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Effect of Professional Exclusion Among Respiratory Therapists in the ICU

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Abstract

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by

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MS, Walden University, 2011

BA, Arizona State University, 2006

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

This study was conducted to test how social exclusion, experienced through a culture of healthcare hierarchy, influenced the feelings/attitudes of respiratory therapists (RTs) who are excluded from discussions of end-of-life (EOL) care. Data analysis was conducted using a multivariate analysis of variance to address the research questions. A quantitative nonexperimental survey research design incorporating four evidence-based surveys was used. There was no significance found between professional exclusion from EOL care discussions and the abilities of RTs to collaborate with intensive care unit (ICU) team members within the shared decision-making model as it relates to providing care in the ICU. There was significance in the differences measured by the variable "*planned together*" on abilities to perform EOL care procedures. In survey responses, RTs expressed a strong desire for inclusion. The study concluded that RTs are rarely involved in EOL care discussions and/or planning. Despite their exclusion, RTs are responsible for performing the majority of EOL care procedures in the ICU, which generated discomfort. This topic of inquiry has social change implications, in that the ethical and emotional burdens of caring for dying patients can impact all ICU team members. All team members are stakeholders in the EOL care process, and the findings of this study can offer insight into the unique goals and essential roles each has within the EOL care decision-making process. This study may give stakeholders such as RTs new insight into the critical roles that they play. Additional knowledge of methods to reduce the burden posed by exclusion may make it easier for RTs to perform their duties in a more fulfilling way leading to positive social change.

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Dedication

I dedicate this work to my mother, Valerie Lubken, who has been inspirational throughout my entire life and has always encouraged me to pursue my dreams.

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I want to acknowledge my family, who have been there for me throughout my life journey. I want to thank my dissertation committee, including Dr. Rhonda Bohs, who has been there to help me through each of the challenging dissertation steps with motivation and direction. Finally, I would like to thank everyone at Walden University who has helped me throughout my doctoral journey.

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Chapter 1: Introduction to the Study

Respiratory Therapists and End-of-Life Care

Currently, one fifth of all deaths within the United States occur in the hospital, usually after intensive care (Cutler & Madani, 2016). The majority of those patients who die within the intensive care unit (ICU) do so after a decision to withdraw life support therapies (Willms & Brewer, 2005). Respiratory therapists (RTs) often care for patients with life-threatening illnesses and are directly involved in the removal of ventilator support during end-of-life (EOL) care situations (Grandhige et al., 2016; Willms, 2010). Grandhige et al. (2016) found that 93.8% of RTs reported actively performing terminal extubation. However, very few expressed having direct interaction with the patient or family about EOL care. Additionally, only 10.8% of RTs reported being included in the EOL care discussions of the multidisciplinary team (Grandhige et al., 2016).

The frequent use of EOL care is expected to increase because of the aging population; hence, providing good EOL care within the hospital remains a priority (Montagnini et al., 2018). The routine removal of life support is becoming more frequent, and in light of the challenging nature of the procedure and reported incidents of distress experienced by caregivers, policyholders have cited a need for further study (Willms, 2010). RTs have a critical role in EOL care; however, data concerning their experiences with performing EOL care tasks are limited (Emory University, 2016; Grandhige et al., 2016). Although RTs are often responsible for the job of removing life support, they are typically not present or included in EOL care discussions, with only around 6.6% reporting that they are involved in EOL care discussions (Grandhige et al., 2016; Willms, 2010). This lack of inclusion leaves RTs vulnerable to consequences such as anxiety, stress, and moral conflicts both before and during the action of performing the procedure (Willms & Brewer, 2005).

Most of the studies concerning this topic have assessed the viewpoints of nurses and physicians; only a few have addressed those of RTs (Grandhige et al., 2016). Willms and Brewer (2005) found that 73% of RTs had a desire to be included in EOL care discussions that led to decisions to remove life support. A small minority of around 13% felt a sense of moral distress when having to perform extubation without having any input or proper training to deal with the after effects of directly ending a patient’s life (Willms & Brewer, 2005). As the practice of healthcare is changing and RTs’ role is becoming broader, RTs are expected to take on more functions. There is a need to understand their feelings and attitudes toward EOL care, and to discover what interventions are necessary to promote the best possible EOL care experience for RTs and their patients.

Problem Statement

In today’s hospital setting, few patients die without being cared for by a RT (Brown-Saltzman et al., 2010). Half of all Americans who die within the hospital spend their last days in the ICU. One in five Americans will die in the ICU, with 60% of these deaths being due to withdrawal from life support systems such as mechanical ventilation (Cutler & Madani, 2016). The decision to remove mechanical ventilation involves an extensive discussion between the patient’s family members and the critical care team—a discussion that RTs tend to be excluded from during preliminary communications and crucial EOL care discussions (Grandhige et al., 2016; Willms, 2010). RTs are the healthcare professionals who are responsible for performing the termination of mechanical ventilation via either terminal weaning (TW) or terminal extubation (TE; Brown-Saltzman et al., 2010; Cutler & Madani, 2016; Kindred Healthcare, 2012).

The exclusion of RTs from EOL decisions and being called on to perform EOL procedures without any voice creates a significant risk for moral distress, anxiety, feelings of professional disrespect, and the RTs' perception of being directly responsible for the patient's death by their actions (Cutler & Madani, 2016; Grandhige et al., 2016). The number of previous studies concerning the role of RTs in EOL care is limited. In one of the first studies in this area, Willms and Brewer (2005) cited their inability to find citations concerning RTs and EOL care. Currently, there are limited amounts of data related to how many hospitals include RTs in EOL discussions and protocols, what percentage of hospitals provide psychological support, and the number of hospital programs that provide continuing EOL care education (Grandhige et al., 2016).

Purpose of the Study

The purpose of this study was to test how social exclusion, experienced through the culture of health hierarchy, relates to the feelings/attitudes of RTs about being excluded from EOL care discussions. Additionally, I sought to assess how social exclusion relates to RTs' expected role of performing EOL care procedures within the ICU. Currently, in most ICUs, the withdrawal of life support is often carried out by RTs and nurses without the direct presence of the physician; however, these RTs have rarely been involved in the previous EOL care discussions (Willms, 2010). Although the exclusion of RTs is known, there is little research on how being excluded impacts their expected job functions of withdrawing life support (Grandhige et al., 2016; Willms, 2010). Grandhige et al. (2016) found that RTs have a desire to be included in EOL care discussions and that integrating them would improve both communication and patient care. It is because of such potential improvements that understanding the feelings and attitudes of RTs is significant. I used quantitative survey methodology to address this gap in research.

Background

According to current statistics, one in five people in the United States will die in the ICU, with around 60% of those deaths due to the withdrawal of advanced life support (Cutler & Madini, 2016). As the severity of hospitalized patients' illnesses increases, death within the ICU often occurs following the removal of life-supporting therapies (Carlet et al., 2004). RTs are not only the healthcare professionals who are responsible for managing advanced life support technology such as mechanical ventilation, but are also most often the professionals who are accountable for performing the termination of life support (Cutler & Madani, 2016; Darlington, 2011; Grandhige et al., 2016; Strickland, 2016; Willms & Brewer, 2005). The responsibility of withdrawing life support is an everyday reality among RTs and the majority practice within acute-care settings (Willms, 2010; Willms & Brewer, 2005). From such findings, it is evident why the inclusion of RTs in EOL care discussions is necessary; however, previous researchers have found that most RTs are excluded from or do not participate in EOL care discussions (Cutler & Madani, 2016; Grandhige et al., 2016; Strickland; Willms & Brewer, 2005). Moreover, initial findings from Willms and Brewer (2005) indicated that exclusion of RTs from EOL care discussions is not the only issue; many RTs expressed feeling ill prepared to be involved in such talks despite a high desire to participate.

There have been a variety of studies concerning EOL care and the withdrawal of life support; however, these studies appear to have focused only on the viewpoints and roles of nurses and physicians, with studies on the role and attitudes of RTs concerning the above issues remaining significantly limited (Grandhige et al., 2016; Rocker et al., 2005; Willms & Brewer, 2005). Evidence for this comes from research conducted by Giordano (2000), who reported finding no citations concerning RTs in conjunction with search terms *EOL care* or *palliative care* when conducting his literature review. Years later, Hani et al. (2016) and Grandhige et al. (2016) would report similar findings concerning the limited amount of research regarding RTs' roles, viewpoints, experiences, and attitudes relating to EOL care.

Even though research related to RTs has limitations, researchers have found that RTs regularly care for patients with life-limiting illnesses, are responsible for terminating life support measures, and have expressed experiencing distress, discomfort, and anxiety in such situations (Emory University, 2016; Grandhige et al., 2016; Strickland, 2016). Termination of life support, such as mechanical ventilation, is one of the most frequently performed and essential elements of EOL care. Unfortunately, the lack of understanding of how professionals who are responsible for implementing this challenging task cope with the sensitive nature of the task highlights a defect within the practices of EOL care (Cutler & Madani, 2016; Rocker et al., 2005).

RTs are among the few healthcare professionals who can treat patients with life-limiting illnesses without regard to hospital department, service, age, disease, or level of care (Darlington, 2011). It is because of this privilege and the ever-increasing number of Americans dying within the hospital setting that the roles of RTs are expanding (Carlet et al., 2004; Rocker et al., 2005). Hani et al. (2016) reported that there are no standardized guidelines or policies concerning how RTs are educated about their role in EOL care. Perhaps this is why RTs are rarely included in discussions concerning EOL care, despite evidence of their desire to be included (Emory University, 2016; Grandhige et al., 2016). The reason why such research is necessary is that it is not understood what is contributing to the already-documented disconnection between exclusion of RTs from the EOL care decision-making processes and the issues that each RT experiences during the performance of EOL care procedures such as withdrawing mechanical ventilation (Strickland, 2016).

Research Questions and Hypotheses

RQ1. What is the relationship between professional exclusion of RTs from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs as measured by the Collaboration and Satisfaction About Care Decisions (CSACD) survey, Scale of End-of-Life Care in the ICU (EOLC-ICU), Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Null hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs.

Alternative hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs.

RQ2. What is the relationship between professional exclusion from EOL care discussions and attitudes/feelings toward EOL care in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Null hypothesis: There is no relationship between professional exclusion from EOL care discussions and attitudes/feelings toward EOL care in the ICU among RTs.

Alternative hypothesis: There is a relationship between professional exclusion from EOL care discussions and attitudes/feelings toward EOL care in the ICU among RTs.

RQ3. What is the relationship between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the shared decision-making (SDM) model related to providing EOL care in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Null hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to collaborate with other ICU team members within the SDM model related to providing EOL care in the ICU among RTs.

Alternative hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU among RTs.

RQ4. What is the relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Null hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs.

Alternative hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs.

Nature of the Study

The nature of the study was quantitative, as this type of research is useful in evaluating the establishment of relationships among two or more variables. Assessment of this association was conducted through an online survey, a format that had higher participant response rates than written survey-questionnaires in previous studies (Meade et al., 2012; Weigel et al., 2011). The online survey method was the best way to obtain data from a large population of RTs (Rocker et al., 2005). No participant was excluded based on gender, ethnicity, or socioeconomic status. The surveys were only in English, which may have prohibited the participation of some individuals.

Theoretical Framework

The theoretical basis for this study was the theory of social exclusion. This theory was relevant the phenomenon of interest in this study because the exclusion of RTs met two conditions specified in the theory: RTs were excluded for reasons beyond their control, and RTs expressed a desired to participate (Burchardt et al., 2002). There is little evidence that this approach has been applied previously to this phenomenon, but its multidimensional process can be used in many areas if the above two conditions are relevant. Previous researchers have found that any social exclusion can significantly impact the quality of life and reduce the equity of cohesion for the parties who are being excluded (Greenwood et al., 2018).

The application of the theory of SDM is often encouraged within the American healthcare system (Freytag, 2012). However, its use is strained or avoided when it comes to medical decisions involving EOL care, explicitly regarding the decision to forgo life-saving treatment for palliative care. The elements that fail the most are appropriate communication and inclusion of healthcare team members within actual EOL care decision-making processes.

Often, the power relationship among healthcare professionals gets in the way of inclusion in the SDM process, and the exclusion of both nurses and allied healthcare professionals occurs. This exclusion tends to undermine the decisions made by the family and physicians because those who are excluded from SDM do not understand the reasoning for the decisions (Carlet et al., 2004; Freytag, 2012). Additional consequences of such exclusion from SDM include team dissatisfaction, patient–provider conflict, relationship barriers, and provision of poor patient care (Carlet et al., 2004).

When applied, SDM focuses on the inclusion of not only the patient/family, but also other members of the healthcare team. The premise of SDM is that all personnel must work together as a team for the provision of optimal care, which means involving them in team efforts, encouraging them to have a voice, listening to team members, and promoting the development of their relationships with the patient/family (Carlet et al., 2004; Freytag, 2012).

Operational Definitions

End-of-life (EOL) care: Support and medical care given during the time surrounding death (National Institute on Aging, 2017).

Theory of social exclusion: A theory with a multidimensional nature that represents the process by which individuals or a group of people are denied appropriate access to various rights, opportunities, and resources that are available to members of a different group (Burchardt et al., 2002).

Theory of shared decision making (SDM): A theory by which clinicians and patients work together to make healthcare decisions. The theory focuses on inclusion of the patient, family members, and all members of the healthcare team. The goal is for all shared decision makers to work toward optimal health outcomes for the patient (Carlet et al., 2004).

Respiratory therapist (RT): A trained healthcare professional who treats patients with healthcare issues affecting the cardiopulmonary system such as asthma, respiratory failure, emphysema, trauma, and pneumonia (University of Kansas Medical Center, 2018).

Intensive care unit (ICU): A specific unit in the hospital that focuses on the care and treatment of patients with severe or life-threatening illnesses that require constant monitoring and support from both specialized equipment and trained healthcare professionals (Sibbald et al., 2007).

Professional exclusion: Occurs when an individual or group is prevented from participating in activities in which the individual or group has the professional responsibility to participate (Burchardt et al., 2002).

Terminal extubation (TE): The withdrawal of mechanical ventilation from critically ill patients who are not expected to survive without mechanical ventilation assistance or care (Willms & Brewer, 2005).

Attitudes/feelings toward EOL care: Represents a psychological construct that characterizes an individual. Such characteristics are usually gained from experiences and are expressed toward a person, object, place, and/or event (Breckler & Wiggins, 1992).

Abilities to perform EOL care procedures: The abilities of respiratory therapists to perform EOL care procedures such as TE, TW, removal of mechanical ventilation, removal/withholding of oxygen-delivering devices, and other procedures.

Abilities to collaborate with ICU team members within the SDM model: Represents the abilities of individual healthcare professionals to work within a shared relationship with other healthcare professionals.

Abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU: Represents the ability of a healthcare professional such as an RT to take part in or become involved in a process whereby the participant has a responsibility or function of performing EOL care procedures in the ICU (Kirchhoff & Kowalkowski, 2010).

Limitations

Limitations of a study are those elements of the design and methodology that can potentially influence the interpretation of findings from the research. Limitations of this study were the constraints on generalizability, claims to practice, and utility of discoveries that came from the research design chosen for the study. Every study carries limitations, which is why it is essential to highlight all of those limitations that will directly pertain to the research problem (University of Southern California [USC], 2018).

This study used survey research to explore the relationships between its variables; such survey research suffers from various internal validity threats. First, instrumental bias can occur when the measuring instrument (survey) used within a study changes over time (Babbie, 2010). This threat can decrease confidence, which changes the scores on the dependent variable caused by instrumental bias, and not the independent variable. Other experimenter effects in the form of personal bias can influence internal validity by the occurrence of directional hypotheses. This threat often occurs without intention, but it can significantly impact research outcomes (Babbie, 2010).

The ability to generalize the results of a similar sample group to a related focus population is one of the many reasons that research is conducted. Threats to external validity arise when inaccurate inferences from sample data are applied to other settings, persons, and situations (Creswell, 2014). One such risk is volunteer bias, which is challenging to prevent. Volunteer bias occurs when the differences associated with those who volunteer for a study differ considerably from the topic population. The effect reduces the similarity of the characteristics shared between the sample group and the topic population. The result is that it can be challenging for researchers to make generalizations. Construct validity for this could potentially be threatened because of a lack of previous research concerning the topic population. One such threat is how the terms *EOL* and *palliative care* are used interchangeably in previous research; for construct validity to be strong, terms should be defined appropriately (Carlet et al., 2004).

Limitations relating to such bias include response bias, potential inaccuracies of self-reported questionnaire responses, nonresponse bias, and experimenter bias (Creswell, 2014). Each of these types of biases can significantly influence the results of a study by producing inaccurate results or skewing the data outcomes (Babbie, 2010). Although most of these biases are unintentional, researchers should be aware of such biases that can enter into the research process.

I addressed these limitations by being aware of the list of biases above, incorporating this awareness into the research measures which have strong construct validity, and using operational terms to avoid inaccuracies (Creswell, 2014). Another way to help reduce the incidence of such bias is to eliminate those surveys that are incomplete. This action removes such problems as nonresponse bias and certain forms of response bias. The other limitations were reduced with the strength of the survey measure, through appropriate data analysis, use of operational terms, and highlighting all potential limitations and validity threats.

Assumptions

Assumptions within a study are elements that the researcher cannot control, but consideration to altogether remove these elements is immaterial (Simon, 2011). This study involved a nonexperimental survey design with a correlational nature. The first assumption was associated with the use of surveys and was as follows: All participants answered the survey questions truthfully (Simon, 2011; Terrell, 2016). The strength of this assumption depended on the following factors: (a) participation in the survey was voluntary, (b) participant responses were anonymous, and (c) participants had no direct contact with me as the researcher except via email, thereby reducing any pressure to participate (Creswell, 2018). Additionally, participants could withdraw from the survey at any time.

The second assumption was that when using an online survey, participants had the technical skills necessary to navigate through the survey and the ability to complete the survey. When using online surveys, there is an assumption that participants have access to both email and the internet. The strength for this assumption was that participants were recruited from social media via Facebook, specifically from two professional groups: a 2,645-member group known as Respiratory Therapy Professionals (RTP) and a 1,500-member group known as Respiratory Therapist (RT). Procedures for recruitment were conducted through weekly announcements via social media postings to the two professional groups listed above, which also provided evidence for the assumptions that participants would have access to the internet and social media services such as Facebook to participate in the study (Simon, 2011). The total timeframe for data collection to reach the target participant population of 200 participants was 6-weeks. Throughout the 6-weeks, each week, a social media posting requesting participants was posted on the professional groups' website via Facebook. There were a total of 200 participants who responded to survey questions.

The next assumptions were attached to the applications of survey questionnaires: (a) all participants were able to answer the questions, (b) all participants who gave informed consent were willing to answer, (c) participants understood the survey questions, (d) participants were able to respond to the survey questions, and (e) the survey questions asked for information that the participants had or could retrieve (Visser et al., 1990). Strength for these assumptions was about the choice of a target population sample through purposive sampling, which allows a researcher to seek out members of a particular group or for a particular purpose (Trochim, 2006). Moreover, the strength of the assumption was increased by the various types of previously used survey instruments that had been used to survey healthcare professionals such as RTs and had been proven to obtain concise, topic-associated results (Dunn et al., 2013; Grandhige et al., 2016; Montagnini et al., 2012; Rocker et al., 2005).

Scope and Delimitations

Aspects of the Research Problem

Cutler and Madani (2016) cited the statistic that one in five Americans will die in the ICU, with 60% of those deaths coming from being withdrawn from ventilator life support technology. RTs are healthcare professionals who are responsible for performing this task. However, RTs are often excluded from preliminary communications, EOL care discussions, and decision-making processes related to the task (Grandhige et al., 2016; Willms & Brewer, 2005). The consequences of such exclusion and being responsible for performing removal of ventilator support without having any voice contribute to potential risks such as moral distress, anxiety, feelings of professional disrespect, and the RTs' perceptions of being directly responsible for a patient's death by their actions (Cutler & Madani, 2016; Grandhige et al., 2016).

Adding to the problem, research regarding the role of RTs in EOL care is limited, as previous reseachers have noted (Cutler & Madani, 2016; Grandhige et al., 2016; Willms & Brewer, 2005). Most studies related to this topic have assessed the viewpoints of nurses and physicians; only a few have addressed RTs (Grandhige et al., 2016; Willms & Brewer, 2005). Specific focus on this topic was warranted because the roles of RTs are becoming increasingly specialized and challenging, with these professionals gaining more responsibility (Kollef, 2017). Moreover, the traditional structure of the healthcare hierarchy regarding healthcare decision making is changing, moving toward a collaborative SDM approach. Previous research has shown SDM to be more effective in providing optimal patient care when compared to the traditional paternalistic approach (Dunn et al., 2013; Hughes & Salas, 2013). Still, in many healthcare settings, this movement has been relatively slow and the traditional hierarchical system is still in practice, which leads to the professional exclusion of other healthcare professionals (Dunn et al., 2013; Grandhige et al., 2016; Hughes & Salas, 2013).

It is this clash between the hierarchical decision-making processes of traditional healthcare and the movement toward the more collaborative SDM model that brings the exclusion of other healthcare professionals such as RTs to light. For if roles of RTs continue to change and RTs are expected to take on more responsibilities and functions, the need to understand their feelings and attitudes related to EOL care and to determine what is necessary to promote the best possible EOL care experiences for RTs and their patients is of paramount importance.

Boundaries of the Study

The chosen population for this study was RTs practicing within the hospital setting who voluntarily participated by taking the online survey questionnaires. The sample for this study was taken from social media via the public Facebook professional groups RTP and RT. An announcement was placed via Facebook on the RTP and RT group pages each week for 6-weeks, asking for study participants. The announcement contained information about the study along with a link that potential participants could click to get to the prescreening questions. When a participant clicked on the link, he or she was taken to three prescreening “yes” or “no” questions. It was these three screening questions that determined exclusion or inclusion regarding whether or not the participant met the criteria to take the survey. The three questions were as follows:

1. Have you actively been practicing as a respiratory therapist within the last 5 years?
2. Do you have experience working in the hospital setting as a respiratory therapist?
3. Do you have experience working in the ICU as a respiratory therapist?

Participants who answered “no” to any of the questions were excluded from the study; all others who answered “yes” were included.

The research design for this study was a quantitative nonexperimental survey. I chose this design because the focus of the research was assessing the relationships among two or more variables (Hatcher, 2013). Surveys are useful in examining, exploring, explaining, and describing attitudes, behaviors, and characteristics (Buckholder et al., 2016). This approach was used instead of a qualitative phenomenological approach because surveys are more cost effective and allow for access to a target population of RTs who can self-report (Buckholder et al., 2016). This type of research design was considered in place of others because the majority of the limited research studies conducted concerning RTs and EOL care used survey questionnaires (Cutler & Madani, 2016; Dunn et al., 2013; Grandhige et al., 2016; Willms & Brewer, 2005).

Addressing Potential Generalizability

Generalizability represents whether or not a study's findings and conclusions are to apply to a larger population or similar circumstances (Colorado State University [CSU], 2019). This research study contained four research questions regarding the relationships between professional exclusion of RTs from EOL care and the RTs' abilities to perform expected job functions and the RTs' attitudes/feelings toward EOL care. There was no significance found between professional exclusion from EOL care discussions and the abilities of RTs to collaborate with ICU team members within the SDM model as it relates to providing care in the ICU. However, significance was found in the differences measured by the variable "*planned together*" on abilities to perform EOL care procedures. Additionally, significance was seen in the effect of experience/education on abilities to collaborate with ICU team members within the SDM model and the effect of communication on abilities to participate in the SDM model processes connected to EOL care procedures performed in the ICU. The relationships were found to exist between the variables within this sample population; thus the results can be applied to the larger associated target population. Hence, these findings can be generalized to other communities of healthcare professionals, not just RTs.

For example, previous research studies have found that nurses have negative experiences within the ICU caring for patients, which have been made more intense by workplace hierarchy. This hierarchy is a contributing factor to the lack of voice nurses have in discussions regarding ineffective treatment within the ICU (Heland, 2007). Next, the occurrence of these generalizations further strengthens the recent movement of healthcare institutions to improve the decision-making process by promoting a more collaborative SDM process between healthcare professionals (Brown, 2013).

The generalizations for this study increase the need for more formal EOL care training for RTs and the standardization of clinical protocols, both suggestions throughout previous studies (Grandhige et al., 2016). This means that further promotion of the SDM model within healthcare is necessary, because in many settings the traditional paternalistic hierarchical model is still in place (Hughes & Salas, 2013), possibly interfering with the healthcare industry’s ability to meet new demands and challenges related to the provision of proper healthcare to patients. Further promotion of SDM and teamwork is necessary to ensure that patients receive the best possible care (Grandhige et al., 2016; Heland, 2007; Hughes & Salas, 2013).

Significance

The role that RTs play in EOL care and their attitudes/feelings on death and dying within the ICU are not well documented (Mahan, 2019). Instead, most of the studies in this area have explored the feelings/attitudes of nurses and/or physicians (Grandhige et al., 2016; Rocker et al., 2005). Second, there are few research studies that identify RTs' experiences of being excluded from the opportunity to understand and discuss decisions to remove life support, a procedure for which they are responsible (Grandhige et al., 2016; Willms, 2010). Bringing to light consideration and understanding of an ignored population's attitudes and/or feelings could help to reduce barriers that RTs might be facing in participating in EOL care discussions, providing options for lack of EOL care education, and offer coping mechanisms to help decrease the discomfort that RTs might experience when participating in EOL care procedures (Grandhige et al., 2016).

Sixty percent of deaths within the ICU are due to the withdrawal of life support measures, which occur with both RTs and nurses constantly at the bedside (Cutler & Madani, 2016). According to Willms and Brewer (2005), only about 18.6% of physicians are reported as being at the bedside during the withdrawal of life support within the ICU. According to the medical hierarchy structure and professional structure of the ICU, the critical care physician is the team leader who is ultimately responsible for medical decision making (Ervin et al., 2018). However, it is not the physician who is withdrawing life support; instead, it is RTs, a population whose members are expected to perform significant responsibilities with little say or ability to cope with their feelings during these experiences (Grandhige et al., 2016; Willms, 2010).

In recent years, the traditional medical hierarchy has faced a new popular notion, that of collaboration in medical teams that include two or more people with shared goals and values (Hughes & Salas, 2013). This notion of teamwork is essential to providing quality patient care, and if used correctly, it reduces defects such as poor communication and cooperation associated with the medical hierarchy. The role of the RT is expanding in healthcare, and without RTs' inclusion in EOL decision making, the quality of EOL care that RTs provide to both patients and families during the end of life will be poor (Hughes & Salas, 2013). This study may promote positive social change by increasing the understanding of how a scarcely studied population's attitudes and or feelings toward members' expected role impact the process of death and dying within the intensive care setting.

Chapter Summary

Previous studies by Grandhige et al. (2016) and Willms and Brewer (2005) highlighted a disconnection between the act of performing EOL care procedures and RTs' exclusion or lack of involvement in discussions as problematic issues for RTs. From the literature, it is known that for a patient to receive the best care within the ICU setting, ICU personnel must work together as a team (Carlet et al., 2004). For this team to accomplish its goals, all members must be included in decision making; as such, there is a need to understand why the exclusion of RTs exists. Moreover, there is a need to gain knowledge through research as to how such professional exclusion impacts RTs.

Research related to the chosen topic is very minimal; further, several of the sources are from previous years, which represents another reason why further research is necessary. In the next chapter, I identify what literature exists concerning this topic and the theoretical framework that served as the foundation for this study.

Chapter 2: Literature Review

Introduction

In the United States today, half of all Americans will spend their last days in a hospital ICU, with 60% of these deaths occurring as a result of being withdrawn from life support such as mechanical ventilation (Cutler & Madani, 2016). The task of removing such life support often falls to RTs, who usually are excluded from EOL care discussions and preliminary communications (Grandhige et al., 2016). This exclusion of RTs from EOL discussions and decisions has in a few previous studies been shown to create a significant risk for RTs to experience moral distress, anxiety, and feelings of professional disrespect, given the potential that they will perceive themselves as directly responsible for a patient’s death by performing their job function of removing life support (Cutler & Madani, 2016; Grandhige et al., 2016).

Previous studies focusing on the RT population have been rare, and several previous researchers have documented an inability to find research sources on this topic (Willms & Brewer, 2005). Therefore, the purpose of this study was to test how social exclusion, experienced through the culture of healthcare hierarchy, influences the feelings/attitudes of RTs who are excluded from EOL care discussions, and how it impacts their expected role of performing EOL care procedures within the ICU. As a significant portion of the American population gets older, there is a greater need to understand the aspects of EOL care and how the making of improvements might be beneficial for both patients and healthcare professionals such as RTs.

