studies. (2020). Education resources. https://iands.org/resources/education.html

International Association for Near-Death Studies. (2022, May 25). IANDS on YouTube. https://iands.org/1497-iands-and-nde-radio-on-youtube.html

James, D. (2004). What emergency department staff need to know about near-death experiences. *Advanced Emergency Nursing Journal, 26*(1), 29-34.

Jones, T. L. (2005). Aguilera's theory of crisis intervention. In S. M. Ziegler (Ed.), *Theory-directed nursing practice* (2nd ed., pp. 5-28). Springer Publishing Company, Inc.

Khader, K. A., Jarrah, S. S., & Alasad, J. (2010). Influence of nurses' characteristics and education on their attitudes towards death and dying: A review of literature. *International Journal of Nursing and Midwifery, 2*(1), 1-9.

Khanna, S., & Greyson, B. (2015). Near-death experiences and posttraumatic growth. *The Journal of Nervous and Mental Disease, 203*(10), 749–755. https://doi.org/10.1097/nmd.0000000000000362

Klemenc-Ketis, Z. (2013). Life changes in patients after out-of-hospital cardiac arrest: The effect of near-death experiences. *International Journal of Behavioral Medicine, 20*(1), 7-12.

Loseu, S., & Holden, J. M. (2017). Impact of an online education program on counselors' knowledge and attitudes about near-death experiences. *Journal of Near-Death Studies, 36*(1), 3-26.

Mallory, J. L. (2003). The impact of a palliative care educational component on attitudes toward care of the dying in undergraduate nursing students. *Journal of Professional Nursing, 19*(5), 305-312.

Mandalise, J. (2013). The nursing profession and near-death experiences: A personal and professional update. *Journal of Near-Death Studies, 32*(2), 59-79.

Marks, A., & Marchand, L. (2019, February 11). *Near death awareness*. Palliative Care Network of Wisconsin. https://www.mypcnow.org/fast-fact/near-death-awareness/

Martial, C., Simon, J., Puttaert, N., Gosseries, O., Charland-Verville, V., Nyssen, A., Greyson, B., Laureys, S., & Cassol, H. (2020). The Near-Death Experience Content (NDE-C) scale: Development and psychometric validation. *Consciousness and Cognition, 86,* 103049-14.

Mays, R. G., & Mays, S. B. (2015). Explaining near-death experiences: Physical or non-physical causation? *Journal of Near-Death Studies, 33*(3), 125-149.

McCord, J., Morse, R. S., & Hirsch, N. (2021). Death education. In H. L. Servaty & H. S. Chapple (Eds.), *Handbook of thanatology: The essential body of knowledge for the study of death, dying, and bereavement* (3rd ed., pp. 467-492). The Association for Death Education and Counseling, Inc.

McEvoy, M. D. (1990). The near-death experience: Implications for nursing education. *Loss, Grief & Caring, 4*(1-2), 51-55.

Moody, R. A. (1975). *Life after life*. Mockingbird Books.

Moore, L. H. (1994). An assessment of physicians' knowledge of an attitudes toward the near-death experience. *Journal of Near-Death Studies, 13*(2), 91-107.

Moore, L., & Pate, C. L. (2013). Reflections of near-death experiences and deathbed visions: A study of nursing faculty's perceptions. Journal of Near-Death Studies, 32(2), 81-106.

Morris, L. L. (1998). *The nature and meaning of near-death experiences to patients and critical care nurses* (Publication No. 304482247). [Doctoral dissertation, University of Illinois at Chicago, Health Sciences Center]. ProQuest Dissertations and Theses Global.

Morris, L. L., & Knafl, K. (2003). The nature and meaning of the near-death experience for patients and critical care nurses. *Journal of Near-Death Studies, 21*(3), 139-167.

Narayanan, V. (2021). Thanatology in curriculum: Status and challenges. *Journal of Palliative Care & Medicine, 12*(1).

Nelson, K. (2017). Neuroscience perspectives on near-death experiences. In J. C. Hagan (Ed.), *The science of near-death experiences* (pp. 111-122). University of Missouri Press.

Noyes, R. (1980). Attitude change following near-death experiences. *Psychiatry, 43*(3), 234-242.

Noyes, R., Fenwick, P., Holden, J. M., & Christian, S. R. (2009). Aftereffects of pleasurable Western adult near-death experiences. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 41-62). Praeger/ABC-CLIO.

Oakes, A. (1981). Near-death events in critical care nursing. *Topics in Clinical Nursing, 3*(3), 61-78.

