Impact of Formal Education Regarding Breaking Bad News on Self-Efficacy

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Abstract

Background: Breaking bad news in a clinical setting can lead to a negative experience for the healthcare provider when delivered inappropriately. This Doctor of Nursing Practice (DNP) Practice Innovation Project seeks to discover if healthcare providers who receive formal education in breaking bad news to patients have increased self-efficacy in breaking bad news compared with healthcare providers not formally educated in a DNP Program. This comparison was analyzed using a pre-test/post-test format. **Purpose:** The purpose of this DNP Practice Innovation Project is to improve the healthcare provider's self-efficacy in breaking bad news to a patient through an educational module outlining the SPIKES protocol, ultimately improving the experience for the healthcare provider. **Methodology:** Participants included students enrolled in the DNP program in the Saint Mary's College Department of Nursing Science. The SE-12 self-efficacy tool measured the participants' self-efficacy utilizing a pre-test/post-test method that measured self-efficacy before and after the presentation of the educational module. The data from the pretest and posttest were analyzed using a two-tailed paired samples *t*-test. **Results:** The result was significant, suggesting the difference in the mean overall score of the SE-12 pretest and the mean overall score of the SE-12 posttest was significantly different from zero. The mean overall score of the SE-12 pretest was significantly lower than the mean overall score of the SE-12 posttest. **Conclusion:** This study established how education about breaking bad news can lead to an improved experience for the healthcare provider, ultimately improving health outcomes.

Keywords: breaking bad news, self-efficacy, SPIKES protocol, SE-12 self-efficacy tool, healthcare provider

1. Introduction

Breaking bad news in a clinical setting can lead to a negative experience for the healthcare provider when the news is delivered inappropriately (Gorniewicz et al., 2017). Bad news is defined as "any news that drastically and negatively alters the patient's view of her or his future" (Buckman, 1984, p. 1597). Poor healthcare provider outcomes resulting from breaking bad news include an increase in stress (Fallowfield, 1993), anxiety (Sykes, 1989), emotional exhaustion, and a lower sense of personal accomplishment (Ramirez et al., 1995). Formal education to improve the process of breaking bad news to patients resulted in increased confidence in the healthcare provider (Baile et al., 2000; Moura Villela et al., 2020). Additionally, formal education in breaking bad news led to a more satisfying and less uncomfortable experience for the healthcare provider, the patient, and the patient's family members (Baile et al., 2000; Moura Villela et al., 2020).

The phenomenon of breaking bad news is both a health promotion and a health system issue. When bad news is not delivered appropriately, the healthcare provider risks developing negative consequences (Fallowfield, 1993; Ramirez et al., 1995; Sykes, 1989). This is a health promotion issue because the inappropriate delivery of bad news can change the outlook and interpretation that the patient and their family members have about the illness (Mostafavian & Shaye, 2018). It is a health system issue because formal training leads to better health outcomes for patients and healthcare providers (Gorniewicz et al., 2017).

2. Background

Breaking bad news in a clinical setting can negatively impact the healthcare provider responsible for delivering the bad news if not delivered appropriately (Fallowfield, 1993; Sykes, 1989; Ramirez et al., 1995). Education

focused on communication skills has improved healthcare provider communication and self-efficacy in breaking bad news to patients (Axboe et al., 2016; Gorniewicz et al., 2017). Increased self-efficacy leads to improved confidence in clinical communication, which results in an improved experience for the healthcare provider (Axboe et al., 2016). The phenomenon of breaking bad news to patients is within the scope of the DNP-prepared Advanced Practice Registered Nurse (APRN) because it directly affects the care the ARPN provides to the patient. The target population for this project is the healthcare providers responsible for breaking the bad news to patients in a clinical setting. This project is healthcare-focused, with the exchange of bad news from a healthcare provider to a patient in a clinical setting.

Strong communication is key to breaking bad news effectively (Kebede et al., 2020) and is highlighted in Healthy People 2030 through the goal of "Health Communication" (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion [HHS ODPHP], 2020). This objective recognizes and acknowledges the importance of clear communication between healthcare providers and patients so that the information received can be utilized to its maximum potential (HHS ODPHP, 2020). Education about communicating bad news to patients improved the provider's skill set and self-efficacy (Axboe et al., 2016; Servotte et al., 2019). Healthcare providers that were surveyed felt unprepared to break the bad news to patients and appreciated education and training about the subject (Brouwers et al., 2018; Goncalves et al., 2017)

The need for formal education about breaking bad news to patients is apparent in several research studies. Historically, education concerning breaking bad news is deferred to training through experience with patients instead of formal training in a classroom environment because the subject matter is tedious, and there is often a lack of resources required to provide formal education on breaking bad news (Bagacean et al., 2020; Baile et al., 2000; Cvengros et al., 2016; Vandekeift, 2001). Yip et al. (2018) found that a group of family medicine residents ranked education about breaking bad news as one of the most important topics. Patients that were surveyed found it essential for the healthcare professional to be empathetic, a good communicator, and knowledgeable about treatment choices (Bagacean et al., 2020). This directly relates to formal training on breaking bad news because this training emphasizes empathy and communication in breaking bad news.

3. Problem Statement

Strong communication is paramount to breaking bad news (Kebede et al., 2020). Education and training about breaking bad news and patient communication led to an improvement in the skill set of breaking bad news, communication skills of the health care providers, and improvement in confidence levels in delivering bad news to patients (Servotte et al., 2019). Education in clinical communication skills has also increased self-efficacy in interactions between patients and healthcare providers (Axboe et al., 2018). This led to a better experience for the healthcare provider because of improved confidence in communication (Axboe et al., 2016). This concept is relevant and critical in the healthcare field, as it can affect the well-being of the healthcare provider (Gorniewicz et al., 2017).

The purpose of this DNP Practice Innovation Project is to improve the healthcare provider's self-efficacy in breaking bad news to a patient through an educational module, ultimately improving the experience for the healthcare provider. Self-efficacy is described by psychologist Albert Bandura (1986) as one's personal belief in their ability to execute a particular task successfully. This project contributes to the general nursing knowledge because educational interventions for healthcare providers about breaking bad news to patients have improved self-efficacy and confidence in the healthcare provider (Chung et al., 2016; Gorniewicz et al., 2017; Johnson & Panagioti, 2018). This DNP Practice Innovation Project focuses on the healthcare provider's perspective and how educating the healthcare provider about breaking bad news can improve the healthcare provider's experience.

4. PICO(T) and Objectives

The PICOT question for this DNP Practice Innovation Project asks: Do healthcare providers who receive formal education in breaking bad news to patients have increased self-efficacy in breaking bad news compared with healthcare providers not formally educated in a Doctor of Nursing Practice Program?

The first objective of this DNP Practice Innovation Project was to improve the healthcare provider's self-efficacy in breaking bad news to patients through an educational module, which ultimately enhances the experience for the healthcare provider. Education focused on communication skills has been shown to improve healthcare provider communication in breaking bad news (Gorniewicz et al., 2017)

The second objective was to offer this training in a classroom environment. Formal training in a safe and controlled classroom environment is preferable in improving the experience of breaking bad news for healthcare providers compared to learning in unpredictable clinical situations (Cvengros et al., 2016; Brouwers et al., 2018).