Literature Search Strategy

This study began with establishing the literature review components online, which guided my selection of keywords to search databases. Keywords included *end-of-life care, respiratory therapists, terminal extubation, social exclusion, EOL care attitudes, EOL care decision making, EOL care perspectives, healthcare hierarchy, withdrawing life support*, *intensive care unit*, *SDM model*, and *participation.* The EBSCO Discovery Service, ProQuest, CINAHL Plus, MEDLINE, ScienceDirect, Elsevier, and SAGE databases were searched. My initial search parameters encompassed publication years from 2000-2019, which produced a total of 1,927 articles using the terms *respiratory therapists* and *end-of-life care.*

Older sources were also included to provide the reader with historical perspective on the topic, and because the particular theme for this study had previously been noted as having been the focus of limited published research. Sources of information included peer-reviewed journal articles, books, medical journals, government statistics, and information cited by professional organizations. All of the resources and references used are listed in the references section of this dissertation.

Theoretical Foundation

Theory of Social Exclusion

It is an approach with a multidimensional nature representing the process by which individuals or a group of people are denied appropriate access to various rights, opportunities, and resources that are available to members of a different group (Burchardt et al., 2002). According to Amartya Sen (2000), the origin of social exclusion or its concept goes back to Aristotle. The contemporary notion of social exclusion comes from the 1974 writings of Rene Lenoir, who was the Secretary of State for Social Action in the French Gaullist government (Mathieson et al., 2008; Sen, 2000). After Lenoir's origination of the term, several others added to the term's definition, broadening it to cover a wide variety of social and economic problems (Mathieson et al., 2008).

Theoretical explanations of the term *social exclusion* come from within the realm of the sociology of education and the professions (Ashley & Empson, 2017). More specifically, neo-Weberian analyses have displayed how occupational/professional groups operate within a process of social closure, where social collectives desire to maximize status and reward by limiting access to resources and opportunities to a small group of those who are deemed worthy (Parkin, 1974). This type of occupational exclusion occurs in the healthcare setting specifically, through the hierarchy of medical teams (Ashley & Empson, 2017; Hughes & Salas, 2013).

Recently, the healthcare system has attempted to promote teamwork and to encourage multidisciplinary cooperation, coordination, and cognition to provide quality patient care (Hughes & Salas, 2013). However, Rodriquez (2015) has suggested that the recent promotion of teamwork is a new managerial strategy to reclassify the traditional medical hierarchy. Furthermore, this promotion of collaboration within the healthcare setting does not improve professional inclusion or integration (Hughes & Salas, 2013; Rodriquez, 2015). Instead, the practice of social exclusion within the healthcare setting leads to challenges such as poor communication, low levels of trust, decision-making conflicts, moral distress, poor collaboration, and a lack of behaviors necessary to promote teamwork (Connor et al., 2002; Hughes & Salas, 2013).

Theory of Shared Decision Making

SDM is the theory by which clinicians and patients work together to make healthcare decisions. The approach focuses on inclusion of the patient, family members, and all members of the healthcare team. This theory originates from the work of Carolyn R. Miller. Other theorists have built on Miller’s foundation, such Grabill and Simmons (1998), who suggested that SDM involves communication processes that are most effective through incorporating the expertise of all decision makers without any form of knowledge dismissal (Freytag, 2012).

In the American healthcare system, the avoidance of SDM occurs specifically in circumstances where decisions concerning EOL care are necessary (Freytag, 2012). This occurrence is so profound that one study published in the *New England Journal of Medicine* expressed that palliative care can and should be applied early for those patients with chronic illnesses, even when the prognosis is unknown (Temel, 2010). Temel (2010) found that when SDM is used first regarding the application of palliative care, not only is the patient’s life better, but the patient lives longer. Additionally, early implementation of SDM involving palliative care can help to reduce challenges, such as healthcare professionals’ differing opinions about care that can lead to conflict in regard to the SDM process (Freytag, 2012).

Carlet et al. (2004) advocated SDM as the best approach to use when it comes to EOL care decision making and contended that the decision-making process should be shared between the care team and the patient/family. Among the challenges that can get in the way of SDM are power relationships among healthcare professionals (Freytag, 2012). For example, both nurses and RTs are responsible for providing daily direct care to patients and are usually the ones who deliver direct palliative care, yet neither are included in SDM processes concerning EOL care decisions (Freytag, 2012; Thelen, 2005). Instead, the process often involves physicians making decisions with other physicians, and even when other healthcare professionals are present during these discussions, physician domination during the discussion is commonplace (Thelen, 2005). The explanation for such incidents is that physicians think that they have superior knowledge and find it challenging to admit that other healthcare professionals might have more knowledge in regard to particular areas (Baggs & Schmitt, 2000). It is within such situations that the theories of social exclusion and SDM come together to explain the phenomenon that I conducted this study to comprehend.

Theoretical Propositions and Hypotheses

Social exclusion involves either experiencing or perceiving exclusion from relationships (MacDonald & Leary, 2005). Research by Fox and Stallworth (2005) found that a range of 19% to 66% of employees reported experiencing some social exclusion within the workplace. The focus of the hypotheses for this study was social exclusion of RTs from EOL care discussions and how it influences RTs’ abilities to perform job functions and their feelings/attitudes toward EOL care. Hughes and Salas (2013) suggested that without the inclusion of all healthcare team members, quality patient care is not possible.

Previous research by Carlet et al. (2004) found that the exclusion of both nurses and other healthcare team members such as RTs who are responsible for providing patients' EOL care prevents them from having any voice regarding the EOL care that they are responsible for providing. Nurses have expressed dissatisfaction with this exclusion and have reported experiences of moral distress when they have to perform EOL care procedures that they do not agree with but have been excluded from having any say or collaboration in EOL care decision-making processes (Meade et al., 2012).

Darlington (2011) has suggested that this social exclusion occurs because of power relations, which are set by the traditional hierarchy of medical teams. Power relations occur in the practice of medicine as physicians use privileged knowledge to exercise power in the form of writing orders with which RTs may not agree but are expected to carry out (Darlington, 2011). Hughes and Salas (2013) have even suggested that medical students, residents, and physicians are all taught to feel, think, and behave in ways that promote a hierarchy based on privileged knowledge, creating a foundation that hinders any teamwork. The consequence is that those who are excluded from decision-making processes, such as RTs and nurses, experience powerlessness and often express feelings of moral distress and/or being devalued (Darlington, 2011; Meade et al., 2012).

The application of SDM has occurred in the American healthcare system over the last few decades; however, its application to decisions regarding EOL care in previous research has shown that its application fails (Freytag, 2012). Cited reasons for the failure include poor communication between patients, professionals, and families. The consequences are that components such as palliative care often go unused, professional conflicts between healthcare professionals occur, and patients do not receive the best possible care (Freytag, 2012; Hughes & Salas, 2013).

It was the application of both the theory of social exclusion and SDM that made up the foundation for the framework of this study. In regard to EOL care decisions, previous research has found that the most effective way to improve patients' quality of life and to provide proper symptom management is through the collaboration of the entire healthcare team and/or the patient/family (Connor et al., 2002). In reality, previous research has shown that very few ICU patients are involved in the decision-making process, and the prevention of collaboration involving healthcare professionals such as nurses and RTs often occurs (Connor et al., 2002; Carlet et al., 2004; Freytag, 2012; Meade et al., 2012). Ultimately, according to research by Carlet et al. (2004), it is the physician who is making the decisions and who holds the responsibility for the patient's medical care. Additionally, traditional medical hierarchies continue to enforce this practice, which actually reduces the promotion of teamwork, encouraging the exclusion of other healthcare professionals and making the application of SDM extremely challenging (Hughes & Salas, 2013).

The above contributing factors are responsible for such consequences as poor communication, cooperation, collaboration, and inclusion among healthcare professionals when it comes to EOL care decision-making processes (Hughes & Salas, 2013). The consequence of physicians attempting to be sole decision makers can lead to poor patient outcomes, as the physician may be unaware of the patient's values, opinions, and/or feelings (Carlet et al., 2004). This is why the promotion of teamwork, multidisciplinary collaboration, and SDM has recently been encouraged; the hope is that EOL care decisions will be made using a multidisciplinary approach in which the sharing of decision making occurs between the collaborative healthcare team and/or patient/family.

Previous research concerning how the topic impacts RTs has been limited (Grandhige et al., 2016; Wilms & Brewer, 2005). However, several previous research studies have addressed this study’s variables and their influence on nurses (Freytag, 2012; Meade et al., 2012). Therefore, the application of these theories to this study was appropriate.

Analysis of Theory Application in Previous Research

Any social or professional exclusion can negatively impact quality of life for an individual or group of individuals (Greenwood et al., 2018). Marginalized groups such as those living with dementia and mental health disorders and their informal caregivers have experienced social exclusion. Greenwood et al. (2018) used a systematic narrative review to explore the extent to which social exclusion was experienced by members of the above groups and how the exclusion had influenced their lives. In their review, Greenwood et al. used both qualitative and quantitative research evidence, along with the documented perspectives of caregivers themselves. The synthesis produced five studies published in years ranging from 2010 to 2016, all of which were qualitative using interviews and focus groups.

Two of the studies focused on caregivers of those living with dementia, and three focused on caregivers of those living with mental health issues. Four of the studies focused on the caregivers’ viewpoints and their experiences of social exclusion, while the fifth study focused on the perceptions of those professionals working with these identified populations (Greenwood et al., 2018). Factors that Greenwood et al. (2018) highlighted from the synthesis included encountering social stigmas, experiences of social isolation, and challenges for caregivers seeking to engage in outside activities. One study even suggested that social exclusion can directly become part of the caregivers' burden (Steele et al., 2009).

Another study that highlighted the incidence of social exclusion was by Bloomer et al., (2011). This study was quantitative using a retrospective observational approach, and the collection of data for the study occurred via patients' medical records from Australia. The essential finding from the Bloomer et al. study was that the inclusion of nurses occurred in only 25% of EOL care discussions. Additionally, the study found that on average, only two formal family EOL care discussions occurred, with 79% of the meetings initiated by the responsible medical officer and no reported family EOL care discussions initiated by the nurse.

Previous research has documented the significance of nurses' roles within the ICU of providing direct patient care and knowing important clinical and social information concerning the patient and patient's family, indicating that nurses' inclusion is necessary within a collaborative team (NSW Health, 2005). Nurses' exclusion or lack of recognition of the need for nurses' presence undermines the importance of nurses' role in providing patient care in the ICU. Exclusion of nurses from EOL care discussions can lead to conflict among involved healthcare professionals, contributing to poor communication and increasing the chance of poor patient outcomes (Bloomer et al., 2011; Hamric & Blackhall, 2007).

Heland (2007) found in a qualitative study that in some ICUs, EOL care decisions were determined only by physicians. As a result of this practice, nurses within these particular ICUs expressed frustration with having to perform treatments with which they did not agree. Moreover, many stated that they chose to leave ICU nursing because of the moral conflict they had experienced (Heland, 2007). RTs reported similar results regarding exclusion from EOL care decisions and discussions in studies by Willms and Brewer (2005) and Grandhige et al. (2016). Hence, the application of the social exclusion concept to this study was warranted because it has proven applicable within other similar research studies.

Theory Rationale

Two theories made up the theoretical framework for this study. The first was social/professional exclusion theory, and the second was SDM. In the ICU setting, healthcare professionals are responsible for caring for the most severely ill patients, which demands numerous resources and causes high levels of stress in providers. To manage such demands, the field of critical care medicine has set the standard of providing care via a multidisciplinary approach (Ervin et al., 2018). Application of this approach has been proven to ensure that the patient is provided optimal care through a team of clinicians.

Even though teamwork is encouraged, the traditional forms of medical hierarchy are still in place (Rodriquez, 2015). In the ICU, the intensivist, a specialized physician, is the leader, and has complete responsibility for medical decision making and patient outcomes (Ervin et al., 2018). Additional documentation has shown that both ICU physicians and nurses agree that the physician holds overall responsibility for the patient’s treatment and is the most qualified individual to initiate EOL care decisions (Flannery, 2015). Further evidence by Dunn et al. (2013) indicated that some physicians expressed beliefs that they were the primary decision makers and did not need to collaborate with other care team members. Hence, the application of teamwork or collaboration depends on the physician’s willingness to listen, share in decision making, and support teamwork coordination to achieve optimal patient care (Dunn et al., 2013).

Even though teamwork has proven to provide the best patient care outcomes; the traditional healthcare hierarchy promotes professional exclusion which continues to interfere with the promotion of EOL care decision-making collaboration (Brown, 2013). Evidence of incidences of exclusion has been documented more for nurses than other healthcare professionals such as RTs. For example, Bloomer et al. (2011) found that the inclusion of nurses occurs in about 25% of EOL care discussions regarding their patients. Further evidence of exclusion was expressed by participant surveys of nurses who reported dissatisfaction with their limited involvement in EOL care discussions (Carlet et al., 2004).

Previous studies by Willms and Brewer (2005) and Grandhige et al. (2016) regarding the attitudes and concerns of RTs about TE and EOL care both cited findings that RTs are hardly ever included in EOL care discussions despite them being called upon to perform the removal of ventilatory support. Grandhige et al. cited that exclusion of

RTs often occurs from the preparatory communications and meaningful goals-of-care discussions, and as a result, many RTs felt less favorably about the dying process and expressed an immense need for improvements concerning the issues.

This is where rationale for the second theory comes into play. SDM is a new theory within the practice of healthcare delivery. Its application not only promotes collaboration and communication but, has proven to be the most effective approach to ensure that patients received the best possible care (Connor et al., 2002). For example, the application of SDM produces high rates of collaboration amongst healthcare professionals, which has been shown to reduce mortality rates, decrease readmissions, and to reduce patient transfers to the ICU (Piquette et al., 2009).

Rationale for including this theory is related to the premise that SDM although encouraged, is not traditionally practice in the healthcare setting (Hughes & Salas, 2013; Sohi et al., 2015). Instead, the healthcare system is organized and ran within a hierarchical framework; with physicians directing care, and everyone else following their set orders (Connor et al. 2002). This practice is not changing as current medical students, interns, residents, and fellows are learning behaviors which function within this hierarchical system but prove to be a hindrance in new systems such as SDM and other teamwork models (Hughes & Salas, 2013).

The problem is that patient care is becoming more complex, requiring a team approach to manage patients’ complexities, which means that other healthcare professionals are required to take on more care responsibilities (Sohi et al., 2015). In the traditional hierarchy system, these other healthcare professionals are excluded from collaborating and from being able to participate in the decision-making processes (Darlington, 2011). A problem which both RTs and nurses have begun to express frustration, suggesting that things need to change (Dunn et al., 2013; Grandhige et al., 2016).

Conceptual Framework

Introduction

The goal of this study is to test how the theory of social exclusion experienced through the culture of the healthcare hierarchy influences the feelings/attitudes of RTs from being excluded from EOL care discussions; and how it impacts their expected role of performing EOL care procedures within the ICU. RTs are an integral part of the healthcare team, and few patients within the hospital setting die without being cared for by an RT (Brown-Saltzman et al., 2010). RTs are one of the few healthcare professionals who are mostly involved in the direct care of patients requiring EOL care regardless of care level, hospital unit, age, service, or condition (Darlington, 2011).

RTs are responsible for the role of withdrawing life-support technologies, when it has been deemed appropriate at the end of life (Darlington, 2011; Grandhige et al., 2016; Willms & Brewer, 2005). From incidents of resuscitation to end of life, RTs have an essential role in the healthcare setting. Willms and Brewer (2005), in their study found that on average RTs were involved in performing EOL care procedures such as TE on 2.2 occasions per year with a reported range between 0 to 12; and about 33 times throughout their career with a reported range of 0 to 350. Researchers of the study concluded that the majority of RTs within the profession have participated in EOL care at some point throughout their career.

Even with such findings, RTs are usually completely excluded from EOL care discussions and any preparatory communications (Grandhige et al., 2016). In a study by Cutler and Madani (2016), RTs reported having little to no voice, yet many expressed a desire to be heard on many levels throughout the EOL care decision-making process. Additionally, RTs expressed being taken for granted, being unprepared to perform EOL care procedures at the "last moment," and feelings of being disrespected regarding their role during the EOL procedural processes (Cutler & Madani, 2016). Research concerning such findings by Cutler and Madani is limited. Hence the need to understand RTs experiences so that the impact of such experiences can be improved and understood by others (Grandhige et al., 2016; Willms & Brewer, 2005).

Professional/Social Exclusion

Professional/social exclusion occurs when an individual or group of individuals are not allowed to participate for reasons out of their control but have expressed a desire to participate (Burchardt et al., 2002). For example, Grandhige et al. (2016) and Willms and Brewer (2005) both found that RTs are often entirely excluded from EOL care discussions, the preparatory communications for the removal of life support, and other significant patient-orientated goals of EOL care discussions. Even with the incidence of exclusion, there are several RTs who participated in these two studies who reported a desire to be involved with the EOL care process (Grandhige et al., 2016; Willms & Brewer, 2005). Although research concerning RTs is limited; previous research studies have suggested that further study is necessary to develop interventions to focus on the inclusion of RTs (Grandhige et al., 2016).

The consequences of professional/social exclusion in the healthcare setting of RTs has shown that many RTs experience distress while performing EOL care procedures. Evidence of this occurs when RTs compared with nurses tend to rate the EOL process less favorably and suggesting for a greater need of improvements (Willms & Brewer, 2005). In a study by Dunn et al. (2013), both RTs and nurses reported feeling the exclusion of their perspectives from the EOL care decision-making process, leading them to feel disenfranchised with the entire process. Further evidence of the exclusion by Cutler and Madani (2016), RTs reported being taken for granted, being caught unprepared when called to perform compassionate extubation because of poor communication, and feelings of being disrespected in their EOL care roles.

Professional exclusion in healthcare is common practice, especially when it comes to EOL care decisions. Such as in Kisorio and Langley (2015) where the majority of nurses surveyed reported that they do not get involved; instead the physicians make the decisions and then come an tell the nurse what is going to happen next. Baggs and Schmitt (2000) found that physicians often make EOL care decisions alone or with little input from other healthcare professionals. Cassell et al., (2003) found that physicians often make treatment decisions in collaboration only with other physicians. Traditionally, physicians are considered to be the ultimate decision-maker regarding the patients’ care; with some physicians even believing that since they are the primary decision-makers they do not need to collaborate with other healthcare professionals (Williams, 1992). For example, even when patients’ family members are involved, physicians traditionally initiate discussions concerning EOL care and usually govern these discussions (Thelen, 2005). This type of dominance occurs because individual physicians believe they have superior knowledge, which in turn makes it more difficult for them to understand anyone else’s perspectives (Baggs & Schmitt, 2000).

Perhaps this is why both nurses and RTs value collaboration more than physicians do regarding decision making, and why most physicians perceive their input as the more essential to making a right decision (Dunn et al., 2013). Even in studies such as Dunn et al. (2013) where interprofessional collaboration is measured, physician groups reported adequate collaborative processes. While other healthcare professionals expressed a different viewpoint suggesting that the collaboration processes were inadequate a required improvement.

Healthcare Hierarchy

Rodriquez (2015) cited that recent promotion of healthcare teamwork and collaboration is only a rebranding of the traditional forms of the healthcare hierarchy. Researchers are suggesting that even when collaboration occurs in the healthcare setting, the work is often parallel with each healthcare professional performing their tasks with very little interaction or collaboration with other healthcare professionals (Piquette et al., 2009). Suggesting that the promotion of teamwork does not improve professional integration (Rodriquez, 2015). Ballangrud et al. (2017) found that the hierarchical structure among healthcare professionals does impede the application of teamwork in hospitals.

Integration into this hierarchical structure begins during initial training and education; as medical students, residents, fellows, interns, and physicians are all taught to feel, think, and behave in manners which dissuade collaboration (Hughes & Salas, 2013). Historically, healthcare, as a profession, has resisted the application of collaborative models such as SDM, particularly those within the realm of medical practice (Rodriquez, 2015). The truth is that throughout the 20th-century physicians took on the dominant position within healthcare, establishing the paternalistic model which is still actively in practice today because of the hierarchical structure within healthcare (Janss et al., 2012). Even with the recent growth of power from administrators, physicians are still able to deflect any concerns from subordinate staff, family members, and patients about decisions and matters concerning treatment and diagnosis (Rodriguez, 2015).

Although there is a need for clinical hierarchies; the challenges of providing healthcare have changed, and the collaboration of the healthcare team has proven to be the best option for providing optimal patient care (Connor et al., 2002; Dunn et al., 2013; Sohi et al., 2015). Nevertheless, the hierarchy still exists as other healthcare professionals such as nurses and RTs are unable to give orders; yet are considered to be the “final check” on all care decisions for which the physicians make (Brown, 2013). In cases where the physician does make a mistake, the nurse or RT is only unable to resolve the mistake by refusing to perform the order (Brown, 2013). Such actions lead to power and conflict between healthcare team members, which can significantly interrupt the practice of teamwork (Janss et al., 2012).

The impact of such conflict is that nurses often express frustration with having to perform treatments for which they do not agree or have little voice in making; which in turn contributes to burnout and them leaving the job altogether (Heland, 2007). RTs have also expressed such frustrations when having to perform TE but are offered little to no voice concerning the procedure (Willms & Brewer, 2005). Grandhige et al. (2016) found that 27.9% of RTs expressed feeling uncomfortable with performing TE. Additionally, RTs most expressed that they had little to no option not to perform the procedure. This feeling of having no options, along with not be included in EOL care discussions contributes to the discomfort or distress RTs can experience when performing EOL care procedures (Grandhige et al., 2016; Willms & Brewer, 2005).

Ervin et al. (2018) cited that team collaboration, and decision making is the foundation of what makes up the ICU team. The practice of rounding maintains this foundation, which is a formal daily face-to-face meeting with all team members who are directly involved with the care of each patient (Hawryluck et al., 2002). Throughout these rounds, the discussion of each patient occurs, and it is expected for healthcare professionals to share and communicate information to each other making decisions as a team (Ervin et al., 2018).The problem is that the implementation of rounds is challenging because of collaborative information sharing, as rounds can be continuously interrupted, time constraints can disrupt the flow, and over conflict can occur over the constraints placed directly on what patient information is communicated (Hawryluck et al., 2002). Other barriers can prevent effective collaboration, such as team members being unsure of their roles or lacking the confidence to speak up in the presence of other more dominating team members (Ervin et al., 2018).

These significant consequences not only impact patient care but lead to exclusion, which causes conflict and undermines the crucial importance of the work the other healthcare professionals provide (Bloomer et al., 2011). Such consequences contribute to moral distress, insufficient communication between healthcare professionals involved with patient care, and poor patient outcomes (Bloomer et al., 2011; Darlington, 2011; Ervin et al., 2018).

Shared Decision-Making Model in the Intensive Care Unit

The application of SDM in the ICU promotes vital aspects of interprofessional collaboration, which allows the separate and shared knowledge and skills of healthcare professionals to interact promoting the teams' abilities to provide the best patient care (Way et al., 2001). Framework for the model includes various participatory ideals such as information sharing between parties, the involvement of at least two or more participants, the expression of treatment preferences on each side, and a consensus concerning the treatment plan (Belanger et al., 2010). Application of this model has proven to be an optimal model for healthcare decision-making, along with being connected with lower rates of risk-adjusted mortality, improved levels of healthcare professionals’ job satisfaction, and enhanced improvements to EOL care (Puntillo & McAdams, 2006).

Literature Review Related to Key Variables and Concepts

Variables and Concepts: Related Studies

The first study which brings to light the constructs of this study is by Willms and Brewer (2005); which used survey research to access the concerns and attitudes concerning TE of RTs practicing at six acute care hospitals in San Diego County, CA. Willms and Brewer (2005) suggested from their findings that most RTs had participated in performing TE. However, exclusion of the majority of RTs from participating in EOL care decision-making processes occurs regularly before performing TE. Conclusions from Willms and Brewer were that many RTs expressed a desire to have a role in the decision-making processes related to EOL care. In the study, RTs suggested that being asked to perform TE, without full participation in the decision-making processes was stressful for them (Willms & Brewer, 2005).

The next study by Rocker et al. (2005) attempted to describe the perspectives of nurses and RTs related to the providing of EOL care for ICU patients. In the study, a survey questionnaire was used to gain reported comfort levels of RTs and nurses concerning the decision making and process for 14 aspects of EOL care. Rocker et al. found that RTs rated many of the components less favorably in comparison to nurses. Revealing the difference in perceptions which may reflect the divergent roles each plays in the EOL care process. In the study, open-ended questions to both nurses and RTs reported they should be more involved within the process and that physicians should consider their concerns more sincerely.

Additionally, related to comfort levels, RTs expressed discomfort regarding considerations involving continuity of care, suggesting that there is no concern for who removes ventilatory support (Rocker et al., 2005). One RT revealed that when arriving on shift, he or she was expected to perform TE without having any rapport with the family, basically making him or her feel like a stranger in a privileged moment (Rocker et al., 2005). In conclusion, researchers of the study determined that even though nurses and RTs have different perspectives, both expressed a desire to be included, heard, and considered regarding the EOL care processes in the ICU.

The third study which contributes to the constructs and methodology of the study is Grandhige et al., (2016). In the study, researchers used a survey to ask RTs about their experiences, providing EOL care for patients such as TE. Data concerning such experiences are minimal (Cutler & Madani, 2016; Grandhige et al., 2016; Willms & Brewer, 2005). In the study Grandhige et al. (2016) discovered that only 6.6% of RTs were frequently involved in discussions related to TE. However, almost 47.5% of RTs expressed the desire to be involved in family meetings discussing TE. Additionally, 72% of RTs expressed feeling frequently or always being comfortable with performing TE. Unfortunately only 39.3% felt that the option to decline to perform TE was not frequently or always available to them (Grandhige et al., 2016).

Only 32.3% of RTs reported having sufficient EOL care education, and the same number cited gaining the experience at work (Grandhige et al., 2016). Around, more than 60% of RTs reported their desire for more EOL care education (Grandhige et al., 2016). The conclusion of the results of the Grandhige et al. (2016) study is that ICU teams should be more inclusive, not only in EOL care discussions but in education as well. Future work concerning this topic should involve the creation and evaluation of interventions such as RT EOL care education and the overall intentional inclusion of RTs in ICU team discussions. Implementing each of these interventions is vital to see if there can be any improvements or further awareness made to decrease the discomfort felt by RTs surrounding EOL care procedures like TE (Grandhige et al., 2016).

Cutler and Madani (2016) conducted a hermeneutical phenomenology approach, using Colaizzi’s seven-step process to conduct a purposive sample of RTs at UCSD; to gain knowledge of their lived experiences during the withdrawal of life support in the ICU. Researchers in the study recorded interviews with RT participants, using open-ended questions related to their experiences in performing EOL care procedures (Cutler & Madani, 2016). Results produced three themes from the analysis: 1) the need for tools to assist RTs with coping, 2) the impact of power relations concerning the EOL care process, and 3) the deep relationships with particular patients within the power relations theme, also including subthemes. The first subtheme was RTs’ reports of being taken for granted, being caught off guard, being unprepared when asked to perform TE without any warning, and feelings of being disrespected in regard to their role during the process of withdrawing life support. The second subtheme was that RTs cited exclusion from having a voice throughout the EOL care process and their desire to be granted the opportunity of inclusion within EOL care discussions (Cutler & Madani, 2016).

Cutler and Madani (2016) concluded that gaining an understanding of RTs lived experiences performing EOL care procedures, brings to light the need for adequate EOL care education and training for RTs. Several of the experiences highlighted in the study related to RTs performing EOL care procedures; occurred within their first experience or during their first year of clinical practice (Cutler & Madani, 2016). Therefore, the experiences of such strong memories bring to focus the need for measures to counteract the potential emotional trauma RTs may experience during the performing of EOL care procedures (Cutler & Madani, 2016). Such measures should be:(a) on the job mentoring for the first year, especially with EOL care procedures, (b) providing proper education about EOL care so RTs can better cope with the process, (c) inclusion of RTs in pre-procedure huddles with the ICU team, and (d) encouragement of RTs to have more involvement in family EOL care discussions, specifically inpatient cases were RTs are already significantly involved in providing care (Cutler & Madani, 2016).

A study by Hani et al. (2016) surveyed the attitudes of RTs about the withdrawing of life support and compassion fatigue. RTs are responsible for either withdrawing or assisting with the removal of life support. Which means consistent communication must occur between healthcare team members, the patient, and the patient’s family; achieving this type of communication can be challenging for RTs. One reason for such challenges is that there is no agreed set standard or agreed guidelines which exist to direct RTs on how the communication should progress (Hani et al., 2016).

Hani et al. (2016) cited that there have been no previous assessments to address compassion fatigue or burnout in RTs. The objectives for Hani et al. was to understand attitudes of RTs related to their training regarding the withdrawing of life support technology (WLST), measuring incidences of compassion fatigue, and RTs' communication preferences concerning the removal of life support. The survey used was an internet-based model from the ProQOL-5 compassion fatigue subscale. Results of the survey showed that the mean burnout score in RTs was 23 (Hani et al., 2016). RTs in the study reported that their EOL care training was lacking, specifically about the teaching of appropriate EOL care communication. RTs in the study also reported that department training about WLST was inadequate; and that the training offered little education or resources about communication. Hani et al. concluded that compassion fatigue/burnout was average in RTs and that current training provided about WLST required improvement.

