LIBERTY UNIVERSITY
JOHN W. RAWLINGS SCHOOL OF DIVINITY

A MIXED-METHODS CASE STUDY OF SPIRITUAL FORMATION AND SCHOOL

INDUCED STRESS IN STUDENT REGISTERED NURSE ANESTHETISTS

DURING HOSPITAL RESIDENCY

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

by

R. Dawn Whybrew

Liberty University, Lynchburg, VA

2020

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APPROVED BY:

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ABSTRACT

Student registered nurse anesthetists in hospital residency undergo a rigorous schedule. For Christian nurse anesthesia students, spiritual formation may suffer due to the stressors of anesthesia residency. The purpose of this mixed-methods case study sought to understand and describe the perceived influence of participation in spiritual formation opportunities during nurse anesthesia hospital residency on students' spiritual formation level as well as their ability to handle stressors of hospital residency. In phase one of the study, the researcher conducted a purposeful convenience sampling of 54 Junior and Senior students in a quantitative quasi-experimental design. In phase one, the participant's spiritual formation level was measured via the Faith Maturity Scale (FMS) tool. Next, the study narrowed the number to the top 30 FMS scores for phase two of the transcendental phenomenological qualitative study. Phase two consisted of interviews that resulted in the common themes of coping, poor coping, positive benefit and no benefit. Findings from the study indicate that spiritual formation opportunities have a positive influence on spiritual formation level in the student nurse registered anesthetists experiencing the stressors of hospital residency. A finding not anticipated was that no relationship was revealed between spiritual formation opportunities and the nurse anesthesia students' ability to handle the stressors of hospital residency. Implications for nurse anesthesia programs are discussed as well as recommendations for areas of future research.

Keywords: Spiritual Formation, Student Registered Nurse Anesthetist, Residency

Dedication

This dissertation is dedicated to my loving and supportive family, my faithful friends, my colleagues, and amazing anesthesia students.

Acknowledgments

Above all, I give God the glory for guiding me through this journey in good times and in bad. My spiritual formation level has been strengthened throughout this process. I pray that with this research people have benefited from the knowledge gained and will continue to seek God's divine guidance in their lives.

Thank you to the anesthesia students who participated in this study. You were and are my inspiration. Without your willingness to be honest and vulnerable, this study would not have been possible.

I thank my friends and family for the encouragement and support that was needed more often than I had even dreamed. You were my refuge in the trying times.

Lastly, I thank my committee for sharing their knowledge and putting up with many questions and concerns over the past few years. Dr. Bredfeldt, your guidance was invaluable and your ability to encourage unmatched. Dr. England, you were willing to be my second reader in a process you did not begin with me. Thank you for taking on that giant task.

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List of Abbreviations

COA-Council on Accreditation

CRNA-Certified Registered Nurse Anesthetist

DNP- Doctorate of Nursing Practice

FMS-Faith Maturity Scale

IRB-Institutional Review Board

NAT-Nurse Anesthesia Track

RN-Registered Nurse

SRNA-Student Registered Nurse Anesthetist

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CHAPTER ONE: RESEARCH CONCERN

Introduction

Spiritual formation is a journey to the goal of transforming lives from a worldly flesh driven basis to lives seeking to emulate the image of Christ (Pettit, 2008). "Christ-followers move from brokenness to wholeness, from pretense to authenticity, and from spiritual immaturity to full-grown spiritual maturity" (Journals.biola.edu, 2017, p. 95). Christians will never cease developing spirituality throughout their lifetime. The spiritual developmental process requires "building upon one stage consisting of distinct and unique characteristics to another subsequent stage" (Welch, 2013, p. 118).

Spiritual formation is a continual and challenging process. It is "complex, and all too frequently well-meaning teachers and preachers try to ignore, avoid, or eliminate this complexity" (Nelson, 2011, p.91). The complexity of continued spiritual formation, while studying for a graduate medical degree, is accentuated. "The implications for medicine as ministry is entailed by the Christian belief that the one God is also three, that the God in whose image we are created is understood to be a trinity, intrinsically and eternally relational" (Mohrman, 1995, p. 9). This Christian medical provider is grounded in the knowledge that their ministry is a calling to heal. As Jesus commanded "Heal the sick, and tell them, 'The Kingdom of God is near you now" (Luke 10:9, New Living Translation).

Throughout this research, the term spiritual formation will be understood conceptually as spiritual formation within a Christian worldview. The spiritual formation opportunities that will be utilized and discussed for this research will be medical mission trips and classroom devotional opportunities. Chapter one includes a background on the

chronic stress experienced by a Student Registered Nurse Anesthetist (SRNA) and explores how spiritual formation can be effected through spiritual formation opportunities during the stressors of anesthesia residency. The chapter will also discuss the purpose and significance of the problem along with the methodology that guided the study. Finally, the chapter concludes with the assumptions and delimitations of the study, along with a list of the applicable definition of terms.

Background of the Problem

Certified Registered Nurse Anesthetists (CRNA) are anesthesia professionals who administer more than 49 million anesthetics to patients in the United States each year (AANA, 2020). CRNAs provide anesthetics to patients in every practice setting and for every type of surgical procedure as well as anesthetics outside the operating room (AANA, 2020). They carry a heavy responsibility and are the sole anesthesia providers in nearly all rural hospitals as well as the main provider of anesthesia to the United States military (AANA, 2020).

The training to become a CRNA is rigorous. The interview process for a SRNA can be demeaning and often there are multiple rejections before being accepted for admittance. To be admitted into anesthesia school, years of Registered Nurse (RN) critical care experience are required. For the SRNA returning to graduate school is a challenging transition and they must adjust from being experienced wage earners to unemployed student learners. Since most nurse anesthesia schools strongly discourage student employment, the nurse anesthesia students and their families often experience financial stressors throughout their three-year educational program.

Shields (2010) describes stress as, "the way an individual perceives the event's implications for him/herself, either positively or negatively" (p. 31). The human body is capable of handling different types of stress for short periods of time. The body activates both the sympathetic and parasympathetic nervous systems to allow the body to react to acute stressors. When stressors continue over long periods of time, the body starts to become depleted of its resources and becomes unable to compensate for those stressors. Chipas & McKenna (2011) found that "chronic stress is insidious and ultimately more devastating than acute stress" (p. 121).

The presence of chronic stress during nurse anesthesia residency training has been previously researched (Kendrick, 2000; Strong, 2012). "Health professionals in training not only must deal with the occupational stressors inherent in their chosen field, they also must manage the added stress that accompanies learning" (Kendrick, 2000, p. 116). "Stress in SRNAs is well documented in the current nurse anesthesia literature" (Stone, 2012, p. 29). Some SRNAs may resort to medications such as anti-depressants, while others begin taking stimulants in order to stay awake to study longer (Strone, 2012). While in some situations these interventions may be necessary, no research has been found that discusses the student's use of faith-based practices to help alleviate their stressors.

Anesthesia is not a degree one can earn by simply making the right grades. An anesthesia degree includes 99 credit hours of didactic learning with the addition of 3400 hours of clinical practice, some of which are done in 12 to 16-hour shifts three to four times per week during their final two years of training (Nurse Anesthesia Track, 2019). The stressors of these long shifts, the demands of meeting their coursework requirements,

and maintaining family life may lead to spirituality taking a back seat to academics and the demands of residency. When the nurse anesthesia student becomes overwhelmed with the education and residency process they may not feel they have time for spiritual formation opportunities.

Medical education is challenging and there is a need for spiritual faith-based alternatives to the typical non-faith based education. "The Association of American Medical Colleges has challenged medical educators to be role models for the incorporation of faith into the art and practice of medicine" (Schnatz, 2018, p. 345). Whether or not the education occurs in a Christian setting does not change the need for faith-based alternatives in medical education. By incorporating faith into one's medical education, spiritual formation may be positively affected.

<p style="text-align:center">Statement of the Problem</p>

The lack of available research addressing the spiritual formation of nurse anesthesia students or how their spiritual formation is impacted by participation in their educational program indicated a need for studies of this type. High stress is unavoidable in graduate nurse anesthesia education, but how that stress is managed can be the difference between success and failure (Varner, 2011). There are many maladaptive behaviors associated in coping with the stress of this type of education (Varner, 2011). Learning to cope with the school-induced stress by turning to faith rather than maladaptive behaviors, can not only help to avoid future problems but also seek to further the student's spiritual formation.

There are several dimensions of faith that play significant roles in medicine (Ventres & Dharamsi, 2013). Medicine and faith are often intertwined (Ventres &

Dharamsi, 2013). Spiritual formation is a necessary component of all medical professionals and especially students of nurse anesthesia. Utilizing nurse anesthesia students' time in school to further their spiritual formation will positively affect their educational experience and form a firm foundation to continue those practices into their professional careers.

Many nurses experience stress within their profession. "Stress in nurses has been linked to reduced physical and psychological health, reduced job satisfaction, increased sickness absence, increased staff turnover, and poorer job performance" (Farquharson, Bell, Johnston, Jones, Schofield, Allan, Johnston, 2013, p. 2327). By separating the perceived influence of participation in spiritual formation opportunities and the level of spiritual formation during the stressors of nurse anesthesia school, this researcher sought to identify any relationship between one's spiritual formation level and offered spiritual formation opportunities during the stressors of nurse anesthesia residency.

Purpose Statement

The purpose of this mixed-methods case study was to understand and describe the perceived influence of participation in spiritual formation opportunities during nurse anesthesia hospital residency on students' spiritual formation level and their ability to handle stressors of hospital residency. In this research, spiritual formation is generally defined as the maturing relationship between the individual believer and God (Pettit, 2008).

This study first collected quantitative data to determine the spiritual formation level among Junior and Senior student registered nurse anesthetists during the stressors of hospital residency. Next, the study collected qualitative data to explore further the

common phenomenon between spiritual formation level and spiritual formation

opportunities for Junior and Senior SRNAs participating in spiritual formation

opportunities during their hospital residency.

Research Questions

The following research questions guided this study:

RQ1. What difference exists, if any, between spiritual formation level and medical mission trip participation in student registered nurse anesthetists during the stressors of hospital residency?

RQ2. What difference exists, if any, between spiritual formation level and class devotional participation in student registered nurse anesthetists during the stressors of hospital residency?

RQ3. How do student nurse registered anesthetists in hospital residency perceive that spiritual formation opportunities contribute to spiritual formation level?

RQ4. How do student registered nurse anesthetists who have participated in spiritual formation opportunities perceive their ability to handle the stressors of hospital residency?

Assumptions and Delimitations

Research Assumptions

This research assumes that a Christian is a person that believes "if you confess

with your mouth that Jesus is Lord and believe in your heart that God raised him from the

dead, you will be saved" (Romans 10:9, English Standard Version).

This research assumes that spiritual formation is a journey to the goal of

transforming a life from a worldly flesh driven basis to a life seeking to emulate the

image of Christ (Pettit, 2008).