This DNP Practice Innovation Project focused on the perspective of the healthcare provider and how education about breaking bad news can lead to a better experience for the provider through improved self-efficacy and confidence in the healthcare provider (Chung et al., 2016; Gorniewicz et al., 2017; Johnson & Panagioti, 2018).

5. Literature Review

A literature review was conducted using articles published from 2016 to 2021. The databases Cochrane Central Register of Controlled Trials, Cochrane Clinical Answers, Cochrane Database of Systematic Reviews, Cochrane Methodology Register, EBSCO Management Collection, Ovid, and MEDLINE with Full Text were searched, and 671 articles were retrieved and reviewed. Ultimately, 75 articles were used in this DNP Practice Innovation Project. Inclusion criteria for these articles included peer-reviewed articles written in English. Only articles from the last five years were used, except for 10 sentinel articles. Melynk and Finehout's Grading System (2014) was used to grade all articles. These databases were searched using the keywords "breaking bad news to patients," "diagnosis delivery," "breaking bad news," "breaking bad news in health care," "breaking significant news," and "delivering a difficult diagnosis." The search was narrowed to include only peer-reviewed articles within the last five years. This literature search allowed the concept of breaking bad news to be discovered in various health care settings, including oncology, women's health, neurology, and the emergency department.

The concept of breaking bad news is relevant and critical in the healthcare field, as it can affect how the patient copes with their circumstances (Bumbe et al., 2017; Warnock et al., 2017). A literature review identified what is known and unknown about this concept. While the concept of breaking bad news has been thoroughly studied for decades in various settings among different cultures, there are specific areas needing exploration and additional research, such as education to healthcare providers regarding breaking bad news.

6. Definition of Terms

Several terms were commonly used in the literature regarding breaking bad news that are critical to understand. The complete understanding of these terms is essential because it allows for a comprehensive understanding of the literature regarding breaking bad news. These terms are defined according to their use in the literature about breaking bad news.

Table 1. Definition of Terms

Term	Definition
Bad News	Bad news is defined as information that will likely change a person's perception of their future (Buckman, 1984). This definition is used widely in the research regarding breaking bad news and is used in this DNP Practice Innovation Project when referring to breaking bad news. This concept is relevant and critical in healthcare as it can affect how patients cope with their circumstances (Warnock et al., 2017).
Blackboard	Blackboard is the online learning management system used by Saint Mary's College that connects students and teachers to educational content and facilitates connections with other students and teachers within the interface (Blackboard, 2022).
Emotional Empathy	Emotional empathy is defined as the ability of the healthcare provider to feel what the patient is feeling (Powell & Roberts, 2017). This allows the healthcare provider to assess and monitor the patient's state of mind, react appropriately, and customize the encounter accordingly (Hurst et al., 2015; Mishelmovich et al., 2016).
Self-efficacy	Self-efficacy is a concept derived from Albert Bandura's Social Cognitive Theory (Bandura, 1986). Self-efficacy is defined as one's belief in the ability to perform a particular skill through the skill set that one possesses under varying circumstances (Bandura, 1997). Successful functioning must incorporate skill competency and the confidence to use the skill (Bandura, 1997). Cognitive, social, emotional, and behavioral attributes are necessary for facilitating self-efficacy because each attribute contributes to one's perceived confidence in performing a specific skill (Bandura, 1997). Bandura (1990) concluded that improved self-efficacy leads to increased goal attainment.
Communication	Communication is defined as how information is shared and is an essential attribute of the concept of breaking bad news (Bumbe et al., 2017). The method in which the bad news is shared with the patient affects how decisions are made about a care plan, the patient's perception of control over the circumstances, and the appropriateness of a treatment plan

	(Bumbe et al., 2017; Warnock et al., 2017). In addition, the element of clear communication is viewed as the highest level of importance in an exchange between the healthcare provider and the patient (Krohn et al., 2017; Ong et al., 1995).
Education	Education is the formal learning process about a specific subject in which the presenter instructs and advises the student on specific aspects of a topic using clear communication (Markowitz & Reid, 2018). In this DNP Practice Innovation Project, education refers to the formal teaching given to healthcare providers regarding breaking bad news to patients.
Quality Improvement	Quality improvement is defined as the methodical and organized way that a process is enhanced to better meet the goal of the purpose that the process serves (Moran et al., 2020). The DNP Practice Innovation Project is a quality improvement project because it examines the current literature about breaking bad news to patients and describes an intervention to improve this process.
SPIKES Protocol	Discussed in detail later in this paper, the SPIKES protocol refers to Setting, Perception, Invitation, Knowledge, Emotion, and Summary

7. Themes and Concepts in the Literature

The emerging theme found in the literature about breaking bad news is education and the importance of having a formal education in breaking bad news (Moura Villela et al., 2020; Setubal et al., 2017; Yip et al., 2018; and Zwingman et al., 2017). Communication and self-efficacy are the major concepts influencing the main concept of education in breaking bad news.

7.1 Breaking Bad News

The concept of breaking bad news is relevant and critical in the healthcare field, as it can affect how patients cope with their circumstances (Bumbe et al., 2017; Warnock et al., 2017). A literature review identified what is known and unknown about this concept. While the concept of breaking bad news has been thoroughly studied for decades in various settings among different cultures, there are specific areas needing exploration and additional research, such as education to healthcare providers regarding breaking bad news.

7.2 Impact of Breaking Bad News on the Healthcare Provider

When bad news is not delivered appropriately, the healthcare provider is at risk of experiencing negative consequences, including an increase in stress (Fallowfield, 1993), anxiety (Sykes, 1989), emotional exhaustion, and a lower sense of personal accomplishment (Ramirez et al., 1995). Daffalah et al. (2020) focused on the SPIKES protocol (Baile et al., 2000), a sentinel study used to break bad news to patients. Many healthcare professionals are not formally trained in their educational curriculum to break bad news to their patients because the subject matter is tedious and requires a significant amount of effort (Baile et al., 2000; Vandekieft, 2001). Additionally, Hoffman et al. (2018) highlighted the importance of training nurse practitioners to give patients bad and difficult news and found that this training is often lacking during the orientation period.

7.3 Education

The literature refers to the concept of education when discussing the concept of breaking bad news. Servotte et al. (2019) found education and training in breaking bad news to patients led to an improvement in the skill set of breaking bad news, communication skills of the health care providers in the emergency department, and improvement in confidence levels in delivering bad news to patients. Similarly, Goncalves et al. (2017) found that most physicians surveyed in the study felt the need for more training and felt unprepared to break bad news to patients. Students who have undergone training in breaking bad news appreciated feedback from simulated patients and clinicians in their technique and ultimately found it helpful (Brouwers et al., 2018). Computerized conversational assistants known as "virtual human software," was shown to be beneficial and valuable in assessing the competence of healthcare professionals in breaking bad news (Guetterman et al., 2017).

When bad news is not delivered appropriately, the healthcare provider risks experiencing negative consequences. Healthcare providers reported symptoms of depression after giving bad news to patients in an oncology center (Alshmmary et al., 2017). Daffalah et al. (2020) provided evidentiary support that formal training in breaking bad news to patients allows for a more successful encounter with the patient than healthcare providers who did not have any training. Daffalah et al. (2020) focused on the SPIKES protocol (Baile et al., 2000).