Dunn et al. (2013) conducted a study to determine how different members of the IP team perceived collaboration and satisfaction with the decision-making process, across three decision types within the NICU. The survey instrument used in the study was the CSACD; which has proven reliable in measuring nurse-physician collaboration in the ICU. In the study, Dunn et al. (2013) discovered that mostly RTs and nurses; viewed SDM for all three decision types to be insufficient. Instead, citing discontent concerning the collaborative attributes of planning, sharing information, communication, and consideration of concerns.

In comparison with other IP team members, both RTs and RNs were more likely to report the decision-making processes related to patient care as poor (Dunn et al., 2013). Consistent with previous research, both RNs and RTs valued the SDM model's collaborative processes more than physicians (Baggs et al., 1997: Dunn et al., 2013). In the study, physicians reported seeing more value in their input, concerning the decision-making of what is considered to be a right EOL care decision. The reason for this is that traditionally, the physicians in the ICU have been the ultimate decision-makers about the patients' medical and treatment concerns, including EOL care (Dunn et al., 2013; Viney, 1996). This is the reason why senior physicians tend to make decisions, with little efforts towards collaboration or the sharing of information with other healthcare team members (Dunn et al., 2013). Hence, the practice of SDM depends on the willingness of the physician leader to listen, to support collaboration, and to directly share the SDM with other ICU team members (Baggs et al., 2007).

Dunn et al. (2013) found that differences in views of IP team members might be due to the variations in roles, power, and responsibilities. This causes IP team members to have different views on whether or not SDM regarding patient care is, in reality, collaborative. It is suggesting that numerous factors influence IP team members' perspectives on the effectiveness of collaboration concerning the SDM model. Future studies relating to SDM should require more exploration of the whole decision-making process and of the reasons why IP team members such as RTs' and nurses' views of the SDM processes are different in comparison to other IP team members (Dunn et al., 2013).

The purpose of this study by Maxson et al. (2011) is to determine whether multidisciplinary simulation team training can successfully impact RN and or physician perceptions concerning collaboration within clinical decision-making. Participants from the study were volunteer healthcare professionals from the Mayo Clinic at Rochester, MN. The total sample included nineteen nurses and nine doctors for a total of twentyeight. The simulation training in the study consisted of three clinical scenarios. Before participating in the simulation training, the gathering of participant responses was undertaken via the pre-simulation CSACD survey (Maxson et al., 2011). After the completion of the simulation training, participants were again given the same survey two weeks later, followed by another two months.

Evaluation of the differences in the CSACD summary scores between times was by paired t-tests. Results from the CSACD pretest reported that physicians were more likely than nurses to believe that open communication existed between themselves and nurses (P=.04) (Maxson et al.,2011). Also, physicians perceived that both medical and nursing concerns impacted the decision-making processes (P=.02). In the analysis of CSACD pretest scores, most respondents expressed dissatisfaction regarding the decision-making processes (Maxson et al., 2011). CSACD posttest scores revealed an improvement from the pretest scores to those gathered two weeks later (4.2 to 5.1; P<.002), and the trend continued at two months (P<.002) (Maxson et al.,2011).

The study concluded that healthcare professionals have different perceptions concerning clinical decision-making, which can be influenced by their professional roles (Maxson et al., 2011). Secondly, the study showed that simulations of team training could directly improve feelings of dissatisfaction which exist between healthcare team members regarding clinical decision-making processes (Maxson et al., 2011). After the training, positive results included a better understanding by physicians of the difficulties faced by nurses and enhanced motivation to improve professional relationships through more effective communication in the future (Maxson et al., 2011).

The reason this study is essential to the topic is that it shows how effective the CSACD can measure collaboration, which is a crucial component within the proposed study. Next, it shows that barriers which impede collaborative relationships between healthcare professionals with differing professional roles are hierarchical relationships, time, sex, lack of role clarification, and culture (Maxson et al., 2011). Finally, it offers further knowledge as to how vital each healthcare professional's perception of collaboration is, and how it directly influences their abilities to make decisions and perform their care-related duties.

Ervin et al. (2018) highlighted how crucial interprofessional collaboration and SDM are for providing care to ICU patients who are the most severely ill in the hospital setting. ICU is one of the most stressful and resource-demanding areas of the hospital. Recently, there has been a shift towards the practice of collaborative care, which has led to lower morbidity and mortality rates among ICU patients (Curtis et al., 2006). The problem is that there has been very little research about the function and form of collaboration among ICU team members or any insight as to how these collaborative relationships impact the team members’ abilities to perform patient care procedures (Ervin et al., 2018).

The results are that ICU team members lack guidance on how to use team collaboration to enhance patient outcomes and improve overall team performance. Ervin et al. (2018) attempted to address the gap in research by through a synthesis of the research concerning collaboration in the ICU among team members and to create a guide for future research concerning this sphere of healthcare.

Ervin et al. (2018) discovered that there is no definitive definition of what the "ICU team" represents. One suggestion was that it represents all ICU staff, even including those who are indirectly involved with care. The issue is that this suggestion undermines the critical interdependencies and collaborations among clinicians whose shared decision-making and teamwork provide direct care for the patient, thereby discounting the essential components of collaboration and team composition (Shortell et al., 1994). Another suggestion is that the ICU team represents two or more clinicians working together to provide various patient care procedures at a particular time. The problem with this representation is that it makes generalizations across all ICU teams, which limits the seeking of more advance understanding of the real multidisciplinary aspects of ICU team collaboration (Ervin et al., 2018).

Ervin et al. (2018) also highlighted the issues of inclusiveness and conflicts associated with power imbalances. Fernandez & Grand (2015) have suggested that the best way to promote SDM and create shared goals is to create a sense of shared responsibility through team leadership which balances authority and inclusion of other ICU team members. Achievement of the above suggestion is best through the application of the interprofessional model, otherwise known as the SDM model (Kohn et al., 2017).

This model goes against current professional guidelines for ICU patient care which recommend that ICU Intensivists lead and be responsible for all ICU patients, however not all ICUs within the US are following this model (Weled et al., 2015). Instead, variability has increased over the last ten years as more hospital ICUs' are using the SDM model; where patient care uses collaboration from ICU team members of different healthcare fields to provide patient care (Kohn et al., 2017). The SDM model is becoming more standard, hence leading to a reduction in the value of the traditional model. Further reduction is occurring, as the diffusing of medical decision-making responsibilities moves across all members of the care team. Additionally, the use of protocols and other communication tools has decreased the need for the traditional model of ICU intensivist-led care (Costa et al., 2015).

Strengths and Weaknesses of Previous Research Studies

Weaknesses

The first weakness from previous research studies has to do with the use of survey research in which survey completion may be higher among highly motivated individuals or those with specific subject interests which can either negatively or positively impact the survey results (Willms & Brewer, 2005). Willms and Brewer (2005) suggested that a high response rate potentially mitigates such effects. The second weakness with survey research in previous studies is that surveys rely on recall of facts, of which participants may not always accurately recall, thus potentially creating the threat of inaccurate results (Willms & Brewer, 2005).

The first weakness cited by Grandhige et al. (2016) was limited generalizability, as in the study only RTs within a single healthcare system were surveyed. Second, the survey used was descriptive and the research team did not ask any specific questions concerning interventions which might improve RTs experiences related to TE. The data gathered was unable to represent the national estimates for RT distress associated with performing TE (Grandhige et al., 2016).

In Rocker et al. (2005) researchers did not conduct in depth interviews, as their goal was not to provide an ethnographic analysis of nurses' and RTs' experiences related to caring for dying patients. Secondly, researchers in the study used a convenient sample of participants from four sites. Finally, the survey instrument used in the study lacked validity and was not tested for reliability (Rocker et al., 2005).

Dunn et al. (2013) cited social desirability bias; which is the tendency of participants to reply in a method that will be viewed favorably by others as its greatest weakness. The weakness was reduced by ensuring confidentiality of all participants involved. All of the surveys were anonymous, which was enabled by providing ballot boxes for participants to return the surveys (Dunn et al., 2013). Another weakness has to do with the limitations connected to correlational research. The limitation is that correlational research does not prove that one variable cause another even if a relationship is identified; instead it is possible that other variables may play a role (Trochim, 2006).

Montagini et al. (2018) cited its first weakness as limited generalizability, since the study was conducted within an institution that may differ in relation to various processes from other healthcare systems. The second weakness was determined to be reliance on relatively new and unstudied self-report questionnaires, which included a slight although likely inconsequential changes to the phrasing of some items from the original survey instrument (Montagini et al., 2018). Third, was the continued use of the scale in research, which requires further validation to determine which items best measure self-perceived EOL care competencies for specific healthcare professionals.

Strengths

The first strength of the survey study by Willms and Brewer (2005) was the conclusion that RTs have participated in TE. Researchers in the study were also able to conclude that even, though RTs have a strong desire to participate in EOL care discussions, they are rarely involved. Additionally, the study found that EOL education provided to RTs is lacking, consistent protocols regarding EOL care are needed, and the inclusion of RTs in multidisciplinary meetings related to EOL care should occur within the ICU setting (Willms & Brewer, 2005).

The first strength from the study by Rocker et al. (2005) was that researchers were able to attain perspectives from more than one stakeholder group and that the survey used within the study provided a more comprehensive approach to understanding the essential clinical issues and the need for change within the current healthcare practice. Findings in the study extended current understanding of the processes of life support withdrawal in the ICU, as perceived by families through the examination of the perspectives of bedside healthcare professionals who are providing direct EOL care to patients.

Grandhige et al. (2016) provide an essential foundation for the proposed research study. Findings from the study have concluded that RTs are rarely involved in EOL discussions despite their desire to be and have provided evidence that RTs experience discomfort when performing EOL care procedures. The same study also brought to light the need for established protocols which would include RTs in meetings before the performing of TE. The survey used in the study is built upon previous research by Willms and Brewer (2005). Data provided from Grandhige et al. involves an understudied population; including the first data obtained related to the frequency of RTs involvement in TE, goals of care discussions, and their preferences for additional education concerning the terminal illness.

Another study by Dunn et al. (2013) provides strengths such as its processes used for data collection which are concise, transparent, and reproducible. The CSACD survey scale achieved a high response rate and provided a great representation across all professional groups within the study. The CSACD scale used in the study is both valid and reliable. In another study by Montagnini et al. (2018), the first strength is the reproduction of the study and extended previous research displaying variability in the self-perceived EOL care competency of interdisciplinary team hospital staff. Specifically, the findings which highlight the continued disparity between physicians and nurses about EOL care competencies. By expanding the understanding of the EOL care training needs, to move beyond those two healthcare professions. Next, Montagnini et al. (2018) called for the creation of interprofessional EOL care training programs; as a way of equalizing and promoting EOL care competencies across all healthcare professions.

Rationale for Selected Study Variables

Professional/Social Exclusion

Grandhige et al. (2016) cited that around half of their RTs who participated in the survey reported a desire to be involved in family discussions regarding TE; however, only 6.6% expressed being frequently involved. Another study by Willms and Brewer (2005) reported that 73% of RTs surveyed expressed a desire to be part of conferences, which led to the decision to perform TE. RTs' responses to the question on how often the RT was present at family EOL discussions or when the decision was made produced the following: always 2.7%, some of the time 22%, most of the time 38%, and never 34.5% (Willms & Brewer, 2005).

Both nurses and RTs are professionals who have the job function of providing hours of direct patient care at the bedside while having little to no voice over decisions related to the care for which they are expected to provide (Meade et al., 2012). Incidence of this has been traditional within the ICU setting, as both nurses and RTs reported being inactive in regard to participating in many of the extensive goals-of-care discussions Meade et al., 2012). In a study by Kisorio and Langley (2015) nurses responded to open-ended interview questions, by stating that they do not get involved in EOL care decision making processes, reporting that the physicians decide, and then they come to tell the nurses what is going to happen. In the same study, nurses expressed the desire to be involved in the process, so that everyone could be on the same page, which would improve teamwork and allow them to voice their concerns by advocating for their patients (Kisorio & Langley, 2015).

Dunn et al. (2013) found that since traditionally, physicians have been the ultimate decision-makers, that some believe they are responsible and do not need to collaborate with other healthcare professionals. Patel and Arocha (2001) cited that with very complicated patients, several physicians tend to make decisions autocratically. Thus, a collaboration concerning decision making is dependent on the physician leaders' willingness to listen, support the process, to share decision making, and to facilitate care coordination (Baggs et al., 2007; Dunn et al., 2013).

The traditional healthcare hierarchy structure is responsible for such practices as medical students learn throughout their entire training and education behaviors, thoughts, and attitudes which impede their abilities to participate in collaborative healthcare teams (Hughes & Salas, 2013). Janass et al. (2012) found that because multidisciplinary teams have complex hierarchical structures, conflict and intra-team power differences can directly inhibit team members from sharing or combining task-relevant knowledge through interaction with one another. Such challenges contribute to deficits in team cooperation, coordination, creating tensions amongst staff, communication misunderstandings, and leads to the exclusion of other team members. All of which cause more substantial consequences like poor patient outcomes, reduced quality of care, poor decision making, and increased patient mortality rates (Ervin et al., 2018; Hughes & Salas, 2013). For without involvement from every team member, the ability to provide optimal patient care is impossible (Hughes & Salas, 2013; Rodriquez, 2015).

RTs are responsible for the withdrawal of life support; and three-fourths of them practice within the hospital setting (Brown-Saltzman et al., 2010). The responsibility of having to perform such as task puts them at risk for distress and anxiety during and after the procedure (Truog et al., 2001). Also, being excluded from having a voice concerning decisions about performing EOL care procedures of which many RTs have expressed experiencing moral distress and anxiety as a result (Cutler & Madani, 2016; Grandhige et al., 2016; Willms & Brewer, 2005).

Along with RTs, nurses have also expressed feeling the negative influences of the exclusion from the EOL care decision-making processes (Rocker et al., 2005). Both have reported discomfort with the process; expressing such negatives during the experience as stressful, frustrating, emotional, and depressing as each provider experiences the terrible loss of their patients (Rocker et al., 2005). This study and other similar studies have suggested that RTs and nurses reports of exclusion from EOL care discussions and the decision-making processes are dangerous, and that improvements to the processes are necessary as the perspectives of all ICU team members are critical.

Attitudes/Feelings Toward End-of-Life Care

Grandhige et al. (2016) reported that 72% of RTs surveyed in the study, frequently or always felt comfortable performing TE. Around 30% of RTs surveyed expressed being comfortable discussing EOL care issues with patients and or families on their own (Grandhige et al., 2016). Where RTs did not feel comfortable was in relation to EOL care; specifically, when they were called to perform EOL care tasks in patient cases where there is an ethical or moral issue which contributes to the distress. The majority of RTs surveyed cited, the perception that they had few options to decline to perform EOL care procedures like TE (Grandhige et al., 2016). Such perceptions along with exclusion form EOL care discussions can significantly, influence the attitudes/feelings which RTs have towards EOL care (Hani et al., 2016; Willms & Brewer, 2005).

Previous research has shown a relationship between healthcare professionals' attitudes regarding death and the quality of EOL care (Wong, 2017). For example, healthcare professionals who have expressed experiencing death anxiety; because they have a negative attitude when it comes to caring for dying patients (Wong, 2017). The personal values of healthcare professionals and their attitudes can also serve as contributors to how they provide EOL care. The same study found that the personal attitudes of physicians were relevant when it came to the decisions concerning the withdrawal of life support in the ICU.

Not only can an individual’s attitudes and feelings influence their viewpoint; but their experiences also play an essential role in forming their outlook regarding EOL care (Kisorio & Langley, 2015). In the same study, participants reported that caring for EOL patients can be traumatic, painful, touching, depressing, disturbing, heartbreaking, stressful, and draining. Healthcare professionals EOL care experiences can significantly influence their attitudes when their views do not coincide or when the treatment provided to the patient is futile offering no benefits (Flannery et al., 2015). One such consequence of the above EOL care experiences is burnout, which impacts the healthcare workforce and productivity significantly (Flannery et al., 2015).

Levels of education and training can influence healthcare professionals’ attitudes/feelings towards EOL care (Montagnini et al., 2018). For example, Whitehead et al. (2015) cited that incompetent healthcare professionals can make the experiences of caring for EOL patients highly distressing, especially when ineffective treatments are being administered only to prolong death. In addition, those healthcare professionals who have higher levels of EOL education display higher levels of moral distress, in comparison to other healthcare professionals who have less EOL education (Whitehead et al., 2015).

Education and training received by most healthcare professionals concerning EOL care is often cited as inadequate and has been found to be a contributor to such consequences as depression, anxiety, and discomfort (Carlet et al., 2004). The lack of education and training can also prevent providers such as physicians from engaging in EOL care discussions. Additionally, many healthcare professionals are reluctant even to take the time to address the topic of EOL care or even acknowledge the need for or use of palliative care (Ecarnot et al., 2018).

A healthcare professional's level of education can also impact their competence concerning EOL care, which in turn influences their attitudes/feelings about the topic (Ecarnot et al., 2018; Montagnini et al., 2012). Hence, those who expressed low competencies associated with EOL care often have the need or desire for more education and training (Montagnini et al., 2012). The lack of education and training represent some of the major barriers to the goals of providing effective EOL care (Mahan, 2019; Brown-Saltzman et al., 2010). Moreover, Montagnini et al. (2012) suggested that by increasing healthcare professionals' education in areas like communication can promote overall improvements to EOL care.

Abilities to Perform End-of-Life Care Procedures

RTs have an essential role in the care and management of challenging patients with respiratory and terminal illnesses (Kollef, 2017; Willms & Brewer, 2005). The reality for the discipline of respiratory therapy is that most RTs are directly responsible for the removal of life support and other EOL care procedures in the ICU (Willms, 2010). This responsibility of RTs has a sensitive nature and is frequently performed; hence, there is an increased risk for RTs to suffer types of procedure-related distress (Willms & Brewer, 2005). It is because of such risks that there is a severe need for attention to the role of which RTs play (Nelson, 2016; Willms, 2010).

Willms (2010) stated that in the ICU setting physicians might be highly involved in EOL care decision making; but that the technical extubation is carried out by the RTs and nurses, without the direct presence of the physician. Willms cited that RTs are rarely involved or present at the discussions leading to a decision to terminate life. RTs do not just have a technical role in performing EOL care procedures, they have a broader professional role along with enough expertise, knowledge, and education to have the opportunity of being included as part of the EOL care team (Nelson, 2016; Willms, 2010).

In their role RTs are exposed to traumatic events frequently, and to say that most RTs are not influenced by such trauma is false. RTs that do choose to separate themselves from such trauma often become emotionally numb, dissatisfied, and unmotivated (Nelson, 2016). Instead it is those RTs who continue to have the desire to take on new challenges, and who have the attitude to face those challenges who embraces the changing roles of RTs (Nelson, 2016; Willms, 2010). It takes a village to provide excellent patient care at any stage, and the consideration and understanding of each other’s roles are crucial to achieving the patients’ care goals.

Collaboration

Shared or collaborative decision making also known as SDM; allows the multidisciplinary team to use their separate and shared knowledge and skills to provide optimal care for patients (Dunn et al., 2013). Its application has proven to be effective with the making of treatment decisions, contributing to lower rates of risk-adjusted mortality, increased levels of healthcare professionals’ job satisfaction, and improvements to the challenging implementation of EOL care (Puntillo & McAdams, 2006).

Caring for patients at the EOL stages is difficult and requires expertise from several disciplines, which is the reason why the application of SDM is so essential (Conner et al., 2016). It is the best way to ensure symptom management and to improve the patient’s quality of life (Watanabe et al., 1997). Along with enhancing aspects of the patient’s care and life quality; SDM through collaboration and teamwork has reduced healthcare professional burnout. It is allowing healthcare professionals to keep a sense of personal values while working with dying patients (Vachon, 1998).

Still, even with proof of all its positives, SDM is not the traditional model implemented concerning EOL decision making (Baggs & Schmitt, 1995; Freytag, 2012; Thelen, 2005). Instead, in western healthcare physicians are the primary decision-makers of EOL, and it is practiced throughout the healthcare hierarchy system (Baggs & Schmitt, 1995; Hughes & Salas, 2013; Thelen, 2005). Baggs and Schmitt (2000) have cited that physicians either make EOL care decisions alone or only in collaboration with other physicians. Even in EOL care discussions where other healthcare professionals are involved, physicians tend to dominate the discussions. It is because many physicians believe they have superior knowledge, which means they are unable to comprehend any other perspectives; which in turn alienates the rest of the ICU care team members (Baggs & Schmitt, 1995, 2000; Dunn et al., 2013; Thelen, 2005).

It is such beliefs and practices that contribute to the exclusion of RTs and nurses concerning their perspectives about a patient’s EOL care, and why both professionals are more likely to feel that the EOL care decision making processes are inadequate (Dunn et al. 2013). The incidence may also provide evidence as to why RTs and nurses value collaboration in EOL care decision making more than physicians (Fagan, 1992).

When it comes to effective collaboration, proper communication is essential. Spencer (1990) suggested that healthcare professionals do not have enough training in interpersonal skills, which is the reason why patients, families, and other healthcare professionals feel dissatisfied with the quality of EOL care communication. Issues with communication can also contribute to how members of the team view their interactions with other team members (Hughes & Salas, 2013). For example, interprofessional rounds have proven to be useful in promoting cross-disciplinary communication and safe care practices for patients.

Previous evidence has shown that interprofessional rounds in which each team member should have the chance to communicate equally, is prohibited by hierarchical traditions (Hughes & Salas, 2013; Reeves et al., 2009). Such instances decrease when collaborative communication is a significant focus, and each member of the team can actively engage and learn from the other. This allows healthcare teams to work both collaboratively and interdependently to resolve patient issues, create goals, and to develop an appropriate patient treatment plan (Connor et al., 2004; Young, 1998).

Maxson et al. (2011) found that SDM is best for making healthcare decisions because it requires, the members from different healthcare disciplines to communicate and collaborate efficiently within the ever-changing realm of healthcare. These requirements of communication and collaboration can be measured using the CSACD. Maxson et al. used the CSACD to measure collaboration and found that when collaboration is effective between team members, each team member also expresses a better understanding of other team members’ roles, skills, and knowledge; leading to better levels of teamwork and outcomes in healthcare decision-making. Schmalenberg et al. (2005) found that high levels of collaboration shown by interdisciplinary behaviors of professionals such as enhanced interactions and communication. Increased collaboration over time also creates trust between healthcare professionals, which is vital to the continued practice of SDM and support for calls to replace the traditional hierarchical model (Maxson et al., 2011).

Abilities to Collaborate With Intensive Care Unit Team Members Within the Shared Decision-Making Model to Provide End-of-Life Care

For the SDM process to be successful in the ICU setting, members from different disciplines must communicate and collaborate effectively in a fast-paced and highly stressful environment (Maxson et al., 2011). When collaboration among team members is effectively, specifically regarding the making of decisions about patient care, it has proven to improve the decision-making process, reduce medical errors, improve nurses' job satisfaction, and levels of retention (Kramer & Schalemberg, 2003; Thomas et al., 2003). However, when collaboration usually fails due to poor communication issues, it can be responsible for sixty-five percent of sentinel events, with seventy-four percent of those being fatal (McConaughey, 2008; Marshall & Manus, 2007). With such statistics, the breakdowns in collaboration ignorance can no longer be the answer. Hence the reason why focus on understanding what contributes to such breakdowns, and what interventions are necessary to reduce is crucial (Maxson et al., 2011).

RTs who work in the ICU, like any other ICU team member has the daily challenges of dealing with death and dying, and the emotional constraints that come along with such challenges (Ervin et al., 2018). Even with adequate access to support services; it is easy for distress and tension to spread among team members which can increase anxiety and reduce the team members' abilities to provide EOL care to their patients (Piquette et al., 2009). Additionally, how the RT perceives collaboration within the team is different from other team members, meaning that their perception of what represents the providing of quality EOL for their patient can have a completely different meaning (Rodriquez, 2015). For example, in various previous research studies, physicians have rated the quality of teamwork higher than nurses (Makary et al., 2006; Rodriquez, 2015). Results from Hall (2005) found that workers perceive and assess collaboration, via the lens of their position within the hierarchy of their organization and that this perception can define their membership within the team.

It is the misunderstandings of other team members’ perceptions, which can lead to a reduction in the abilities of the particular team member to proper EOL care to their patients (Oberle & Hughes, 2001). Which is why gaining an understanding of how RTs' perceive their experiences with collaboration and their role within the ICU team, will help policyholders and other team members to be aware of their unique dilemmas, moral conflicts, and care-related situations which by gaining such awareness will allow the team as a whole to provide better EOL care for patients in the ICU (Thelen, 2005).

Abilities to Participate in Shared Decision-Making Model Related to Performing End-of-Life Care Procedures

A big part of being able to participate in the SDM model within the ICU is through inclusion (Rocker et al., 2005). Rodriquez (2015) found that in order to participate in EOL care decisions, staff members must define themselves as being part of the "ICU team." Such motivations to participate and belong to the team, do not just happen; reports from participants in previous studies have shown that multidisciplinary simulation exercises, integrated checklists, and the creation of relationships built on trust and respect go a long way in producing successful healthcare teamwork (Gawande, 2011; Rodriquez, 2015).

The problem is that the deflection of any member's participatory membership can occur, often because of power imbalances in the health care setting. These power imbalances represent one of the various barriers to producing a useful SDM model (Joseph-Williams, Edwards, & Elwyn, 2014). When team members are receptive, having trust and respect for other professions, and have the willingness to consider different viewpoints the SDM process has a significantly higher chance of being successful (Baggs & Schmitt, 1997).

In the ICU, RTs are valuable, especially in the role they play for those patients receiving life support. RTs are responsible for maintaining the patients' airway and ensuring the safe function of the life support equipment (Grandhige et al., 2016). So, imagine when RTs' participatory voice concerning decision-making in the SDM process goes unheard, because of the exclusion of the RTs' voice. This incidence of exclusion contributes to RTs expressing feelings of being disenfranchised from the process (Dunn et al., 2013).

A healthcare professional's perceived responsibilities can influence their participation (Rodriquez, 2015). Hence, those healthcare professionals who have a smaller role or focus, may not perceive themselves as needing to participate in the various steps of the SDM process (Dunn et al., 2013). Instead, they participate only when necessary or by attending daily rounds when required. It is for these reasons that gaining an understanding of RTs' perceptions is vital. By attempting to understand what influences participation regarding the performing of EOL care procedures in the ICU, will help researchers to further our understanding of the SDM process and whether or not the process of sharing is equal or if equitably only occurs some of the time (Dunn et al.).

Variables: Related Studies—Explanations and Controversies

Professional/Social Exclusion

In this study, the concept serves as the predictor variable (PV). It occurs when RTs are excluded from opportunities to participate in EOL care discussions and decision-making processes to remove life-sustaining technology; for which RTs have a professional responsibility or job function of performing. The practice of professional/social exclusion in healthcare, not only happens to RTs but other healthcare professionals such as nurses (Ballangrud et al., 2017; Bloomer et al., 2011; Heland, 2007). Bloomer et al. (2011) found that nurses were only involved in about 25% of EOL care discussions with patients and families.

Grandhige et al. (2016) found even lower levels of RTs inclusion in EOL care discussions with only 10.8% and 6.6% of RTs reporting being frequently or always involved in EOL care discussions. This practice of professional exclusion has created consequences. For example, nurses provide a role that is so much more than just providing direct patient care and management of therapies. Still, nurses are excluded from discussions and decision making, which undermines the significance of the nurses' work in turn leading to conflict among healthcare professionals, along with poor patient outcomes (Bloomer et al., 2011). RTs to have expressed experiencing such consequences as well. Grandhige et al. found that RTs are rarely included in EOL care discussions, even when expressing a desire to participate, and as a result of exclusion many reported experiencing circumstances of discomfort when tasked with or during the removal of ventilatory life support.

Rocker et al. (2005) found that even in preparation for death, the inclusion both nurses and RTs was rare, even though both expressed the desire for involvement. Rocker et al. recommended that inclusion of all team members would encourage understanding for decision rationale, awareness of procedures to be performed, and establish a set understanding within the ICU team and between the ICU team and the patient's family. One nurse even cited that physicians should seriously consider RTs and nurses concerns (Rocker et al., 2005).

Darlington (2011) suggested that because physicians exclude RTs and use the power of privileged knowledge to make decisions for which RTs are expected to carry out; the result is that RTs experience feelings of powerlessness which leads to consequences such as moral distress. Such experiences are common when healthcare professionals are expected to carry out futile care procedures or when they have little voice in the decision-making processes for those ineffective EOL care procedures (Darlington, 2011).

Both RTs and nurses have expressed a desire for inclusion in EOL care decision making and discussions (Bloomer et al. 2011;Grandhige et al., 2016; Thelen, 2005; Willms & Brewer, 2005). However, many healthcare professionals agree that since physician's have ultimate responsibility for the patient's treatments, that they are the most qualified to guide the decision-making processes concerning EOL care (Flannery et al., 2015). It is also tradition in healthcare practice for physicians to be the primary decision-makers regarding EOL care (Baggs & Schmitt, 2000; Thelen). Moreover, with no set standardized approach to EOL decision making the inclusion or exclusion of other healthcare professionals is dependent on the physician's willingness to include or exclude (Flannery et al., 2015; Dunn et al., 2013). Thus, the physician has a clearly defined role in the EOL decision-making process, but the role of other healthcare professionals such as nurses and RTs remain unclear (Flannery et al., 2015).