This research assumes that medical mission trips are a spiritual formation

opportunity to deepen one's spiritual formation level.

This research assumes that classroom devotionals are a spiritual formation opportunity to deepen one's spiritual formation level.

This research assumes that continued spiritual formation during anesthesia residency is possible. "Do not be conformed to this world, but be transformed by the renewal of your mind, that by testing you may discern what is the will of God, what is good and acceptable and perfect" (Romans 12:2).

This research assumes that Christian nurse anesthesia students at a faith-based institution may desire spiritual formation opportunities.

This research assumes that anesthesia residency students have not developed any maladaptive stress management practices.

This research assumes that all nurse anesthesia residencies are congruent with all the requirements of the Council on Accreditation of Nurse Anesthesia Educational Programs (Council on Accreditation, 2020).

This research assumes that Senior resident SRNA's had the opportunity to participate in spiritual formation opportunities an additional year longer than the Junior resident SRNA's and therefore had a year longer for their spiritual formation level to be affected.

Delimitations of the Research Design

This study was delimited to Junior and Senior SRNAs presently in hospital residency. A convenience sampling of currently enrolled nurse anesthesia track (NAT) students encountering the stressor of hospital residency was utilized. Furthermore, this reduced extraneous factors such as school class schedule variability, number of hours spent in the hospital weekly, and grade point average differences. It did not account for

differences in external stressors such as family dynamics, finances, separation from family or friends and support systems.

It is possible that the sample was not representative of the stress level of all SRNAs in hospital residency. Each nurse anesthesia school student is diverse in how they study and how they cope with hospital residency. The hours spent in the hospital versus classroom time differs for each student. Different hospitals also pose varying stressors. Consequently, the research may not necessarily generalize to all nurse anesthesia hospital residency programs.

Personal stress management strategies differ for each NAT student. Students come to the program with established stress management strategies that may or may not work with the new stressors of graduate school & residency. Each student's stress management technique was not considered.

Students' individual responses to spiritual formation opportunities may differ depending on their spiritual maturity when entering hospital residency. The students' spiritual maturity upon entering residency was not measured. This unknown initial spiritual formation level could have given a baseline for comparison with the SRNAs' Junior and Senior years. Other spiritually formative disciplines such as church attendance, personal Bible study, and individual prayer were not assessed and may have contributed to their spiritual formation level in addition to those offered for the study.

The study was limited to the number of respondents to surveys. Online anonymous surveys were chosen for the quantitative portion for student availability reasons. A total of 45 participants responded to the quantitative survey. For the qualitative portion of the study, a research assistant unknown to the students and without

any association with the nurse anesthesia program was utilized for the personal interviews. This was to lessen any bias on the part of the primary researcher. The research assistant gathered the data under a pseudonym system in order for the students to remain anonymous to the primary researcher.

Definition of Terms

The following terms were used for the purpose of this explanatory sequential mixed-methods study.

1. *Christian Worldview*: "The foundational truth that Jesus Christ's life and death exemplified divine love and exerted an influence for good and sacrifice" (Dockery & Thornbury, 2002, p. 8).

2. *Certified Registered Nurse Anesthetist (CRNA):* CRNAs provide anesthetics to patients in every practice setting, and for every type of surgery or procedure. They are the sole anesthesia providers in nearly all rural hospitals, and the main provider of anesthesia to the men and women serving in the U.S. Armed Forces. (AANA, 2020)

3. *Faith Maturity Scale:* A spiritual formation tool that "focuses on the common understandings of personal faith and spirituality within churches and religious communities, minimizing denominational, economic, educational, and racial specificity" (Ji, 2004, p. 993).

4. *Phenomenological*: An approach "in which the focus of investigation is on how people perceive and experience themselves and certain aspects of their world." (Leedy et al., 2019, p. 417)

5. *Residency*: The final portion of supervised student clinical practice where a synthesis of information and clinical skills are honed. (Nurse Anesthesia Track, 2019)

6. *Spiritual Formation*: A journey to the goal of transforming a life from a worldly flesh driven basis to a life seeking to emulate the image of Christ (Pettit, 2008).

7. *Spiritual Formation Classroom Devotional Opportunities:* Devotionals led by the instructor or student in the classroom accompanied by prayer.

8. *Spiritual Formation Medical Mission Trip Opportunities:* Trips in which trained medical professionals travel to foreign countries with a specific medical purpose for a designated period of time ("Medical Mission Trips*,"* 2017).

9. *Stress*: "The way an individual perceives the event's implications for him/herself, either positively or negatively" (Shields, 2010, p. 31).

10. *Stressor*: "A stimulus that causes stress" ("Definition of stressor," n.d.)

11. *Student Registered Nurse Anesthetist:* Registered nurse with a baccalaureate or graduate degree with a minimum of one year full-time critical care experience enrolled in a nurse anesthesia program (AANA, 2020).

12. *Transcendental phenomenological research:* Research focused on the description of the experiences of the research participants rather than the interpretations of the researcher (Creswell, 2014).

Significance of the Study

Being able to continue that wholehearted devotion to God while experiencing the stressors of anesthesia residency is paramount. Christian education is about changing the individual and helping them in their relationship with Christ (Virkler, 2017). The educator's role in Christian education should be fashioned after the teachings of Jesus (Dockery, 2012). This can be seen in the most important commandment given to the Christian by Jesus which is to "Love the Lord your God with all your heart, all your soul, and all your mind" (Matthew 22:37 New Living Translation). The Christian educator's role is "a whole-hearted devotion to God with every aspect of our being, from whatever angle to consider it-emotionally, volitionally, or cognitively" (Dockery, 2012, p. 3).

One way to increase one's spiritual formation is participation in medical mission trips in order to look at the needs of others versus self. "While information and behavior are certainly important aspects of spiritual formation, the concept of missional discipleship is built on the presumption that they were never meant to be the end, but

rather the means by which transformation takes place" (Beard, 2015, p. 179). During medical mission work, the SRNA may learn to focus on healing the patient which in turn can strengthen the student spiritually. It is an opportunity for the students to learn to trust each other by mutual participation in unfamiliar circumstances and the opportunity to observe faculty and missionary nurse anesthetists modeling the Christian Worldview in providing care and dealing with the stresses inherent in offering care in a third world environment.

Another spiritual formation opportunity where the student may strengthen their spiritual formation level while in a Christian education environment is through instructor lead classroom devotionals. Not only do the students share in prayer requests but they also observe role models of Christian classmates and faculty. "One of the ways in which spiritual partners connect to one another in a spiritual ecology and share spiritual resources is by praying for one another" (Lowe & Lowe, 2017, p.162). Paul's instructions were to, "carry each other's burdens, and in this way you will fulfill the law of Christ" (Galatians 6:2, New International Version). The role modeling and sense of community along with support developed by praying with and for one another may provide spiritual formation that can then be used to better deal with the stress of anesthesia residency.

The spiritual formation opportunities of short term mission trips and/or classroom devotionals may help to foster the Christian's community experience. Samra (2006) states that all are, "members of the body of Christ and of the people of God and by definition are united in community with other believers" (p. 134). Paul spoke of each member of the community as an intricate part of the body. He wrote, "All of you

together are Christ's body, and each one of you is a part of it (I Corinthians 12:27, New Living Translation). In the community created by mission trips and /or classroom devotionals, each student can become a better and more intricate part of the body of Christ in support of one another.

The significance of the study is found in understanding and identifying the role that participation in spiritual formation opportunities plays in enabling students to grow spiritually while under the stress of hospital residency. This case study focused on a single southeastern United States Christian University's nurse anesthesia program in order to identify common themes of spiritual formation in the Junior and Senior SRNAs. The researcher hopes to inspire future studies that would include a larger population and diversity of participants to garner statistical significance and allow for generalizability to a wider number of people.

Summary of the Design

Research Population

The population for this study was Junior and Senior nurse anesthesia students participating in hospital residency training attending a Christian university nurse anesthesia program in the southeastern United States. Among this sample, the population surveyed was asked if they were practicing Christians. Only those who attested to be practicing Christians were utilized for the study.

Research Sample and Sampling Technique

The researcher conducted a purposeful sampling to obtain participants for this study after receiving approval from the necessary Institutional Review Boards (IRB). Surveys were sent to 54 NAT students who were currently in hospital residency within

their program of study. For this research, the purpose represented by the sample selection was the identification of Junior and Senior SRNAs who meet the inclusion criteria. Students who are not currently in hospital residency or decline to participate in the study were excluded. Nurse anesthesia residents who did not attest to be Christians we also excluded.

To accomplish this purpose, this researcher sent the survey via the SRNA email database within Union University School of Nursing Doctor of Nursing Practice Anesthesia Track. The quantitative research was conducted via the *Survey Monkey* platform. A survey was sent to all eligible students inviting them to participate. A mixture of demographic multiple-choice questions was included. Respondents were also asked to complete the Faith Maturity Scale (FMS) assessment tool. Next for phase two of the study, the top 30 scoring participants from the FMS tool were interviewed by a research assistant. The data generated from the tool and the interview question responses were analyzed.

Methodological Design

The methodological design for this study entailed a mixed-methods study. By utilizing both quantitative and qualitative data the researcher gained a deeper understanding of the research problem and was better able to capture all aspects of the study. An explanatory sequential mixed design was utilized. The explanatory sequential mixed design involved the collection of quantitative data with analysis for phase one of the study followed by qualitative data collection for phase two of the study (Creswell, 2014).

For the quantitative strand, the researcher conducted a quasi-experimental design to determine the spiritual formation level in the study participants. The Faith Maturity Scale (FMS) tool was used to measure the spiritual formation level in the Junior and Senior SRNA's from a Christian worldview. The data was collected from the participants and generated a statistical comparison via the Levene's test for equality of variances A two-tailed t-test was used to compare the degree of variance between the Junior and Senior SRNA participants' spiritual formation levels. The level of statistical significance is defined as the priori probability value of $p \leq 0.05$. The goal of the quantitative phase was to determine if a statistically significant difference in spiritual formation was seen in the Junior versus the Senior resident SRNAs participating in spiritual formation opportunities.

For the qualitative strand of this study, the respondents to the quantitative portion that had the highest score on the FMS tool were interviewed. The qualitative study utilized transcendental phenomenological research. Through surveys and interviews, the research methodology explored the common phenomenon between spiritual formation level and spiritual formation opportunities for Junior and Senior SRNAs participating in spiritual formation opportunities during their hospital residency. The function of the qualitative data was to determine if spiritual formation opportunities influenced the students.

CHAPTER TWO: LITERATURE REVIEW

Overview

This chapter presents a summary of the theological and theoretical framework, the related literature, the rationale for the study along with gaps in the literature and finally the profile of the current study. Defining spiritual formation and how the level of spiritual formation is influenced was instrumental in this study. Other factors such as the stress experienced in nurse anesthesia hospital residency and how that stress impacts one's spiritual formation level were also significant to the research. This chapter explores the concepts of spiritual formation as well as the stress nurse anesthesia students experience in hospital residency, as evidenced by an extensive review of the literature from a Christian worldview perspective.