8. Education for Oncology Healthcare Providers

The need for training regarding breaking bad news is urgent in the oncology setting due to an increase in people surviving cancer, an aging population in the United States, and enhancement in healthcare coverage for previously uninsured people (Coombs et al., 2016). The number of nurse practitioners currently practicing in the oncology workforce is increasing; therefore, the education regarding breaking bad news should be improved (Coombs et al., 2016). Education regarding breaking bad news in the oncology setting is complex because a delicate balance of realism and optimism is necessary (Vakada et al., 2018). When receiving a breast cancer diagnosis, women who were optimistic about their diagnosis had better coping skills when compared with women in the same situation who were not optimistic (Vakada et al., 2018). An appropriate amount of optimism may be an essential tool for the provider to incorporate when breaking bad news to the patient (Vakada et al., 2018).

Physicians and APRNs have indicated that they are not properly trained in delivering bad news to patients and often have a negative experience personally when delivering bad news to the patient (Rosenzweig, 2012). However, research has shown that training within the medical provider educational programs regarding communication skills has become protocol. In contrast, this type of training still lacks in the training of the APRN (Corey & Gwyn, 2016). Corey & Gwyn (2016) promoted an educational training program for APRNs regarding communication with oncology patients, in which five nurse practitioners were educated about the SPIKES protocol. After this education, they were asked to implement the SPIKES protocol in their practice for 30 days and then were interviewed about their experiences using the SPIKES protocol (Corey & Gwyn, 2016). Corey & Gwyn (2016) stated that the APRNs found that using the SPIKES protocol was helpful in breaking bad news and improved the experience for both the patient and the provider. DNP-prepared APRNs play an integral part in caring for oncology patients, as oncology interfaces with many other disciplines to ensure that the patient has a comprehensive plan of care.

8.1 Communication

In the literature regarding breaking bad news, the concepts of communication and education are closely linked. The literature suggests the advancement of robust, formal education regarding the communication of bad news between the healthcare provider and the patient (Bagacean et al., 2020; Chung et al., 2016; Cvengros et al., 2016; 2020; Kron et al., 2017). The SPIKES protocol (Baile et al., 2000) is discussed in much of the literature as a template for guiding difficult conversations. Specifically, the SPIKES protocol (Baile et al., 2000) was discussed by Wolfe et al. (2016) when used to formally educate health care providers in delivering bad news to the family members of pediatric patients.

Communication is an essential attribute of the concept of breaking bad news and is the foundation of the SPIKES protocol (Baile et al., 2000). The method in which the information is communicated to the patient affects the way decisions are made about a plan of care by both the patient and the healthcare provider. The method of communication also affects the patient's perception of control over the circumstances and the appropriateness of a treatment plan (Bumbe et al., 2017; Warnock et al., 2017). In addition, the element of clear communication is viewed as the highest level of importance in an exchange between the healthcare provider and the patient (Krohn et al., 2017; Ong et al., 1995). The attribute of communication must consider communication with the entire family. Rao et al. (2016) conducted a study about the presence of family members when a cancer diagnosis is delivered to a patient. The study concluded that most patients prefer the involvement of family members during the delivery of a cancer diagnosis (Rao et al., 2016).

In considering the concept of a healthcare provider breaking bad news to a patient, the healthcare provider has information that must be expressed. Giving accurate information in a way that the patient and patient's family understand and prefer is paramount to the patient's quality of life (Rozveh et al., 2017). Interventions to improve breaking bad news have increased confidence in the healthcare provider responsible for breaking bad news (Johnson & Panagioti, 2018).

8.2 Self -Efficacy

Psychologist Albert Bandura (1986) described self-efficacy as one's personal belief in their ability to execute a particular task successfully. Educational interventions for healthcare providers about breaking bad news to patients have been shown to improve healthcare provider self-efficacy and confidence (Chung et al., 2016; Gorniewicz et al., 2017, Johnson & Panagioti, 2018). Self-efficacy requires the knowledge or skills to successfully achieve a goal and the self-confidence to achieve the goal under varying circumstances (Bandura, 1997). Axboe et al. (2016) developed a tool using self-efficacy to determine the impact of a training module

aimed at teaching communication skills to healthcare providers. The SE-12 tool was found to be reliable and valid in measuring self-efficacy before and after the training module (Axboe et al., 2016).

8.3 Quality Improvement

This DNP Practice Innovation Project is a quality improvement project. The goal is to improve the education that healthcare providers receive regarding breaking bad news to patients, which will improve the experience for the healthcare provider. Evidence shows formal training to enhance the process of breaking bad news to patients leads to increased confidence in the healthcare provider and an overall more satisfying and less uncomfortable experience for the healthcare provider, the patient, and the patient's family members (Moura Villela et al., 2020). Strong communication is paramount to breaking bad news, and strategies in the communication of bad news are helpful to the healthcare provider (Kebede et al., 2020)

8.4 SPIKES Protocol

The phenomenon being researched is breaking bad news to patients in a clinical setting. The SPIKES protocol (Baile et al., 2000) is often utilized in the framework to break bad news to patients. The majority of the literature regarding breaking bad news mentions the SPIKES protocol (Baile et al., 2000). Table two summarizes the central concepts of the SPIKES protocol.

Table 2. Definition and Implementation of SPIKES protocol

Steps	Definition	Implementation
Setting	The physical space in which the bad news is exchanged from provider to patient (Baile et al., 2000).	Ensure a private space, engage the other people that the patient brought along, minimize interruptions, connect with the patient by maintaining eye contact, and be seated (Baile et al., 2000).
Perception	Assess the patient's knowledge and thoughts of their medical situation and possible results (Baile et al., 2000).	Assess the patient's perception by asking open-ended questions about their understanding of the situation (Baile et al., 2000).
Invitation	Obtain the patient's consent to give the results and information, and do not assume they would like to know all the details (Baile et al., 2000).	Asking permission to go over the results with the patient is a way to obtain consent. If the patient does not want to know the results, the conversation can begin by asking them if they have any questions about the information or the results (Baile et al., 2000).
Knowledge	An initial preamble that warns the patient that bad news is coming can help decrease the shock when the news is disclosed (Baile et al., 2000). While giving the information, speak with words and phrases that are understandable to the patient, avoiding technical terms, bluntness, and medical jargon (Baile et al., 2000). Give the information in small, understandable pieces, checking for understanding throughout the conversation (Baile et al., 2000).	This can be unaccomplished by saying, "unfortunately, this isn't the news we were hoping for…" (Baile et al., 2000). Using words that are easier to understand but still convey the same meaning is essential, such as using the word "spread" instead of "metastasized" (Baile et al., 2000).
Emotion	Empathetic responses to address the patient's emotions are paramount to breaking bad news (Baile et al., 2000).	Observing the emotion, identifying the emotion, identifying the reason for the emotion, and connecting the emotion with the reason for the emotion, are essential steps in giving an empathetic response to the patient (Baile et al., 2000).
Summary	Discussion of main points of the conversation, with the ultimate goal of constructing a plan of care so that the patient will have a more precise way to progress with their new information (Baile et al., 2000)	Begin by asking if the patient would like to discuss the next steps so that a treatment plan can begin (Baile et al., 2000). Discuss the next steps, including planning and decision making, checking along the way to ensure that the patient understands all of the information that has been presented (Bail et al., 2000).