The controversy is that even though both nurses and RTs expressed a desire to have a role in EOL care; many have reported feeling unprepared or stated in previous studies that they do not get involved in EOL care discussions or decision-making

(Kisorio & Langley, 2015). Instead, nurses reported the physicians decide and then tell the nurses what decision has been made. Additionally, the researchers found that when physicians did ask nurses for an opinion about EOL care, they had already made the decision on their own.

Many healthcare professionals report feeling unprepared to deal with EOL care; suggesting the primary reason that both EOL care education and training have been insufficient (Flannery et al., 2015; Grandhige et al., 2016; Willms & Brewer, 2005). Even physicians have reported feeling unprepared to discuss EOL issues with their patients (Thelen, 2005). For example, some physicians reported not knowing the meaning of palliative care or that offering it to patients who are still actively seeking a cure for their condition is an option (Thelen, 2005). Nurse participants in a study by Stroud (2002) stated that they learned about providing EOL care through experiences of trial and error. It is such instances which provide evidence for why healthcare professionals hold different viewpoints and levels of satisfaction concerning the EOL care decision-making process (Sibbald et al., 2007).

A desire to be involved is important, but actually striving to attain inclusion is critical as well. For example, nurses and RTs have cited a desire to be involved in EOL care discussions yet many in practice rarely take initiative to attend (Kisorio & Langley, 2015; Rocker et al., 2005). Albers et al. (2014) suggested the reason for this is because of the healthcare hierarchy and that many nurses believe that they have less decision-making power than the physicians hence the reason for why they do not attend EOL care discussions. Albers et al. also discovered that most nurses believe that patients would rather talk to them concerning EOL care than physicians. Further evidence of this was reported by the close contacts and relationships established between nurses and their patients/families (Kirchhoff et al., 2009). For example, some patients' families actually look to nurses to find the "real answer" related to prognosis and quality of life for the patients. It is to answer such conflicting issues that further study of this variable is necessary. So that perhaps at some point a set of standards might be established to guide the EOL care process.

Attitudes/Feelings About End-of-Life Care

Collins et al. (2015) found that the impact of dealing with patients' deaths and dying can not only effect healthcare professionals' personal viewpoints but influence their feelings towards EOL care. RTs experience death and dying a routine basis; these experiences not only influence the RTs attitudes but for some RTs such experiences create negative consequences such as depression and anxiety (Collins et al., 2015). In today's healthcare settings, most patients are dying in the ICU now frequently following the removal of life-saving technologies (Carlet et al., 2004). Statistics have shown that in the U.S., around one in five patients will die in the ICU (Strickland, 2016).

From such statistics, it is easy to assume the inclusion of RTs at some point in providing care for those patients. Hence gaining an understanding of the role RTs play in EOL care, and how their EOL care experiences influence their viewpoints related to EOL care is crucial (Strickland, 2016).The study of such information has involved other healthcare professionals such as physicians and nurses, but research concerning RTs attitudes/feelings towards death and dying is limited (Collins et al., 2015; Grandhige et al., 2016; Rocker et al., 2005; Willms & Brewer, 2005). Even Willms and Brewer (2005) cited that at the time their study took place, no citations were naming RTs in titles in connected with EOL care.

Perhaps if more studies had been done using RTs, as has been done with nurses and physicians, there would be useful data concerning RTs' attitudes/feelings towards EOL care (Willms & Brewer, 2005). Unfortunately, that is not reality, and with the ever-changing realm of healthcare, the need to understand RTs' attitudes/feelings towards EOL care is even more critical (Collins et al., 2015; Grandhige et al., 2016).

In the proposed study, attitudes/feelings towards EOL care procedures represent the psychological construct which characterizes an individual. Such characteristics are usually gained from experiences and are expressed towards a person, object, place, and or event (Breckler & Wiggins, 1992). Cottereau et al. (2016) suggested such attitudes and or feelings concerning EOL care come from practice experiences. In previous studies regarding physicians' attitudes towards EOL care, reported that influences for such attitudes are through their experiences, and their personal beliefs and philosophies (Cottereau et al., 2016). These factors can also influence healthcare professionals' preferences for specific types of life support withdrawal procedures such as TE (Cottereau et al., 2016).

Healthcare professionals' ethical attitudes/feelings can also influence how they choose to care for dying patients. For example, Puntillo et al. (2001) found that 6% of nurses reported acting against their ethical perspectives in regard to EOL care to a significant extent, and around 34% stated that they sometimes acted against their ethical perspectives.

Some researchers have suggested that it is healthcare professionals' ethical attitudes, which are often associated with the experiences of moral distress during EOL care procedures (Puntillo et al., 2001). For example, nurses reported often disagreeing with physicians EOL care decisions, thinking that treatment was either stopped too soon or prolonged too long in futility (Johnson, 2002). In such experience's healthcare professionals such as nurses often have to act against their ethical attitudes, and it is repeated exposure to such situations which lead to reduced self-esteem and psychologic shutdown (Puntillo et al.,2001). Like nurses, RTs have reported similar experiences of discomfort related to acting against their ethical attitudes regarding EOL care procedures (Keene et al., 2006).

Keene et al. (2006) cited that reasons for this include not only RTs' ethical attitudes towards EOL care but their education and training in which RTs are taught to serve the purpose for helping patients get well and reducing their sufferings. Hence, when RTs have to perform EOL care procedures such as TW; a procedure for which some RTs view as unethical is suggesting that the RTs are acting against the principle of nonmaleficence or doing no harm (Keene et al., 2006). Keene et al. have suggested that in response to the dilemma; some RTs try even harder to save their patients. While others increasingly promote EOL care to end patients' pain and suffering (Keene et al., 2006).

Abilities to Perform End-of-Life Care Procedures

Keene et al. (2006) cited that the EOL care associated procedure of TW is responsible for one of the most important ethical dilemmas for which RTs face in their practice. The second criterion variable (CV) within this proposed study is the RTs' abilities to perform EOL care procedures such as TE, TW, removal of mechanical ventilation, removing/withholding oxygen delivering devices, and other EOL care procedures.

How healthcare professionals' views EOL care strongly influences their preferences of which EOL care procedures they are willing to perform or agree with (Cottereau et al., 2016). For example, the choice between TE and TW is often based on the physicians' judgment and from input by other staff members along with the intent to maintain comfort and dignity while avoiding non-beneficial prolongation of the dying process (Cottereau et al., 2016). The RTs' abilities to perform EOL care procedures are not just influenced by their attitudes, but also by the EOL care decision-making process (Flannery et al., 2015). For example, when physicians make unilateral EOL care decisions without including other stakeholders such as family members and other healthcare professionals is inappropriate, with those who are excluded experiencing distress (Flannery et al., 2015).

Such exclusion from the decision-making processes for RTs has been problematic, because they are expected to perform EOL care procedures such as TE, without being included or having a voice in the EOL care process (Grandhige et al., 2016; Willms & Brewer, 2005).The result of exclusion is that the differentiating perspectives concerning EOL care causes conflict which in turn negatively impacts the EOL care process for the patient and all involved (Brooks et al., 2017). It is because of such consequences that the SDM approach to EOL care and EOL care decisions should be used instead of the traditional healthcare hierarchy (Brooks et al., 2017; Carlet et al., 2004).

Abilities to Collaborate with Intensive Care Unit Team Members Within the Shared Decision-Making Model to Provide End-of-Life Care

Interprofessional collaboration in the SDM process represents the method where different professional groups work together to achieve positive patient associated care outcomes (Sohi et al., 2014). This type of collaboration is possible when interprofessional collaboration involves clearly defined professional roles, promotes inclusion, allows for team members to communicate and share their unique knowledge and perspectives openly, and the other team members understand their contributions (McCloskey & Maas,1998; Sohi et al., 2014). In previous research studies collaboration within the SDM model has been identified as the best model for treatment decision-making and in the ICU practice of the model has been related to decreased rates of risk-adjusted mortality, increased levels of resident and nurse job satisfaction, decreasing ICU readmissions after being previously transferred to the medical-surgical floor, and improvements to EOL care (Puntillo & McAdam, 2006).

Even though interprofessional collaboration has proven to be successful through the SDM model, there are several barriers which can prevent its success (Legare et al., 2013; Piquette et al., 2009). Applying effective collaboration within the ICU setting can be very challenging, as the ICU is dynamic and time pressured as the composition of ICU teams is always changing (Hawryluck et a., 2002). In such ICU environment tensions and alliances can emerge and constantly vanish among ICU team members, and the interprofessional collaboration can rapidly change into interprofessional conflict (Lingard et al., 2004; Piquette et al., 2009). Factors which contribute to the incidences of such interprofessional conflict; regarding SDM include team members level of involvement in the SDM processes, the nature of the decision, individual decisional conflict, uncertainty of the inherent nature of the decision, and the degree of disagreement among teams in the SDM process (Dunn et al., 2013). Such factors can impact the perceptions of healthcare professionals regarding the perceived quality of their interactions complicating their interprofessional collaboration abilities and reducing their development and assessment of the interactions (Piquette et al., 2009). Hence, the reason why many ICU nurses rate the quality of nurse-physician collaboration and communication much lower in comparison to physicians (Thomas et al., 2003).

The controversy involving interprofessional collaboration in the SDM model is that it represents a new managerial strategy to rebrand traditional forms of hierarchy in more acceptable terms (Barker, 1993; Finn et al., 2010; Rodriquez, 2015). Previous research has shown that workers perceive and assess collaboration through the lens of their position within the organizational hierarchy. Hence, the promotion of collaboration in the SDM model is just another way for managers to manage their labor processes (Barker, 1993). Second, some researchers have suggested that the promotion of teamwork and collaboration does not improve professional integration (Rodriquez, 2015). Kerr

(2009) found that the promotion of collaboration and teamwork in the healthcare setting is responsible for increasing medical errors by undermining independent thinking and promoting the sharing of responsibility. For example, current professional guidelines recommend that ICU intensivists-led care should be solely responsible for all ICU patients (Weled et al., 2015).The consequences of such controversy are the differences in how successful collaboration is perceived, which can lead to conflict within the process and the eventual erosion of collaboration (Lingard et al., 2004).

Gaining further understanding of the perceived nature and qualify of interprofessional collaboration within the SDM model is essential, especially in the ICU where a patient's stability changes rapidly requiring immediate interventions from the ICU team (Piquette et al., 2009). There has been very little research concerning the understanding of processes involved in decision-making, and the process impacts the team members' abilities to perform the functions of their roles (Dunn et al., 2013; Ervin et al., 2018). Perhaps by attempting to understand the elements associated with collaboration researchers will be able to gain insight into the power and conflicts which inhibit SDM success, which would help to reduce barriers and promote the best patient outcomes (Janss et al., 2012).

Abilities to Participate in Shared Decision-Making Model Related to Performing End-of-Life Care Procedures

The exclusion of team members from the SDM process in healthcare can cause dissatisfaction (Carlet et al., 2004). The exclusion is occurring as Grandhige et al. (2016) has suggested that most are not even allowed to participate in the preparatory communications and vital goals-of-care discussions. In response to this occurrence, many RTs have expressed a desire to participate in these discussions and to collaborate with team members taking care of patients at the end stages of life (Rocker et al., 2005). Grandhige et al. suggested that exclusion from the opportunity to participate in EOL care discussions and to understand decisions to remove life-support technology can cause potential moral distress and anxiety if the RT's perception is that he or she is directly causing the patient's death by removing life support. The lack of participation of RTs and other healthcare professionals such as nurses can lead to conflict which reduces the quality of EOL care provided, and poor communication between the healthcare team members (Hamric & Blackhall, 2007). It is because of such potential risks and the recognition of the roles RTs play in providing EOL care that understanding the importance of their opportunities to participate is critical.

Allowing team members to participate in SDM; provides a wide array of benefits and promotes improvements of their understanding and perceptions among team members overall enhancing their value within the team (Black & Gregerson, 1997). Evidence of this is in the guidelines for the end of life care and decision-making from NSW Health (2005) which suggests that by promoting the participation and inclusion of nurses within the SDM model brings different viewpoints and perspectives to the decision-making processes. Grandhige et al. (2016) suggested that by including RTs in EOL care discussions would offer another viewpoint which has gone unrecognized; as about six to ten percent of RTs have reported being involved in EOL care discussions.

The controversy surrounding the issue of the ability to participate in SDM processes has to do with the current practice of healthcare hierarchy, power imbalances, and rapid changes in healthcare decisions are made and delivered (Bloomer et al., 2011; Brown-Saltzman et al., 2010; Rocker et al., 2005).The SDM model has become more popular, as the value of the ICU intensivists is decreasing, as interprofessional providers are achieving new expertise allowing them to take a more active role in caring for patients and in treatment decision-making responsibilities (Ervin et al., 2018). This scattering of responsibilities across the ICU team and the promotion of the use of protocols and interprofessional communication tools have decreased the need for intensivist-led care (Costa et al., 2015; Kohn et al., 2017).

However, SDM is very dependent on the willingness of the physician leader to listen, share decision-making, and support collaborative structures as a way of promoting care coordination (Baggs et al., 2007; Dunn et al., 2013). For example, the physician group in a study by Dunn et al. (2013) reported feeling that the SDM team was exceedingly collaborative; other members of the SDM team did not share the feelings. Secondly, in current training, physicians are still learning to internalize the aspects of healthcare hierarchy; which teaches them behaviors that inhibit the promotion of participation in healthcare teams (Hughes & Salas, 2013). Some researchers have found that the big issue to the promotion of SDM processes; is that physicians are resistant to change and that some senior physicians’ scorn any of those who promote new systems (Salamonson et al., 2006). It is such barriers which make the motivation to participate in SDM collaboration challenging, which in turn creates conflict and potentially harms the patient as clinicians are less likely to admit the need for help and advocacy for their patients (Hughes & Salas, 2013).

Lingard et al. (2004) suggested that the recognition of others' knowledge and skills is essential to promoting participatory collaboration to have a successful functioning ICU team. However, what makes up a functioning team and how individual ownership can contribute to interprofessional tensions and conflicts is not entirely understood (Dunn et al., 2013; Lingard et al., 2004). Previous research has shown that significant variation exists among the different professions concerning SDM collaboration, and their satisfaction with the process; it is the understanding of these variations which is necessary for the future as healthcare continues to proceed more towards the application of interprofessional decision-making, from the traditional patriarchal structure of physician-led decision-making.

Research Questions and Hypotheses

In this study, the purpose was the exploration of the relationships between the variables, using survey research to gather participant data. Various studies have suggested that professional exclusion does potentially influence the attitudes/feelings among RTs towards EOL care, and their abilities to perform EOL care (Cutler & Madani, 2016; Grandhige et al., 2016; Willms & Brewer, 2005).

Incidences of professional exclusion have also impacted SDM model participation and collaboration (Dunn et al., 2013). For example, in patriarchal led ICUs, do not promote teamwork, and the decision-making process is usually only by physicians, while other healthcare professionals such as nurses and RTs are expected to follow orders

(Hughes & Salas, 2013; Viney, 1996). Self-perceived levels of competency can also influence the willingness to work within the SDM model (Montagnini et al., 2018). For example, the majority of physicians and nurses feel they have limited competency levels to direct EOL decision-making, which in turn either leads them not actively to seek assistance through collaboration or to avoid the EOL care discussion altogether (Thelen, 2005).

Another reason why the exploration of these research questions was necessary is that there are few studies which have addressed the variables in this study (Dunn et al., 2013; Grandhige et al., 2016; Rocker et al., 2005; Willms, 2010). For example, the studies which have accessed the viewpoints of RTs have been to review specific EOL care procedures such as TE or TW (Cottereau et al., 2016; Grandhige et al.; Keene et al., 2006). There are also very few studies which evaluate the mechanism of team functioning, and which factors positively or negatively influence a team’s performance (Ervin et al., 2018). For example, conflict within a team can have either positive or negative effects on team performance, but little is known as to what sources influence the directions (Cronin & Weingart, 2007).

This study provided insight into the roles RTs play within EOL care, and why RTs inclusion is necessary. As the reliance on team-based care in the ICU increases, it is essential to achieve further understanding of the connections between team processes and the impact that the collaboration sharing has on patient outcomes in the ICU (Ervin et al., 2018). Furthermore, as healthcare becomes even more challenging and RTs' roles expand, the creation of interventions, training, protocols, and future education will be vital. Which is why the research questions are significant; and why guidance towards future research of this topic is imperative, for which this study has served as a steppingstone.

Summary and Conclusions

The objective of this study was to test how the theory of social/professional exclusion experienced through the culture of healthcare hierarchy influences the feelings/attitudes of RTs from being excluded from EOL care discussions; and how it impacts their expected function of performing EOL care procedures within the ICU. There is also focus on how the theory of social/professional exclusion impacts the RTs' abilities to collaborate with others and to participate in the providing of EOL care procedures within the SDM model incorporated within the ICU. In the hospital, almost no patient dies without being cared for by an RT, and in the ICU nearly every RT has at some point in their career either removed or participated in the removing of life-sustaining technology (Brown-Saltzman et al., 2010; Willms & Brewer, 2005). So, it would be logical to assume that RTs are involved in the decision-making processes when it comes to deciding on whether or not to withdraw life support, instead both RTs and nurses have reported being rarely included in such discussions (Willms, 2010).

The gap in research comes into play through the lack of research regarding how the professional exclusion of RTs, impacts their attitudes towards EOL care and their abilities to perform associated tasks (Grandhige et al., 2016; Willms & Brewer, 2005). This topic is also important because in the realm of healthcare RTs are an understudied population, and as healthcare is changing the role of RTs will expand providing a need to examine and understand their roles (Kollef, 2017; Nelson, 2016). The ability to care for patients effectively at the end of life is dependent on the education foundation and the competency a healthcare professional receives (Strickland, 2016).

Brown-Saltzman et al. (2010) suggested that RTs do not receive adequate EOL care education, which in turn means that they are unlikely to develop the skills necessary to help them deal and cope with the consequences associated with the responsibility of caring for dying patients. Schwenzer and Wang (2006) have suggested that without the foundation of such training RTs are more at risk for adverse effects such as moral distress, depression, and burnout from repeated exposures to such situations. Thus, the understanding of such risks and what contributes to causing them is crucial (Nelson, 2016). By gaining an understanding of such consequences, researchers will be able to create training and interventions to help RTs to better cope with their roles in EOL care (Brown-Saltzman et al., 2010).

Grandhige et al. (2016) had a goal of trying to understand the experiences of RTs as they related to performing TE, including to what level the RTs were involved in the decision-making process. Results of the study showed that although 93.8% of sampled RTs were involved in TE, only around 12.3% reported speaking directly with the patient and or family concerning EOL care (Grandhige et al., 2016). Additionally, only 10.8% of RTs reported being included in EOL care discussions (Grandhige et al., 2016). Similar results were found in previous research by Willms and Brewer (2005).

Both of which suggested that the integration of RTs into the EOL care decision-making processes is necessary. Unfortunately, neither was able to explore directly how professional exclusion impacts RTs attitudes/feelings towards EOL care and the impact it has on their abilities to perform such procedures. To answer the gap in research regarding this topic, a nonexperimental survey was used. To explore the relationships between the predictor and criterion variables, of which chapter 3 provides essential details relating to the process.

Chapter 3: Research Method

Introduction

The purpose of this study was to examine how the theories of social exclusion and SDM, as applied to experiences involving the culture of the healthcare hierarchy, address the feelings/attitudes of RTs who are excluded from EOL care discussions, as well as how such exclusion influences their job function of performing EOL care procedures within the ICU.

Research Design and Rationale

Variables

The predictor variable (PV) for this study was professional/social exclusion. Professional exclusion occurs when RTs are excluded from opportunities to participate in EOL care discussions and decision-making processes to remove life-sustaining technology—a task that RTs have a professional responsibility and/or job function of performing. There were four criterion variables (CV) for this study. The first was RTs' abilities to perform expected job functions of EOL care procedures in the ICU. The second was the RTs' feelings/attitudes toward EOL care procedures within the ICU. The third was the RTs' abilities to collaborate with other healthcare professionals within the SDM model in making decisions about providing EOL care in the ICU. The fourth was the RTs' abilities to participate in SDM model processes relating to the performance of EOL care procedures in the ICU. Measurement of the various variables occurred through four surveys: the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al.

(2016) survey. Specific details as to the operationalization of each the variables will appear later in the chapter.

Study Design

The research design for this study was a nonexperimental survey, which is useful in assessing the relationships among two or more variables (Trochim, 2006). The method to evaluate the variable relationships was survey research. Survey research is useful in exploring, explaining, and describing various attitudes, behaviors, and characteristics (Buckholder et al., 2016). The application of survey research is most appropriate when a researcher has access to a specific population whose members can self-report, as was the case for this study's chosen population. Second, the use of the survey method was appropriate because previous research studies have been used to explain the relationships between two or more variables of interest. In this study, I sought to explain whether or not professional exclusion of RTs from EOL care discussions influences RTs' abilities to perform EOL care procedures and RTs' feelings/attitudes regarding EOL care within the ICU.

A written/online survey instrument was used to collect population data. Surveys of this type contain items that participants read, with no direct contact with the researcher, with the participants self-reporting their answers (Buckholder et al., 2016). These types of surveys are self-administered as web-based questionnaires, via a website or survey host. These types of surveys offer privacy to participants and have low rates of interviewer bias. Additionally, this type of survey can be faster to administer and less costly in comparison to other survey methods (Buckholder et al., 2016).

The first significant constraint with survey research is population access. Although I had access to the Facebook public group RTP, I had no control over how many members would respond to the survey. Response rates are not only a constraint but a limitation that can impact the validity of a study's outcomes (Buckholder et al., 2016). Another constraint associated with participant responses is the motivation behind the participants' responses, as the researcher is unable to verify respondent truthfulness (Creswell, 2014). Respondents may have a hidden agenda, potentially being influenced to participate based on the subject of the survey. These inclinations of respondents can contribute to possible inaccuracies in study outcomes produced by disparities between respondents who interpret the research topic in a positive light and those who view it negatively (Creswell, 2014). Management of this constraint occurred through the application of prescreening questions, which in this study took the form of demographic questions that determined inclusion or exclusion of each participant who consented to take the survey (Creswell, 2014).

The five previous studies that included RTs within their sample population concerning withdrawal of life support such as TE and EOL care procedures within the ICU used survey-type questionnaires or direct survey interviews (Cutler & Mandini, 2016; Grandhige et al., 2016; Hani et al., 2016; Rocker et al., 2005; Willms & Brewer, 2005). Furthermore, various studies that have explored the attitudes of physicians and nurses have also included a survey method (Grandhige et al., 2016). Hence, there was strong support for the use of survey methods in the measurement of this study's topic. Additionally, surveys have been used for explaining the relationship between two or more variables, which was the direct purpose of this study (Buckholder et al., 2016; Martella et al., 1999).

RTs are important members of the healthcare team, and like any other member of the team, they develop strong relationships with their patients. Because of RTs' importance, their inclusion in patient care decisions such as those related to EOL care is necessary; however, this is currently not a widespread practice (Cutler & Mandini, 2016; Grandhige et al., 2016; Willms & Brewer, 2005). Additionally, as the practice of EOL care becomes more constant in the hospital setting, specifically in the ICU; not only is it essential to strive to include all care team members; it is also important to gain understanding of all team members' attitudes and what impacts their abilities to perform their job functions. Such understanding can assist healthcare professionals in providing the best possible care for future patients (Willms & Brewer, 2005).

Methodology

Study Population

The target population for this study included RTs practicing within the hospital setting who voluntarily chose to take the online survey questionnaires. The sample was drawn from social media, specifically from the public Facebook groups RTP and RT. Participants drawn from the RTP group were selected from a population of 2,645 members (RTP, 2015). The second group, RT, had 1,500 members; inclusion of this group increased the target population, thereby increasing the chance of attaining more participants who met the criteria captured within the prescreening inclusion questions to take the study survey (Creswell, 2014).

Sampling and Sampling Procedures

For this study, a specific type of nonprobability sampling was used, known as purposive sampling. Nonprobability types of sampling do not rely on randomization to achieve a sample. Instead, the application of purposive sampling allows a researcher to seek out members of a specific group or for a specific purpose (Trochim, 2006). This type of sampling was justified for this study because I was particularly seeking to understand how EOL care impacts RTs. Purposive sampling became even more detailed, in that I was seeking to survey RTs. Hence, the sampling type could be best classified as homogenous sampling, which focuses on a specific group in which all members are similar, such as members of a certain occupation (Saunders et al., 2012).

The sampling frame for this study was taken from two respiratory therapy professional groups through social media via Facebook. RTP, the first group, was a closed Facebook group with a population of 2,645 members. The group included members who were respiratory therapy professionals who were focused on improving the profession and increasing both recognition and respect for the role of RTs (RTP, 2015). The second group, RT, had a total of 1,500 members, for a total of 4,145 participants between both professional groups. This group was added to increase participant survey inclusion rates in order to reach the survey goal of 200 participants. The addition of RT increased the chances of getting participants who met the prescreening inclusion criteria to help reach the goal of 200 surveys (i.e., participants).

An announcement was placed via Facebook on the RTP and RT group pages asking for study participants; it contained information about the study and a link on which potential participants could click to get to the prescreening questions. Consent to participate was given when the participant made the choice to click on the link. When members clicked on the link, they were taken to a brief three-question screening questionnaire, which determined whether the participants met the criteria to take the survey.

The first question was “Have you actively been practicing as a respiratory therapist within the last five years?” This question asked if potential participants had actively been practicing as RTs within the last five years, in order to ensure that participants’ responses would be relevant to current clinical practices, protocols, and recent healthcare trends. Precedents for this criterion came from other studies that had used actively practicing RTs for research concerning EOL care (Dunn et al., 2013; Grandhige et al., 2016; Rocker et al., 2005; Willms & Brewer, 2005). The practice of caring for patients in the ICU has made more progress than many other branches of medicine; hence, it was vital to obtain responses from RT participants who were actively practicing and had up-to-date knowledge of the ICU setting (Perez & Kajadcay, 2012).

The second question was “Do you have experience working in the hospital setting as a respiratory therapist?” and the third question was “Do you have experience working in the ICU as a respiratory therapist?” The reason for the hospital setting prescreening question was that three quarters of RTs work in hospital settings, more specifically in ICUs, where they are often exposed to EOL care issues (Brown-Saltzman et al., 2010; Schwenzer & Wang, 2006). Another reason for these questions was that almost all RTs have at some time during their career participated in EOL care procedures such as TE, which occurs mostly in the ICU (Grandhige et al., 2016).

The third reason was that in many countries, such as Canada, three out of four patients die in the ICU or on the medical floors of hospitals from chronic illnesses, and these patients rarely receive any palliative care treatments and/or transfers to palliative care units (Young & Rocker, 2009). For these reasons, participants in this study had to be either RTs working in the hospital setting or RTs who had recent past experiences of working within the hospital setting. This was a stipulation for the target population in several previous studies (Brown-Saltzman et al., 2010; Grandhige et al., 2016; Nelson, 2016; Willms & Brewer, 2005).

Responses to these criteria questions were “yes” or “no.” Those participants who answered “no” to any of the prescreening questions were excluded from the survey and were directed to a statement thanking them for choosing to participate and indicating that they did not meet the necessary criteria to continue with the survey. Those participants who answered “yes” to any of the prescreening questions were then directed to the actual survey.

Sample Size

The intended sample size for this study was 155 participants. This sample size was calculated from a population size of 2,645 members; using a confidence level of 95% with a 5% desired margin of error. The standard deviation (*SD*) or variation for this study was 0.5, and the Z score was 1.96. The calculation was computed using the G-Power analysis software (Abraham & Russell, 2008). The estimated population size was expected to be around 155 participants; to reduce participant nonresponses, around 200 participant surveys were gathered (Creswell, 2014).

Procedures for Recruitment

Participants were recruited from social media via Facebook, specifically from the 2,645-member RTP group and the 1,500-member RT group. The RT group was added to increase the chances of getting participants who met the prescreening inclusion criteria to reach the target population goal. I placed a study announcement via social media seeking participants; interested individuals could click on a link to be taken to the prescreening questions and information concerning the purpose of the survey. A total of 200 participants provided enough responses to meet the necessary sample size of 155 participants, and the gathering of 200 participants increased participant response rates (Creswell, 2014).

Participants who clicked on the link were taken to three “yes” or “no” screening questions. The three questions were as follows:

1. Have you actively been practicing as a respiratory therapist within the last 5 years?
2. Do you have experience working in the hospital setting as a respiratory therapist?
3. Do you have experience working in the ICU as a respiratory therapist?

Those participants who answered “no” to any of the questions were excluded from the survey and directed to a statement thanking them for choosing to participate and explaining that they did not meet the necessary criteria to continue with the survey.