Orne, R. (1986). Nurses' views of NDEs. *American Journal of Nursing, 86*(4), 419-420.

Pace, L., Holden, J. M., Blalock, S., Holliman, R., & Henson, R. K. (2016). Development of the knowledge and attitudes about near-death experiences scale (KANDES). *Journal of Near-Death Studies, 34*(3), 173-188.

Parnia, S., & Fenwick, P. (2002). Near death experiences in cardiac arrest: Visions of a dying brain or visions of a new science of consciousness. *Resuscitation, 52*(1), 5-11. https://doi.org/10.1016/S0300-9572(01)00469-5

Parnia, S., Post, S. G., Lee, M. T., Lyubomirsky, S., Aufderheide, T. P., Deakin, C. D., Greyson, B., Long, J., Gonzales, A. M., Huppert, E. L., Dickinson, A., Mayer, S., Locicero, B., Levin, J., Bossis, A., Worthington, E., Fenwick, P., & Shirazi, T. K. (2022). Guidelines and standards for the study of death and recalled experiences of death--a multidisciplinary consensus statement and proposed future directions. *Annals of the New York Academy of Sciences, 1511*(1), 5-21. https://doi.org/10.1111/nyas.14740

Pennebaker, J. W. (1989). Confession, inhibition, and disease. *Advances in Experimental Social Psychology*, 211–244. https://doi.org/10.1016/s0065-2601(08)60309-3

Pennebaker, J. W., & Susman, J. R. (1988). Disclosure of traumas and psychosomatic processes. *Social Science & Medicine*, *26*(3), 327–332. https://doi.org/10.1016/0277-9536(88)90397-8

Pine, V. (1977). A socio-historical portrait of death education. *Death Education, 1*(1), 227-232.

Rawlings, D., & Devery, K. (2015). Near death experience and nursing practice: Lessons from the palliative care literature. *Australian Nursing and Midwifery Journal*, *22*(8), 26-29.

Ring, K. (1980). *Life at death: A scientific investigation of the near-death experience*. Coward Mc Cann.

Ring, K. (1995). The impact of near-death experiences on persons who have not had them: A report of a preliminary study and two replications. *Journal of Near-Death Studies, 13*(4), 223-235.

Ring, K., & Cooper, S. (1997). Near-death and out-of-body experiences in the blind: A study of apparent eyeless vision. *Journal of Near-Death Studies, 16*(2), 101-147.

Ring, K., & Lawrence, M. (1993). Further evidence for veridical perception during near-death experiences. *Journal of Near-Death Studies, 11*(4), 223-229.

Rominger, R. A. (2009). Exploring the integration of near-death experience aftereffects: Summary of findings. *Journal of Near-Death Studies*, *28*(1), 3-34.

Royse, D. (1985). The near-death experience: A survey of clergy's attitudes and knowledge. *Journal of Pastoral Care*, *39*(1), 31–42.

Sabom, M. (1982). *Recollections of death: A medical investigation*. Harper and Row.

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). SAGE Publications, Inc.

Samoilo, L., & Corcoran, D. (2020). Closing the medical gap of care for patients who have had a near-death experience. *Narrative Inquiry in Bioethics*, *10*(1), 37-42. https://doi.org/10.1353/nib.2020.0011

Sanford, J. (2015). Proof of heaven?: Controversy over near-death experiences in American Christianity. *The Hilltop Review, 8*(1), 97-108.

Sartori, P. (2014). *The wisdom of near-death experiences: How understanding NDEs can help us live more fully*. Watkins Media Limited.

Sheeler, R. D. (2005). Teaching near death experiences to medical students. *Journal of Near-Death Studies, 23*(4), 239-247.

Sheils, D. (1978). A cross-cultural study of beliefs in out-of-body experiences, waking and sleeping. *Journal of the Society for Psychical Research, 49*(775), 697-741.

Simpson, S. M. (2001). Near death experience: A concept analysis as applied to nursing. *Journal of Advanced Nursing*, *36*(4), 520-526.

Sitzman, K., & Watson, J. (2018). *Caring science, mindful practice: Implementing Watson's human caring theory* (2nd ed). Springer Publishing Company, LLC.

Smith Glasgow, M. E., Dreher, H. M., & Schreiber, J. (2019). Standardized testing in nursing education: Preparing students for NCLEX-RN® and practice. *Journal of Professional Nursing*, *35*(6), 440–446. https://doi.org/10.1016/j.profnurs.2019.04.012

Stout, Y. M., Jacquin, L. A., & Atwater, P. M. H. (2006). Six major challenges faced by near-death experiencers. *Journal of Near-Death Studies, 25*(1), 49-62.