To define spiritual formation one must also understand how a person develops both cognitively and ultimately how they develop spiritually. **"**Spirituality may be defined as one's unique way of experiencing and exploring the essence of being, and of finding hope, meaning and purpose in existence" (Gallacher, 2016, p. 61). To comprehend the complexity of spirituality one must recognize how an individual develops as an intelligent being and also as a spiritual being. Because cognition and faith are so significantly intertwined, the developmental stages of cognition and eventually the development of one's faith are examined in this chapter.

The cognitive and spiritual formation development of a person requires many phases and this continued development through those phases eventually permeates all areas of one's life. As in the illustration given by Jesus, "The Kingdom of Heaven is like the yeast a woman used in making bread. Even though she put only a little yeast in three

measures of flour, it permeated every part of the dough" (Matthew 13:33, New Living Translation). So must spiritual formation penetrate through all the trials of life including that of the nurse anesthesia hospital residency.

Theological Framework

This section considers spiritual formation from a biblical and theological perspective. A biblical theology:

> must keep all three principles in careful balance: that all created reality comes from the hand of God and was originally and intrinsically good; that all is marred and corrupted by sin; yet that all is capable of being redeemed, restored, and transformed by Gods' grace. (Pearcey, 2004, p. 95)

Spiritual formation in the context of this study is examined through a Christian worldview. The Christian worldview is based upon Christian doctrine. Christian doctrine is defined by:

> Statements of the most fundamental beliefs the Christian has, beliefs about the nature of God, about his action, about us who are his creatures, and about what he has done to bring us into relationship with himself. (Erickson, 2015, p. 4)

Understanding Christian doctrine is paramount for the Christian student and educator. To understand Christian doctrine, one must study the nature of God. "The study of God's nature should be seen as a means to a more accurate understanding of him and hence a close personal relationship with him" (Erickson, 2015, p. 80).

Spiritual Formation

Spiritual formation as a term has become popular in the Christian community over the past few decades. According to Pettit (2008) "spiritual formation is a composite term

not found explicitly in the Bible" (p. 105). To understand spiritual formation one must know the definition of spiritual formation. Spiritual formation can be defined as "the ongoing process of the triune God transforming the believers' life and character toward the life and character of Jesus Christ-accomplished by the ministry of the Spirit in the context of biblical community" (Pettit, 2008, p. 24). The process of spiritual formation is a continual process throughout one's lifetime and can be described as a journey or a pilgrimage (Niles, 2010).

Many factors influence how one's spirituality is formed. "The ecology of spiritual formation must be multifaceted rather than singular in focus to accommodate the numerous factors influencing the formation of spirituality" (Estep, 2002, p. 160). These numerous factors are incorporated into the process of spiritual formation which begins at salvation and continues to grow as the Christian matures.

At the beginning of one's spiritual formation walk, the new Christian realizes their weaknesses and need for a Savior. "Weakness is where Christian spiritual formation begins and never leaves" ("Spiritual formation in the church," 2014, p. 293). The Christian accepts their brokenness and surrenders their life to God. "Christ-followers move from brokenness to wholeness, from pretense to authenticity, and from spiritual immaturity to full-grown spiritual maturity" (Journals.biola.edu, 2017, p. 95).

Striving to walk in a Christ-like example is the goal of the Christian seeking spiritual maturity. "The question of adequately performing for God in one's life appears to be near the surface of many believers' thoughts" (Lang, 2015, p. 261). This spiritual formation toward maturity can only be accomplished through spiritual guidance from God and through opportunities that allow one to seek God. "Spiritual formation refers to

all God undertakes and undergoes for us to bring us to maturity" (Pettit, 2008, p. 105).

God begins to remodel the Christian's entire life. "Genuine spiritual formation involves

the transformation of a person's heart or wellspring of human action" (Niles, 2010, p. 68)

Spiritual formation is an extensive process that occurs over time. "Spiritual

formation is not a linear or unidirectional process" (Estep, 2002, p. 160). As believers,

Christians learn through spiritual formation how to better endure the pressures of earthly

life. "Spiritual formation provides an inner support system to progressively help believers

master the difficulties of life" (Niles, 2010, p. 80). A genuine spiritual formation takes

time and is not without difficulties. "Spiritual growth includes ebbs and flow; some

seasons incorporate obvious and rapid growth while other seasons include little or no

growth or even spiritual languishing" (Niles, 2010, p. 81).

Pettit (2008) stated that spiritual formation is "many-sided and complex" (p. 143).

This complexity can be extenuated during stressful times such as in a rigorous academic

environment. "Christian spiritual formation is complex, and all too frequently well-

meaning teachers and preachers try to ignore, avoid, or eliminate this complexity"

(Nelson, 2011, p.91). The effort to continue in one's spiritual formation takes effort and

work especially during stressful situations. Pettit (2008) states that "spiritual formation

involves attention to both inside ('heart work') and outside ('mouth work')" (p. 126).

Spiritual formation is multifaceted. "Spiritual formation is not the result of a

single factor, but of multiple factors, both individual and social, which coalesce within

the individual" (Estep, 2002, p. 160). Although many factors formulate one's spirituality,

the most important factor in spiritual formation is striving to follow the example of Christ

even through stressful situations. The Christian must strive to live in the image of Christ.

"Spiritual formation takes place at the points of one's unlikeness to the image of Christ" (Niles, 2010, p. 69). Only through seeking to emulate the image of Christ does continued spiritual formation occur.

Medicine and Spiritual Formation

Non-Christian medical providers deliver physical care for the sick. Conversely, Christian medical providers are often called to their profession to minister to the sick. "The implications for medicine as ministry is entailed by the Christian belief that the one God is also three, that the God in whose image we are created is understood to be a trinity, intrinsically and eternally relational" (Mohrmann, 1995, p. 9). This relationship is grounded in the knowledge that Christian medical providers know they are called to heal the sick through this relationship with God.

God promised Israel, "Behold, I will bring to it health and healing and I will heal them and reveal to them abundance of prosperity and security" (Jeremiah 33:6, English Standard Version). All healing comes from God, but the medical provider can be a conduit of healing as they are used by God. Health and healing will always be at the forefront of this earthly life when disease and sickness occurs.

The fall of man brought sin into the world, but God redeemed man through the blood of Christ. Sin introduced disease and illness into the world, but God redeemed the world through the blood of Christ. "Thus creation and redemption are both expressions of the one essential reality, which is God's desire for a meaningful relationship with the whole creation, and not least with the human community" (Ayre, 2010, p. 235). Although the Christian is redeemed from a life of sin, while on this earth disease and sickness will

still exist and the people of God must take on the responsibility to care for those who are ill.

The Christian medical provider strives to follow the lessons taught by Jesus. This is evidenced in the book of Matthew when Jesus responded to questions asked by the disciples. Jesus said:

> And when did we see you sick or in prison and visit you? And the King will answer them, 'Truly, I say to you, as you did it to one of the least of these my brothers, you did it to me'. (Matthew 25:39-40)

Through caring for the least of these, the Christian medical provider can experience continued spiritual formation.

Nursing encompasses not only physical care but spiritual care as well. "The linking of spirituality with nursing has been rooted in the early years of the first millennium" (Kilpatrick, 2002, p. 41). Spirituality has been a part of medical care for centuries. "If one goes back far enough, spiritual care may have been the only thing, other than comfort measures, that could be offered to most patients" (Barnum, 2010, p. 95). The profession of nursing is rooted in caring for one's fellow man which is consistent with a biblical worldview. "Nursing was seen as a religious or spiritual lifestyle choice, that is, the choice that dominated and controlled one's whole life" (Barnum, 2010, p. 96).

Jesus commanded "Heal the sick, and tell them, 'The Kingdom of God is near you now" (Luke 10:9, New Living Translation). Clinicians who are Christians take this directive very seriously. Dean (2015) states, "The opening of the self to God, the sacred, is the essential task of the Christian life" (p. 19). Through continued spiritual formation

the Christian medical provider can continue their calling in a ministry of healing for their fellow man.

Community

Spiritual formation is more than an individual process. "Spiritual formation is not simply an internal process but is partially an acquisition from the community of faith in which the individual engages" (Estep, 2002, p. 160). Connecting through community furthers one's spiritual formation. "The Christian life if not to be pursued in isolation" (Pettit, 2008, p. 46). "Our connections to one another as fellow Christians derive from our mutual connection to Christ as Head of the body, creating spiritual conduits of mutual exchange and mutual spiritual benefit" (Lowe & Lowe, 2017, p.161). This mutual exchange brings the Christian not only closer in faith to their brothers and sisters in Christ, but to God himself.

Community plays a prominent role in spiritual formation. "This aspect of spiritual formation is often referred to as *koinonia* or the sharing of a common life together" (Niles, 2010, p. 87). This sharing of common life in community helps to form covenantal relationships. "Covenantal relationships fill deep needs, enable work to have meaning and to be fulfilling" (DuPree, 2004, p. 38). The people within one's spiritual community are not merely acquaintances or friends; they become a spiritual family. Jesus stated, "Here are my mother and brothers. For whoever does the will of my Father in heaven is my brother and sister and mother" (Matthew 12:49-50 New International Version). As Jesus introduced the concept of the spiritual family to his disciples, so must today's Christian follow his example through community among believers.

A Christian community can be a strength in a time of struggle. All Christians may have times of struggle in their spiritual walk. "For all have sinned and fall short of the glory of God, and all are justified freely by his grace through the redemption that came by Christ Jesus" (Romans 3:23-24). Even when one stumbles, it is the community of God who picks up their fellow brothers and sisters and encourages them to move forward. Helping one another and exhibiting grace is a key factor in community. The spiritual community family must always "remain connected to Christ and to one another in the face of internal dissension and external opposition" (Lowe & Lowe, 2017, p.158).

Community promotes spiritual formation through Christ's presence. Being in Christ's presence within a community is manifested in the following way:

> When believers assemble together, the Spirit is not only in each one of them but also becomes manifest through them and dwells among them. As a result, God and Christ become present in the assembled community in a unique way. (Samra, 2006, p. 135)

Paul wrote about this concept when he stated, "For where two or three gathered in my name, there am I among them" (Matthew 18:20, English Standard Version). He is speaking about the spiritual community and the idea that all are one in spirit not only with one another but also with a Holy God. Community allows Christians to be bonded to each other and through each other they become connected to God.

Samra (2006) states that all Christians are, "members of the body of Christ and of the people of God and by definition are united in community with other believers" (p. 134). This was exampled when Paul spoke of each member of the community as an intricate part of the body. He wrote, "Now you are the body of Christ, and each one of

you is a part of it (I Corinthians 12:27, New International Version). The body is not whole without all of the parts. Community allows Christians to be a part of that spiritual body and therefore the Christian continues in their spiritual formation through their relationships with other Christians.