8.5 Concept Map

This concept map (see Figure 1) depicts how educating healthcare providers about communication strategies regarding breaking bad news using evidence-based practice leads to an improved experience for the healthcare provider (Gorniewicz et al., 2017). Educational interventions for healthcare providers about breaking bad news to patients have been shown to improve self-efficacy and confidence in the healthcare provider (Chung et al., 2016; Gorniewicz et al., 2017; Johnson & Panagioti, 2018). An essential part of this education is teaching healthcare providers effective communication strategies when breaking bad news to patients (Kebede et al., 2020). Education given to healthcare providers in communication strategies about breaking bad news has been shown to increase self–efficacy in the healthcare provider, resulting in an improved experience for the healthcare provider when breaking bad news to the patient (Axboe et al., 2016; Gorniewicz et al., 2017).
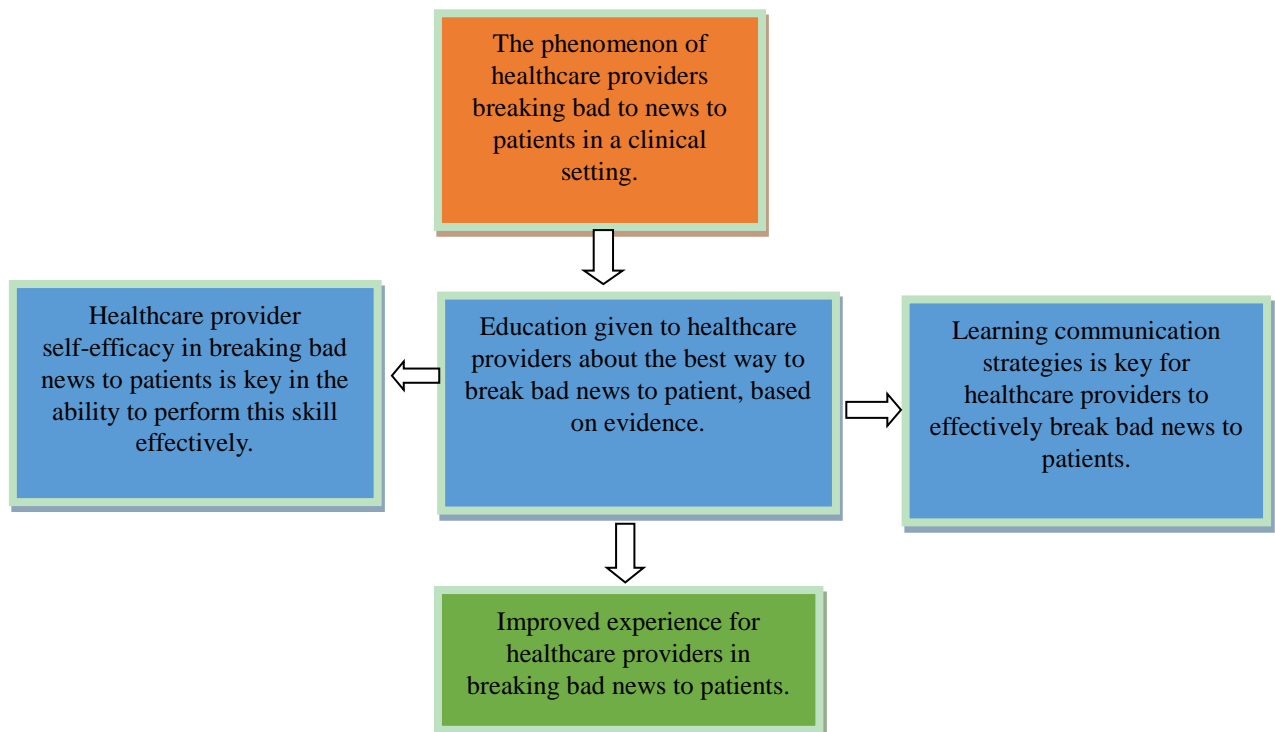
The phenomenon of healthcare providers breaking bad to news to patients in a clinical setting.

Healthcare provider self-efficacy in breaking bad news to patients is key in the ability to perform this skill effectively.

Education given to healthcare providers about the best way to break bad news to patient, based on evidence.

Learning communication strategies is key for healthcare providers to effectively break bad news to patients.

Improved experience for healthcare providers in breaking bad news to patients.

Figure 1. Concept Map

9. Critical Appraisal of Literature

9.1 Strengths

A major strength in the literature is the various ways the concept of breaking bad news was analyzed. For example, McElroy et al. (2019) examined giving bad news over the phone and what that means for both the patient and the healthcare provider. Rouge-Bugat et al. (2016) discussed the partnership between primary care physicians and oncologists in delivering bad news. Many articles went into depth in analyzing the need for healthcare providers to have formal education and training regarding the concept of breaking bad news. Yip et al. (2018), Setubal et al. (2017), Moura Villela et al. (2020), and Zwingman et al. (2017) discuss the importance of formal education in breaking bad news. Several high-level research articles were used, including randomized controlled trials (Gorniewicz et al., 2017; Kron et al., 2017), systematic reviews (Elf et al., 2017; Licqurish et al., 2019), and meta-analyses (Chung et al., 2016; Johnson & Panagioti, 2018) were included in the research regarding the phenomenon of breaking bad news. Another strength of the literature is that all of the literature used the same definition of "bad news," taken from a sentinel study by Buckman (1984). The SPIKES protocol (Baile et al., 2000) was also used uniformly throughout the articles.

9.2 Weaknesses

A weakness noted in the literature is the primary focus on physicians and medical students regarding breaking bad news, and there is no significant focus on APRNs. Examples of such articles that only discuss physicians

and medical students include Johnson & Panagioti (2018), Aminiahidashti et al. (2016), Zielinska et al. (2017), Monden et al. (2016), Mostafavian & Shaye (2018), and Gorniewicz et al., (2017).

Most current research uses the SPIKES protocol (Baile et al., 2000) to identify and describe evidence-based guidelines for breaking bad news. Although the SPIKES protocol (Baile et al., 2000) is widely used and accepted, it is 21 years old. This is a weakness because evidence-based practice in healthcare is constantly changing, evolving, and integrating new research into the SPIKES protocol (Baile et al., 2000) may be beneficial. Buckman (1984) defined bad news in his sentinel article, which is widely used in the literature regarding breaking bad news. However, it is 37 years old and is an opinion piece, making it a low level of evidence.

9.3 Gaps

Only one article specifically discussed educating APRNs about breaking bad news, and it was a low level of evidence, as it was an exploratory, descriptive design (Corey & Gwyn, 2016). No articles about educating APRN students about breaking bad news to patients were found. Additionally, most articles about breaking bad news to patients focus on the patient experience (Baun et al., 2020; Brazeal et al., 2017; Ghoshal et al., 2019; Gonçalves et al., 2017). Fennimore et al. (2018) recommended that oncology palliative care should be integrated into the standard DNP curriculum to meet the needs of the growing number of patients in this situation. It is possible for breaking bad news to be integrated into a curriculum regarding palliative care and oncology, as they are often linked.

9.4 Description of the Intervention

The purpose of this DNP Practice Innovation Project was to improve the healthcare provider's self-efficacy in breaking bad news to a patient through an educational module, ultimately improving the experience of the healthcare provider. This project contributes to the general nursing knowledge because educational interventions for healthcare providers about breaking bad news to patients have been shown to improve self-efficacy in the healthcare provider (Chung et al., 2016; Gorniewicz et al., 2017; Johnson & Panagioti, 2018). This DNP Practice Innovation Project focused on the healthcare provider's perspective and how education about breaking bad news can improve the healthcare provider's experience.