Sung, S. C., Huang, H. C., & Lin, M. H. (2015). Relationship between the knowledge, attitude, and self-efficacy on sexual health care for nursing students. *Journal of Professional Nursing*, *31*(3), 254-261.

Sura, S. D., Chabria, A., & Sansgiry, S. (2011). Relationship of herbal knowledge towards attitude formation among future pharmacists. *Value in Health*, *14*(3), A25-A26.

Sutherland, C. (1990). Changes in religious beliefs, attitudes, and practices following near-death experiences: An Australian study. *Journal of Near-Death Studies, 9*(1), 21-31.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson.

Tassell, N. A., & Lindsay, N. (2016). “I’m not afraid to die”: The loss of the fear of death after a near-death experience. *Mortality, 21*(1), 71-87. http://dx.doi.org/10.1080/13576275.2015.1043252

Tassell, N. A., & Lindsay, N. (2017). Undergraduate psychology students’ knowledge and attitudes about near-death experiences: Does education about NDEs make a difference? *Journal of Near-Death Studies, 36*(1), 27-52.

Tedeschi, R. G., Shakespeare-Finch, J., Taku, K., & Calhoun, L. G. (2018). *Posttraumatic growth: Theory, research, and applications*. Routledge.

Thornburg, N. R. (1988). Development of the near-death phenomena knowledge and attitudes questionnaire. *Journal of Near-Death Studies, 6*(4), 223-239.

van Lommel, P. (2004). About the continuity of our consciousness. In C. Machado & D. A. Shewmon, (Eds.), *Brain death and disorders of consciousness: Advances in experimental medicine and biology* (Vol. 550). Springer. https://doi.org/10.1007/978-0-306-48526-8_9

Wallace, R. (Director). (2014). *Heaven Is for Real* [Film]. TriStar Pictures.

Walker, B. A. (1989). Health care professionals and the near-death experience. *Death Studies, 13*(1), 63-71.

Walker, B. A., & Russell, R. D. (1989). Assessing psychologists' knowledge and attitudes toward near-death phenomena. *Journal of Near-Death Studies, 8*(2), 103-110.

Watson, J. (2018). *Unitary caring science: The philosophy and praxis of nursing*. The University Press of Colorado.

Zingrone, N. L., & Alvarado, C. S. (2009). Pleasurable Western adult near-death experiences: Features, circumstances, and incidence. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 17–40). Praeger/ABC-CLIO.

Appendices

Appendix A: Email Study Participation Invitation

Dear Nursing Student,

My name is Laura Varela and I am a doctoral candidate at the University of the Incarnate Word. I am writing to invite you to participate in a research study that I am conducting on nursing students' knowledge and attitudes toward certain transpersonal experiences. Your unique perspective, as a nursing student, is extremely important and it will help provide valuable information to further this area of research. This study will contribute to the fields of health care, nursing preparation, and transpersonal experience research.

As a currently enrolled nursing student, you are eligible to participate in this study. Participation in this study is voluntary. If you decide to participate in this study, you will be asked to complete a survey that should take approximately 30 minutes. Your responses will be kept confidential. If you participate, you will be eligible to enter a drawing for one of four $50 Visa gift cards. If you wish to enter the drawing, you will have the opportunity to provide an email address using a link provided at the end of the survey. Entering the drawing is optional and your e-mail address will not be associated with your survey responses in any way.

If you would like to participate, please click on the link below and you will be directed to the survey site.

Survey link: **https://www.surveymonkey.com/r/KHP2G2T**

This survey will be available until January 10, 2019.

If you have questions about the study, please feel free to contact me at lvarela@uiwtx.edu or my faulty advisor, Dr. Alfredo Ortiz at alortiz1@uiwtx.edu. For questions about your rights as a research participant or to discuss problems, complaints, or concerns about a research study, or to obtain information or offer input, contact the UIW Institutional Review Board (IRB) at 210-805-3036. This research and survey tool has been approved by the UIW IRB (IRB #18-11-001).

Thank you for your time and consideration.

Laura Varela

Appendix B: Survey Protocol

Knowledge of and Attitudes toward Certain Transpersonal Experiences

The following survey contains questions regarding your knowledge and attitudes toward certain transpersonal experiences. This study will contribute to the fields of health care, nursing preparation, and transpersonal experience research.