Reasons for the exclusion of specific participants are presented in the sampling and procedures section of this chapter. Those participants who answered “yes” to any of the questions were then taken to the actual survey. In reality, I was looking for participants who were able to answer “yes” to all survey questions to take the survey. Participant consent was granted when a participant decided to click on the initial link; this was seen within the initial announcement posting. Participation in the survey study was voluntary, and the participants were informed that they only needed to click on the exit button to leave the survey.

The participants’ survey responses were anonymous. Recruitment for this study occurred via an announcement posting on professional groups through Facebook; there was no direct contact between participants and researcher. All of these procedures for recruitment were approved by the Walden University Institutional Review Board (IRB # 12-16-20-0120240). Demographics gathered within this study included gender, age, total years of respiratory care experience, education level, number of experiences performing EOL procedures, type of ICU, type of hospital, and patient population for which the participant provided care.

Data Collection

The goal for this study was to gather survey responses from a target population of 200 participants throughout a 4-week period, which was extended to 6-weeks to gather more participant survey responses. Throughout the 6-weeks, each week, a social media posting requesting participants was placed on each of the professional group’s pages via Facebook. The posting contained information about the survey and a link that participants could click on to reach the prescreening questions. Participants who qualified via the three prescreening questions moved on to take the survey, which took about 25 minutes to complete. It took a 6-week timeframe to gather enough responses from participants to reach the target goal of 200 participants. Approval for these procedures came from the Walden IRB. There were no follow-up procedures for this survey study. Demographics gathered during this survey were used to answer the research questions and further highlight various study variable relationships.

Participation in this survey was anonymous; no names were taken during the study. There was no direct contact between participants and researcher; the use of a survey platform allowed for the incorporation of procedures to ensure anonymity. There was no direct identification of participants' surveys; instead, each survey was assigned a number when submitted to reach a total of 200 participants, which was the target sample size. Participation in the online survey was voluntary, and there was no pressure to participate. There were a total of 200 participants who responded to the survey questions. However, only 70 of the 200 participants responded to the demographic survey questions. A possible reason for this was that the demographic questions appeared at the end of the survey. Perhaps the length of the survey, with a total of 77-questions, and resulting question fatigue offer an explanation as to why there were more nonresponses recorded for questions at the end of the survey in comparison to those at the beginning. Previous research has shown that the relationship between the number of questions in a survey and the time spent answering each question is not linear (Creswell, 2004).

There was no initial identification of participants. Otherwise, responses of the participants were anonymous, being categorized by each survey and its specific questions. Protection of the electronic data is through passwords. The computers which store the data were kept in a locked file cabinet. The electronic data is kept for the recommended timeframe and removed via confidential shredding or computer file deletion. Access to the data is limited to only the primary researcher and members of the dissertation committee and university officials.

Instrumentation and Operationalization of Constructs

Collaboration and Satisfaction About Care Decisions

The CSACD was created by Baggs (1994) to measure nurse-physician collaboration regarding the making of individual patient care decisions and satisfaction with decision-making within the ICU. The survey includes nine items; with the first six measuring essential elements of collaboration. These elements include; open communication, planning together, shared responsibility, cooperation, coordination, and consideration of concerns (Baggs, 1994). The instrument is self-administered, and the elements are scored from 1 (strongly disagree) to 7 (strongly agree) via a Likert style scale. The seventh element represents a global measure of collaboration scored from 1 (no collaboration) to 7 (complete collaboration). Scoring for the last two elements include satisfaction with the decision-making process, and the decision ranges from 1 (not satisfied) to 7 (very satisfied) (Baggs, 1994). The application of a seven-point Likert scale provides enough variation in response choices. A total collaboration score for questions (1-7) was from 7 to 49; with a more substantial score indicating more collaboration in regard to the decision-making process (Baggs, 1994).

This instrument is useful because it measures perceived collaboration and satisfaction of healthcare professionals in regard to the decision-making within the SDM model (Dunn et al., 2013). Gaining insight into how RTs' view collaboration and satisfaction with the decision-making process will help to answer the research questions as to whether or not professional exclusion impacts the RTs' abilities to perform EOL procedures within the ICU.

Support concerning content validity for the CSACD is by Baggs and Schmitt (1988) literature review; also, the instrument's questions have been reviewed by both nursing and medical experts (Baggs & Schmitt, 1995). Additionally, further, support for content validity is through pilot testing. Construct validity was supported by a correlation which was higher between collaboration and satisfaction with the decision-making process (r=0.69) than between collaboration and satisfaction with the decision (r=0.50) (Baggs & Schmitt, 1995). Evidence of criterion-related validity came through the correlation of the global collaboration question with the six essential elements producing a correlation coefficient of .87 (Baggs, 1994). Validation of internal consistency and reliability for the instrument was via Cronbach's alpha of .98 in a nursing sample and .93 for medical residents concerning the six essential elements of collaboration (Baggs & Schmitt, 1995). Correlation between two satisfaction items was 0.64 (Baggs & Schmitt, 1995).

Additionally, the CSACD was used by Dunn et al. (2013) recently to survey interprofessional shared decision making in the neonatal intensive care unit (NICU). The instrument proved to be valid and reliable during the study as it produced a Cronbach's alpha of .94 for the six essential elements of collaboration across all sample groups within the study. The results of Dunn et al. study have demonstrated to be statistically significant and clinically relevant by highlighting differences between professional groups and across decision types.

The findings by Dunn et al. (2013) were found to be clinically relevant for some members of the interprofessional team, specifically RTs and nurses. Both of whom reported SDM for a chronic condition, triage, and values-sensitive decisions to be less than optimal. RTs and nurses reported that discontent is connected to some aspects of the SDM process, such as sharing information, planning, communication, and consideration of concerns (Dunn et al., 2013). Collaboration scores for nurses were stable across all decision types; however, RTs collaboration scores were lower than physicians across all decision types. Whereas physicians' collaboration scores were higher than both RTs and nurses, and physicians reported being the most satisfied with the decision-making process (Dunn et al., 2013).

Hence, results from Dunn et al. (2013) are similar to the Baggs et al. (1997) study which found that both RTs and nurses are more likely than other groups to feel that the SDM process is defective. Dunn et al. cited a reason for this is that both RTs and nurses value collaboration in decision-making more than physicians do and that perhaps physicians see their input as most important when it comes to making a sound decision.

Hence, providing evidence for the premise that some physicians believe that since they are the primary decision-makers that they do not need to collaborate with other team members, which is the direct opposite meaning of the SDM process and goals (Williams, 1992). Even with the physician group within the study being very collaborative, other members of the team did not share the view and even emphasized the need for improvements in order to achieve optimal decision making and quality patient outcomes (Dunn et al., 2013). Permission to use the CSACD instrument is in the Appendix D section of this dissertation.

Scale of End-of-Life Care in the Intensive Care Unit

The development of EOLC-ICU scale is by Montagnini et al. (2012) explores the self-perceived competencies associated with the provision of EOL care within the ICU. The surveyed population was all healthcare providers in the ICU; in particular, RTs. The reason for the application of this instrument within this study is that in the study by Montagnini et al., the survey assessed areas such as EOL care decision-making and communication which are essential components within this study. Secondly, the EOLC-ICU uses 28 questions to assess the self-perceived attitudes, knowledge, and behaviors of healthcare providers within seven EOL care domains (Montagnini et al., 2012).

The domains include; communication, continuity of care, staff support, decision-making, symptom management, spiritual support, and patient and family support. The scoring for EOLC-ICU questions was via a five-point Likert scale (1-strongly disagree, 2-disagree, 3-neutral, 4-agree, and 5- strongly agree (Montagnini et al., 2012). Participants who chose to respond “N/A” were scored a zero. The scores were calculated by adding up all the responses for all 28 items, with a range from 0-140 with the higher scores meaning greater perceived competence concerning EOL care within the ICU (Montagnini et al., 2012). The seven EOL domain subscales and attitude, behaviors, and knowledge subscales were all scored by adding participants' responses to the relevant components of each subscale (Montagnini et al., 2012).

In the study, the survey response rate was 50.3% for a total of 93 surveys. The majority of participants included nurses (40.9%) followed by physicians (26.2%); the rest include other healthcare providers at around 28% (Montagnini et al., 2012). Data analysis was both correlational and descriptive, including means being calculated for each item to identify the areas of highest perceived competency. While a possible difference in self-perceived competency was totaled via analysis of variance (ANOVA); comparisons of the mean scores for those who had previous EOL education and those who did not were assessed using *t*-tests (Montagnini et al., 2012). Correlations were totaled to explore the relationship between several of years in practice and self-perceived EOL care competencies, years in practice ad total types of education, and having previous EOL education and self-perceived competencies.

Results of the study indicated that internal consistency reliability of the EOLC-ICU and its subscales was high, ranging from adequate for the attitudes and continuity of care subscales, too high for the remaining subscales (Montagnini et al., 2012). The subscale which showed poor internal consistency was emotional support for staff. A possible reason for this was the small number of items contributing to the domain condensed the results. In correlation analysis, the results showed that years in practice significantly correlated with self-perceived competence for providing emotional support to patients and their families (r=0.25, p=0.05). Additionally, years in practice were significantly correlated with types of education (r=0.27, p=0.05) (Montagnini et al., 2012). However, years in practice did not correlate well with perceived EOL knowledge (r=0.13), attitudes toward EOL care within the ICU (r=0.08), EOL care behaviors (r=0.08), or any of the subscale care domains. Yet, having previous EOL education did prove to be significant correlating with; self-perceived EOL knowledge (Spearman's rho=0.32, p=0.01), self-perceived competence in decision-making (rho=0.23, p=0.05), symptom management (rho=0.30, p=0.01), providing emotional support (rho=0.24, p=0.05), and symptom management (rho=0.23, p=0.05) (Montagnini et al., 2012).

This survey was appropriate because in Montagnini et al. (2012) and Montagnini et al. (2018), there were differences in perceived EOL care behaviors due exist across various disciplines within the ICU. Furthermore, both studies found these differences to exist between physicians and nurses; finding that nurses were less likely than physicians to view communication concerning EOL care within the ICU (Montagnini et al., 2012; Montagnini et al., 2018). These differences between nurses and physicians were found in the Montagnini et al. (2012) and reproduced in Montagnini et al. (2018) which showed that the survey results could be replicated, hence increasing the survey's reliability.

A request for permission to use this survey is in the Appendix C section. This survey was applied to two populations: Those healthcare providers who worked in the ICU at Clement J. Zablocki Veterans Administration Medical Center (ZVAMC) and other healthcare providers who are not in the ICU and was revised to include those who work outside the ICU (Montagnini et al., 2012; Montagnini et al., 2018).

Rocker et al. (2005) Survey of Perspectives on Decision Making and Comfort Level With End-of-Life Care

This survey questionnaire was developed and used by Rocker et al. (2005) in a study to describe Canadian nurses and RTs perspectives concerning EOL care for critically ill patients. The study method involved 20 to 30 cases of patients who had life support withdrawn in four Canadian university-affiliated ICUs, of which both RNs and RTs were asked to report their comfort levels with decision making and process for all fourteen aspects of EOL care (Rocker et al., 2005). The 14 items included: cardiopulmonary resuscitation (CPR), life support withdrawal, the timing of these decisions, the tempo of life support withdrawal, the method by which mechanical ventilation and oxygen were withheld, decreased, or withdrawn, the amount of sedation used, the quality of the physician's explanations to families, the availability of physicians to address concerns, involvement of RNs and RTs in the decision, whether or not the life support withdrawal process went as planned, the peacefulness of the dying process, and the degree of privacy (Rocker et al., 2005). Gathering of the data for the survey was after the patient died; this was done to reduce the influence of the study on EOL care delivered.

The survey was a self-administered questionnaire provided to the bedside nurse and RT who was involved in the withdrawal of life support directly after or within 24 hours after the patient had died (Rocker et al., 2005). The survey used a 5-point ordinal scale (1-very comfortable to 5-not at comfortable) to evaluate the comfort with 14-items concerning EOL care decisions and the process of life support withdrawal for each patient. If any discomfort was reported for each item, an open-ended explanation was promoted. Additionally, participants were asked if they would do anything differently, and whether or not the entire ICU team could have done better. From responses of both RTs and nurses the majority of nurses (85/94, 90.4%) and RTs (50/73, 68.5%) were very comfortable with decisions about whether to withhold CPR and with decisions to withdraw life support (83/94, 88% of nurses and 56/73, 76.7% of RTs) (Rocker et al., 2005). Additionally, the majority of nurses and RTs were very comfortable concerning the timing of the decisions about CPR (70/93, 75.3% of nurses and 47/70, 67.1 % of RTs), and life support withdrawal.

Since the survey was initially developed for Rocker et al. (2005) study it was first pretested for clarity at one study site; however, since the survey is descriptive, in the Rocker et al. did not test for reliability. Rocker et al. cited within the limitations of their study, was the use of a convenient sample of participants and the lack of validity and reliability testing of the survey. Rocker et al. did cite that various items within the survey come from other studies which have been relevant to satisfaction and EOL care within the ICU. Although this instrument has limited validity and reliability; in the Rocker et al. is was able to produce findings to extend the understanding of the process of life support withdrawal within the ICU, and to explore the perspectives of bedside clinicians in the process. Specifically highlighting the perspectives of RTs; of which previous research has been severely limited (Grandhige et al., 2016).

Use of this survey is appropriate because it has previously measured RTs perspectives but addresses their level of comfort of their involvement in the EOL decision-making process, which is relevant to the study's research questions. Additionally, the survey explores the role an RT has within the EOL care process can provide understanding as to whether or not their level of involvement or lack thereof impacts their job function and attitudes/feelings towards the EOL care process. This survey has proven to be able to obtain the suggestions from both nurses and RTs concerning the EOL care process within the ICU, which can help to address the research questions of this study (Rocker et al., 2005).

Rocker et al. (2005) acknowledged that the use of a convenient sample impacts the validity and reliability of the survey, but the various components within the survey have been reported through previous research to be relevant to measuring and representing EOL care within the ICU (Keenan et al., 2003). A letter for permission to use this survey is in the Appendix H section.

Grandhige et al. (2016) Survey of Respiratory Therapists' Experiences and Attitudes Concerning Terminal Extubation and End-of-Life Care

This survey was developed and used by Grandhige et al. (2016) in a study to survey RTs from two academic medical centers concerning their experiences providing EOL care to patients in the ICU and performing the procedure of terminal extubation. This survey is appropriate for this study because it focuses on measuring the inclusion of RTs in the EOL care process, their knowledge and attitudes concerning EOL care procedures such as terminal extubation, and their overall experiences with EOL care within the ICU (Grandhige et al., 2016). A letter for permission to use this survey is in the Appendix A section.

Grandhige et al. (2016) evaluated validity for survey by incorporating the services of experienced RTs and RT leaders to assist in the creation of the survey contents. Additionally, the majority of the questions came from content-related, previously published surveys. Third, the study by Grandhige et al. comes from a previous research study foundation from the study by Willms and Brewer (2005). Limitations of Grandhige et al. survey have to do with that it was only administered to a small population within a single health system when it can reduce its generalizability. Hence the collected data is unable to represent national estimates for RT distress during EOL care procedures, something this study rectified.

Operationalization of Study Variables

Professional/social exclusion occurs when RTs are excluded from opportunities to participate in EOL care discussions and decision-making processes to remove life-sustaining technology; for which RTs have a professional responsibility or job function of performing.

Scoring for the PV was via the measuring of the six collaboration attributes of the CSACD, which are the first six questions. The six attributes are: planning together, shared responsibility, cooperation, open communication, coordination, and consideration of concerns (Baggs, 1994; Dunn et al., 2013; Maxson et al., 2011). Scoring for these questions is done using the seven-points Likert Scale (1-strongly disagree to 7- strongly agree). Additionally, from the CSACD question, seven was used as it represents a measure of global collaboration, using the seven-points Likert Scale (1-no collaboration to 7- complete collaboration) (Baggs, 1994; Dunn et al., 2013).

In Grandhige et al. (2016) survey, measuring for the PV was through the responses of one of two five-category scale responses (never/rarely/sometimes/frequently/always) or (strongly disagree/disagree/neutral/agree/strongly agree. The following questions from the survey measured the PV under the heading of *Participation in EOL discussions.* It includes the following four questions: 1) I speak with my terminal patients and or their families one-on-one about the end of life care? 2) I am part of the multidisciplinary medical team that discusses EOL care with a patient and or family? 3) I am comfortable discussing EOL care with a patient and or family on a one-on-one basis? and 4) I would like to be included in multidisciplinary medical team meetings with a patient and or family regarding EOL discussions (Grandhige et al., 2016).

Another heading in the Grandhige et al. (2016) survey which assesses the PV is *Communication concerning EOL procedures* and asks the following questions: 1) I am involved in discussion with family about the withdrawal of life support? and 2) I would like to be included in family meetings where decisions to remove ventilator support are discussed? The statistical calculations for the responses from these questions were through descriptive statistics in the form proportions. The process is through categorization of the responses under the above headings.

There were four CVs for this study. The first is the abilities to perform expected job functions of EOL care procedures in the ICU. This represents the RT's ability to perform EOL care procedures (terminal extubation, removal of mechanical ventilation, withhold/removing of oxygen delivering devices, and other EOL care procedures). Measurement for this CV was via the collaboration scale from the CSACD, comfort levels from the EOLC-ICU and Rocker et al. (2005), followed by questions from Grandhige et al. (2016) concerning experience and education.

Specific questions from the CSACD about collaboration attributes that measured the CV include:1) Open communication between the interdisciplinary team takes place as decisions are made for patients? 2) Decision-making responsibilities for patient care are shared between members of the interdisciplinary team? 3) The multidisciplinary team plans together to make decisions about care for patients? and 4) Decision-making for patients is coordinated between members of the interdisciplinary team? Scoring for these questions is on a seven-point Likert Scale (1-strongly disagree to 7-strongly agree) (Dunn et al., 2013). Additionally, the following question was included *"How much collaboration occurs between members of the interdisciplinary team in making decisions for patient care?"* (Baggs, 1994; Dunn et al., 2013). This question represents a global measure of collaboration using a seven-point Likert scale (1-no collaboration to 7-complete collaboration).

Next, measurement of the same CV was by comfort levels from the EOLC-ICU. Scoring for the EOLC-ICU responses come from a five-point Likert scale (1-strongly disagree to 5 strongly agree, with 2-neutral) (Montagnini et al., 2018). The particular questions to measure comfort levels of the CV include: 1) I am well prepared to treat respiratory symptoms in the dying patient? 2) I am well prepared to withdraw life support in the dying patient? 3) I am well prepared to discuss code status with patients and families? 4) I feel comfortable discussing advance care planning with patients and families? 5) I feel comfortable discussing codes status with patients and families? 6) I feel comfortable withdrawing life support in the dying patient? 7) I feel it is important for physicians, nurses, and other ICU team members to collaborate in EOL decision making? 8) In the ICU team members meet with the patient and or family on a regular basis to review the patient’s status and to answer questions? and 9) In the ICU continuity of care for the patient/family at EOL is observed when team member assignments are made? (Montagnini et al., 2012, 2018).

Measurement of comfort levels for the same CV was through the following questions from the Rocker et al., (2005) survey. The scoring for these survey questions is on a five-point ordinal scale (1-very comfortable to 5- not at all comfortable); a non-scored N/A option is available. The following questions are used precisely to measure the comfort levels of the CV, which include:1) Comfort with the way the ventilator was withheld/withdrawn? 2) Comfort with the decision to withhold/withdraw life support? 3) Comfort with the way oxygen was withheld/withdrawn? 4) Your comfort with your level of involvement in the decision-making process in withdrawing of life support? and 5) How closely did the process of life support withdrawal proceed as expected? (Rocker et al., 2005).

The same CV was measured using the Grandhige et al. (2016) survey questions concerning experience and education to assess the variable. Scoring for these questions involved using one of two five-category response scales seen in sections above. The following questions were used to evaluate the variable:1) I am given the option NOT to perform the extubation if I do not feel comfortable? 2) I am involved in the discussion with family about the withdrawal of support? 3) I feel comfortable performing the extubations? 4) It is my preference that the physician performs the extubation? 5) I feel comfortable with the decision to terminally extubation? 6) I have had sufficient education/training regarding terminal illness during my working respiratory career? 7) When I am involved in a terminal extubation, someone from the treatment team communicates with me directly regarding the process of withdrawal? and 8) How many terminal extubations have you been involved in? (Grandhige et al., 2016).

The second CV attitudes/feelings towards EOL care procedures was the representation of the psychological construct with characterizes an individual; usually attained from experiences and is expressed towards a person, place, object, and or event (Breckler & Wiggins, 1992). Specific questions to assess attitudes/feelings towards EOL care procedures among RTs were through the measurement of comfort levels from the EOLC-ICU.

The questions included:1) I am well prepared to treat respiratory symptoms in the dying patient? 2) I am well prepared to withdraw life support in the dying patient? 3) I am well prepared to discuss advance care planning with patients and families? 4) I am well prepared to identify the emotional needs of dying patients and their families? 5) I am well prepared to provide grief and bereavement support to patients and their families? 6) I feel comfortable discussing advance care planning with patients and families? 7) I feel comfortable withdrawing life support in the dying patient? 8) I feel it is important for physicians, nurses, and other ICU team members to collaborate in EOL decision making? 9) In the ICU conflicts among team members are addressed before meeting with the patient and or family? 10) In the ICU, there is sufficient support for staff to handle the personal distress that may arise when caring for patients at EOL stages? 11) In the ICU withdrawal of life, support is discussed with patients/families in a timely fashion when the patient's clinical status deteriorates? and 12) In the ICU, clear and consistent information is provided by team members to patients/families making decisions regarding EOL care? (Montagnini et al., 2012, 2018).

Survey questions from Grandhige et al. (2016) assessed attitudes/feelings towards EOL care procedures through questions involving knowledge, attitudes, and experiences in TEs among RTs. The questions include the following:1) I feel comfortable with the decision to terminally extubation, 2) I feel comfortable performing the extubations, 3) I feel comfortable with the family's presence during the patient's extubation and subsequent care, and 4) It is my preference that the physician performs the extubation (Grandhige et al., 2016). The Grandhige et al. survey was also used to assess experience regarding the same DV. The following questions were included: 1) How many terminal extubations have you been involved? 2) I am given the option NOT to perform the extubation if I do not feel comfortable? 3) The physician is present at the time of extubation? 4) I am involved in discussion with the family about the withdrawal of support? 5) The physician performs the extubation? and 6) I would like to be included in family meetings where decisions to remove ventilator support are discussed? (Grandhige et al., 2016).

Additionally, assessment of attitudes/feelings towards EOL care was through questions from Rocker et al. (2005) survey which uses comfort levels to measure the perspectives of participants concerning EOL care decision-making and the withdrawal processes of life support. Such questions included: 1) Comfort with the decision to withhold CPR? 2) Comfort with the timing of the decision to withhold CPR 3) Comfort with the decision to withhold/withdraw life support? 4) Comfort with the time course or tempo of the withholding/withdrawal process? 5) Comfort with the way the ventilator was withheld/withdrawn? 6) Your comfort with your level of involvement in the decision-making process in WOLS? 7) The availability of the physician to address any concerns? 8) How closely did the process of life support withdrawal proceed as expected? and 9) How peaceful was the dying process? (Rocker et al., 2005). Scoring for these questions comes from a five-point Likert scale, which is in the above sections.

The ability to collaborate with other healthcare professionals within the SDM concerning providing EOL care in the ICU is the third CV. It represents the abilities of individual healthcare professionals to work within a shared relationship with other healthcare professionals. Specifically, where the discussion of each patient occurs, providing a context for ICU team members to share information and engage in similar collaborative processes. With the primary purpose of achieving optimal patient outcomes (Ervin et al., 2018). Relevant questions measured participants' self-perceived confidence by responses administered using a five-point Likert scale that ranged from strongly disagree to strongly agree, including an option of "not applicable."

These questions came from the EOLC-ICU questionnaire. The questions to measure the CV included the following: 1) It is important for physicians, nurses, and other team members to collaborate in EOL decision-making? 2) Continuity of care for the patient/family at the end of life, is observed when healthcare professionals work assignments are made? 3) Clear and consistent information is provided by team members to patients/families making decisions regarding EOL care? 4) Conflicts among team members are addressed before meeting with the patient and or family 5) Palliative care experts are consulted in a timely manner for EOL issues? and 6) There is sufficient support for staff to handle the personal distress that may arise when caring for patients at the end of life? (Montagnini et al., 2018).

Questions to measure the same CV were from the Rocker et al. (2005) survey which uses comfort levels to measure participants' collaborative perspective concerning collaboration related elements of continuity of care and the SDM processes ICU teams use in preparing for a patient's death. The scoring for these questions was via a five-point Likert scale which is in the above sections.

Measurement of the CV was from the following questions: 1) Your comfort level of involvement in the decision-making process in WOLS? 2) Comfort with the decision to withhold CPR? 3) Comfort with the decision to withhold/withdraw life support? 4) Comfort with the time course or tempo of the withholding/withdrawal process? 5) Comfort with the way the ventilator was withheld/withdrawn? 6) Comfort with the way oxygen was withheld/withdrawn? 7) Comfort with the level of sedation used? 8) How well did the physician explain the process of withdrawing life support? 9) The availability of the physician to address any concerns? 10) How closely did the process of life support withdrawal proceed as expected? and 11) How peaceful was the dying process? (Rocker et al., 2005).

The next scale used to measure collaboration or the ability of an individual to work with others is by the CSACD. The first questions use a seven-point Likert scoring scale; including responses from 1(strongly disagree) to 7 (strongly agree). The first questions included the following: 1) Open communication among team members takes place as the decision was made for this patient? 2) Decision-making responsibilities for this patient are shared among team members? 3) Team members cooperated in making the decision? 4) Decision-making for this patient was coordinated among team members? 5) How much collaboration among team members occurred in making the decision for this patient? (Baggs, 1994; Maxson et al. 2011).

The next question was,*" how much collaboration among team members occurs in the making decisions for patient care?"* Measurement for this question was via a seven-point Likert scale with responses ranging from 1-no collaboration to -complete collaboration (Baggs, 1994; Maxson et al., 2011). The second question was, *"In general, how satisfied are you with the way the decisions are made about patient care, that is, with the decision-making process?"* Responses for this question using a seven-point Likert scale include 1-not satisfied to 7-very satisfied (Baggs, 1994; Maxson et al., 2011).

Next, a question from Grandhige et al. (2016) survey was used to assess the CV of collaborative abilities was through the related components of communication and experiences with TE and symptom management. The questions included: 1) I am comfortable with the medical team's use of opiates for the alleviation of dyspnea in terminal patients? 2) I feel that the patient's symptoms are adequately managed? 3) I am given the option NOT to perform the extubation if I do not feel comfortable? 4) The physician is present at the time of the extubation? 5) The physician performs the extubation? 6) I am involved in the discussion with family about the withdrawal of support? 7) I would like to be included in family meetings where decisions to remove ventilator support are discussed? and 8) When I am involved in a terminal extubation, someone from the treatment team communicates with me directly regarding the process of withdrawal? (Grandhige et al., 2016). Scoring scales for these questions are in the sections above.

The abilities to participate in the SDM model concerning the performing of EOL care procedures in the ICU was the fourth CV. It represented the ability of a healthcare professional to take part in or become involved in a process whereby the professional as the responsibility or function of performing EOL care procedures in the ICU (Kirchhoff & Kowalkowski, 2010). Kirchhoff and Kowalkowski (2010) suggested that the processes of determining EOL care in the ICU as having no set standardization; instead, guidance is in the hands of the ICU intensivists.

Reports by palliative care physicians and advanced practice nurses have suggested that direction for EOL care in the ICU is also by physician orders, care plans, and EOL care protocols (Trung et a., 2008). Such challenges to participation with the withdrawing of life support involve; emotional difficulties, procedural challenges, and ethical dilemmas (Kirchhoff & Kowalkowski, 2010).

Scoring for the EOLC-ICU was via the above five-point Likert scale. Questions which assessed the CV included:1) I am well prepared to discuss advance care planning with patients and families? 2) I am well prepared to withdraw life support in the dying patient? 3) I am well prepared to treat respiratory symptoms in the dying patient? 4) In areas that I provide the care, I initiate advance care planning with patients/families when they are admitted with no documentation of advance care plans? 5) In areas that I provide care conflicts among team members are addressed before meeting with the patient and or family? 6) In areas that I provide care for we prepare patients and families for changes of clinicians? and 7) In areas that I provide care for continuity of care for the patient/family at the end of life is observed when healthcare professional work assignments are made? (Montagnini et al., 2018).

Questions from Grandhige et al. (2016) were used to measure the same CV. Scoring for the survey questions was done using one of two five category scales which are: never/rarely/sometimes/frequently/always or strongly disagree/disagree/neutral/agree/strongly agree (Grandhige et al., 2016). First four questions from the subcategory "*participation in end of life discussions"* included:1) I speak with my terminal patients and or their families one-on-one about the end of life care? 2) I am part of the multidisciplinary medical team that discusses the end of life care with a patient and or family? 3) I am comfortable discussing end of life care with a patient and or family on a one-on-one basis? and 4) I would like to be included in multidisciplinary medical team meetings with a patient and or family regarding end of life care discussions (Grandhige et al., 2016). The category scale for responses for the above four questions was never/rarely/sometimes/frequently/always.