Biblical Foundations

Scripture is the foundation of how one is to experience spiritual formation. "The Bible places a striking emphasis on spiritual growth" (Niles, 2010, p. 70). This growth comes from continued dedication to the journey of spiritual formation. "Spiritual formation becomes a matter of obeying the teachings of Christ and attempting to live a righteous life" (Niles, 2010, p. 71). "It is our privilege to follow the God-ordained good path of growth in grace by which we aim at Christ-like holiness while resting in the Lord's forgiveness and transforming power" (Nelson, 2011, p. 92).

God sees how each Christian's spirituality grows. "Nothing in all creation is hidden from God's sight" (Pettit, 2008, p. 127). The Christian's spiritual formation continues over time and therefore their behavior begins to reflect that continued spiritual formation. "While information and behavior are certainly important aspects of spiritual formation, the concept of missional discipleship is built on the presumption that they were never meant to be the end, but rather the means by which transformation takes place" (Beard, 2015, p.179). A Christian will never reach perfect spiritual maturity while on this earth but the journey toward that maturity strengthens their spiritual formation.

Spiritual formation not only occurs through the individual relationship one has with God but through the sharing of the gospel and community with other Christians. "These spiritual connections serve as interactive conduits for the exchange of spiritual

nutrients and resources that lead to mutual growth and maturity (Lowe & Lowe, 2017, p.43). Sharing the gospel and experiencing biblical community gives the Christian the opportunity for spiritual formation as commanded by Jesus. "But you will receive power when the Holy Spirit has come upon you, and you will be my witnesses in Jerusalem and in all Judea and Samaria, and to the end of the earth" (Acts 1:8). The Holy Spirit guides the Christian in their witness within their community and beyond.

Examples from the Old Testament. Spiritual formation has been exampled by many since Old Testament times. "There are a number of other Old Testament examples of relationships in which people operate under a relational model in such a way as to bring about spiritual formation" (Shepson, 2012, p. 184). As seen in Genesis, "Then the Lord God said, 'It is not good that the man should be alone" (Genesis 2:18, English Standard Version). In this instance, God was referring to Adam being alone in the Garden of Eden. Therefore, God created Eve to come into community with Adam. Through their union, the earth was populated and community began.

The Israelites were another example of a community that relied upon a leader and one another to bring about spiritual formation. Moses was that leader who shepherded the Israelite community out of the captivity of Egypt. "Israel saw the great power that the LORD used against the Egyptians, so the people feared the LORD, and they believed in the LORD and in his servant Moses" (Exodus 14:31). Israel became a community of people seeking the same goal of freedom from slavery through the power of God. "Scripture focuses on humans experiencing community with God and with one another" (Pettit, 2008, p. 74).

As the Israelites wandered in the desert seeking the Promised Land, they relied upon God for their provision as well as one another for strength. Israel developed into a community of God and is an example of continued spiritual formation over time. This became evident when God told Israel, "Now therefore, if you will indeed obey my voice and keep my covenant, you shall be my treasured possession among all peoples, for all the earth is mine" (Exodus 19:5). This covenant solidified the Israelite community with God.

Examples from the New Testament. Some scholars believe the initial charge toward spiritual formation was given by Jesus to his disciples in the Great Commission. "This charge commissions His disciples to outreach and discipleship" (Niles, 2010, p. 68). Jesus commanded:

Go therefore and make disciples of all nations, baptizing them in the name of the Father and of the Son and of the Holy Spirit, teaching them to observe all that I have commanded you. And behold, I am with you always, to the end of the age. (Matthew 28:19-20)

Discipleship is key in one's maturing spiritual formation. "Discipleship is about following Jesus" (Pettit, 2008, p. 104). Through the carrying out of this command of discipleship, spiritual formation is strengthened.

Pettit (2008) describes a disciple as "a learner or a follower" (p. 104). As one disciples, they continue to follow Christ and learn in their spiritual formation. "Disciples are called to be righteous and reflect sonship with God. This is what being a follower of Jesus, a disciple, means" (Pettit, 2008, p. 107). Being a follower of Jesus requires continued spiritual formation over time.

Spiritual formation transforms the Christian. Paul wrote to the Corinthians concerning spiritual formation saying, "And we all, with unveiled face, beholding the glory of the Lord, are being transformed into the same image from one degree of glory to another. For this comes from the Lord who is the Spirit" (2 Corinthians 3:18). "Thus, spiritual formation is what God does to and for us, along with all he makes available to make this transformation possible, a process that never ends until he brings us to himself" (Pettit, 2008, p. 105). This is "a whole-hearted devotion to God with every aspect of our being, from whatever angle to consider it-emotionally, volitionally, or cognitively" (Dockery, 2012, p. 3).

Because evil is in the world, many endure suffering. Jesus warned, "In the world you will have tribulation. But take heart; I have overcome the world" (John 16:33). Through Jesus' promise, the Christian can find strength in difficulties and find a desire for continued spiritual formation through many stages of life. The spiritual developmental process requires "building upon one stage consisting of distinct and unique characteristics to another subsequent stage" (Welch, 2013, p. 118).

One theory of increasing spiritual formation is to follow the commands of the New Testament Beatitudes. "The Beatitudes give an overview of the nature of spiritual formation that must take place" (Niles, 2010, p. 71). Specifically for the medical provider, one must always display mercy. "Blessed are the merciful, for they shall receive mercy" (Mathew 5:7). The medical provider often cares for the sick in situations others would shy away from. Continuing to show mercy no matter what the situation, promotes spiritual formation in the medical provider. As Mother Teresa stated, "I see God in every

human being. When I wash the leper's wounds, I feel I am nursing the Lord himself. Is it not a beautiful experience?" (Teresa & Kelly-Gangi, 2006, p. 19).

Spiritual formation requires study. This study can occur through community devotionals. Peter instructed the early Christians to "grow in the grace and knowledge of our Lord and Savior Jesus Christ" (2 Peter 3:18). In this scripture, Peter is advising the church on how to grow in spiritual formation. "The most important thing we bring to the spiritual table is our open and receptive heart for the things of God" (Pettit, 2008, p. 114). To grow in spiritual formation one must grow in the knowledge of God.

The spiritual family becomes a community and spiritual formation occurs. Paul showed this type of spiritual community when he wrote, "so in Christ we, though many, form one body, and each member belongs to all the others" (Romans 12:5, New International Version). There are many parts to the body of Christ and many parts connected within a community. "One of the ways in which spiritual partners connect to one another in a spiritual ecology and share spiritual resources is by praying for one another" (Lowe & Lowe, 2017, p.162). Paul wrote that Christians are to, "carry each other's burdens, and in this way you will fulfill the law of Christ" (Galatians 6:2). As Christians pray for one another and carry each other's burdens, they are drawn even closer in community and therefore increase in spiritual formation.

The most important commandment given to the Christian by Jesus is to "You must love the Lord your God with all your heart, all your soul, and all your mind. This is the first and greatest commandment" (Matthew 22:37 New Living Translation). Then Jesus said, "A second is equally important: 'Lover you neighbor as yourself" (Matthew

22:37 New Living Translation). By loving one's neighbor through community and caring for them in all circumstances, this commandment is fulfilled.

Through these commandments, one can accomplish continued spiritual formation with the help of the Holy Spirit. "The Spirit does his transforming work, shaping us into the likeness of God. Those character traits lead to the expression of holiness and the pursuit of community. Engagement and mission follow" (Pettit, 2008, p. 117). Allowing the Holy Spirit to shape the Christian in the likeness of God can occur through community with other Christians.

Theoretical Framework

This section considers the theories of spiritual formation development and the theories that pertain to the psychology of stress. First one must look at a human's cognitive development as well as their faith development to understand how spiritual formation occurs. This section also considers stress and its impact on the nurse anesthesia student in hospital residency as well as the influence of spiritual formation in a stressful environment.

Developmental Stages

As humans transition from infancy to childhood, from childhood to adolescence, from adolescence to adulthood and eventually, from adulthood to the geriatric years, many developmental changes occur. There are multiple theories on human cognitive development and how it occurs. Three of the top developmental models were established by Jean Piaget, Kohlberg and Erik Erikson (Kohlberg, 1968; Smith, Dockrell, & Tomlinson, 1997; Zock, 1990). The following section addresses each of these theorists as well as an explanation of their developmental models.

Piaget. Jean Piaget became known in the 1950s and 1960s for his theory on the stages of cognitive development (Smith et al., 1997). The theory looked at how human intelligence progresses over time and what type of development occurs at which particular stage. "According to Piaget, social development, play, and art all have large cognitive-structural components and contribute to, and are contributed to by, cognitive development in the narrower sense" (Kohlberg, 1968, p. 1014). Piaget proposed four stages which were sensorimotor-birth to two years, preoperational-two years to seven years, concrete operational-seven years to eleven years and formal operational-twelve years and up (Smith et al., 1997).

In each stage, the child would master specific cognitive tasks. In the sensorimotor stage, the infant would gain control of motor movement as well as begin to explore the world around them (Smith et al., 1997). In the preoperational stage, the toddler progresses through the learning of language and self-awareness (Smith et al., 1997). The concrete operational years consist of the child learning to think in symbols or what Piaget referred to as "operations" (Smith et al., 1997). Piaget's final stage of formal operations required the child to begin to accomplish abstract thinking to adapt to the world.

Piaget was one of the first to look at children's behavior from a cognitive point of view. Kohlberg (1968) stated that "Piaget's work has been the first to apply these assumptions to children's behavior in logically precise and empirically specified form" (p. 1015). Many scholars have utilized Piaget's work as a basis for cognitive development theories that have expanded upon the same ideas.

Kohlberg. Lawrence Kohlberg studied and built upon Piaget's theory of development. Kohlberg coined his theory on the stages of moral development (Kohlberg,

1968). He proposed three levels of development with two more specific stages that occur within each level. He believed that "Attainment of a given level of development implies successive attainment of all the preceding levels of development" (Kohlberg, 1968, p. 1054).

Kohlberg's (1968) first level of moral development was called preconventional morality which he proposed occurred from ages one to nine years. Within level one was the stages of punishment-obedience orientation as well as instrumental relativist orientation (Kohlberg, 1968). This level and its stages consisted of the child learning behavior through punishment and reward (Kohlberg, 1968).

The second level occurring from age nine to twenty years was labeled conventional morality with stages of good boy-nice girl orientation as well as law and order orientation (Kohlberg, 1968). This level and stages incorporate the child conforming to the rules of society to please others as well as from the respect of an authority figure (Kohlberg, 1968). This stage is what constitutes social order (Kohlberg, 1968).

The final level proposed by Kohlberg is the post-conventional morality level with the stages of social contract orientation and universal ethical principle orientation occurring after twenty years of age (Kohlberg, 1968). This level and its stages involve rules based on mutual agreement and ethical principles (Kohlberg, 1968). Kohlberg (1968) believed that only a small percentage of adults will ever reach this stage.