If you decide to take part, there will be no adverse consequences and your identity and responses will remain confidential. All information obtained from you in the study will be confidential. If study results are published, you will not be identified in any way.

Your decision to take part in the study is voluntary. You are free to choose not to take part in the study or to stop taking part at any time. If you choose not to take part or to stop at any time, it will not affect your future status at the university or your grades in any way. Completion of the survey will take approximately 30 minutes. Participants will be eligible to enter a drawing for one of four $50 Visa gift cards. Entering the drawing is optional and your email address will not be associated with your survey responses.

If you have questions about the study, please feel free to contact Laura Varela at lvarela@uiwtx.edu. You can also contact the faulty advisor for the study, Dr. Alfredo Ortiz, at alortiz1@uiwtx.edu. For questions about your rights as a research participant or to discuss problems, complaints, or concerns about a research study, or to obtain information or offer input, contact the UIW Institutional Review Board (IRB) at 210-805-3036. This research and survey tool has been approved by the UIW IRB (IRB #18-11-001).

If you experience any emotional discomfort related to the topics discussed in the survey, you can contact the [redacted] Counseling Center at [redacted]. Additionally, further information about counseling services offered to enrolled students can be found at [redacted].

YOUR COMPLETION OF THIS SURVEY INDICATES THAT YOU ARE AT LEAST 18 YEARS OLD, YOU CONSENT TO TAKE PART IN THIS RESEARCH, AND THAT YOU HAVE READ AND UNDERSTOOD THE INFORAMTION PROVIDED ABOVE.

Do you consent?
○ YES
○ NO

*If this question was answered no, the subject was exited from the survey.

Imagine that you are learning the history of a new adult patient. The patient describes having been in a serious car accident three years prior, and that while physically unconscious at the accident scene, the patient had a very real experience of being outside the body, feeling profoundly calm, seeing people's efforts to rescue the patient's body, and meeting a deceased grandparent who communicated that the patient couldn't stay and had to return to physical life; the next thing the patient remembers was regaining consciousness several hours later in the hospital.

What would your reactions be to hearing this account?

A – Completely disagree
B – Mostly disagree
C – Somewhat disagree
D – Uncertain
E – Somewhat agree
F – Mostly agree
G – Completely agree

(Answer options provided for each question in dropdown menu form.)

1. I would be surprised or confused by what my patient was describing.
2. I would think my patient was describing a dream, hallucination, or other imaginary experience.
3. I would consider the experience spiritually threatening or scary.
4. I wouldn't know what to make of what my patient was describing.
5. I would not believe the experience actually happened.
6. I would want to give my patient every opportunity to talk about this subject.
7. I would think that my patient's experience was purely imaginary - like a dream or hallucination.
8. I would consider the experience a sign of mental illness.
9. I would recognize what my patient described as a kind of experience that is somewhat common.
10. I would believe it was a potentially helpful spiritual experience.
11. I would believe my patient was truthfully describing what he or she experienced.

12. I would think my patient's experience belongs in the same category as a dream or hallucination.

13. I think it would be best to avoid further discussion of the subject.

14. I would question my patient's mental health for having had the experience.

15. I would think my patient was honestly telling me what he/she experienced.

16. I would think that my patient's experience might be objectively real - not just a dream or hallucination.

17. I would steer my patient away from talking further about this subject.

18. I would think the experience came from an ultimately benevolent spiritual source.

19. I would not doubt my patient's sanity just for having had the experience.

20. I would think that my patient was lying or making up the story.

21. I would invite my patient to talk more about this subject if he/she wished.

22. I would consider such an experience to be within the bounds of psychological normalcy.

23. I would recognize it as, or even call it, a near-death experience (NDE).

In the following section, please respond to each item relying on your general knowledge of near-death experiences. You no longer need to recall the account from the previous section.

A – Completely True
B – Somewhat True
C – Unsure
D – Somewhat False
E – Completely False
(Answer options provided for each question in dropdown menu form.)

1. Near-death experiencers' (NDErs') disclosures of their near-death experiences (NDEs) are often met with skepticism and disbelief from significant others.

2. NDEs have been reported by people of various races and ethnicities.

3. NDErs sometimes report encountering a "point of no return" during their NDEs.

4. During an NDE, many people feel the effects they have had on other people throughout their lives.

5. NDErs frequently report that their experience was like a hallucination or a drug induced state.

6. NDErs often report that time during their NDE occurred different than "Earth time."

7. During an NDE, people often experience a deep level of peacefulness.

8. It is unusual for people who experience NDEs to have a profound sensation of unconditional love during their experiences.