The next three questions from the survey were under the subcategory of "*experiences with terminal extubations.*" The three questions included: 1) I am given the option NOT to perform the extubation if I do not feel comfortable? 2) The physician is present at the time of extubation? and 3) The physician performs the extubation? (Grandhige et al., 2016). Responses for these questions had the same category scale as the questions from above.

The final three questions from the survey were under the subcategory of "*communication around terminal extubations.*" The questions included the following: 1) I am involved in the discussion with family about the withdrawal of life support? 2) I would like to be included in family meetings where decisions to remove ventilator support are discussed? and 3) When I am involved in a terminal extubation, someone from the treatment team communicates with me directly regarding the process of withdrawal? (Grandhige et al., 2016). Responses for these questions came from both types of five-category scales.

Measurement for the same CV were via questions from the CSACD. Scoring for the first five questions from the CSACD, came from the seven-point Likert scale for collaboration/participation with 1 (strongly disagree) and 7 (strongly agree) (Baggs 1994; Dunn et al., 2013). The final two questions measured satisfaction using the same seven-point Likert scale with 1(not satisfied) and 7 (very satisfied). The questions included the following:1) team members planned together to make the decision about care for this patient? 2) Open communication among team members took place as the decision was made for this patient? 3) Decision-making responsibilities for this patient were shared among team members? 4) In making the decision, all team members' concerns about this patient's needs were considered? and 5) Decision-making for this patient was coordinated among team members? The final two questions that measured satisfaction included: 1) How satisfied are you with the way the decision was made for this patient that is with the decision-making process, not necessarily with the decision itself? and 2) How satisfied were you with the decision made for this patient? (Baggs, 1994; Dunn et al., 2013).

Survey Instrumentation Procedures

All of the above four previously published surveys were incorporated together; integrating all questions to answer the research questions of the study. Each publish survey was headlined encompassing all of each survey’s questions; making up a total of four sections along with a single demographic introduction section. Completion time for the survey was around 25 to 30 minutes, and participants initially had four weeks to complete the survey; which was later extended to 6-weeks to meet the appropriate population numbers. The total timeframe for data collection to reach the target participant population of 200 participants was 6-weeks. Administration of the survey was through the survey service *Survey Expressions*.

The PV of professional/social exclusion was operationalized as occurring when RTs were excluded from opportunities to participate in EOL care discussions and decision-making process to remove life-sustaining technology for which the RTs have a professional responsibility and or job function of performing. Measurement of the PV was by the CSACD and Grandhige et al. (2016) Survey of RTs' experiences and attitudes regarding terminal extubation. The CSACD measured the PV through the component of collaboration, which represents the action of when healthcare professionals assume complementary roles and cooperatively working together, sharing responsibility for problem-solving and making decisions to create and carry out plans for patient care (O'Daniel & Rosenstein, 2008).

In the CSACD, measurement of the PV was through collaboration by the use of seven questions. The first six, which involved the attributes of collaboration as mentioned in the above variables section, and the seventh question which serves as a global collaboration measure. The first six questions are scored using a seven-point Likert Scale (1- strongly disagree to 7- strongly agree) and the seventh question the same with (1-no collaboration to 7- complete collaboration) (Baggs, 1994). The values from the seven questions were then scored to make up a total possible collaboration score which ranged from 7 to 49; with the higher score meaning more collaboration within the EOL care decision-making process (Baggs, 1994; Dunn et al., 2013).

The PV was measured via the Grandhige et al. (2016) survey using the component of participation. Participation represented an act of sharing activities within a group, such as being involved or partaking in an activity. The PV was measured through participation, by including responses of the questions in the variables section of this chapter including; four questions concerning respondents' participation in EOL discussions and two questions regarding the communication concerning EOL procedures (Grandhige et al., 2016). There were two five category scales of responses for these questions which were (never/rarely/sometimes/frequently/always) and (strongly disagree/disagree/neutral/agree/strongly agree). Scored responses for this section of the survey were through descriptive statistics (proportions) placed into categories: 1) How many terminal extubations have you been involved in (based on years) and from the CSACD 2) Whether or not collaboration occurred, placed into to two categories (no collaboration or complete collaboration). The interconnection of these components comes from previous studies; and has shown to be accurate components for correlating and exploring the impact professional exclusion has no the abilities and attitudes that healthcare professionals must have to optimally function in their designated roles (Dunn et al., 2013; Maxson et al., 2011; Piquette et al., 2009).

The first CV for this study is was RTs’ abilities to perform expected job functions of EOL care procedures in the ICU. The description of this CV is the RTs ability to perform EOL care procedures (terminal extubation, removal of mechanical ventilation, withhold/removing oxygen delivering devices, and other EOL care procedures). Measurement for this CV was by all four of the above previously published surveys.

Collaboration attributes, including all seven questions regarding collaboration, was used to measure the CV. Collaboration is scored using seven points Likert Scale with total scores ranging from 7 to 49 from all seven questions (Baggs, 1994). The higher collaboration score indicates a greater level of collaboration amongst the interdisciplinary team (Dunn et al., 2013). If lower than like previous results such as those of RTs in Dunn et al. (2013) study, that collaboration is inadequate hence there are issues as to why represented healthcare professionals face challenges when trying to perform their expected role (Dunn et al.). These collaboration scores were correlated with comfort levels from the EOL-ICU and Rocker et al. (2005) survey.

The component of comfort levels was described as the perception of the respondent's competency or ability to perform their expected job functions (Montagnini et al., 2012). The EOL-ICU measured comfort levels by using five-point Likert Scale (1-strongly disagree to 5-strongly agree, with 2-neutral). Responses from nine questions in the above variables section were calculated along with comfort levels taken from five questions from the Rocker et al. (2005) Survey. Rocker et al. survey used a five-point ordinal scale (1- very comfortable to 5-not at all comfortable) with a non-scored N/A option available. Scoring for the questions from this survey is in the above variables section. Descriptive statistics were used to correlate the findings exploring the relationship between comfort levels and collaboration which can help to answer the research question; for example, those who have low comfort levels cite poor communication (a collaboration attribute) as a reason for difficulties in performing EOL care tasks such as withdrawing mechanical ventilation (Rocker et al., 2005).

Additionally, the Grandhige et al. (2016) survey was used to measure the components of experience and education to evaluate the CV. Both of these components are connected to the variable as both have previously proven to influence professionals' abilities to perform functions of their job (Grandhige et al., 2016; Willms & Brewer, 2005). The scores of seven questions listed within the variables section, were taken. Scoring for these questions includes two types of responses, which are also listed in the variables section. Then these two components were categorized using descriptive statistics into correlations based on demographics of respondents level of education and years of experience to then be compared to data from the collaboration/comfort components to really see if professional exclusion is the cause of RTs expressed challenges or instead is it the lack of experience or educational training concerning EOL care (Grandhige et al., 2016; Rocker et al., 2005).

The next CV was RTs' feelings/attitudes towards EOL care procedures, which was defined as the psychological construct that characterizes an individual; traditionally obtained from experiences and is expressed towards a place, person, object or event (Breckler & Wiggins, 1992). This CV was measured via the component of comfort levels from the EOLC-ICU and Grandhige et al. (2016) survey. The component of EOL care experience were used to measure the CV along with the Grandhige et al. survey.

The comfort levels measured by the EOLC-ICU and comfort represents the expression of feelings/competencies as many of the questions start with the first words "I feel" and "I am well prepared" (Montagnini et al., 2012; Montagnini et al., 2018). The twelve questions to measure the comfort component are in the variables section of this chapter. These questions are scored using the same five-point Likert Scale (1-strongly agree to 5- strongly agree); and a non-scored N/A option (Montagnini et al., 2018).

The findings for this measure were descriptive, as the means were calculated for each question to identify which of the twelve questions suggests the highest feelings/competency scores. The scores were also correlated with the scores concerning EOL care experiences in the Grandhige et al. (2016) survey in order to explore the relationship between RTs' feelings/attitudes and professional exclusion. EOL care experiences is the component which was used by Grandhige et al. to evaluate the CV. The six questions used are in the variables section of this chapter. These questions are scored using one of two five-category scales of responses (never/rarely/sometimes/frequently/always) and (strongly disagree/disagree/neutral/agree/strongly agree); the scores are expressed via proportions and placed into categories. The categories included attitudes, experiences with terminal extubation, and communication around terminal extubation (Grandhige et al., 2016). After being put into the categories, a correlation of the results with the comfort levels was performed,. thereby answering the research questions and exploring the relationships between the PV and CVs.

The third CV was the RTs' abilities to collaborate with other healthcare professionals within the SDM model concerning the providing of EOL care in the ICU. The definition for this CV is the abilities of individual healthcare professionals to work within a shared relationship along with other healthcare professionals to perform patient-related care tasks. For example, such instances as EOL care discussions where the shared collaboration allows the team to achieve optimal patient outcomes by working together (Ervin et al., 2018). Measurement for the third CV was by the EOLC-ICU, CSACD, and Rocker et al. (2005) survey.

The EOLC-ICU used six of its questions to measure the third CV; in regard to RTs' feelings regarding the importance of ICU team collaboration, whether or not they agree or disagree that certain aspects in areas for which they provide care are vital. These areas included: “is it essential to maintain continuity of care when a patient is in the end stages of life", "is communication between ICU team members to patients and or family members making EOL care decisions clear and consistent", and "is there enough support for staff to handle the personal distress which can arise when caring for EOL care patients" (Montagnini et al., 2018). Two additional questions measure whether or not the RTs disagree or agree with that it is essential to consult other expert healthcare professionals and if the resolution of conflicts among ICU team members is vital to address before meeting with the patient and or family (Montagnini et al., 2018).

In previous research, Montagnini et al. (2018) found that differences in self-competence ratings were related to the variation in disciplines. For example, physicians had higher response ratings concerning EOL care attitudes and behaviors. Nurses had higher ratings regarding EOL care knowledge and symptom management. Which, these differences can represent the varying degrees to which EOL care training or experience influences a healthcare professional's abilities to work within a shared team environment and what elements might need to more development to improve the levels of collaboration in the ICU setting (Montagini et al., 2012).

Measurement for the same CV was by the CSACD. This scale measured collaboration or the ability for individuals to work together, and it also can measure the individuals' satisfaction with collaboration (Baggs, 1994; Dunn et al., 2013). If the collaboration between team members is high, then it means that each team member has an awareness of each other's knowledge and skills, which enhances the team member's ability to work with others thus being able to provide quality patient care (Maxson et al., 2011). Evidence of this appears in the form of high collaboration scores which come from the questions found in the variables section of this study. If total collaboration scores are low, it can indicate that the respondent feels that collaboration is lacking (Dunn et al., 2013). They are indicating that he or she finds it challenging to work with others and to perform their duty of providing EOL care. The CSACD questions which measured the third DV are in the variables section.

Measurement for the same CV was by the Rocker et al. (2005) survey. Questions to measure the CV are in the variables section of this study. These questions concerned the RTs perspectives on decision-making and the EOL withdrawal process; using comfort levels to evaluate the DV. Previous research has shown that those who express low comfort levels in relation to collaboration and how EOL withdrawal procedures are carried out, can cause tensions which can negatively impact the way which an individual provides EOL care in the ICU (Rocker et al., 2005). The calculations for all of these survey scales are in previous sections within this study.

The fourth CV RTs' abilities to participate in the SDM model process concerning EOL care procedures performed in the ICU; measurement for the CV was through the EOLC-ICU, CSACD, and Grandhige et al. (2016) survey. This survey includes 28 items which assess EOL care-related items of knowledge, symptom management, communication, behaviors, attitudes, emotional support, staff support, decision-making, spiritual support, and continuity of care (Montagnini et al., 2012). Assessment of this CV was by the six specific questions from the EOLC-ICU, which are in the variables section of this study.

Scoring for these questions was via a five-point Likert scale. These questions addressed the subcategories of respondent preparation and in areas for which they provide EOL care. Specifically, addressing their preparation to discuss EOL care with patients, to treat symptoms in the dying patient, to participate in the withdrawing of life support, management of communication between professionals, and the considerations for continuity of care (Montagnini et al., 2018). Calculation of results for this questionnaire was via correlations with the gathered demographics from the study. The use of correlations allows for the discovery of differences among the items of the questionnaire, and the relationship between the PV and CV.

The Grandhige et al. (2016) survey was used next to measure the fourth CV; of which the questions used for assessment are in the variables section of this study. This survey included questions which incorporated RTs' knowledge, attitudes, and experiences providing everyday EOL care and TE. Responses for the survey were from one of two five-category scales, which are in the variables section of this proposal. Calculations for responses from this survey were via descriptive statistics, consisting of proportions for each question (Grandhige et al., 2016).

The first four questions of this survey are under the category of "participation in EOL discussions," which focuses the element of participation a vital component of the CV. Being part of a group such as in the SDM process, which involves decision-making is a participatory process. It is in this process wherein multiple individuals work together to analyze the problem and to come up with a resolution from available alternatives (Janss et al., 2012). To achieve optimal shared decision making, the understanding of participation is necessary, of which the four questions provide the appropriate data (Grandhige et al., 2016).

The next three questions have to do with the category of "experiences with terminal extubations." An RT's experience is within the present moment; of which he or she is processing current inputs and information. However, once the moment has passed, it is the memory of that moment which influences the RT's responses regarding experience, thereby influencing their abilities to participate in the SDM model and perform EOL care procedures (Murray, 2012).

The last three questions represent the category of "communication around terminal extubation." These questions concerning communication highlight the connection between communication and inclusion; for example, effective open communication contributes to the inclusion and promotes the participation of all team members (Grandhige et al.,2016; Willms & Brewer, 2005). SDM is not sufficient without open communication, which is successful when healthcare team members can participate in discussions (Dunn et al., 2013). However, previous research has suggested that nurses and other healthcare professionals find it challenging to voice their opinions; suggesting the lack of inclusion prevents them from not just participating but being able to communicate within the healthcare team (Grandhige et al., 2016; Dunn et al., 2013). These questions allow us to understand further how communication influences participation and the RTs' abilities to perform their EOL care duties.

Measurement for the same CV was by the CSACD; which scores for concepts of collaboration and the respondent's satisfaction with collaboration (Baggs, 1994). In order for people to collaborate in decision-making, they must first participate, hence the reason why we are using this scale to understand the connection between participation and collaboration regarding the chosen topic (Maxson et al., 2011). Questions from the CSACD to measure this CV are in the variables section of this study. Analysis of the score responses for this survey was through descriptive statistics; including frequencies, means, and percentages (Dunn et al., 2013).

Calculations included a collaboration score from the responses of each survey, which comes from questions one through seven. Next, the Pearson product-moment correlation coefficient provides an exploration of the relationship between collaboration about decision-making (questions 1-5), satisfaction with decision-making (question 8), and satisfaction with the decision (question 9). An examination of the comparisons with other collaboration scores occurs, to test the relationships between the PV and CV.

Data Analysis: Plan

Survey Expressions was used to administer the survey through a Facebook posting link; the survey engine provides initial data analysis results. Additional software used included SPSS; which was useful as we had easy access and researcher experience with the program. Preparing survey data can be a challenging process, and data cleaning is often required as it is possible that participant's answers will not match the predefined options or it is possible that their responses may not apply at all (Bainbridge, 2009). That is why the use of an online survey tool such as *Survey Expressions* is essential because its use can decrease many of the issues associated with paper surveys (Bainbridge, 2009).

Data Cleaning Procedures

On the data values obtained in this study, missing value data analysis was performed. In particular, Little's Missing Completely at Random Test (MCAR) was performed. The test results were not significant. This revealed that the missing data was completely missing at random. This indicated that the missing data cases were no different from the full cases, being a strictly random subset of the data. Thus, as there was no bias in studies focused on complete events, listwise deletion was done.

Listwise deletion was conducted through SPSS; which means that a case with missing data is this circumstance the number representing the participant and the number case including the participants response to each question which is represented within the variables The effect of this is that you get complete cases for particular variables; and those cases who are missing up to 15% of the data are removed. This reduces the issue of bias concerning the outcomes of the analysis (George & Mallery, 2019).

Research Questions and Hypotheses

RQ1. What is the relationship between professional exclusion of RTs from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Null hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs.

Alternative hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs.

RQ2. What is the relationship between professional exclusion from EOL care discussions and attitudes/feelings toward EOL care in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Null hypothesis: There is no relationship between professional exclusion from EOL care discussions and attitudes/feelings toward EOL care in the ICU among RTs.

Alternative hypothesis: There is a relationship between professional exclusion from EOL care discussions and the attitudes/feelings toward EOL care in the ICU among RTs.

RQ3. What is the relationship between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Null hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to collaborate with other ICU team members within the SDM model related to providing EOL care in the ICU among RTs.

Alternative hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU among RTs.

RQ4. What is the relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Null hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs.

Alternative hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs.

Statistical Plan for Data Analysis

The type of data analysis used for this study was a one-way multivariate analysis of variance (MANOVA). The purpose of a one-way MANOVA is to understand the nature of the relationships between one PV and multiple CVs (Hatcher, 2013). In this type of analysis measurement of the PV can be from any scale; whereas the measurement of the CVs must be via an interval or ratio scale (Hatcher, 2013). The scales of measurement for the four surveys in this study are all in the form of multiple-item Likert scales, which are most often considered to be interval scales of measurement (Hatcher, 2013).

Hypotheses' testing occurs with the comparison of conditions to multiple CVs. The conditions are vectors, and the null hypothesis tested in the MANOVA refers to these vectors. Meaning that in the population of RTs, there is no relationship between PV concerning the vectors of means on the CVs (Hatcher, 2013). If the obtained multivariate test statistics produces a p-value that is lower than the standard criterion 0.05, the research rejects the null hypothesis and concludes that there is a relationship between the PV and CVs.

Conduction of any MANOVA often occurs through a sequence of steps. The first step is the computation of a multivariate test statistic to determine if there is a relationship between the CVs and the PV (Hatcher, 2013). There are four multivariate test statistics to measure a potential relationship, each of which has its conceptual differences. In the analysis, the researcher may use all four test statistics but usually interprets one (Hatcher, 2013). The four multivariate test statistics include the Pillai-Barett trace, the Hotelling-Lawley trace, Wilk's lambda, and the Roy's largest root. Usually, in a comparison of fewer than two groups, the four multivariate test statistics will yield the same results (Hatcher, 2013). If one of the tests proves that the relationship is significant, the researcher next conducts a follow-up procedure to explore the nature of the relationship better (Hatcher, 2013). The follow-up procedures usually involve a separate ANOVA for each CV, a discriminant analysis, a stepdown analysis, and or multivariate planned comparisons.

The procedure for conduction of a one-way MANOVA is as follows. The significance level for this proposed study is 0.05, with confidence intervals of ninety-five percent. The procedure for this analysis occurs in SPSS. First, a multivariate general linear model of the CVs and PV is run, after which multivariate post-hoc multiple comparisons for observed means are completed. The post-hoc tests for equal variances assumed and equal variances not assumed; this test produces post-hoc tests for the univariate ANOVAs, not the MANOVA itself (Laerd Statistics, 2018). Next, continue with the multivariate test to produce the estimated marginal means; which displays descriptive statistics, estimates of effect size, and homogeneity tests. It is this the step which creates the output, consisting of various tables, with the first focuses of the researcher being towards the assumption of sample size, equality of the variance-covariance matrices, and homogeneity of variances (Laerd Statistics, 2018).

The objective of the one-way MANOVA is to determine whether the groups of the PV are statistically significant concerning the CVs and if there are any differences within the group of the PV. Answers to these objectives are in descriptive statistics, one-way MANOVA results, univariate one-way ANOVAs, and multiple comparisons (Laerd Statistics, 2018). With descriptive statistics, the researcher can see complete representations of the data, including components, such as the mean, standard deviation, number of cases for the CVs, the separate figures for the groups of the PV, and an overall score.

Researchers can also measure trends using the standard error of the mean and confidence intervals. It is through these descriptive statistics that trends or highlights of differences between the variables can be expressed (Laerd Statistics, 2018). The results of a one-way MANOVA are within the multivariate tests table. The table consists of results from each of the four test statistics. This has the purpose of testing for statistical significance of the differences between the groups of the PV.

The calculation of each test statistic provides the researcher with the p-value (probability) of getting an F-statistic greater or equal to the one calculated (Hatcher, 2013; Laerd Statistics, 2018). In the same table, the test statistics will also provide an effect size. The one issue with using a multivariate analysis is that the researcher has to decide which multivariate F-statistic to use because each does not always produce the same answer (Hatcher, 2013; Laerd Statistics, 2018). Usually, the most common multivariate test statistic used is Wilk's Lambda. In a Wilk's Lambda if a test is statistically significant, meaning the p-value is less than .05 ($p<.05$), it means that the researcher rejects the null hypothesis and concludes that there is a difference between the CVs of the PV group (Hatcher, 2013). It is attempting to further understanding the occurrence of this difference where follow-up tests come into play.

Determination of which CV is contributing to statistical significance in the MANOVA was done by evaluating the one-ANOVA results for each CV. The display of the results is in a table of "*tests of between-subjects effects*." With statistical components such as the type III sum of squares, degrees of freedom, mean square-value, significance, and partial Eta squared (Laerd Statistics, 2018). The alpha level is adjusted to obtain a statistical significance with multiple comparisons. The procedure responsible for this adjustment is Bonferroni (Hatcher, 2013). Performance of the procedures occurs when more than one significance test on the same data set happens; to reduce the influence of a familywise Type 1 error to become inflated (Hatcher, 2013).

If any of the ANOVAs prove to be statistically significant, the best follow-up test is the Tukey post-hoc tests otherwise known as multiple comparisons. The types of multiple comparisons tests chosen for follow-up analysis depend on various factors such as the nature of the research hypotheses, the sample sizes, the variances, and types of errors (Hatcher, 2013). The strength of the relationship between the variables evaluated by a MANOVA involves two methods. The first is the value of the Wilk's Lambda computed in the omnibus multivariate analysis, which involves all of the CVs (Hatcher, 2013). Second, are the values of the Eta squared computed in a separate ANOVA for each CV. The researcher can display the final results of the analysis through SPSS, which provides graphs or bar charts, which show the plots of each CV (Leard Statistics, 2018).

Threats to Validity

The first threat is to internal validity of this study concerned participant selection. According to Creswell (2014) when participants are chosen based on a certain characteristic such as in this study; it is possible to predispose the participants to enlist particular outcomes. To address participant selection concerns the first 200 participants were selected from the Facebook group RTP; and specific screening procedures listed in above sections were incorporated. The second threat to internal validity is instrumentation; such as a change occurring within the study as to how the CV was measured. Threats involving instrumentation were addressed by the researcher ensuring consistency throughout the measure. For example, within this study making sure that all respondents saw the same announcement posting and link to the screening questions each week, which ensured that each participant had a consistent chance of responding appropriately to the questions (Creswell, 2014).

External validity has to do with the process of generalizing or the making of conclusions within the study to be applicable in other places, persons, and times (Trochim, 2006). The first threat to external validity is concluding the wrong generalization about persons, places, and times which makes up three major threats. These threats are addressed by conducting appropriate sampling procedures and using the proximal similarity model (Trochim, 2006). Applying proper sampling procedures involves identifying the target group you wish to generalize, and then drawing an appropriate sample from that target group and performing your research within that sample. Taking this approach allows you to conclude that your sample represents the target group because the sample was taken from that direct population (Trochim, 2006). For example, the target group for this study is RTs, of which the sample has been taken from that particular target population. Next, using the proximal similarity model means that you as the researcher start to see generalizability through different perspectives and work to create or use a theory for which those perspectives are similar to your study and which perspectives are different (Trochim, 2006). Use of this model addressed the threats of time and place; for example, when we use different perspectives in terms of their connected similarities, we can conclude that their similarities of some association will occur (Trochim, 2006).

Construct validity involves the operationalization of the study variables and whether or not the variables are connected to the theories the researcher is attempting to measure. It deals with the question are you measuring what you want to measure? The first threat to construct validity is inadequate preoperational explication of constructs; otherwise known as the inadequate function of operationally defining your variables or what you meant to construct (Trochim, 2006). This can happen when research is being conducted on a topic that has limited research; such as within this study. The best way to address this threat is to use concept mapping and obtain expert advice and critiques as to the operationalization of the variables (Trochim, 2006). The second threat to construct validity for this study is the restriction of generalizability across constructs. Also known as unintended consequences, this happens when you find that a there is a relationship or an effect, but do not anticipate the consequences of the relationship or effect (Trochim, 2006). This threat is best addressed by being careful about certain relationships and effects which might influence other outcomes.

Ethical Procedures

Permission for study approval was obtained from the Walden University IRB. The location for this survey was online, and the recruitment of participants was via Facebook groups known as RTP and RT. There was no direct contact between the researcher and participants. The purpose of the study, study information, and a link to the three prescreening questions is in the initial announcement. Informed consent happened when the participant chose to click on the link. Throughout the prescreening questions and an actual survey questionnaire, the participant was made aware of the exit button; in which he or she can click on to leave the survey.

There was no pressure placed on participants to respond, participants who wished not to participate or complete the survey were able to exit the survey. Participant responses were anonymous to protect identity, increase the response rates, and reduce response bias (Creswell, 2014). The timeframe to gather participant responses was initially 4-weeks, which had to be extended to 6-weeks in order to meet the number of required participants from the sample population.

There was no initial identification of participants, no participant names were taken during the study. All of the data for this study was shared with the study committee and other university officials. The data is kept securely online under password protection for the next five years of which at that time the data will electronically deleted through the destruction of online records such as via Cybersrub.

Summary

In conclusion, this chapter provides the rationale and methodological detail of the study. This chapter includes all aspects of the research plan, along with all four surveys used for the study, the research questions, data analysis plan, threats to validity, and ethical procedures. It represents the road map for the study. The next chapter has the purpose of revealing the answers to the research questions and reflects the design suggested in Chapter 2.

Chapter 4: Results

Introduction

Currently, one fifth of all deaths within the United States occur in the hospital, usually after intensive care (Cutler & Madani, 2016). The majority of those patients who die within the ICU do so after a decision to withdraw life support therapies (Willms & Brewer, 2005). RTs often care for patients with life-threatening illnesses and are directly involved in the removal of ventilator support during EOL care situations (Grandhige et al., 2016; Willms, 2010).

Through this study, I sought to explore how the theories of social/professional exclusion and SDM experienced through the culture of healthcare hierarchy apply to the feelings/attitudes of RTs who are excluded from EOL care discussions, and how such exclusion relates to their expected role of performing EOL care procedures within the ICU. I used a quantitative nonexperimental survey research design to measure the relationships among the previously stated variables. This study investigated the following research questions and corresponding hypotheses:

RQ1. What is the relationship between professional exclusion of RTs from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

RQ1 Null Hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs.

RQ1 Alternative Hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs.

RQ2. What is the relationship between professional exclusion from EOL care discussions and attitudes/feelings toward EOL care in the ICU among RTs as measured by the CSACD, EOLCICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

RQ2 Null Hypothesis: There is no relationship between professional exclusion from EOL care discussions and attitudes/feelings toward EOL care in the ICU among RTs.

RQ2 Alternative Hypothesis: There is a relationship between professional exclusion from EOL care discussions and the attitudes/feelings toward EOL care in the ICU among RTs.

RQ3. What is the relationship between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

RQ3 Null Hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to collaborate with other ICU team members within the SDM model related to providing EOL care in the ICU among RTs.

RQ3 Alternative Hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU among RTs.

RQ4. What is the relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

RQ4 Null Hypothesis: There is no relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs.

RQ4 Alternative Hypothesis: There is a relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs.

What follows is a description of the data collection process. This is followed by the data collection time frame and missing data. A description of the sample is provided, which includes demographic data as well as the predictor and criterion variables of the study. This is followed by the results of inferential analysis, which include results of

MANOVA performed in order to assess each research question. The chapter ends with a summary of the results.

Data Collection

This study’s sampling frame was taken from two respiratory therapy professional groups through social media via Facebook. The first group was a closed Facebook group identified as RTP, which had a population of 2,645 members. The group included members who were respiratory therapy professionals who were focused on improving the profession and increasing recognition and respect for RTs’ role (RTP, 2015). The second group, RT, had a total of 1,500 members. This group was added to increase participant survey inclusion rates to reach the survey goal of 200 participants.

The total timeframe for data collection to reach the target population of 200 participants was 6-weeks. Each week, a social media posting requesting participants was placed on the professional groups’ websites via Facebook. Extension of the initial time frame of 4-weeks to 6-weeks was necessary to achieve the participant target response goal.