The intervention implemented in this DNP Practice Innovation Project was the presentation of an educational module to the Saint Mary's College graduate APRN students enrolled in the Department of Nursing Science. The educational module discussed breaking bad news in a clinical setting using the SPIKES protocol (Baile et al., 2000). Educational modules about breaking bad news effectively teach students how to break bad news to patients (Brighton et al., 2018; Rat et al., 2018; Reed & Sharma, 2016; Papadakos et al., 2016). The pretest/posttest method to measure self-efficacy in quality improvement projects is an effective method of measuring self-efficacy (Axboe et al., 2016; Papadakos et al., 2020; Rat et al., 2018; Reed & Sharma, 2016). The SE-12 self-efficacy tool (Axboe et al., 2016) utilized a pretest/posttest method that measured the participants' self-efficacy before and after the presentation of the educational module. The Calgary-Cambridge guide was used as a framework to structure the self-efficacy questionnaire (Axboe et al., 2016).

10. Theoretical and Implementation Models

10.1 Florence Nightingale's Environmental Theory

The key concepts of Florence Nightingale's Environmental Theory are clearly defined in her publication, *Notes on Nursing* (Nightingale, 1969), as ventilation, warmth, diet, cleanliness, light, and noise. These concepts remain relevant in nursing practice today. Elf et al. (2017) identified instruments to assess the physical healthcare environment, as the physical healthcare environment is critical in measuring healthcare quality. Similarly, the fundamental concepts of Nightingale's Environmental Theory were applied to another study conducted by Anaker et al. (2018) in identifying the physical environment on stroke units. Stroke can be a major cause of death and disability. Therefore, stroke units must promote wellness so that the patients can reach their maximum potential (Anaker et al., 2018). Although simplistic, the fundamental concepts of Nightingale's Environmental Theory can be applied in various, diverse, present-day healthcare settings to promote a favorable experience for the healthcare provider when breaking bad news to patients. The SPIKES protocol (Baile et al., 2000) incorporates the framework of Nightingale's Environmental Theory. The first step in the SPIKES protocol is "setting up the interview" (Baile et al., 2000, p. 305). Nightingale's Environmental Theory applies to this critical step in breaking bad news to patients. As Baile et al. (2000) described the first step in the SPIKES protocol, he stated that the setting in which the exchange of information occurs is essential. A private, quiet room where no interruptions will happen is the ideal setting for breaking bad news to patients. This relates to Nightingale's (1969) concepts of ventilation, cleanliness, light, and noise. A quiet, clean, well-lit, well-ventilated room allows

the patient and family members to focus on exchanging complex, life-altering information while being as comfortable as possible in the given circumstances.

An example of this is found in a study by Pouyesh et al. (2018). This study concluded that calming environmental factors had a calming effect and decreased anxiety in patients in a waiting room before coronary angiography (Pouyesh et al., 2018). Similarly, Ergin & Yucel (2019) found that influencing the environment of a nursing home by playing soothing music led to a decrease in anxiety in the residents of the nursing home. This is another example of applying the environmental theory in present-day healthcare to achieve favorable results.

10.2 Alfred Bandura's Social Cognitive Theory

Axboe et al. (2016) discussed the work of Albert Bandura (1997) in constructing the self-efficacy tool developed to measure 12 points of self-efficacy related to the self-evaluation of clinical communication strategies. Bandura's Social Cognitive Theory (Bandura, 1986) hypothesized that people have the ability to influence their environment, as well as be influenced by their environment. Additionally, the behaviors that people observe in their environment can be learned and reproduced, furthering the notion that a person has the ability to impact their environment, just as the environment can impact the person (Bandura, 1986).

Self-efficacy is a major component of Bandura's Social Cognitive Theory because a person's belief in self-efficacy affects the ability to mirror an observed behavior (Bandura, 1986). Bandura described self-efficacy as one's personal belief in their ability to execute a particular task successfully. Goncalves et al. (2017) found that most physicians surveyed felt the need for more training and were unprepared to break bad news to patients. Students who have undergone training in breaking bad news appreciated feedback from simulated patients and clinicians in their technique and ultimately found it helpful (Brouwers et al., 2018). Educational interventions for healthcare providers about breaking bad news to patients have improved self-efficacy and confidence in the healthcare provider (Chung et al., 2016; Gorniewicz et al., 2017, Johnson & Panagioti, 2018). Bandura's social cognitive theory is essential to this DNP Practice Innovation Project because improved healthcare provider self-efficacy has been shown to enhance the experience of breaking bad news to a patient (Axboe et al., 2016).

11. Implementation

11.1 Quality Improvement

The quality improvement (QI) model was the best fit for this DNP Practice Innovation Project because it intended to improve the experience of breaking bad news to patients. A specific aspect of this DNP Practice Innovation Project that supported the use of the QI design is healthcare provider education in breaking bad news. This allowed for an improved encounter between patient and provider. Ultimately, in improving the experience of breaking bad news, the healthcare provider is equipped to deliver the bad news in a patient-centric way and provide an overall better experience for the healthcare provider (Gorniewicz et al., 2017).

11.2 Project Implementation

This DNP Practice Innovation Project was implemented using a virtual pretest/posttest design constructed in SurveyMonkey. The pretest/posttest consisted of the SE-12 self-efficacy tool (Axboe et al., 2016). The educational module, which was the intervention, was presented virtually using the Blackboard format to the DNP graduate students at Saint Mary's College. The presentation was given during the Spring 2022 Saint Mary's College DNP immersion program on March 18, 2022.

12. Innovation and Social Entrepreneurship

Project funding, acceptance, and applicability to improving current processes rely on a project's innovative potential, as innovation is a crucial part of research (Villarruel, 2018). This DNP Practice Innovation Project is innovative because it focused on the APRN healthcare provider. In contrast, most of the literature utilizing the SPIKES protocol (Baile et al., 2000) focuses on the patient. The literature regarding breaking bad news to patients has shown how the experience of breaking bad news can negatively affect healthcare workers (Fallowfield, 1993; Gorniewicz et al., 2017; Ramirez et al., 1995; Sykes, 1989;). Utilizing an educational module to improve the experience of breaking bad news for healthcare workers can promote enhanced interaction (Chung et al., 2016; Gorniewicz et al., 2017; Johnson &Panagioti, 2018).

Social entrepreneurship is defined as a movement in which social change is inspired through sustainable and innovative ideas (Ngatse-Ipangui & Dassah, 2019). Traditionally, the goal of social entrepreneurship is to promote change, whereas the purpose of traditional entrepreneurship is to earn a monetary profit (Ngatse-Ipangui & Dassah, 2019). This DNP Practice Innovation Project fits within the social entrepreneurship framework

because it is intended to support healthcare providers by educating them on a tool that can be used to break bad news to a patient.

13. Sustainability

Villarruel (2018) defined sustainability as the capacity to support an idea's key elements and infrastructure after its implementation. Interventions that are brief, targeted, and sensitive to the target population's culture have been suggested to show improved sustainability (Tan et al., 2018). This DNP Practice Innovation Project aligns with the definition of sustainability because the intervention of an educational module regarding breaking bad news to patients is relevant to the graduate nursing student population. The intervention also introduced the SPIKES protocol (Baile et al., 2000), an understandable and applicable model for patient encounters.