9. During an NDE, people often experience making a decision whether or not to come back to their bodies.

10. People have reported seeing and hearing things during their NDEs that occurred in the operating room while they were unconscious, such as in a coma or deeply anesthetized.

11. During an NDE, people often experience their thinking to be slower and less clear.

12. NDErs frequently report feeling a deep sense of fear when encountering the light during their experience.

13. More women than men report NDEs.

14. NDEs have not been reported by children.

15. Individuals' values before an NDE are usually compatible with their values after an NDE.

16. It is common for people who have experienced an NDE to have no fear of death.

17. The vast majority of people who experience NDEs are profoundly changed for decades after the experience.

18. It is common for people who have experienced an NDE to be less materialistic after their NDE.

19. It is common for NDErs to feel frustrated when trying to describe their NDEs to other people.

20. It would be unusual for someone to change their career in the aftermath of an NDE.

21. It is common for people who have experienced an NDE to be more interested in prestige and fame after their NDE.

22. People of all ages have reported NDEs.

23. People who experience NDEs often become more competitive after their experience.

1. What is your sex?
   ○Female
   ○Male
   ○Prefer not to answer

2. What is your age in years?

3. Which best describes your ethnicity?
   ○Asian
   ○Black/African American
   ○Hispanic or Latino/a
   ○Native Hawaiian/Pacific Islander
   ○White, European heritage
   ○Other
   ○Prefer not to answer

4. What is your religious affiliation, if any?

5. How many credit hours have you earned in the nursing major?

6. Do you have prior experience working in the medical field? If yes, how many years?

7. Do you currently or have your previously held any medical licenses or certifications? If yes, please list.

8. Have you had a near-death experience?

9. Has someone you know had a near-death experience?

10. From what source(s) have you learned about near-death experiences? Please describe.

11. Considering the prior question, which single source of information has been the most influential to your overall knowledge of near-death experiences? Please be specific. For example, if you read an article, please state if it was in a magazine or academic journal.

12. Have your nursing instructors included the topic of near-death experiences in your courses? If yes, please describe ways that they have included the topic into their courses.

13. Are you aware of any strategies for working with patients who have had a near-death experience? If yes, please share.

14. Do you think the topic of near-death experiences should be included in nursing education? Please explain why or why not?

15. If given the opportunity, would you want to learn more about near-death experiences?
    ○Yes
    ○No

Thank you for completing this survey. Your participation is appreciated.

If you would like to be entered into a drawing to win one of four $50 Visa gift cards, please follow the link below.

https://www.surveymonkey.com/r/KBCHLM8

Appendix C: IRB Approval

UNIVERSITY OF THE INCARNATE WORD

November 8 2018

To: Ms Laura Varela

From: University of the Incarnate Word Institutional Review Board, FWA00009201

Laura:

Your request to conduct the study titled Nursing Students' Knowledge of and Attitude towards Near-Death Experiences was approved by review on 11/08/2018. Your IRB approval number is 18-11-001. You have approval to conduct this study through 11/08/19.

Please keep in mind the following responsibilities of the Principal Investigator:

1. Conducting the study only according to the protocol approved by the IRB.
2. Submitting any changes to the protocol and/or consent documents to the IRB for review and approval prior to the implementation of the changes. Use the **IRB Amendment Request** form.
3. Ensuring that only persons formally approved by the IRB enroll subjects.
4. Reporting immediately to the IRB any severe adverse reaction or serious problem, whether anticipated or unanticipated.
5. Reporting immediately to the IRB the death of a subject, regardless of the cause.
6. Reporting promptly to the IRB any significant findings that become known in the course of the research that might affect the willingness of the subjects to participate in the study or, once enrolled, to continue to take part.
7. Timely submission of an annual status report (for exempt studies) or a request for continuing review (for expedited and full Board studies). Use either the **IRB Study Status Update** or **IRB Continuing Review Request** form.
8. Completion and maintenance of an active (non-expired) CITI human subjects training certificate.
9. Timely notification of a project's completion. Use the **IRB Closure** form.

Approval may be suspended or terminated if there is evidence of a) noncompliance with federal regulations or university policy or b) any aberration from the current, approved protocol.

If you need any assistance, please contact the UIW IRB representative for your college/school or the Office of Research Development.

Sincerely,

Ana Hagendorf, PhD, CPRA

Ana Hagendorf, PhD, CPRA
Director, Office of Research and Sponsored Projects Operations
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