A total of 200 participants responded; however, response rates were inconsistent, as some participants responded to specific questions and skipped others. Only one participant answered every single survey question. It was noticed that participants responded to more questions at the beginning of the survey. Participant response rates were higher for the questions at the beginning of the survey than for the questions at the end. Evidence of this is expressed in the 191 participants who responded to the three prescreening questions, in contrast to the 130 participants who skipped the final questions of the survey, to which only 70 participants responded. Out of the total of 200 participant responses, 99.5% of the responses were incomplete, with only one participant who answered every question.

Missing value data analysis was conducted on the data values collected in this study. Specifically, Little's missing completely at random (MCAR) test was conducted. The results of the test were not significant, $\chi 2$ (4238) = 3876.024, $p = 0.999$. This indicated that missing data were missing completely at random. This suggested that the cases with missing data were no different from the complete cases, being a purely random subset of the data. Thus, listwise deletion was conducted, as there was no bias in analyses based on complete cases.

Listwise deletion was conducted through SPSS. Meaning, that a case with missing data in this circumstance, the number representing the participant and the number of the case including the participant's response to each question were represented within the variables. The effect of this is that the researcher gets complete cases for particular variables. Hence, for those cases that were missing, up to 15% of the data were removed, which reduced bias concerning the outcomes of the analysis (George & Mallery, 2019).

Baseline Descriptive and Demographic Characteristics of the Sample Population

There were a total of 200 participants who responded to survey questions. Out of these 200 participants, 70 responded to the demographic survey questions. A possible reason for this was the fact that the demographic questions appeared at the end of the survey. Perhaps the length of the survey, with a total of 77-questions, and consequent question fatigue offer an explanation as to why there were more nonresponses recorded for questions at the end of the survey in comparison to those at the beginning. Previous research has shown that the relationship between the number of questions in a survey and the time spent answering each question is not linear (Creswell, 2004).

Most participants' ages were between 41 and 50 years (31.4%), whereas only 8.6% were between 21-30 years of age. Table 1 depicts this information.

Table 1

Age

	Frequency	Percent	Valid percent
21-30 years old	6	3.0	8.6
31-40 years old	18	8.9	25.7
41-50 years old	22	10.9	31.4
51-60 years old	17	8.4	24.3
61-70 years old	7	3.5	10.0
Total	70	34.7	100.0
Missing	132	65.3	
Total	202	100.0	

Regarding gender, 14.3% of the RTs were male, with the majority (85.7%) being female. The data for this demographic can be seen in Table 2.

Table 2

Gender

	Frequency	Percent	Valid percent
Male	10	5.0	14.3
Female	60	29.7	85.7
Total	70	34.7	100.0
Missing	132	65.3	
Total	202	100.0	

Table 3 provides the number of EOL care procedures that RTs performed. Among respondents, the majority of RTs reported performing at most 20 procedures (32.9%).

Other categories depicted in Table 3 indicate that the frequency of RTs decreased with increasing number of procedures overall.

Table 3

Number of EOL Care Procedures

	Frequency	Percent	Valid percent
1-20 procedures	23	11.4	32.9
21-40 procedures	21	10.4	30.0
41-60 procedures	10	5.0	14.3
61-80 procedures	2	1.0	2.9
81-100 procedures	11	5.4	15.7
101 or greater procedures	3	1.5	4.3
Total	70	34.7	100.0
Missing	132	65.3	
Total	202	100.0	

The level of education of RTs is reported in Table 4. Most respondents had an associate’s degree (51.4%); 2.9% had a PhD.

Table 4

Level of Education

	Frequency	Percent	Valid percent
Associate’s degree	36	17.8	51.4
Bachelor’s degree	25	12.4	35.7
Master’s degree	7	3.5	10.0
PhD	2	1.0	2.9
Total	70	34.7	100.0
Missing	132	65.3	
Total	202	100.0	

RTs reported the type of patient population in which they worked. Most RTs (54.3%) reported working with adults. Very few RTs worked with long-term care patients (1.4%) or young adults (2.9%). Table 5 displays these data.

Table 5

Type of Patient Population

	Frequency	Percent	Valid percent
NICU	3	1.5	4.3
Pediatrics	9	4.5	12.9
Young adults	2	1.0	2.9
Adults	38	18.8	54.3
Geriatrics	9	4.5	12.9
COPD patients (pulmonary)	8	4.0	11.4
Long-term care patients	1	.5	1.4
Total	70	34.7	100.0
Missing	132	65.3	
Total	202	100.0	

Years of RT practice are depicted in Table 6. Most RTs worked between 1 and 10 years. There was a reduction in the number of RTs working for each additional 10-year increment in years of practice, as seen in Table 6.

Table 6

Years of RT Practice

	Frequency	Percent	Valid percent
1-10 years of practice	24	11.9	34.3
11-20 years of practice	20	9.9	28.6
21-30 years of practice	16	7.9	22.9
31-40 years of practice	9	4.5	12.9
41 or greater years of practice	1	.5	1.4
Total	70	34.7	100.0
Missing	132	65.3	
Total	202	100.0	

The type of hospital in which the RTs worked was noted. Among the RTs, 4.9% worked in long-term care, 59% worked in acute care, 32.8% worked in trauma, and 3.3% worked in other types of healthcare facilities. The mean for these responses was 2.34, indicating that most of the target RT population worked in acute care. The data can be seen in Table 7.

Table 7

Type of Hospital

	Frequency	Percent	Valid percent
Long-term care	3	1.5	4.9
Acute care hospital	36	17.8	59.0
Trauma hospital	20	9.9	32.8
Other	2	1.0	3.3
Total	61	30.2	100.0
Missing	141	69.8	
Total	202	100.0	

The demographic statistics above suggest that the sample population does serve as an appropriate representation of the target population, which was composed of RTs who met the criteria in the prescreening questions located at the beginning of the survey. Those who did not meet the requirements found in those prescreening questions were redirected. The first screening question asked if a participant had been practicing as an RT within the last 5 years; 182 participants (95.29%) replied "yes," and nine participants replied "no" (4.71%). The second screening question asked whether the participant had experience working in the hospital as an RT, to which 190 participants (99.48%) responded "yes." One participant (0.52%) provided a "no" response. The third screening question asked if the participant had experience working in the ICU as an RT. In response rate, 190 participants (99.48%) stated "yes," and one participant (0.52%) stated "no."

According to descriptive statistics from demographic survey questions concerning RTs' years of practice and from Grandhige et al.'s (2016) question concerning the number of TEs that an RT had performed, the majority of RTs indicated that they had practiced from 1 to 30 years (85.7%) and had been involved in 21 or more TE procedures (70.2%). These statistics can be seen in Table 8.

Table 8

Experience/ICU Denoted by the Number of TE Procedures

	Frequency	Percent	Valid percent
1-5	5	2.5	4.0
6-20	32	15.8	25.8
Greater than or equal to 21	87	43.1	70.2
Total	124	61.4	100.0
Missing	78	38.6	
Total	202	100.0	

Additionally, as is shown in Table 9, 8% of participants stated they worked in Medical/Surgical ICU, and out of the same number of participant responses 36.8% cited experience working in the Acute care ICU as well. Such descriptive statistics provide evidence that the sample population does directly represent the target population of interest.

Table 9

Type of ICU

	Frequency	Percent	Valid percent
Medical/surgical ICU	25	12.4	36.8
Cardiac ICU	5	2.5	7.4
Neuro ICU	3	1.5	4.4
Long-term care ICU	3	1.5	4.4
Acute care ICU	25	12.4	36.8
Surgical ICU	2	1.0	2.9
Trauma ICU	5	2.5	7.4
Total	68	33.7	100.0
Missing	134	66.3	
Total	202	100.0	

Descriptive Statistics of Study Variables

The predictor variable (PV) for this study is professional/social exclusion. Professional exclusion occurs when RTs are excluded from opportunities to participate in EOL care discussions and decision-making process to remove life-sustaining technology for which the RTs have a professional responsibility and or job function of performing. There are four criterion variables (CV) for this study. The first is RTs' abilities to perform expected job functions of EOL care procedures in the ICU. The second is the RTs' feelings/attitudes towards EOL care procedures within the ICU. The third is the RTs' abilities to collaborate with other healthcare professionals within the SDM model about providing EOL care in the ICU. Fourth is the RTs' abilities to participate in the

SDM model processes relating to the performing of EOL care procedures in the ICU. Measurement of the various variables were accomplished through surveys, which included; the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey. Descriptive statistics of minimum, maximum, mean, standard deviation, skewness, and kurtosis were calculated. Skewness and kurtosis index were used to identify the normality of the data. The results suggested the deviation of data from normality for each of the survey items was not severe as the value of skewness and kurtosis index were below 3 and 10 respectively (Kline, 2011).

The CSACD was created by Baggs (1994) to measure nurse-physician collaboration regarding the making of individual patient care decisions and satisfaction with decision-making within the ICU. The survey includes nine items. These elements include; open communication, planning together, shared responsibility, cooperation, coordination, and consideration of concerns (Baggs, 1994). The instrument is self-administered, and the elements are scored from 1 (strongly disagree) to 7 (strongly agree) via a Likert style scale.

The development of EOLC-ICU scale by Montagnini et al. (2012) explores the self-perceived competencies associated with the provision of EOL care within the ICU. The EOLC-ICU uses 28 questions to assess the self-perceived attitudes, knowledge, and behaviors of healthcare providers within seven EOL care domains (Montagnini et al., 2012). The domains include; communication, continuity of care, staff support, decision-making, symptom management, spiritual support, and patient and family support. The scoring for EOLC-ICU questions was via a five-point Likert scale (1-strongly disagree, 2-disagree, 3-neutral, 4-agree, and 5- strongly agree (Montagnini et al., 2012).

Rocker et al. (2005) survey on perspectives on decision-making & comfort level with EOL care The 14 items included: cardiopulmonary resuscitation (CPR), life support withdrawal, the timing of these decisions, the tempo of life support withdrawal, the method by which mechanical ventilation and oxygen were withheld, decreased, or withdrawn, the amount of sedation used, the quality of the physician's explanations to families, the availability of physicians to address concerns, involvement of RNs and RTs in the decision, whether or not the life support withdrawal process went as planned, the peacefulness of the dying process, and the degree of privacy (Rocker et al., 2005) The survey used a five-point ordinal scale (1-very comfortable to 5-not at comfortable) to evaluate the comfort with 14-items concerning EOL care decisions and the process of life support withdrawal for each patient.

Grandhige et al. (2016) Survey of Respiratory Therapists Experiences & Attitudes concerning Terminal Extubation & End of Life Care measures experiences providing EOL care to patients in the ICU and performing the procedure of terminal extubation. The questions focused on measuring the inclusion of RTs in the EOL care process, their knowledge and attitudes concerning EOL care procedures such as terminal extubation, and their overall experiences with EOL care within the ICU (Grandhige et al., 2016).

Results

Multivariate analysis of variance (MANOVA) was conducted in order to address the research questions. MANOVA is an extension of ANOVA to incorporate two or more dependent variables (i.e., ANOVA investigates just one dependent variable).

This first research question was investigated by conducting MANOVA:

RQ1. What is the relationship between professional exclusion of RTs from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

The assumptions of MANOVA were first tested. Skewness and kurtosis index were used to identify the normality of the data. The results suggested the deviation of data from normality was not severe as the value of skewness and kurtosis index were below 3 and 10 respectively (Kline, 2011). Additionally, there were no extreme outliers, as assessed by standardized values and no multicollinearity as assessed by no correlations greater than 0.9.

The differences between collaboration as measured by the independent variable item "*plannedtogetherQ24*", which measures collaboration, on the combined dependent variables, which measures abilities to perform EOL care procedures, was statistically significant, $F(4, 4) = 9.939$, $p = .024$; Pillai's trace = 1.640; partial $\eta 2 = .909$. Multiple comparisons were conducted in order to determine specifically which differences were significant.

Respondents who answered *never* for the participation question *planned together*, had a smaller mean score for collaboration. This mean difference was significant, M*diff* = -1.235, *p* = .046. No other differences were significant (*p* > .05). Table 10 depicts this information.

Table 10

Multiple Comparisons (Dependent Variable: Collaboration CSACD)

(I) participation	(J) participation	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Never	Rarely	-1.235*	.436	.046	-2.46	-.01
	Sometimes	-1.069	.502	.220	-2.48	.34
	Frequently	-.235	.716	.997	-2.24	1.77
	Always	.765	.901	.914	-1.76	3.29
Rarely	Never	1.235*	.436	.046	.01	2.46
	Sometimes	.167	.557	.998	-1.40	1.73
	Frequently	1.000	.756	.678	-1.12	3.12
	Always	2.000	.932	.214	-.61	4.61
Sometimes	Never	1.069	.502	.220	-.34	2.48
	Rarely	-.167	.557	.998	-1.73	1.40
	Frequently	.833	.796	.832	-1.40	3.06
	Always	1.833	.965	.328	-.87	4.54
Frequently	Never	.235	.716	.997	-1.77	2.24
	Rarely	-1.000	.756	.678	-3.12	1.12
	Sometimes	-.833	.796	.832	-3.06	1.40
	Always	1.000	1.092	.890	-2.06	4.06
Always	Never	-.765	.901	.914	-3.29	1.76
	Rarely	-2.000	.932	.214	-4.61	.61
	Sometimes	-1.833	.965	.328	-4.54	.87
	Frequently	-1.000	1.092	.890	-4.06	2.06

*The mean difference is significant at the 0.05 level.

The effect of communication as measured by the Grandhige item *"involvement in the discussion with family about the withdrawal of life support"* was also significant, *F*(21, 9) = 4.4119, *p* = .017; Pillai's trace = 2.717; partial η2 = .906. This was followed up by performing multiple comparisons in order to determine specifically which differences were significant. However none of the multiple comparisons were significant. This suggests that, even though the relationship between communication and the collective dependent variables were significant, the relationship between the individual dependent variable and communication was not significant.

This second research question was investigated by conducting MANOVA:

RQ2. What is the relationship between professional exclusion from EOL care discussions and attitudes/feelings towards EOL care in the ICU among RTs as measured by the CSACD, EOLCICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

The assumptions of MANOVA were first tested. Skewness and kurtosis index were used to identify the normality of the data. The results suggested the deviation of data from normality was not severe as the value of skewness and kurtosis index were below 3 and 10 respectively (Kline, 2011). Additionally, there were no extreme outliers, as assessed by standardized values and no multicollinearity as assessed by no correlations greater than 0.9. Results of the MANOVA yielded no significant effects. The effects of the predictor variables on the dependent variables collectively were not significant (*p* > .05). Tables 11 and 12 depict this information.

Table 11

Multivariate Tests RQ2

Effect		Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial eta squared	Noncent. parameter	Observed power^b
Intercept	Pillai's trace	.993	70.327	2.000	1.000	.084	.993	140.654	.448
Speak with their terminal patients about EOL care	Pillai’s trace	.934	.584	6.000	4.000	.736	.467	3.502	.104
Part of the multidisciplinary medical team that discusses EOL care with a patient	Pillai's trace	1.035	.715	6.000	4.000	.661	.518	4.293	.117
RTs how comfortable they are discussing EOL care with a patient	Pillai's trace	1.043	.727	6.000	4.000	.654	.522	4.364	.118
Would like to be included in disciplinary medical team meetings with patient	Pillai's trace	.891	.804	4.000	4.000	.581	.446	3.216	.123

a. Design: Intercept + GrandhigeQ4A + GrandhigeQ5B + GrandhigeQ6C + GrandhigeQ7D. b.Computed using alpha = .05.

Table 12

Multivariate Tests RQ2

Effect		Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial eta squared	Noncent. parameter	Observed power^a
Intercept	Pillai's trace	.998	34.076	17.000	1.000	.134	.998	579.285	.293
Involved in the discussion with family about withdrawal of life support	Pillai's trace	1.818	1.174	34.000	4.000	.498	.909	39.907	.178
Would like to be included in family meetings where decisions to remove the ventilator support	Pillai's trace	2.809	2.602	51.000	9.000	.063	.936	132.695	.747
Involved in a TE	Pillai's trace	3.526	1.749	68.000	16.000	.106	.881	118.948	.798

a. Design: Intercept + GrandhigeQ4A + GrandhigeQ5B + GrandhigeQ6C + GrandhigeQ7D

b. Computed using alpha = .05

The third research question was investigated by conducting MANOVA:

RQ3. What is the relationship between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

The assumptions of MANOVA were first tested. Skewness and kurtosis index were used to identify the normality of the data. The results suggested the deviation of data from normality was not severe as the value of skewness and kurtosis index were below 3 and 10 respectively (Kline, 2011). Additionally, there were no extreme outliers, as assessed by standardized values and no multicollinearity as assessed by no correlations greater than 0.9. There was a significant effect of experience/education on the collective dependent variables which measured abilities to collaborate with ICU team members within the SDM model, *F*(27, 9) = 2.694, *p* = .047; Pillai's trace = 2.694; partial η2 = .898. Tables 13 and 14 depict this information. Multiple comparisons were conducted in order to determine specifically which differences were significant.

Table 13

Multivariate Tests RQ3

Effect		Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial eta squared	Noncent. parameter	Observed power[a]
Intercept	Pillai's trace	.999	823.085	2.000	1.000	.025	.999	1646.170	.958
Speak with their terminal patients and or the patients' families one-on-one about EOL care	Pillai's trace	.983	.645	6.000	4.000	.700	.492	3.867	.110
Part of the multidisciplinary medical team that discusses EOL care with a patient	Pillai's trace	1.091	1.200	4.000	4.000	.432	.545	4.800	.162
How comfortable they are discussing EOL care with a patient	Pillai's trace	1.311	1.903	4.000	4.000	.274	.656	7.611	.233

a. Design: Intercept + GrandhigeQ4A + GrandhigeQ5B + GrandhigeQ6C

b. Computed using alpha = .05

Table 14

Multivariate Tests RQ3

Effect		Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial eta squared	Noncent. parameter	Observed power^a
Intercept	Pillai's trace	.999	158.080	9.000	1.000	.062	.999	1422.723	.584
Discussion with family about withdrawal of life support.	Pillai's trace	2.604	2.193	27.000	9.000	.109	.868	59.224	.626
Would like to be included in family meetings where decisions to remove the ventilator support	Pillai's trace	1.623	.957	18.000	4.000	.588	.812	17.235	.149
Involved in a TE	Pillai's trace	2.694	2.936	27.000	9.000	.047	.898	79.267	.777

a. Design: Intercept + GrandhigeQ21Q + GrandhigeQ22R + GrandhigeQ23S

b. Computed using alpha = .05

Multiple comparisons were conducted in order to determine specifically which differences were significant. The specific differences lied in comfort levels as measured by the survey item “*Confidence in manner of which palliative care experts are consulted through a timely manner for patients with EOL issues”* .Table 15 depicts these multiple comparisons.

Table 15

Multiple Comparisons (Dependent Variable: Confidence in Manner in Which Palliative Care Experts Are Consulted in a Timely Manner for Patients With EOL Issues)

(I) GrandhigeQ23S	(J) GrandhigeQ23S	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Never	Rarely	-.467	.856	.982	-2.86	1.93
	Sometimes	-.467	.716	.966	-2.47	1.54
	Frequently	-1.590	.715	.182	-3.59	.41
	Always	-1.571	.724	.202	-3.59	.45
Rarely	Never	.467	.856	.982	-1.93	2.86
	Sometimes	.000	.574	1.000	-1.61	1.61
	Frequently	-1.123	.573	.295	-2.72	.48
	Always	-1.105	.583	.330	-2.74	.53
Sometimes	Never	.467	.716	.966	-1.54	2.47
	Rarely	.000	.574	1.000	-1.61	1.61
	Frequently	-1.123*	.328	.009	-2.04	-.20
	Always	-1.105*	.347	.018	-2.07	-.13
Frequently	Never	1.590	.715	.182	-.41	3.59
	Rarely	1.123	.573	.295	-.48	2.72
	Sometimes	1.123*	.328	.009	.20	2.04
	Always	.018	.344	1.000	-.94	.98
Always	Never	1.571	.724	.202	-.45	3.59
	Rarely	1.105	.583	.330	-.53	2.74
	Sometimes	1.105*	.347	.018	.13	2.07
	Frequently	-.018	.344	1.000	-.98	.94

*The mean difference is significant at the 0.05 level.

Higher levels of comfort levels were found in respondents with higher levels of experience/education (GrandhigeQ23S). Significant differences were found between those who answered sometimes and frequently (*Mdiff* = -1.105, *p* = .009) and sometimes and always (*Mdiff* = -1.105, *p* = .018). No other comparisons were significant.

This fourth research question was investigated by conducting MANOVA:

RQ4. What is the relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

The assumptions of MANOVA were first tested. Skewness and kurtosis index were used to identify the normality of the data. The results suggested the deviation of data from normality was not severe as the value of skewness and kurtosis index were below 3 and 10 respectively (Kline, 2011). Additionally, there were no extreme outliers, as assessed by standardized values and no multicollinearity as assessed by no correlations greater than 0.9. There was a significant effect of communication regarding "*having a desire to be included in communication during family meetings where the decision to remove the ventilator*" on the collective dependent variables which measured abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU, F(30, 36) = 1.986, p = .025; Pillai's trace = 1.870; partial η2 = .623. Table 16 and 17 depict this information.

Table 16

Multivariate Tests RQ4

Effect		Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial eta squared	Noncent. parameter	Observed power^a
Intercept	Pillai's trace	.997	83.340	4.000	1.000	.082	.997	333.360	.459
Speak with their terminal patients and or the patients' families one-on-one about EOL care.	Pillai's trace	2.268	2.322	12.000	9.000	.106	.756	27.862	.588
Part of the multidisciplinary medical team that discusses EOL care with a patient	Pillai's trace	1.968	.968	16.000	16.000	.525	.492	15.493	.370
Discussing EOL care with a patient and or family one a one-on-one basis.	Pillai's trace	2.143	1.154	16.000	16.000	.389	.536	18.458	.444
Would like to be included in disciplinary medical team meetings with a patient and or family concerning EOL discussions.	Pillai's trace	1.589	1.935	8.000	4.000	.274	.795	15.483	.254

a. Design: Intercept + GrandhigeQ4A + GrandhigeQ5B + GrandhigeQ6C + GrandhigeQ7D

b. Computed using alpha = .05

Table 17

Multivariate Tests RQ4

Effect		Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial eta squared	Noncent. parameter	Observed power[b]
Intercept	Pillai's trace	.998	488.391	10.000	10.000	.000	.998	4883.911	1.000
Involved in the discussion with family about withdrawal of life support	Pillai's trace	.897	.895	20.000	22.000	.597	.449	17.893	.421
Would like to be included in family meetings where decisions to remove the ventilator support	Pillai's trace	1.870	1.986	30.000	36.000	.025	.623	59.589	.958
Involved in a TE	Pillai's trace	1.891	1.165	40.000	52.000	.300	.473	46.609	.854

a. Design: Intercept + GrandhigeQ21Q + GrandhigeQ22R + GrandhigeQ23S

b. Computed using alpha = .05

Multiple comparisons were conducted in order to determine precisely which differences were significant. However, the results of the multiple comparisons made were significant. This suggests that, even though the relationship between communication and the collective dependent variables were significant, the relationship between the individual dependent variable and communication was not significant. Table 18 depicts this information.

Table 18

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) communication	(J) communication	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Disagree	Neutral	-2.000	1.145	.313	-5.06	1.06
	Agree	-1.088	.988	.691	-3.73	1.56
	Strongly agree	-1.500	.976	.426	-4.11	1.11
Neutral	Disagree	2.000	1.145	.313	-1.06	5.06
	Agree	.912	.734	.605	-1.05	2.88
	Strongly agree	.500	.718	.898	-1.42	2.42
Agree	Disagree	1.088	.988	.691	-1.56	3.73
	Neutral	-.912	.734	.605	-2.88	1.05
	Strongly agree	-.412	.427	.770	-1.55	.73
Strongly agree	Disagree	1.500	.976	.426	-1.11	4.11
	Neutral	-.500	.718	.898	-2.42	1.42
	Agree	.412	.427	.770	-.73	1.55

Supplemental Analysis

Supplemental analyses (ANOVAs) were conducted in order to determine if there were statistically significant mean differences in comfort levels as measured by Grandhige and Rocker amongst different levels of education and experience in dealing with EOL. There were nine comfort variables that had significant differences between levels of EOL experience. This is depicted in Table 19.

Table 19

ANOVA

Comfort item	Sum of squares	*df*	Mean square	*F*	Sig.
Discussion of advanced care planning with patients	8.256	4	2.064	4.357	.003
	38.848	82	.474		
	47.103	86			
Participating in the discussion of code status	4.554	4	1.138	4.315	.004
	13.192	50	.264		
	17.745	54			
Withdrawing life support from a dying patient	3.970	4	.993	2.699	.037
	27.580	75	.368		
	31.550	79			
The process of withdrawing life support at the time a patient is actually dying	3.970	4	.993	2.699	.037
	27.580	75	.368		
	31.550	79			
Consideration being given to continuity of care for dying patients	13.853	4	3.463	2.841	.030
	88.981	73	1.219		
	102.833	77			
Comfort levels with how physicians explain the withdrawing procedure	24.758	4	6.190	4.492	.003
	95.080	69	1.378		
	119.838	73			
Whether or not the physician is available during the process to address any concerns	20.204	4	5.051	3.479	.012
	100.174	69	1.452		
	120.378	73			
Comfort levels about whether or not the process proceeded as expected	15.962	4	3.991	4.692	.002
	58.686	69	.851		
	74.649	73			

Multiple comparisons for each dependent variable now follow.

Discussion of Advanced Care Planning With Patients

Significant mean differences in this comfort variable existed between strongly disagree and neutral (*Mdiff* = -1.238, *p* = .045), agree (*Mdiff* = -1.389, *p* = .010), and strongly agree (*Mdiff* = -1.439, *p* = .009). Greater agreement that the participant had adequate training in EOL resulted in greater difference in comfort levels. Table 20 provides this information.

Table 20

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) experience/EDU	(J) experience/EDU	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Strongly disagree	Disagree	-.833	.444	.339	-2.07	.41
	Neutral	-1.238*	.438	.045	-2.46	-.02
	Agree	-1.389*	.414	.010	-2.54	-.24
	Strongly agree	-1.439*	.424	.009	-2.62	-.26

* The mean difference is significant at the 0.05 level.

Participating in the Discussion of Code Status

Significant mean differences in this comfort variable existed between strongly disagree and neutral (*Mdiff* = -1.278, *p* = .020), agree (*Mdiff* = -1.196, *p* = .022), and strongly agree (*Mdiff* = -1.433, *p* = .005). Greater agreement that the participant had adequate training in EOL resulted in greater difference in comfort levels. Table 21 provides this information.

Table 21

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) experience/EDU	(J) experience/EDU	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Strongly disagree	Disagree	-.833	.419	.287	-2.02	.35
	Neutral	-1.278*	.402	.020	-2.41	-.14
	Agree	-1.196*	.379	.022	-2.27	-.12
	Strongly agree	-1.433*	.387	.005	-2.53	-.34

* The mean difference is significant at the 0.05 level.

Withdrawing Life Support From a Dying Patient

Significant mean differences in this comfort variable existed between disagree and strongly agree (*Mdiff* = -.648, *p* = .037). Greater agreement that the participant had adequate training in EOL resulted in greater difference in comfort levels. Table 22 provides this information.

Table 22

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) experience/EDU	(J) experience/EDU	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Disagree	Strongly disagree	-.909	.395	.156	-2.01	.19
	Neutral	-.601	.248	.121	-1.30	.09
	Agree	-.442	.214	.244	-1.04	.16
	Strongly agree	-.648*	.222	.037	-1.27	-.03

* The mean difference is significant at the 0.05 level.

The Process of Withdrawing Life Support at the Time a Patient Is Actually Dying

Significant mean differences in this comfort variable existed between disagree and strongly agree (*Mdiff* = -.648, *p* = .037). Greater agreement that the participant had adequate training in EOL resulted in greater difference in comfort levels. Table 23 provides this information.

Table 23

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) experience/EDU	(J) experience/EDU	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Disagree	Strongly disagree	-.909	.395	.156	-2.01	.19
	Neutral	-.601	.248	.121	-1.30	.09
	Agree	-.442	.214	.244	-1.04	.16
	Strongly agree	-.648*	.222	.037	-1.27	-.03

* The mean difference is significant at the 0.05 level.

Consideration Being Given to Continuity of Care for Dying Patients

Significant mean differences in this comfort variable existed between strongly disagree and disagree (*Mdiff* = 2.061, *p* = .042). Greater agreement that the participant had adequate training in EOL resulted in greater difference in comfort levels. Table 24 provides this information.

Table 24

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) experience/EDU	(J) experience/EDU	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Strongly disagree	Disagree	2.061*	.719	.042	.05	4.07
	Neutral	1.564	.707	.187	-.41	3.54
	Agree	1.678	.670	.100	-.19	3.55
	Strongly agree	1.152	.679	.444	-.75	3.05

* The mean difference is significant at the 0.05 level.

Comfort Levels With How Physicians Explain the Withdrawing Procedure

Significant mean differences in this comfort variable existed between disagree and strongly agree (*Mdiff* = 1.847, *p* = .001). Greater agreement that the participant had adequate training in EOL resulted in greater difference in comfort levels. Table 25 provides this information.