This DNP Practice Innovation Project addresses the lack of current protocol in breaking bad news to patients in a clinical setting related to the APRN healthcare provider experience. Many articles about breaking bad news to patients focus on the patient experience (Baun et al., 2020; Brazeal et al., 2017; Ghoshal et al., 2019; Gonçalves et al., 2017). This DNP Practice Innovation Project focused on the APRN provider experience when delivering the bad news to the patient. The DNP plays an integral part in collaborative care for the patient, which often includes breaking bad news regarding test results or other studies that have revealed an unfavorable outcome (Corey & Gwyn, 2016).

Fennimore et al. (2018) recommended that oncology palliative care be integrated into the standard DNP curriculum to meet the needs of the growing number of patients in this situation. This is an example of an educational module used with students to teach patients the best approach to breaking bad news. The problem addressed by this DNP Practice Innovation Project is significant because it directly affects the care that the DNP-prepared APRN is providing to the patient. The method in which bad news is delivered to the patient is paramount to the encounter in its entirety. The existing research on this subject must be analyzed and translated into practice for necessary improvements in advancing opportunities and strategies related to breaking bad news. Although the audience of APRN students participating in the educational module for this DNP Practice Innovation Project may not specialize in oncology, they will likely be responsible for breaking bad news to a patient at some point in their career. Therefore, the information about breaking bad news will be valuable for their practice as an APRN.

14. Ethical Considerations

14.1 Participation Risks

Risks to the participants of this project were minimal. There were no physical risks, as this project was designed to be viewed as a PowerPoint presentation, with a pre-test/post-test survey to be completed. The psychological risks were minimal. The content of this project concerned breaking bad news to patients, and the assessment questions included in the SE-12 tool asked about the participant's ability to communicate difficult information (Axboe et al., 2016). While answering the questions on the assessment tool and viewing the educational module, participants may be reminded of times when they had to break bad news to another person or when they received bad news in the past. Reflecting on these experiences may elicit unpleasant memories and feelings. To minimize this risk, the participant will be informed that they can leave the presentation at any time. There are no legal risks, as the demographic information was kept confidential, and no personal information is collected.

14.2 Participation Benefits and Nursing Knowledge

The participants in this DNP Practice Innovation Project were not paid. They were asked to participate because the information offered in the presentation served as an educational opportunity to learn how to break bad news to patients appropriately. When the Saint Mary's College graduate students become APRNs, they will likely have to break bad news to a patient at some point in their career. This can be an intimidating responsibility. The educational module presented in this DNP Practice Innovation Project gave the graduate students tools to break bad news to a patient. Gaining the knowledge of evidence-based practice techniques in breaking bad news to patients allows for the expansion of nursing knowledge and provides for implementation of evidence-based practices.

14.3 Informed Consent

The SurveyMonkey platform was used for the informed consent presentation and completion and data collection for this DNP Practice Innovation Project. The option to include informed consent before opening the assessment tool in SurveyMonkey was utilized. This was how and when informed consent was obtained. To maintain anonymity and confidentiality, the anonymity feature in SurveyMonkey was activated for the participants ("Making Responses Anonymous," n.d.).

Thorough communication of the risks and benefits of this study were discussed with the participants to ensure a proper consent process. This was done through the informed consent letter at the beginning of the presentation (Lika et al., 2017). Dr. Sue Anderson and the DNP student researcher have access to the data and reports of data. The DNP student researcher has been certified through the CITI training program. Data were stored on the SurveyMonkey server and the student's password-protected personal computer. The participants were not identifiable because the anonymity feature was activated on SurveyMonkey ("Making Responses Anonymous," n.d.). Stanley et al. (2017) conducted a study in which a similar format was used regarding a questionnaire and data collection, and the SurveyMonkey platform was successful in data collection.

15. Discussion of Methods

15.1 Key Stakeholders

Barbara Schmidtman, Ph.D., MAOL, CNMT, Director of Oncology Services at Spectrum Health Lakeland (SHL), is a key stakeholder in the DNP Practice Innovation Project. She believes this project is a good fit with SHL because it will provide necessary education in cancer diagnosis delivery and breaking bad news. Together, we discussed the idea of presenting an education module to the physicians in the residency program at SHL and any other APRNs, APPs, and physicians who desire to attend. If necessary, I would bring this project proposal and presentation to the IRB at SHL to be approved.

Dr. Schmidtman stated that this project would have many benefits to SHL, such as a better understanding of who exactly is responsible for giving bad news to patients within the organization, a better overall experience for both the patient and the provider, and higher retention of patients in the organization because of the better patient experience. When discussing barriers to this project, Dr. Schmidtman did not foresee any barriers or financial concerns. She thought the educational module presented in my DNP Practice Innovation Project could be used within the residency program to educate the residents on the SPIKES protocol.

Jamie Birris, PsyD, is the clinical psychologist for Lakeland Cancer Specialists. She is a key stakeholder in this DNP Practice Innovation Project because she often has difficult conversations with patients and is consulted when a healthcare provider has to break bad news to a patient. She agrees that implementing this program at SHL would be beneficial to the healthcare providers. Dr. Birris stated that this is an interesting and important topic and will ultimately lead to improved experiences for the healthcare provider and the patient. Successfully engaging in difficult conversations is part of Dr. Birris's training as a clinical psychologist.

15.2 Participant Sample Information

For this DNP Practice Innovation Project, the population sample consisted of graduate students enrolled in the Department of Nursing Science at Saint Mary's College. This population is currently learning evidence-based practice techniques to implement in practice as an APRN. The APRN is often responsible for breaking bad news to patients; therefore, this educational module will be helpful and relevant. Inclusion criteria includes an age range between 18 years old to 65 years old. This study was intended only for adults, so the lower limit of 18 years old was chosen. Axboe et al. (2016) did not include participants over the age of 65 in the study. Therefore, the upper limit of 65 was chosen for this project. A power analysis indicated that 34 participants were needed for this project. This number was used as the minimum number of participants. Other inclusion criteria included access to a smartphone or computer and experience with direct patient care. Exclusion criteria included an age under 18 years old or over 65 years old, no experience with direct patient care, no access to a smartphone or computer, and no evidence of enrollment in the graduate program of the Department of Nursing Science at Saint Mary's College.

This population was chosen because, in similar projects, students in professional healthcare programs and residencies were most often studied (Cvengros et al., 2016; Gorniewicz et al., 2017; Reed & Sharma, 2016; Setubal et al., 2017). In another similar study, only healthcare providers with direct patient care were included (Dafallah et al., 2020). Completing this training before independent practice will be beneficial in implementing this knowledge throughout their entire career.

15.3 Implementation Plan

This DNP Practice Innovation Project was presented virtually using the Blackboard platform during the Spring 2022 Immersion Program at Saint Mary's College on March 18th, 2022. A brief description of the purpose of this DNP Practice Innovation Project was given. After this, the presenter's screen was shared to view the educational module on Blackboard. A link to the informed consent and pretest was shared in the chat feature on Blackboard, and the participants were instructed to click on it. This link took the participants to the SurveyMonkey platform and automatically generated the informed consent and the pretest. The narrated educational module PowerPoint

presentation was then presented virtually in real-time. After the presentation was complete, another link was shared in the Blackboard chat feature for the participants to click on, and a posttest was generated for the participants to complete. After completing the posttest, the participants were free to leave the presentation. The data in SurveyMonkey was accessed after the data collection, and a paired samples *t*-test was utilized to analyze the data.