Erikson. Erik Erikson created a "life cycle" theory in his stages of psychosocial development (Knight, 2017). "He first developed his groundbreaking life-cycle theory of eight stages of psychosocial development in 1950" (Knight, 2017, p. 1048). Erikson

studied Freud's theories of psychosexual development while establishing his model.

"While theoretically influenced by Freud's psychosexual stages of development he also

moved away from Freud's classical drive theory" (Knight, 2017, p. 1048). "Unlike Freud

who focused upon the cause and cure of neuroses, Erikson focused upon the

developmental tendencies toward growth and maturity" (Fuller, 1996, p. 372).

The stages consisted of (Knight, 2017; Zock, 1990):

1. Trust vs. Mistrust- age birth to 1 year. In this stage, the infant looks to the primary caregiver for their care. If the infant receives consistent care they will form trust and if not they will begin to mistrust.

2. Autonomy vs. Shame/Doubt- age two to four years. This stage occurs when the child becomes more mobile and independent. If independence is supported by the caregiver the child will become more confident. If the independent effort is criticized the child will feel inadequate.

3. Initiative vs. Guilt age five to eight years. As the child begins interacting with others at school. The child takes initiatives and if those initiatives are supported by their peers and their caregivers they become confident in their initiatives. If the initiative is criticized the child feels guilty and this may inhibit creativity.

4. Industry vs. Inferiority nine to 12 years. Teachers possess an important role during this stage. The child seeks approval in demonstrating competencies. If the child is encouraged they will feel confident in their abilities. If the child is not encouraged they will doubt their abilities.

5. Identity vs. Role Confusion 13 to 19 years. In this stage, the adolescent will examine their identity and learn their role as an adult. Failure to establish their own identity may lead to role confusion.

6. Intimacy vs. Isolation 20 to 39 years. In this stage, the person begins to form intimate relationships. Successful relationships can lead to a sense of safety, whereas avoiding intimacy can lead to loneliness.

7. Generativity vs. Stagnation 40 to 49 years. During this stage, the adult begins to nurture others which leads to a sense of accomplishment. If the adult feels unproductive they will experience stagnation.

8. Ego Integrity vs. Despair 60 years and above. The final stage is when the adult contemplates their accomplishments over their lifetime. Those who feel

successful in their accomplishments feel they have become wise while those who feel unproductive may feel hopeless.

Each stage of Erikson's model gives a contrast between conflicting psychological and social dimensions that occur throughout one's life (Knight, 2017).

Erikson's stages all progress toward growth and maturity which has influenced many theories of faith development. "Erikson's life-cycle theory is a religious construct in the sense that Erikson increasingly incorporated existential and religious language in his life-cycle theory" (Zock, 2018, p. 438). The stages of development proposed by Erikson are apparent in social and can be linked to theories of spiritual development.

Development of Faith

In addition to theories of cognitive and social development, many theories of how one develops in faith have emerged over the past few decades. Three of the most popular theories have come from John Westerhoff (Westerhoff, 2012), Bruce Powers (Powers, 2003), and James Fowler (Fowler, 2010). These theories are the basis for how one develops in their faith and therefore how spiritual formation occurs and matures over one's lifetime.

Westerhoff. John Westerhoff (2012) uses the rings of a tree to explain his theory of faith development. Each ring continues to remain as another ring is added over time which he relates to how faith develops. As one grows in their faith, they continue to build and deepen their faith over time. His model consists of four different stages of faith.

1. Experienced faith. This stage occurs from preschool to childhood is the foundational time of the individual's faith.

2. Affiliative faith. This time occurs in adolescence and is linked to a strong sense of belonging within a community.

3. Searching faith. This stage occurs during late adolescence and is characterized by individual doubting and questioning their faith.

4. Owned faith. The final stage occurs in adulthood is characterized by a person coming to peace with their faith and that they will eventually seek to share their faith.

Fowler. One of the most popular faith development theories is that of James Fowler's stages of faith development. Fowler utilized the work of Piaget, Erikson, and Kohlberg in the development of his theory. He looked at faith as a normal human experience. "Faith is a person's way of seeing him- or herself in relation to others against a background of shared meaning and purpose" (Fowler, 2010, p. 4). Fowler (2001) wrote that "faith development theory (FDT) stands at the convergence of developmental psychologies and a tradition of liberal theology deriving from Christian origins" (p. 159).

Fowler believed every human began in what he called Primal Faith which occurs throughout the first two years of life. He did not consider it a stage of faith but merely the beginning of the faith journey. The six stages of Fowler's faith development are (Fowler, 2010):

1. Intuitive-Projective Faith Early- Childhood, ages two-six or seven years. "The fantasy-filled, imitative phase in which the child can be powerfully and permanently influenced by examples, mood, actions, and stories of the visible faith of primally related adults" (Fowler, 2010, p. 132).

2. Mythic-Literal Faith- Childhood, seven to 11 years and beyond. "The stage in which the person begins to take on for him- or herself the stories, beliefs, and observances that symbolize belonging to his or her community" (Fowler, 2010, p. 149).

3. Synthetic-Conventional Faith- Adolescence and Beyond, 11-13 years. "A person's experience of the world now extends beyond the family. Faith must provide a coherent orientation in the midst of that more complex and diverse range of involvements" (Fowler, 2010, p. 172).

4. Individuative-Reflective Faith- young adulthood and beyond. This stage is "particularly critical for it is in this transition that the late adolescent or adult

must begin to take seriously the burden of responsibility for his or her own commitments, lifestyle, beliefs and attitudes" (Fowler, 2010, p. 182).

5. Conjunctive Faith- Early Mid-life and beyond. This stage "involves a critical recognition of ones' social unconscious-the myths, ideal images, and prejudices built deeply into the self-system by virtue of one's nurture within a particular social class, religious tradition, ethnic group or the like" (Fowler, 2010, p. 198).

6. Universalizing Faith- Mid-life and beyond. This stage is rare. Those who reach this stage "have become incarnators and actualizers of the spirit of an inclusive and fulfilled human community" (Fowler, 2010, p. 200).

The growth of one's faith over a lifetime can be seen through Fowler's six stages of development. Fowler proposed that "faith is the most fundamental category in the human quest for relation to transcendence" (Fowler, 2010, p. 14). "Faith, classically understood, is not a separate dimension of life, a compartmentalized specialty. Faith is an orientation of the total person, giving purpose and goal to one's hopes and strivings, thoughts and actions" (Fowler, 2010, p. 14).

Powers. Bruce Powers (2003) looks at faith development as a cyclical process adjusting according to one's life's needs. He integrated the theories of both Westerhoff and Fowler into the formulation of his model. There are five phases of Powers' model:

1. Nurture- ages zero to six years. Here the child is exposed to the meaning of life. The influential people in the child's life contribute greatly to this phase.

2. Indoctrination- ages seven to eighteen years. In this stage, the individual gains content from scripture reading, sermons, and community with others of faith.

3. Reality Testing- ages nineteen to twenty-seven years. This is a phase where the believer may test their faith out in the secular world.

4. Making Choices- ages twenty-eight to thirty-five years. In this phase, the individual begins to own their faith and their life becomes shaped by their acquired faith.

5. Active Devotion- ages thirty-six years and beyond. In the final phase, Powers leads to the culmination of all the phases which entails total devotion of one's life to their faith.

Each stage of faith described by the theorist shows growth in spiritual formation.

Stress Theory

"The term 'stress', as it is currently used was coined by Hans Selye in 1936" (Marksberry, 2011). There are many different theories about stress. **"**A great deal of confusion has arisen in lay and even in scientific literature because the term stress means different things to different people" (Selye, 1976, p. 14). Stress can manifest in many ways as seen by the following:

Stress is part of our daily human experience, but it is associated with a great variety of essentially dissimilar problems, such as surgical trauma, burns, emotional arousal, mental or physical effort, fatigue, pain, fear, the need for concentration, the humiliation of frustration, the loss of blood, intoxication with drugs or environmental pollutants, or even with the kind of unexpected success that requires an individual to reformulate his lifestyle. (Selye, 1976, p. 14)

Many see stress as reactionary to a situation. "Stress is a response to change" (Tunajek, 2006, p. 20). Roszler & Brail (2017) found symptoms of stress affecting the physical, the emotional, and the interpersonal relationships of the person undergoing high levels of stress. Stress can manifest in emotional, mental and physical reactions. Tunajek (2006) found stress symptoms to "include exhaustion, loss of/increased appetite, headaches, crying, sleeplessness, and oversleeping. Individuals may escape through alcohol, drugs, or other compulsive behavior" (p. 21).

How one copes with a new stressor in life may cause many responses. Medical research has shown that humans "respond with a stereotyped pattern of biochemical, functional and structural changes essentially involved in coping with any type of increased demand upon vital activity, particularly adaptation to new situations" (Selye, 1976, p. 14). The ability to adapt to stressful situations can be difficult for some.

Poor management of stress can lead to many problems. "Negative coping skills or dysfunctional coping strategies, such as illegal drug use, alcohol abuse, and promiscuous sexual behavior have profound life-long implications" (Tunajek, 2006, p. 21). These types of severe reactions to stress can be life-altering. "Unmanageable stress and ineffective coping may contribute to clinical depression, leading to suicidal thoughts" (Tunajek, 2006, p. 21).

Despite the potential negative outcomes of stress, there are ways to regulate the maliferous effects of stress. "Although it is not possible to eliminate stress entirely, people can learn to manage it" (Richardson & Rothstein, 2008, p. 69). Richardson & Rothstein (2008) found the most popular type of treatment for stress was relaxation and meditation techniques. Finding positive ways to reduce stress is paramount. "Positive coping strategies consist of family support, social support, religion, exercise, clubs, spirituality, mentoring, and talking to friends" (Tunajek, 2006, p. 21). Christian educators must recognize these signs when their students are no longer coping well with the stressors of higher education and provide opportunities to mitigate that stress if possible.

Stress Theorists

James-Lange: Theory of Emotion. Two early theorists to study emotional stress were William James and Carl Lange. In the late 1880s, these theorists hypothesized that

emotions become present after the body responds to stress (Cannon, 1987). "The main evidence cited for the theory is that we are aware of the tensions, throbs, flushes, pangs, suffocations- we feel them, indeed, the moment they occur" (Cannon, 1987, p. 568). They concluded that "impulses from the periphery account for the richness and variety of emotional feeling, was assumed to arise from all parts of the organism, from the muscles and skin as well as the viscera" (Cannon, 1987, p. 569). Therefore, they proposed that the "vasomotor center holed the explanation of emotional experience" (Cannon, 1987, p. 569).