Table 25

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) experience/EDU	(J) experience/EDU	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Disagree	Strongly disagree	.970	.765	.711	-1.17	3.11
	Neutral	1.053	.490	.212	-.32	2.43
	Agree	.912	.416	.194	-.25	2.08
	Strongly agree	1.847*	.445	.001	.60	3.09

* The mean difference is significant at the 0.05 level.

Whether or Not the Physician Is Available During the Process to Address Any Concerns

Significant mean differences in this comfort variable existed between disagree and strongly agree (*Mdiff* = 1.469, *p* = .006). Greater agreement that the participant had adequate training in EOL resulted in greater difference in comfort levels. Table 26 provides this information.

Table 26

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) experience/EDU	(J) experience/EDU	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upperbound
Disagree	Strongly disagree	1.697	.785	.206	-.50	3.90
	Neutral	.364	.503	.950	-1.05	1.77
	Agree	.812	.427	.326	-.38	2.01
	Strongly agree	1.469*	.456	.016	.19	2.75

* The mean difference is significant at the 0.05 level.

Comfort Levels About Whether or Not the Process Proceeded as Expected

Significant mean differences in this comfort variable existed between disagree and neutral (*Mdiff* = 1.091, *p* = .046), agree (*Mdiff* = 0.987, *p* = .028), agree (*Mdiff* = 0.987, *p* = .028) and strongly agree (*Mdiff* = 1.459, p = .001). Greater agreement that the participant had adequate training in EOL resulted in greater difference in comfort levels. Table 27 provides this information.

Table 27

Multiple Comparisons (Dependent Variable: Comfort Levels)

(I) experience/EDU	(J) experience/EDU	Mean difference (I-J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Disagree	Strongly disagree	.424	.601	.954	-1.26	2.11
	Neutral	1.091*	.385	.046	.01	2.17
	Agree	.987*	.327	.028	.07	1.90
	Strongly agree	1.459*	.349	.001	.48	2.44

* The mean difference is significant at the 0.05 level.

Summary

The purpose of this study was to test how the theory of social exclusion experienced through the culture of healthcare hierarchy influences the feelings/attitudes of Respiratory Therapists (RTs) from being excluded from End of Life (EOL) Care discussions; and how the exclusion impacts their expected role of performing EOL care procedures within the Intensive Care Unit (ICU). MANOVA was employed in order to address the following research questions:

RQ1. What is the relationship between professional exclusion of RTs from EOL care discussions and the abilities to perform EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

RQ2. What is the relationship between professional exclusion from EOL care discussions and attitudes/feelings towards EOL care in the ICU among

RTs as measured by the CSACD, EOLCICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

RQ3. What is the relationship between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

RQ4. What is the relationship between professional exclusion from EOL care discussions and the abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU among RTs as measured by the CSACD, EOLC-ICU, Rocker et al. (2005) survey, and Grandhige et al. (2016) survey?

Regarding the first research question, the differences between collaboration as measured by the variable *plannedtogetherQ24* on the combined dependent variables measuring abilities to perform EOL care procedures was statistically significant. Respondents, who answered *never* for the participation question *planned together,* had a smaller mean score for the collaboration variable. Regarding the second research question, Results yielded no significant effects. The effects of the predictor variables on the dependent variables collectively were not significant. Thus there were no significant relationships found between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU amongst RTs. Pertaining to the third research question, there was a significant effect of experience/education on the collective dependent variables which measured abilities to collaborate with ICU team members within the SDM model. Higher levels of comfort levels were found in respondents that higher levels of experience/education. Regarding the fourth research question, there was a significant effect of communication on the collective dependent variables which measured abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU.

Supplemental analyses (ANOVAs) were conducted in order to determine if there were statistically significant mean differences in comfort levels as measured by Grandhige and Rocker amongst different levels of education and experience in dealing with EOL. Results of ANOVAs found that increased education and experience levels were associated with increased comfort levels in dealing with EOL.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of the study was to examine how social exclusion and SDM, as experienced through the culture of healthcare hierarchy, impact the attitudes and feelings of RTs who are excluded from EOL care discussions, and how such exclusion influences their job function of performing EOL care procedures in the ICU. Concerning the first research question, the variations between collaboration as estimated by the variable *plannedtogetherQ24* on the combined dependent variables measuring abilities to perform EOL care procedures were statistically significant. Respondents who selected *never* for the participation question “planned together” had a smaller mean score for the collaboration variable. Regarding the second research question, results yielded no significant effects. The effects of the predictor variables on the dependent variables collectively were not substantial. Thus, there were no significant relationships found between professional exclusion from EOL care discussions and the abilities to collaborate with ICU team members within the SDM model related to providing EOL care in the ICU among RTs. Pertaining to the third research question, there was a significant effect of experience/education on the collective dependent variables, which measured abilities to collaborate with ICU team members within the SDM model. Higher levels of comfort were found in respondents with higher levels of experience/education. Regarding the fourth research question, there was a significant effect of communication on the collective dependent variables, which measured abilities to participate in the SDM model processes related to performing EOL care procedures in the ICU. Further supplemental analyses using ANOVA on differences in comfort level as estimated by Grandhige and Rocker among different levels of education and experience in dealing with EOL indicated that higher levels of experience and knowledge were associated with increased comfort level when dealing with EOL.

Interpretation of Findings

As the application of palliative care becomes more widely used in the inpatient setting, it is significant to take into account broadening the current perspective of what involves the interdisciplinary team. The hospital environment is increasingly complex and requires the expertise of several supportive professionals such as RTs, nutritionists, speech therapists, and physical therapists. Each of these disciplines may have a significant effect on the decisions made by families and patients in an EOL situation and the kind of care that they decide patients will receive. As a result of the rising number of patients with serious illnesses, it essential for life-sustaining therapies with removal after time-limited trials. The first research question focused on the professional exclusion of RTs who are on the front line of taking care of patients in EOL situations. Whether RTs should be involved in EOL decisions is an open question for which answers vary; however, the available resources necessitate their involvement in EOL decisions. RTs must be sufficiently prepared and involved to carry out the procedures in a way that increases comfort while reducing stress.

As the findings from the research indicate, both Rocker et al. (2005) and Grandhige et al. (2016) noted that RTs feel comfortable carrying out these procedures; however, in the event of moral or ethical distress, a significant number feel that they have limited choices. This suggests a degree of moral distress for which there is little outlet for the practitioner. The long-term ramifications of this unease have yet to be fully explored. Over a third of RTs reported that symptoms were not frequently or always well controlled post extubation. Because RTs may often be alone or with a critical care nurse at the bedside, this is distressing not only to patients and families, but to the RT as well, who cannot administer comfort medications beyond oxygen and respiratory therapy treatments (such as aerosolized treatments). This may also add to the unease surrounding the TE procedure.

The findings of the MANOVA on Research Question 1 indicated statistical significance on the effect of communication as measured by the Grandhige item "*involvement in the discussion with family about the withdrawal of life support*." The findings indicated that regardless of the relationship between communication and the dependent variables emerging as significant, the associations between individual dependent variables and communication were not significant. Braganza et al. (2017) also indicated the significance of shared decision making in respect to treatment withdrawal from the ICU. Braganza et al. further noted that there are significant international differences in the extent of family involvement in EOL decisions, and in some rare cases there are families that do not wish to be involved in these decisions.

The findings in the study are consistent with the results of the hermeneutical phenomenology study by Cutler and Madani (2016). Which identified the impact of power relations concerning the EOL care process and the deep relationships with particular patients within the power relations theme. Hani et al. (2016), unlike Cutler and

Madani, surveyed the attitudes of RTs concerning the withdrawal of life support and compassion fatigue. Hani et al. pointed out the importance of consistent communication between healthcare team members, family members, and the patient; however, attaining this information can be challenging for RTs. One of the explanations for such challenges is that there is no agreed-upon set standard or guidelines that exist to direct RTs on how communication should proceed (Hani et al., 2016).

The results of the current study identified statistically significant mean differences between comfort levels as measured by experience and education with EOL as part of supplemental analysis. Significant mean difference in Comfort Level Variable l indicated that greater agreement that the participant had adequate training in EOL led to greater difference in comfort levels. Rocker et al. (2005) also described the perspectives of nurses and RTs who offer EOL care for ICU patients. However, Rocker et al. indicated that RTs experience discomfort regarding considerations involving continuity of care, suggesting that there is no concern for who removes ventilator support. Despite different outcomes from both studies, it is clear that RTs are more comfortable when they are involved, considered, and heard in matters related to EOL care processes in ICU.

Strategies to minimize distress can be developed. One way to potentially reduce the incidence of discomfort is to involve RTs in family meetings where the withdrawal of ventilator support is discussed, as well as to have RTs present when planning the technical, pharmacological, spiritual, and social support available for the patient and family before and after the removal of ventilatory support. Although nearly half of RTs reported wanting to be involved in these discussions, only 6%–10% reported being involved frequently. A better understanding of how this decision came to be, including a sense of the patient’s goals for care and perception of quality of life, is of paramount importance to conducting the care plan without unease. These structured family meetings could also serve as a model for how RTs may conduct delicate conversations at the bedside. In a previous study, Singer et al. (2016) insisted on the importance of consistent communication among health care providers, families, and patients in delivery of high-quality EOL care. Concerning Singer et al., the application of healthcare tools to assist in conducting family meetings can facilitate the translation of research into clinical practices and improve the efficiency of these meetings alongside routine conduct. It would also be a way to communicate with the RT about what symptoms to expect and the team's symptom management plan, potentially decreasing moral distress. Surveyed RTs also did not feel that they had received adequate education or training in EOL care; this is reflected in the 70% who did not feel comfortable discussing these issues on their own, the 63% who did not feel that they received sufficient education regarding terminal illnesses either in school or on the job, and the 60% who desired more formal education in caring for terminal patients. Encouragingly, the proportion reporting sufficient education in school was higher among RTs who had been in practice for fewer years (i.e., who went to school more recently), but still, a majority of those in practice for 5 years reported insufficient education on these topics in respiratory school. Unsurprisingly, the proportion reporting sufficient education on the job rose with more experience. Overall, the percentage reporting sufficient education either in school or on the job did not vary depending on how long they had been in practice.

Two questions asked RTs about their comfort levels with the decisions to withdraw life support and the overall course/tempo of the withdrawal of life support. In regard to comfort levels with the decision to withdraw life support, 84.7% of the sample population chose a mean response value of 1.6 (*very comfortable*/*comfortable*). In the next question concerning RTs' comfort levels with the course of withdrawing life support, 79.8% of the sample population choose a mean response value of 2.1 (*comfortable*). A cross-tabulation between these two questions showed that the highest response values concerning comfort levels ranged from 1.7 to 2.1, which represents about 128 to 129 participants from the sample population. Hence, from these descriptive statistics, it appears that the majority of RTs in the sample population were either very comfortable or comfortable when it came to decisions being made to withhold life support and the course/tempo of the withdrawal of life support. Other statistics taken from the cross-tabulation procedure indicate that only three participants chose a response value of 5 (*not at all comfortable*), and only an additional nine participants chose a response value of 4 (*uncomfortable*).

Rocker et al. (2005) Survey

This survey questionnaire was developed and used by Rocker et al. (2005) in a study to describe Canadian nurses' and RTs' perspectives concerning EOL care for critically ill patients. The study method involved 20 to 30 cases of patients who had life support withdrawn in four Canadian university-affiliated ICUs, in which both RNs and RTs were asked to report their comfort levels with decision making and process for all 14 aspects of EOL care (Rocker et al., 2005). The 14 items included cardiopulmonary resuscitation (CPR); life support withdrawal; the timing of these decisions; the tempo of life support withdrawal; the method by which mechanical ventilation and oxygen were withheld, decreased, or withdrawn; the amount of sedation used; the quality of the physician's explanations to families; the availability of physicians to address concerns; the involvement of RNs and RTs in the decision; whether or not the life support withdrawal process went as planned; the peacefulness of the dying process; and the degree of privacy (Rocker et al., 2005). The gathering of data for the survey occurred after the patient died; this was done to reduce the influence of the study on the EOL care delivered.

Grandhige et al. (2016) Survey

This survey was developed and used by Grandhige et al. (2016) in a study to survey RTs from two academic medical centers concerning their experiences providing EOL care to patients in the ICU and performing the procedure of TE. This survey was appropriate for this study because it focuses on measuring the inclusion of RTs in the EOL care process, their knowledge and attitudes concerning EOL care procedures such as TE, and their overall experiences with EOL care within the ICU (Grandhige et al., 2016). A letter for permission to use this survey is in the Appendix A.

Grandhige et al. (2016) evaluated validity for the survey by incorporating the services of experienced RTs and RT leaders to assist in the creation of the survey contents. Additionally, the majority of the questions came from content-related, previously published surveys. Research from the study by Willms and Brewer (2005) served as the foundation for the survey by Grandhige et al. Limitations of the Grandhige et al. survey relate to the fact that it was only administered to a small population within a single health system, which may have reduced its generalizability. Hence, the collected data are unable to represent national estimates for RT distress during EOL care procedures, something that I sought to rectify within this study.

Limitations of the Study

This study used survey research to explore the relationships between its variables; such survey research suffers from various internal validity threats. First, instrumental bias can occur when the measuring instrument (survey) used within a study changes over time (Babbie, 2010). This threat can decrease confidence, which changes the scores on the dependent variable caused by instrumental bias and not the independent variable. Other experimenter effects in the form of personal bias can influence internal validity by the occurrence of directional hypotheses. This threat often occurs without intention, but it can significantly impact research outcomes (Babbie, 2010).

The ability to generalize the results of a similar sample group to a related focus population is one of the many reasons that research is conducted. Threats to external validity arise when inaccurate inferences from sample data are applied to other settings, persons, and situations (Creswell, 2014). One such risk is volunteer bias, which is challenging to prevent. One such risk is volunteer vias, which is challenging to prevent. The effect reduces the similarity of the characteristics shared between the sample group and the topic population. The result is that it can be challenging for researchers to make generalizations.

Construct validity for this study might be threatened because of a lack of previous research concerning the topic and population. One such threat is how the terms *EOL care* and *palliative care* are used interchangeably through previous research; for construct validity to be strong, terms should be defined appropriately (Carlet et al., 2004). The findings of the research may fail to present a wide national perspective on challenges of including RTs during EOL situations. Grandhige et al. (2016) used the term *terminal extubation* in their study, yet the term did not account for the exclusion of patients from ventilator support, for example, noninvasive ventilation or bilevel positive airway pressure, prompting potential underreporting of EOL encounters for RTs.

The current study is simply expressive, and the researchers did not get some information about explicit intercessions that may improve RTs' involvement with TEs. Future work may incorporate the turn of events and appraisal of intercessions, such as targeted education efforts and more intentional inclusion of RTs in critical care team meetings, to see whether this alleviates the discomfort surrounding TEs.

Limitations relating to possible bias include response bias, potential inaccuracies of self-reported questionnaire responses, nonresponse bias, and experimenter bias (Creswell, 2014). For example, extreme responses are common is surveys that offer a scale for individual responses, whether that scale involves numbers or even a selection of statements. This type of bias can be seen in many of the responses recorded for this study, such that more participants chose *rarely* or *strongly agree* responses in comparison to *sometimes* or *neutral*. Previous research has shown that participants are less likely to choose the middle options on a scale (Creswell, 2014). Another example of response bias that occurred in this study is nonresponse. Evidence of this is mentioned in previous chapters, as only one participant completed the entire 77-question survey.

Each of these types of bias can significantly influence the results of a study by producing inaccurate results or skewing data outcomes (Babbie, 2010). Although most of these biases are unintentional, a researcher should be aware of such biases that can enter into the research process.

Recommendations

Future researchers should consider exploring a larger population to increase generalizability. Randomly selecting participants to form a study sample would increase the validity and reliability of a research study. Furthermore, various limitations are inherent in quantitative research designs with no specific sampling strategy. As such, there is a risk of self-selection bias facing such research, and caution should be taken when applying the outcomes of the current study to other study populations and groups.

Prospective, longitudinal, and case-oriented studies are needed to identify how RTs engage in the EOL decision-making process and how engagement changes with the needs of the family over the time of the hospitalization, as well as to explore the effect that interventions have on comfort and distress among RTs. Such investigations would add to the understanding of the techniques that attendants use and how and why relatives react to these methodologies.

Implications

The study has multiple implications. The research study built upon the initial work of Rocker et al. (2005) and Grandhige et al. (2016) to extend the research on effects of inclusion of RTs in EOL decisions which will guide future research on clinical protocols in similar context. As the worldwide population ages and innovation permits prolongation of life, managing dying patients and their families is probably going to turn into a more frequent experience among practitioners, particularly RTs who operate in acute care settings. Medical practitioners need direction in instituting their jobs in EOL decision making with the goal that they can ease enduring and guarantee that EOL needs and objectives for their patients and relatives are being met. These care approaches ought to be guided by empirical evidence. Information on what strategies RTs should follow to establish their jobs and what procedures are valuable to patients and relatives will influence education, practice, and research on EOL approaches. The current research helps in understanding how RTs engage in this procedure is basic to the advancement of mediations to improve the methodologies that attendants use in EOL decision making.

From a wide perspective, the current practice as palliative care providers should work towards including other care team members in EOL care and education implementation. The emotional and ethical burden of caring patients at EOL situation can impact all care providers, however, offering the opportunity to truly understand the unique goals of patients and how that plays a key role in the decision-making process will play an important role in reducing the burden and may further make it operate in a more fulfilling way for every stakeholder.

Conclusions

RTs are rarely involved in end-of-life discussions despite a desire to be, and they experience situations that generate discomfort. There is a demand for more formal RT training around care for terminal patients. Clinical protocols that involve RTs in meetings before ventilator withdrawal should be considered. RTs spend considerable time taking care of their patients and linking up with corresponding families. Hence they develop trusting relationships.

Moreover, they can assess the families' and patients' needs concerning their readiness to withdraw or withhold care. RTs acquire a unique perspective, which offers them a chance to be aware when patients are no longer responding to treatment. This unique viewpoint situates RTs in the apposition to facilitate EOL decisions significantly. Therefore, it is critical to expanding the education to families and patients to understand the significance of collaborating with ICU team members in offering EOL care to ensure that RTs reduce distress and attain higher comfort levels.

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Appendix A: Permission Request Letter to Use Grandhige et al. (2016) Survey

April 15, 2019

Dr. Anjali Grandhige, M.D.

Emory University of Medicine

Atlanta, GA

Anjali.grandhige@emory.edu

Dear Dr. Anjali Grandhige:

I am a doctoral student from Walden University writing my dissertation tentatively titled *"How does Professional Exclusion of Respiratory Therapists from End of Life care Discussions and Decision-Making Impact Their Attitudes/Feelings and Abilities Regarding End of Life Care* under the direction of my dissertation committee chaired by Dr. Rhonda Bohs.

I would like your permission to reproduce your survey questions from your 2016 study "Respiratory *Therapists' Experiences and Attitudes Regarding Terminal Extubations and End-of-Life Care"* in my research study. I would like to use and print the questions under the following conditions:

- I will use these survey questions only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send my research study and one copy of reports, articles, and the like that may make use of the survey data promptly to your attention

If these terms are acceptable terms and conditions, please indicate so my signing one copy of this letter and returning it to me either through postal mail, fax, or email:

Sincerely,

Tiffany A. Lubken MS, RRT

____

Signature

Appendix B: Permission Request Letter to Use Rocker et al. (2005) Survey

April 15, 2019

Dr. Graeme M. Rocker, DM, MHSc, FRCP

Department of Medicine, Queen Elizabeth II Health

Sciences Center, Halifax, Nova Scotia

B3H 3A7

gmrocker@dal.ca

Dear: Dr. Graeme Rocker:

I am a doctoral student from Walden University writing my dissertation tentatively titled *"How does Professional Exclusion of Respiratory Therapists from End of Life care Discussions and Decision-Making Impact Their Attitudes/Feelings and Abilities Regarding End of Life Care"* under the direction of my dissertation committee chaired by Dr. Rhonda Bohs.

I would like your permission to reproduce your survey instrument "*RN and RT Perspectives on Decision Making and Process of Withdrawal of Life Support"* in my research study. I would like to use and print the questions under the following conditions:

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- I will include the copyright statement on all copies of the instrument.
- I will send my research study and one copy of reports, articles, and the like that may make use of the survey data promptly to your attention

If these terms are acceptable terms and conditions, please indicate so my signing one copy of this letter and returning it to me either through postal mail, fax, or email:

Sincerely,

Tiffany A. Lubken MS, RRT

Signature

Appendix C: Permission Request Letter to Use Scale of End-of-Life Care Survey

April 15, 2019

Dr. Marco Montagnini, M.D.

University of Michigan & Ann Arbor VA Healthcare

System, Ann Arbor, MI

mmontag@med.umich.edu

Dear Dr. Marcos Montagnini:

I am a doctoral student from Walden University writing my dissertation tentatively titled *"How does Professional Exclusion of Respiratory Therapists from End of Life Care Discussions and Decision-Making Impact Their Attitudes/Feelings and Abilities Regarding End of Life Care* under the direction of my dissertation committee chaired by Dr. Rhonda Bohs.

I would like your permission to reproduce your survey instrument the *"Scale of End-of-Life Care in the Intensive Care Unit (EOLC-ICU)"* in my research study. I would like to use and print the questions under the following conditions:

- I will use this survey only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send my research study and one copy of reports, articles, and the like that may make use of the survey data promptly to your attention

If these terms are acceptable terms and conditions, please indicate so my signing one copy of this letter and returning it to me either through postal mail, fax, or email:

Sincerely,

Tiffany A. Lubken MS, RRT

____

Signature

Appendix D: Permission Request Letter to Use Collaboration & Satisfaction About Care Decisions Survey

April 15, 2019

Dr. Judith G. Baggs, Ph.D., RN, FAAN

School of Nursing

Oregon Health & Science University

3455 SW US Veterans Hospital RD

Portland, OR

baggsj@ohsu.edu

Dear: Dr. Judith G. Baggs:

I am a doctoral student from Walden University writing my dissertation tentatively titled *"How does Professional Exclusion of Respiratory Therapists from End of Life care Discussions and Decision-Making Impact Their Attitudes/Feelings and Abilities Regarding End of Life Care* under the direction of my dissertation committee chaired by Dr. Rhonda Bohs.

I would like your permission to reproduce your survey instrument the *"Collaboration and Satisfaction about Care Decisions (CSACD)"* in my research study. I would like to use and print the questions under the following conditions:

- I will use this survey only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send my research study and one copy of reports, articles, and the like that may make use of the survey data promptly to your attention

If these terms are acceptable terms and conditions, please indicate so my signing one copy of this letter and returning it to me either through postal mail, fax, or email:

Sincerely,

Tiffany A. Lubken MS, RRT

____

Signature

Appendix E: Email Permission Consent to Use Grandhige et al. (2016) Survey Questions

Survey questions

GA

Grandhige, Anjali <Anjali.Grandhige@wellstar.org>

Reply all|

Fri 4/26, 1:34 PM

Tiffany Lubken

Inbox

Flag for follow up. Start by Monday, April 29, 2019. Due by Monday, April 29, 2019.
You replied on 4/26/2019 3:03 PM.

Tiffany

I received your email to use the survey questions from my respiratory therapist paper. You are welcome to use the questions.

Would be happy
to help if you have any further questions!

Best of luck

Anjali Grandhige
Sent from my iPhone

Appendix F: Email Permission Consent to Use Scale of End-of-Life Care Survey

Re: Permission Request to Use Survey Instrument for Dissertation Study

MM

Montagnini, Marcos (MARCOS) <mmontag@med.umich.edu>

Reply all|

Mon 4/29, 11:51 AM

Tiffany Lubken

Inbox

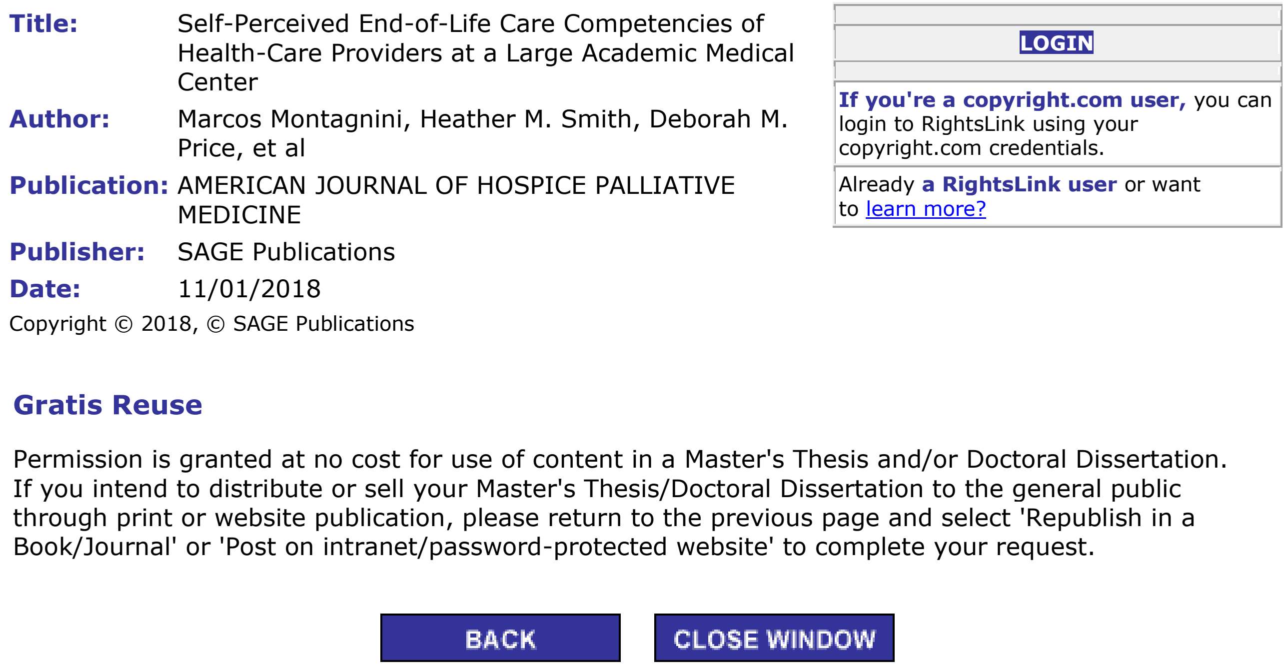
Flag for follow up. Start by Monday, April 29, 2019. Due by Monday, April 29, 2019.

You replied on 4/29/2019 4:36 PM.

Dear Tiffany,

Thanks for your interest in the Instrument *“Scale of End-of-Life Care in the Intensive Care Unit (EOLC-ICU)”*. I reviewed your request and the conditions of use and I grant you permission to use it in your study.

Sincerely,
Dr. Marcos Montagnini



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Author:	Marcos Montagnini, Heather M. Smith, Deborah M. Price, et al
Publication:	AMERICAN JOURNAL OF HOSPICE PALLIATIVE MEDICINE
Publisher:	SAGE Publications
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Appendix G: Elsevier License for Consent to Use Rocker et al. (2005) Survey Questions

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Appendix H: Email Permission Consent to Use Collaboration & Satisfaction About Care Decisions Survey

RE: Permission Request to use survey instrument for dissertation study

JB

Judith Baggs <baggsj@ohsu.edu>

Reply all|

Yesterday, 4:33 PM

Tiffany Lubken

Inbox

Flag for follow up. Start by Monday, May 06, 2019. Due by Monday, May 06, 2019.
You replied on 5/6/2019 10:11 PM.

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Action Items

Dear Ms. Lubken,

You are welcome to use the instrument.

I have attached four versions of it, a list of related references, and the original psychometric article.

I have five requests:

1. If you want to make any changes in the instrument, please send me a copy of your proposed revisions before using it
2. If you publish, cite my work appropriately
3. If you publish, do not publish the instrument so that I can maintain copyright and continue to share
4. If you publish, please send me the citation so that I may add it to my reference list
5. Let me know what you find out.

Best wishes,
Judith Baggs

Judith Gedney Baggs, PhD, RN, FAAN
Professor Emerita
Oregon Health & Science University
University of Rochester

503-430-7969
baggsj@ohsu.edu

Appendix I: Participant Prescreening Questions

Please answer ‘Yes” or “No” to the following questions.

1. Have you actively been practicing as a respiratory therapist within the last five years?

   Yes________ No________

2. Do you have experience working in the hospital setting as a respiratory therapist?

   Yes________ No________

3. Do you have experience working in the ICU as a respiratory therapist?

   Yes________ No________

Appendix J: Survey Demographic Questions

Please respond place response in blank space provided. If you do not wish to answer one of the questions, please place NA in the blank space.

1. Participants Age _____
2. Participants Gender_____
3. Participants number of years practicing Respiratory Therapy______
4. Participants level of education__________
5. Participants number of experiences performing EOL care procedures________
6. Type of hospital participant currently works at_______
7. Type of patient population participant works with the most_______
8. Type of ICU participant works in___________