15.4 Participant Duties

The participants in this project were asked to click a SurveyMonkey link in the Blackboard chat feature that automatically populated the informed consent through the SurveyMonkey platform. The participants were required to complete the consent form before moving forward with the next step. The participants were then asked to complete a pretest using the SE-12 self-efficacy tool. After filling out the pretest, each participant watched an educational presentation about breaking bad news to a patient and the communication skills needed to improve these difficult conversations. After the educational presentation, the participant was asked to click another link in the Blackboard chat feature and fill out the post-test form to assess if they felt more confident in breaking bad news to patients than how they felt before watching the educational presentation. The posttest was also the SE-12 self-efficacy tool. The participant was also asked to provide a unique identifier in the SurveyMonkey platform so that their pretest and posttest could be matched up. The unique identifier suggestion was the participant's birth month and the last four digits of their phone number.

15.5 Reliability and Validity of Instrument

There were no qualitative data collected from the participants for this DNP Practice Innovation Project. All data were quantitative in nature. The questions found in the SE-12 tool asked the participants to rate the answers on a scale from 1 to 10, with 1 being "very uncertain" and 10 being "very certain". (Axboe et al., 2016). These responses were analyzed through a paired samples *t*-test.

The instrument used in this DNP Practice Innovation Project was the SE-12, a self-efficacy questionnaire used to evaluate the communication skills of healthcare providers. A test-retest procedure was used to assess the reliability of the SE-12 tool (Axboe et al., 2016). Four departments were included, with two departments not having had a communication course and two having a communication course (Axboe et al., 2016). Completed questionnaires were received from 292 of the 787 staff members surveyed, a 37% response rate (Axboe et al., 2016). Out of the 787 staff members surveyed, 195 (25%) completed both questionnaires and rated their skills in communication as stable (Axboe et al., 2016). The questionnaire was completed on two separate occasions using an intra-class correlation coefficient (Axboe et al., 2016). The test-retest reliability was acceptable for the entire SE-12 tool, with 0.71 (0.66-0.76) being the ICC agreement (Axboe et al., 2016). When comparing the two departments with clinicians previously educated in the communication course (n=98), a higher reliability was found with an ICC agreement of 0.77 (range 0.67-0.84). Reliability was shown to be fair to good in the two departments, with staff not having previously attended the course on communication (n=97), with 0.64 (range, 0.49-0.79) being the ICC agreement (Axboe et al., 2016).

Evaluation of the 12 self-efficacy questions showed a high internal consistency, with a Cronbach's α of 0.95 (range, 0.94-0.95) (Axboe et al., 2016). This is indicative of high correlations between the elements in the scale. Loevinger's H was high in the Mokken Analysis, showing a total scale coefficient of 0.71 (range, 0.63-0.75). This indicates rank-ordered, non-overlapping items, making the data additive (Axboe et al., 2016). The SE-12 tool was found to be partially valid, as only two out of the three hypotheses of the study were confirmed due to a ceiling effect (Axboe et al., 2016).

The first hypothesis revealed higher scores in all the questions regarding self-efficacy in group 1, which was the group with the two departments with the staff having previously participated in the course. The mean sum score in group 1 ($n = 152$) was 101.27 (SD = 15.84), while the mean sum score in group 2 ($n = 140$) was 96.99 (SD = 13.5) (Axboe et al., 2016). The t-test was found to be t = 2.47 ($P = 0.01$), which confirmed the first hypothesis that the department with previous participation in a communication course would have high scores on questions regarding self-efficacy (Axboe et al., 2016). The second hypothesis found a higher self-efficacy sum score in the participants with the most experience within their field compared to less experienced participants (Axboe et al., 2016). An equality-of-populations Kruskal-Wallis rank test was completed (chi-square = 12.94 with 5 degrees of freedom; $P = 0.024$), confirming the notion that self-efficacy is highly correlated to field experience (Axboe et al., 2016). In the third hypothesis, the difference in self-efficacy sum scores among professions found that the higher mean sum score (mean=100.20, SD 15.08) belonged to nurses, while physicians had a lower mean sum score (mean=98.80, SD=12.33); however, the difference was not statistically significant (t=0.72, P=0.47) (Axboe et al., 2016). Adjustments were made for the length of service, which

showed higher physician self-efficacy sum scores, but still not statistically significant (Axboe et al., 2016). When comparing nurses and nursing assistants, nurses had higher self-efficacy sum scores (mean = 100.20, SD = 15.08 compared to mean = 93.42, SD = 20.42, respectively); however, the difference was not statistically significant (t = 1.81, P = 0.07). These findings neither supported nor rejected the hypothesis of physicians having the highest self-efficacy scores, with nurses coming in second (Axboe et al., 2016).

A ceiling effect was observed in 9 of the 12 self-efficacy questions, which went over the set limit of >15% (Axboe et al., 2016). Regarding the floor effect, >15% was not exceeded in the self-efficacy questions (Axboe et al., 2016). Despite the ceiling effect, nothing was changed in the self-efficacy questions (Axboe et al., 2016).

15.6 Power Analysis

This DNP Practice Innovation Project required a paired samples *t*-test, in which the mean scores for the same group of people at two different times was compared (Manfei et al., 2017). The G*Power software was used (Faul et al., 2009). Two tails, effect size of 0.5, α error probability of 0.05, and Power (1-β err prob) 0.8 was used. This calculation revealed that a total sample size of 34 participants for this DNP Practice Innovation Project was needed to capture the effect of this project at the 0.05 significance level.

15.7 Budget

SurveyMonkey is $70/month, which was necessary to disseminate the informed consent, the pre-test, and the post-test to the participants. PowerPoint is provided to Saint Mary's College students and did not need to be purchased. The pre-post test was conducted in a virtual platform. The PowerPoint presentation was presented in a virtual platform through the learning management system Blackboard, which is provided to each student and faculty member with enrollment at Saint Mary's College. The pretest/posttest and PowerPoint presentation did not incur any cost. Intellectus Statistics software was purchased for $179. This software was used to analyze the data collected for this DNP Practice Innovation Project.

15.8 Timeline

The DNP Practice Innovation Project proposal was approved by the Saint Mary's Institutional Review Board on January 18, 2022. Data collection took place at the Spring 2022 Immersion Program at Saint Mary's College on March 18, 2022. Data analysis was completed on May 1, 2022. The academic poster presentation of this DNP Practice Innovation Project was completed on June 25, 2022. The final paper for this DNP Practice Innovation Project was submitted on July 22, 2022.

16. Data Analysis Using Two-Tailed Paired Samples t-Test

The SE-12 self-efficacy tool pre-test and post-test were completed by 35 participants during the Spring 2022 Immersion Program at Saint Mary's College on March 18th, 2022. The pre-test and post-test scores were entered into the Intellectus Statistics software. A two-tailed paired samples t-test was conducted to examine whether the mean difference of the pre-test (Pre-Overall) and post-test (Post-Overall) was significantly different from zero. This determined if there was a statistically significant improvement in the scores on the SE-12 self-efficacy tool after the participant viewed the educational module on breaking bad news.