Cannon-Bard: The Emergency Theory. The Cannon-Bard theory is quite the opposite of the James-Lange theory. "Claude Bernard, the renowned French physiologist, studied the physiology of emotions by tracing the heart with the kymograph during emotions" (Dror, 2014, p. 13). "Bernard proposed an interactive model between the brain and the heart, which explained the generation of emotional experiences" (Dror, 2014, p. 13). They believed emotional responses to stress can occur even without physical changes within the body (Dror, 2014). "Their instrument-based approach to the study of emotions marked a new era in the history of the study of affective states, yet neither inaugurated a program of sustained research on emotions" (Dror, 2014, p. 13).

Selye. One more recent theorist who is extremely popular in the study of physical stress responses is Hans Selye. In the 1930s, Selye was working in the Biochemistry Department at McGill University when he noticed how animals respond to different noxious stimuli (Selye, 1976). He noted that continued exposure to noxious stimuli eventually caused exhaustion in the animal (Selye, 1976). This theory became an example of how different stressors affect the human body.

Selye is known for his theory on human responses to stress that he coined "general adaptation syndrome" (Selye, 1976). Once a stressor occurs he theorized the human begins to adapt but without the eventual removal of that stressor they will wear out (Selye, 1976). He proposed that "just as any inanimate machine gradually wears out, so does the human machine sooner or later become the victim of constant wear and tear" (Selye, 1976, p. 6).

In his research, Selye also noticed little difference in the human response to stress no matter if the stress was positive or negative (Selye, 1976). He coined negative stress as "distress' and positive stress as "eustress" (Selye, 1976). Selye's research has a profound influence on both psychology and medicine. His discoveries have opened the door to numerous future stress theories.

Stress and Coping Theories

Stress in one's life requires different ways of coping. "Coping is a discipline that grew out of psychoanalysis and its study of defense mechanisms" (Aldwin & Levenson, 2013, p. 18). When people are under stress they look to different ways of coping. "Coping refers to the thoughts and behaviors people use to manage the internal and external demands of stressful events" (Folkman, 2010, p. 902). Stress and coping theory "holds that stress is contextual, meaning that it involves a transaction between the person and the environment, and it is a process, meaning that it changes over time" (Folkman, 2010, p. 901).

There are multiple types of coping theories. Three of the most popular coping theories are:

1. Emotion-focused coping. This theory looks to "regulate negative emotion using strategies such as distancing, seeking emotional support, and escape-avoidance" (Folkman, 2010, p. 902).

2. Problem-focused coping. This coping skill uses "planful problem-solving, to address the problem causing distress using strategies such as information gathering and decision making" (Folkman, 2010, p. 902).

3. Meaning-focused coping. This theory "draws on deeply held values and beliefs in the form of strategies such as goal revision, focusing on strengths gained from life experience, and reordering priorities" (Folkman, 2010, p. 902).

Coping plays a significant role both physically and spiritually for the person experiencing stress. "Coping plays a critical role in fostering hope when it is at low ebb, as when an individual is confronted with information that threatens well-being" (Folkman, 2010, p. 907). Learning to cope in the best possible fashion can help to relieve life's stressors.

Religion and Coping

Religious coping can be defined as "the use of cognitive and behavioral techniques, in the face of stressful life events, that arise out of one's religion or spirituality" (Tix & Frazier, 1998, p. 411). "Religious coping is a multifaceted concept reflecting a variety of ways of bringing one's religious life to bear on stressful experience" (Aldwin & Levenson, 2013, p. 69). Many look to religion in times of stress to cope with whatever situation they are undergoing.

Many theologians, as well as psychologists, believe people look to religion for comfort. "A growing body of literature suggests that people often turn to religion when coping with stressful events" (Ano & Vasconcelles, 2005, p. 461). Christian educators must learn to utilize and teach the spiritual aspects of coping when educating their students in stressful situations.

Coping through religion helps the individual emotionally and spiritually. "In general, religious coping is more likely to be healthy and can lead to the preservation of physical and emotional health, a greater sense of self-efficacy, and recognition of real threats to well-being, rather than denial of them" (Aldwin & Levenson, 2013, p. 69). Utilizing a healthy coping mechanism such as one's spiritual connection with a community and with God can assist the Christian during stressful situations.

<div align="center">**Related Literature**</div>

Stress in Anesthesia Education

The presence of stress during nurse anesthesia residency has been previously documented. "Health professionals in training not only must deal with the occupational stressors inherent in their chosen field, they also must manage the added stress that accompanies learning" (Kendrick, 2000, p. 116). Nurse anesthesia residency introduces stressors not previously experienced by the student. "Research indicates that students and nurse anesthetists' develop multiple mechanisms to deal with daily stress. Coping strategies can be separated into two categories: positive and negative" (Tunajek, 2006, p. 21).

A degree in anesthesia is not something one can earn by simply making the right grades. One study of anesthesia residents showed "40.4% of anesthetists were suffering from high emotional exhaustion; the highest rate was in young residents under 30 years of age" (Nyssen, Hansez, Baele, Lamy, & De Keyser, 2003, p. 336). These findings are congruent with this author's belief of the accentuated stressors the nurse anesthesia student experiences during hospital residency. During this stressful time of hospital residency, spiritual formation may take a back seat to academics and clinical obligations.

Possible coping strategies among nurse anesthesia students' needs further study. "How students can cope has not been extensively researched and remains an ongoing concern for the nurse anesthesia profession" (Tunajek, 2006, p. 20). Negative outcomes from the rigors of nurse anesthesia education may occur and can be devastating. "Being overwhelmed with stress can lead to a feeling of failure, low self-esteem, and helplessness, and may put the student at risk for physical and mental problems-even chemical abuse or other inappropriate behaviors" (Tunajek, 2006, p. 20). These poor coping mechanisms must be addressed and avoided if at all possible.

Stress within the career of anesthesia is not an uncommon discussion in the literature. "There is a common perception that anesthetists are exposed to stress, having the life of the patient in their hands and having to operate under different critical conditions in scheduled and emergency situations" (Nyssen et al., 2003, p. 333). Some cope with this type of stress more poorly than others. "These factors can lead to impaired health and performance" (Nyssen et al., 2003, p. 333). Impaired performance within the field of anesthesia is not only detrimental for the provider but might, in turn, be devastating for the patient receiving care.

The time constraints and pressures the nurse anesthesia resident endures could lead to emotional exhaustion. "Together, the lack of empowerment and the lack of support, decreasing the individual's ability to cope with stressful situations, could explain the emotional exhaustion found in the young anesthetist's group" (Nyssen et al., 2003, p. 336). Emotional exhaustion in the anesthesia resident may promote eventual burnout.

Due to the inherent stressors of nurse anesthesia residency, students eventually begin to experience burnout. "Burnout is defined as a psychological state of physical and

emotional exhaustion, which is thought to be a stress reaction to a reduced ability to meet the demands of one's occupation" (Tunajek, 2010, p. 22). "Because of the nature of their work, health care professionals are at especially high risk for experiencing the emotional exhaustion component of burnout" (Erickson & Grove, 2008, p. 2).

Nurses of all specialties are susceptible to burnout. "Exhausted, discouraged, saddened, powerless, frightened – these are the emotions experienced by nurses on a daily basis" (Erickson & Grove, 2008, p. 2). This occupational burnout can have detrimental effects over time and lead to poor coping behaviors.

Stress in Medicine and Spiritual Formation

There are "several dimensions of faith that play significant roles in medicine" (Ventres & Dharamsi, 2013). Medicine and faith are often intertwined (Ventres & Dharamsi, 2013). Spiritual formation can be a beneficial component for all medical professionals and especially students of medicine. Utilizing nurse anesthesia students' time in hospital residency to further their spiritual formation can not only affect their spirituality during their time in school but also in their future practice of medicine.

There is little research available to show how the stressors of nurse anesthesia hospital residency affect spiritual formation. High stress is unavoidable in graduate medical education, but how that stress is handled can be the difference between success and failure (Varner, 2011). Learning to cope with the stress by turning to faith rather than the usual known maladaptive behaviors, may help avoid future problems but also seek to enhance the student's spiritual formation.

Medical education is challenging and there is a need for spiritual faith-based alternatives to non-faith based education. "The Association of American Medical

Colleges has challenged medical educators to be role models for the incorporation of faith into the art and practice of medicine" (Schnatz, 2018, p. 345). Anesthesia professors at faith-based institutions may combine the learning of medicine along with opportunities important for spiritual formation.

Creating spiritual formation opportunities in the student nurse anesthetist may benefit the whole student and bring them closer to spiritual maturity. Although the medical education of a nurse anesthesia student is of the highest priority, it is not the only priority. "People are not only social, psychological, and physical beings, they are also spiritual beings" (Pargament, 2008, p. 23). Spiritual formation cannot be ignored no matter the focus of one's education.

By utilizing spiritual formation opportunities while in nurse anesthesia hospital residency, one may gain positive outcomes. Creating relationships through spiritual formation may invoke positive emotional responses, therefore, decreasing stress. "Positive emotions have relational repercussions. Even though positive emotions broaden thought-action repertoires within individuals, such broadening can impact interpersonal relationships, especially enduring ones" (Fredrickson, 2000, p. 6).

The literature demonstrates that spiritual formation occurs through many different avenues but there is little research found for promoting spiritual formation during nurse anesthesia hospital residency. The Christian anesthesia educator may utilize spiritual formation opportunities such as medical mission trips and classroom devotionals to assist the student in continued spiritual formation. Horan (2017) believes that "private Christian schools are committed to bolstering spiritual formation of students" (Horan, 2017, p. 69).

One way to bolster spiritual formation may be through short-term medical missions and classroom devotionals for nurse anesthesia residents.

Missions. The type of mission trip researched for this study is coined short-term missions. "The modern form of short-term missions can be defined simply as groups of people who take trips with religiously motivated objectives" (Offutt, 2011, p. 797). "Recent decades have seen the resurgence of long-term mission and the emergence of short-term missions among US Christians" (Hancock, 2014, p. 155). A significant amount of data exists on the many different types of short-term mission trips. "Trips can be project or action oriented, where groups build a house, put on puppet shows, or hold dental clinics. Trips can also be educationally oriented" (Offutt, 2011, p. 797).

Research shows that mission work is a way to increase one's spiritual formation by looking at the needs of others versus self. "While information and behavior are certainly important aspects of spiritual formation, the concept of missional discipleship is built on the presumption that they were never meant to be the end, but rather the means by which transformation takes place" (Beard, 2015, p. 179). During medical mission work, the student learns to focus on the healing of the patient which in turn can strengthen the student's spirituality.

Short-term mission trips have an impact on not only the people being ministered to but also impacts the person participating in the mission. Trinitapoli & Vaisey (2009) found that short-term missions can be a transformative experience as well as inspire Christians in terms of their religious beliefs and practices. "These findings also confirm the body of anecdotal evidence from missionaries, pastors, youth leaders, and volunteer

coordinators – all of which cast the experience of the short-term mission as a formative–even transcendent–experience" (Trinitapoli & Vaisey, 2009, p. 139).