16.1 Assumptions

16.1.1 Normality

A Shapiro-Wilk test was conducted to determine whether the differences in Pre-Overall and Post-Overall could have been produced by a normal distribution (Razali & Wah, 2011). The results of the Shapiro-Wilk test were not significant based on an alpha value of .05, W = 0.98, p = .800. This result suggests the possibility that the differences in Pre-Overall and Post-Overall were produced by a normal distribution cannot be ruled out, indicating the normality assumption is met.

16.1.2 Homogeneity of Variance

Levene's test was conducted to assess whether the variances of Pre-Overall and Post-Overall were significantly different. The result of Levene's test was not significant based on an alpha value of .05, $F(1, 68)$ = 0.11, p = .741. This result suggests it is possible that Pre-Overall and Post-Overall were produced by distributions with equal variances, indicating the assumption of homogeneity of variance was met.

16.2 Results

The result of the two-tailed paired samples *t*-test was significant based on an alpha value of .05, $t(34)$ = -12.23, p < .001. This confirms that healthcare providers who receive formal education in breaking bad news to patients have increased self-efficacy in breaking bad news compared with healthcare providers not formally educated in a

Doctor of Nursing Practice Program. This finding suggests the difference in the mean of Pre-Overall and the mean of Post-Overall was significantly different from zero. The mean of Pre-Overall was significantly lower than the mean of Post-Overall. The results are presented in Table 1. A bar plot of the means is presented in Figure 2.

Table 3. Two-Tailed Paired Samples t-Test for the Difference Between Pre_Overall and Post_Overall

Pre_Overall		Post_Overall				
M	SD	M	SD	t	P	d
6.29	1.25	8.10	1.06	-12.23	< .001	2.07

Note. N = 35. Degrees of Freedom for the *t*-statistic = 34. *d* represents Cohen's *d*.
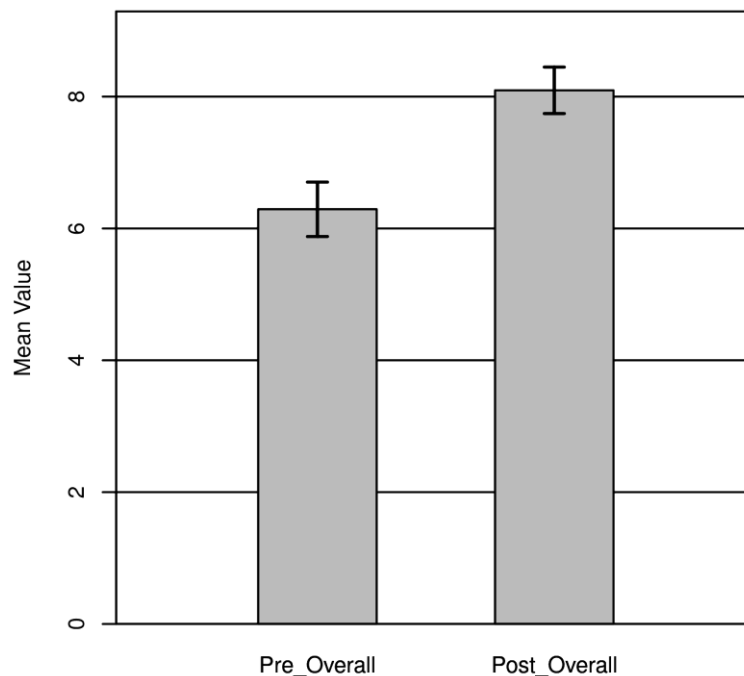
Figure 2. The means of Pre-Overall and Post-Overall with 95.00% CI Error Bars

17. Discussion

17.1 Implications

The data analysis from this DNP Practice Innovation Project indicated that self-efficacy is improved in APRN student healthcare providers who are formally educated about the topic in a DNP Program compared with those who had not been formally educated. Improved self-efficacy regarding breaking bad news has been shown to improve the experience in which bad news is shared for both the healthcare provider and the patient (Baile et al., 2000; Moura Villela et al., 2020). Improvement in self-efficacy regarding breaking bad news decreases the healthcare provider's risk of experiencing negative consequences, including stress (Fallowfield, 1993), anxiety (Sykes, 1989), emotional exhaustion, and a lower sense of personal accomplishment (Ramirez et al., 1995). Additionally, the inappropriate delivery of bad news can change the outlook and interpretation that the patient and their family members have about the illness (Mostafavian & Shaye, 2018). Formal training leads to better health

outcomes for patients and healthcare providers (Gorniewicz et al., 2017). In terms of healthcare policy, implementing a course or seminar in breaking bad news within the standard accredited APRN curriculum would benefit students. The American Association of Colleges of Nursing (AACN) (2021) delineates an educational framework citing the domain of "Person-Centered Care" in its professional nursing education competencies. The evidence obtained from this DNP Practice Innovation Project fits within this domain and can be used to support the policy of this curriculum change to demonstrate the importance of formal education regarding breaking bad news.

17.2 Strengths and Limitations

Strengths of this DNP Practice Innovation Project include the use of recent and pertinent high quality, evidence-based studies to support the DNP Practice Innovation Project study and the utilization of highly researched nursing theory. Anonymity was preserved in this DNP study to maintain authentic responses of the participants. The data from this DNP Practice Innovation Project were analyzed using Intellectus Statistics to ensure the accuracy of the data outcomes.

Limitations for this project include a homogenous sample, as the participants consisted only of APRN students at Saint Mary's College. Additionally, the sample size can be considered small, with 35 participants. This DNP Practice Innovation Project was presented virtually to the APRN students due to the restrictions that the Covid-19 pandemic presented. The statistically significant findings in a virtual platform indicate the impact of virtual learning, which has the potential to reach a larger audience with ease. Although this can be considered a strength of this DNP Practice Innovation Project, there is no way to know if a more considerable impact may have been had if the ability to present the project in person was available and utilized. The results of the paired samples *t*-test in this DNP Practice Innovation Project showed statistically significant results, which further demonstrates the importance of formal education regarding breaking bad news and its impact on the self-efficacy of healthcare providers. Plans for future study include implementation of formal education regarding breaking bad news with larger groups of learners and application to diverse healthcare settings.

18. Conclusion

This DNP Practice Innovation Project explored improvement in the APRN healthcare provider's self-efficacy in breaking bad news to a patient using an educational module to enhance the experience of healthcare providers. This project contributes to the general knowledge because educational interventions for healthcare providers about breaking bad news to patients have been shown to increase self-efficacy and confidence in the healthcare provider (Gorniewicz et al., 2017, Chung et al., 2016 Johnson & Panagioti, 2018). This DNP Practice Innovation Project focused on the perspective of the APRN student healthcare provider and how education about breaking bad news can lead to an improved experience for the healthcare provider, ultimately improving health outcomes.

This research was limited by the homogeneity and size of the sample, as the participants consisted of 35 APRN students at Saint Mary's College, South bend, Indiana, USA. These limitations open up avenues for future studies on the topic of formal education regarding breaking bad news on self-efficacy. Other groups may benefit from education on this topic, just as the APRN students showed an improvement in self-efficacy. Future studies could include members of law enforcement, social workers, and any other population tasked with breaking bad news.

Acknowledgement

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