Short-term missions especially those that are healthcare-related can increase spiritual formation. "Healthcare missions exist to facilitate and encourage physical, emotional, and spiritual health" (Seager, Seager, & Tazelaar, 2010, p. 266). Spiritual formation occurs through many different means during medical missions. "There is on-the-job training associated with mission work, and if you keep your eyes focused on God, he provides unexpected lessons" (Johanson, 2008, p. 200). Many who have participated in short-term missions feel it is spiritually enhancing. As Peterson (2012) wrote, "God has shown me much about himself, his people, and myself as I've served where and how he has called" (p. 97). In service on mission trips, the Christian can strengthen their spiritual formation.

Devotionals. Devotionals are another type of spiritual formation opportunity that may strengthen the student while in nurse anesthesia hospital residency. Devotional reading in the context of Christianity can be defined as "an immersion in the world of the text, a discursive self-abnegation that eagerly embraces the interpellative power of narrative, the polysemous play of language, and the transhistorical promise of ethically responsible encounter" (Corley, 2009, p. 255). Devotionals do not completely focus on the theology of the text but integrates spirituality of the Christian with the text. "In contrast to the equally common Christian reading practice of theologically informed analysis, devotional reading is adventurous, open-ended, and, somewhat paradoxically, deeply secular" (Corley, 2009, pp. 255–256).

Devotionals have played a role in spiritual formation for centuries. "During the early modern period, devotional writing took many forms, from more recognizably literary genres, such as lyric verse, to genres of spiritual account keeping such as meditations, prayers, and journals" (Burke, 2012, p. 47). In the eighteenth century, more people began to have access to education and the ability to read became more commonplace. "Devotional reading materials dominated the reading lives of most eighteenth-century readers" (Pettella, 2012, p. 281). Since the origins of devotional readings, their availability and practice have become a part of the modern Christian's spiritual formation.

Devotionals can vary in their forms. "While these texts vary in doctrine and structure, each aims to provide the reader with instruction in moral reform" (Pettella, 2012, p. 281). Devotional reading is not dependent on one's theological education. "It is, after all, the one mode of Christian reading that is widely considered to be open to all adherents without regard to literary training" (Corley, 2009, p. 254). Therefore, all can participate and benefit from devotionals.

Different types of devotionals can be accessed by all Christians. "The terms of admission to devotional reading can be stated simply as a confidence that the Bible can be understood and can be fruitfully applied in one's life" (Corley, 2009, p. 254). A Christian from any denomination or educational background can benefit spiritually from devotional reading. This is evidenced by the following:

Although systematized in a variety of ways in different communities and strands of Christianity, the intense, meditational slow-reading of the Bible with an expectation of divinely inspired and authoritative insights that will speak directly

to the reader's present character and daily activities is so commonly advocated

that it can be considered a normative element of modern Christian identity.

(Corley, 2009, p. 254)

The now common practice of Christian devotional reading provides opportunities for

continued spiritual formation.

Through group devotionals in the classroom, the nurse anesthesia student

develops a community of believers that serves to strengthen each person who

participates. Samra (2006) states that all are, "members of the body of Christ and of the

people of God and by definition are united in community with other believers" (p. 134).

"There is a sacred character to community life" (Pargament, 2008, p. 32). In the

community created by devotional readings, the student can strengthen their spiritual

formation. "Spiritual communities have something to teach us about transcendent

visions" (Pargament, 2008, p. 30).

Devotional readings and prayer can promote spiritual formation "One of the ways

in which spiritual partners connect to one another in a spiritual ecology and share

spiritual resources is by praying for one another" (Lowe & Lowe, 2017, p.162). Paul's

exampled this with his instructions to, "carry each other's burdens, and in this way you

will fulfill the law of Christ" (Galatians 6:2 New International Version). Group

devotional readings promote the type of community Paul spoke of.

Classroom devotionals provide spiritual support for the student. "Spiritual support

is defined as aiding the individual in feeling a greater sense of connectedness to a higher

power" (Carleton, Esparza, Thaxter, & Grant, 2008, p. 114). "Spirituality is an important

predictor of behavior, an important resource to many people" (Pargament, 2008, p. 23).

The resource of classroom devotionals contributes to community and in turn, contributes to spiritual formation in the student.

Christian Education

Educating the next generation is complex and can become more complicated in a faith-based environment. "Integrating a concern for spiritual outcomes along with academic and social goals in teaching is an audacious quest" (Dockery, 2012, p. 475). "Historically, a predominant rationale for Christian schools has been that biblically infused academics will lead to developing the qualities of Christ in students" (Cox & Peck, 2018, p. 245). Contemporary culture is moving away from a focus on God and more reliant on science for guidance and understanding (Cox & Peck, 2018).

It is the responsibility of the Christian educator to disciple those they teach no matter what the subject may be. "Great teachers strike a livable balance between recognizing the needs of contemporary culture and attention to the whole person's deep need for synergy in academic, social, and spiritual education and in life" (Dockery, 2012, p. 493). The Christian educator may become a catalyst for spiritual formation among their students.

Spiritual Growth Assessment

Spiritual growth has been defined in many ways. "The concept of growth itself suggests process, change, and movement toward a more mature developmental stage" (Gallagher & Newton, 2009, p. 233). In the case of spiritual growth, the movement toward a more sophisticated faith occurs. The ability to assess that spiritual growth may be difficult. "Defining spirituality and assessing spiritual growth have been difficult tasks among Christian educators" (Hancock, Bufford, Lau, & Ninteman, 2005, p. 129).

One's spiritual growth is subjective and what one person may consider as growth, another may not see as a growth opportunity.

Spiritual Formation Measurement

There are several quantitative instruments that can be used to measure spiritual formation (Hancock et al., 2005). The Faith Maturity Scale instrument was developed by Benson, Donahue, Erickson, & Sanders (1998). The initial development of the assessment tool involved approximately 11,000 adolescents and adults from six Protestant denominations (Benson et al., 1998). The tool "focuses on the common understandings of personal faith and spirituality within churches and religious communities, minimizing denominational, economic, educational, and racial specificity" (Ji, 2004, p. 993).

The original tool was comprised of 38 seven-point Likert-type items and was reduced in length to 12 items which had a strong correlation to the 38-item original tool (Benson et al., 1998). "The 12 items, according to the authors, are purported to tap two different types of Faith Maturity: Vertical and Horizontal" (Ji, 2004, p. 994).

The FMS instrument has shown to be reliable (Benson et al, 1998; Choi, 2012; Ji, 2004). "The reliability of FMS, using Cronbach's alpha, is strong across age, gender, respondent type, and denomination, ranging from 0.84 to 0.89" (Choi, 2012, p. 299). In a study by Ji (2012) reliability was assessed by calculating Cronbach coefficient alpha. The internal consistency estimates were 0.77 and 0.88 for the Horizontal-social and Vertical-personal scores, respectively (p. 996).

Rationale and Gap

Rationale

Being able to continue that wholehearted devotion to God while experiencing the stressors of nurse anesthesia hospital residency is paramount. Christian education is about changing the individual and helping them in their relationship with Christ (Virkler, 2017). The educator's role in Christian education should be fashioned after the teachings of Jesus (Dockery, 2012). The most important commandment given to the Christian by Jesus is to "Love the Lord your God with all your heart, all your soul, and all your mind" (Matthew 22:37 New Living Translation). This is "a whole-hearted devotion to God with every aspect of our being, from whatever angle to consider it-emotionally, volitionally, or cognitively" (Dockery, 2012, p. 3).

There was a need to identify if participation in spiritual formation opportunities such as short-term missions and classroom devotional readings, would enable the student nurse anesthetist to successfully increase their spiritual formation while coping with the stress of hospital residency. Christian educators in faith-based institutions have a responsibility to not only educate in their field of study but to contribute to the continued spiritual formation of their students. "When teachers and learners are genuinely walking with the Spirit of God, His divine, transforming power makes it possible to exceed what is normally expected of our human capacities" (Dockery, 2012, p. 98). As a Christian educator, this researcher takes the responsibility of educating students both academically and spiritually seriously.

Gap in the Literature

A review of previous research on this topic revealed data on cognitive development as well as faith development along with considerable information on spiritual formation. Data were also available on spiritual formation as it relates to the profession of nursing, among medical school students, and among students of generalized academia. Further examination also revealed studies on the many stressors of nursing, medical training, and nurse anesthesia hospital residency.

No information was found in the research on spiritual formation during nurse anesthesia hospital residency. Additionally, there is no research available to show how the stressors of anesthesia residency affect one's spiritual formation or how spiritual formation opportunities may impact spiritual formation during nurse anesthesia hospital residency.

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Profile of the Current Study

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The researcher conducted a purposeful sampling to obtain participants for this study after receiving approval from the appropriate IRBs. For this research, the purpose represented by the sample selection was the identification of students who meet the inclusion criteria. Students who were not presently in a hospital residency did not identify as a Christian or declined to participate in the study were excluded.

To accomplish this purpose, the researcher sent a survey via the email database within Union University School of Nursing Doctor of Nursing Practice Anesthesia Track. The quantitative research was conducted via the *Survey Monkey* platform that allowed for anonymous responses. The survey was sent to all eligible students inviting them to participate. A mixture of demographic multiple-choice questions was included. They

were also asked to complete the Faith Maturity Scale tool. Next for phase two of the study, the top 30 scoring participants from the FMS tool were interviewed by a research assistant. The data generated from the tool and the interview question responses were analyzed.

The methodological design for this study entailed a mixed-methods study. By utilizing both quantitative and qualitative data the researcher hopes to gain a better understanding of the researcher problem and is better able to capture all aspects of the study. A sequential explanatory mixed design was utilized. The sequential explanatory mixed design involved the collection of quantitative data with analysis for phase one of the study followed by qualitative data collection for phase two of the study (Creswell, 2014).

For the quantitative strand, the researcher conducted a quasi-experimental design to determine the spiritual formation level in the study participants. The Faith Maturity Scale tool was used to measure the spiritual formation level in the SRNA's from a Christian worldview. The data was collected from the participants and generated a statistical comparison via the Levene's test for equality of variances A two-tailed t-test was used to compare the degree of variance between the Junior and Senior SRNA participants' spiritual formation levels. The level of statistical significance is defined as the priori probability value of $p \leq 0.05$. The goal of the quantitative phase was to determine if a statistically significant difference in spiritual formation was seen in the Junior versus the Senior resident SRNAs participating in spiritual formation opportunities.

For the qualitative strand of this study, the research entailed a transcendental phenomenological study. Through interviews by a research assistant, the research methodology explored the common phenomenon between spiritual formation level and spiritual formation opportunities for SRNAs participating in spiritual formation opportunities during their hospital residency. The function of the qualitative data was to determine how spiritual formation opportunities influenced the students' spiritual formation level.

Summary

Research clearly shows that stress can come in many forms. "Psychological stress has been identified in the literature for centuries" (Yarvis, 2012, p. 669). Stress can manifest physically, emotionally and spiritually. Learning how to cope with the different stressors of life is key. Through many different types of stress coping one can find the ability to lessen the stressors they experience.

Understanding how the human develops both cognitively and spiritually is necessary in order to cope with life stressors as well as to learn how to grow spiritually. The developmental stages of a person play an important role in spiritual formation. As a person develops cognitively they also develop in their faith. This faith development is continuous and contributes to one's spiritual formation.

Utilizing spiritual formation opportunities may help to relieve stressors associated with nurse anesthesia hospital residency. Spiritual formation opportunities such as short-term medical mission trips as well as instructor lead classroom devotional readings are possible opportunities for spiritual formation. A study by Allmon, Tallman, & Altmaier (2013) on spiritual growth during illness showed that "the relationship between positive

religious coping and spiritual growth suggests that the successful pretreatment use of spiritual resources contributes to spiritual growth" (p. 562). The ability to utilize religious coping in stressful situations is paramount.

The goal of this research sought to determine whether spiritual formation opportunities: medical mission trips and classroom devotionals affected spiritual formation levels in Junior and Senior student registered nurse anesthetists during the stressors of hospital residency. Through spiritual formation opportunities, continued spiritual formation may occur. The goal of the Christian educator is not only to provide an environment for favorable learning but to disciple all those they teach.

CHAPTER THREE: RESEARCH METHODOLOGY

This mixed-methods case study sought to understand and describe the perceived influence of participation in spiritual formation opportunities during nurse anesthesia hospital residency on students' spiritual formation level and their ability to handle stressors of hospital residency. This study first collected quantitative data to determine spiritual formation level among Junior and Senior student registered nurse anesthetists during the stressors of hospital residency. Next, this study collected qualitative data to explore the common phenomenon between spiritual formation level and participation in spiritual formation opportunities for SRNAs during their hospital residency. This chapter presents the research design synopsis, the quantitative research methodology, and the qualitative research methodology.

Research Design Synopsis

The Problem

The training to become a CRNA is rigorous. The presence of chronic stress during nurse anesthesia residency training has been well documented in the literature. Health professionals must deal with not only the rigorous demands of academia but also the taxing obligations of caring for patients (Kendrick, 2000). The stressors of nurse anesthesia residency can lead to a student's spirituality taking a back seat to academics during the demands of residency.

The lack of available research addressing the spiritual formation of nurse anesthesia track (NAT) students in residency or how their spiritual formation is impacted by participation in their educational program indicates a need for studies of this type.

There is a need to measure the relationship between spiritual formation opportunities and spiritual formation level during the stressors of nurse anesthesia residency.

Purpose Statement

The purpose of this mixed-methods case study was to understand and describe the perceived influence of participation in spiritual formation opportunities during nurse anesthesia hospital residency on students' spiritual formation level and their ability to handle stressors of hospital residency. "Stress in nurses has been linked to reduced physical and psychological health, reduced job satisfaction, increased sickness absence, increased staff turnover, and poorer job performance" (Farquharson, 2013, p. 2327). By measuring the relationship between spiritual formation opportunities and spiritual formation level during the stressors of nurse anesthesia school, this researcher explored the existence of a relationship between spiritual formation level and spiritual formation opportunities during nurse anesthesia residency.

Research Questions

The following research questions guided this study:

RQ1. What difference exists, if any, between spiritual formation level and medical mission trip participation in student registered nurse anesthetists during the stressors of hospital residency?

RQ2. What difference exists, if any, between spiritual formation level and class devotional participation in student registered nurse anesthetists during the stressors of hospital residency?

RQ3. How do student nurse registered anesthetists in hospital residency perceive that spiritual formation opportunities contribute to spiritual formation level?

RQ4. How do student registered nurse anesthetists who have participated in spiritual formation opportunities perceive their ability to handle the stressors of hospital residency?

Research Design and Methodology

The methodological design for this study entailed a mixed-methods study. By utilizing both quantitative and qualitative data this researcher gained a better understanding of the research problem and was better able to capture all aspects of the study. An explanatory sequential mixed design was utilized. The explanatory sequential mixed design involved the collection of quantitative data with analysis for phase one of the study followed by qualitative data collection for phase two of the study (Creswell, 2014).

Quantitative Research Methodology

For the quantitative strand, the researcher conducted a quasi-experimental design to determine the spiritual formation level in the study participants. In a quasi-experimental design, "only a convenience sample is possible because the investigator must use naturally formed groups (e.g., a classroom, an organization, a family unit) or volunteers" (Creswell, 2014, p. 168). Therefore, because the available population for this study is small, a convenience sample was most appropriate.

Permission was sought and granted to utilize the Faith Maturity Scale (FMS) in order to measure the spiritual formation in the SRNA's from a Christian worldview. Once the quantitative data is collected from the participants a statistical comparison via a two-tailed t-test compared the data results. Then it was determined if a statistically significant spiritual formation level was seen in the Junior versus Senior SRNAs participating in spiritual formation opportunities.

Population

The population of this study consisted of Junior and Senior nurse anesthesia students participating in hospital residency training attending a Christian university nurse anesthesia program in the southern United States. Among this sample, the population surveyed was asked if they were practicing Christians. Only those who attested to be practicing Christians were utilized for the study.

Sampling Procedures

The researcher conducted a purposive sampling method to obtain participants for this study after receiving approval from Liberty University IRB as well as the Union University IRB. Online surveys were sent to 54 NAT students who were participating in hospital residency within their program of study. For this research, the purpose represented by the sample selection was the identification of SRNAs who meet the inclusion criteria. Students who were not participating in hospital residency did not attest to be a Christian or declined to participate in the study were excluded.

To accomplish this purpose, the researcher sent a survey via the SRNA email database within Union University School of Nursing Doctor of Nursing Practice Anesthesia Track. The research was conducted via the *Survey Monkey* platform. A survey was sent to all eligible students inviting them to participate. Multiple choice demographic questions comprised the first section of the survey. Next, the students were also asked to complete the FMS tool. All the data from the survey was gathered anonymously with each student being assigned a pseudonym by the research assistant without the researcher knowing to which student the pseudonym belonged. The data generated from the tool and the survey question responses were analyzed.

Limitations of Generalization

This study was limited to Junior and Senior SRNAs participating in hospital residency, therefore it was not directly applicable to SRNA's not in hospital residency, SRNA's not attending a faith-based institution or those who profess to be a non-Christian. A limitation of the generalizability of the study is that all participants are from a faith-based university. The sample population may differ demographically due to location constrictions but may have common experiences of other nurse anesthesia residencies. The sample size is small and is limited to two cohorts from one program of study in the southeastern United States.

Ethical Considerations

No data was collected prior to Institutional Review Board (IRB) approval. "The IRB committees exist on campuses because of federal regulations that provide protection against human rights violations" (Creswell, 2014, p. 95). The researcher filed an IRB application for Liberty University followed by application to Union University that contained procedures and information about participants so that the committee could review the extent to which the participants would be at risk (Creswell, 2014).

Ethical considerations were given high priority with precautions taken to maintain confidentiality. This researcher upheld all university policies for questionnaires and interviews for data collection. Each SRNA answered the quantitative survey voluntarily as well as participated in the qualitative questioning on a volunteer basis. All necessary permission and agreement documents were signed before data collection (Creswell, 2014).

All data were collected anonymously in the quantitative survey portion of the study. The names of the students participating in the qualitative portion of the study were unknown to this researcher to avoid bias on the part of this researcher. The data was stored via a password protected electronic storage to maintain security and in a locked cabinet and a locked office for all paper documentation.

Instrument

There are several quantitative instruments that can be used to measure spiritual formation (Hancock et al., 2005). In this study, the FMS instrument developed by Benson, Donahue, Erickson, & Sanders (1998) was utilized to measure spiritual formation (FMS tool Appendix A). The FMS was chosen to serve as the measure of spiritual formation from a Christian worldview.

The initial development of the FMS assessment tool involved approximately 11,000 adolescents and adults from six Protestant denominations (Benson et al., 1998). The tool "focuses on the common understandings of personal faith and spirituality within churches and religious communities, minimizing denominational, economic, educational, and racial specificity" (Ji, 2004, p. 993). The original tool was comprised of 38 seven-point Likert-type items and was reduced in length to 12 items which had a strong correlation to the 38-item original tool (Benson et al., 1998). "The 12 items, according to the authors, are purported to tap two different types of Faith Maturity: Vertical and Horizontal" (Ji, 2004, p. 994).

The FMS instrument has been shown to be reliable (Benson et al, 1998; Choi, 2012; Ji, 2004). "The reliability of FMS, using Cronbach's alpha, is strong across age, gender, respondent type, and denomination, ranging from .84 to .89" (Choi, 2012, p.

299). In a study by Ji (2012) reliability was assessed by calculating Cronbach coefficient alpha. The internal consistency estimates were .77 and .88 for the Horizontal-social and Vertical-personal scores, respectively (p. 996).

Data Collection

The FMS assessment tool was emailed via *Survey Monkey* to all SRNA's participating in hospital residency attending the Union University Doctor of Nursing Practice (DNP) anesthesia track. The SRNA's were given demographic questions and the FMS tool to answer as well as asked whether or not they identified as a Christian. A deadline of three weeks was given for the completion of the survey to receive and process the data in a timely manner. A reminder email was also sent at one and two weeks prior to the due date.

Data Analysis

The Junior and Senior SRNAs who participated in spiritual formation opportunities during hospital residency were be compared. Once the anonymous quantitative data was collected from the SRNA participants, a statistical comparison was analyzed using IBM SPSS software version 23 (*SPSS Statistics—Overview*, 2019). Descriptive statistics are expressed as percentages or as mean with standard deviation. The data that was collected from the participants generated a statistical comparison via the Levene's test for equality of variances. A two-tailed t-test described the equality of means. The level of statistical significance was defined as $p \leq 0.05$. A comparison between the degree of variance between the Junior and Senior student's spiritual formation was performed.

Qualitative Research Methodology

For the qualitative strand of this study, the respondents to the quantitative study who scored the highest on the FMS tool were asked to participate in the qualitative portion of the study. Those who agreed to participate were identified and interviewed by a research assistant who had no academic connection to the students. The primary researcher was not aware of which students agreed to participate in the qualitative portion.

The transcendental phenomenological method was utilized to conduct the study. "Phenomenological research is a design of inquiry coming from philosophy and psychology in which the researcher describes the lived experiences of individuals about a phenomenon as described by participants" (Cresswell, 2014, p. 14). This type of qualitative research allowed the researcher to seek understanding about the experiences of the research participants.

The transcendental phenomenological method uses a systematic approach to set aside prejudgements in a technique known as the Epoche process. The Epoche process is utilized in the following way:

> To conduct the study as far as possible free of preconceptions, beliefs, and knowledge of the phenomenon from prior experience and professional studies-to be completely open, receptive, and naive in listening to and hearing research participants describe their experience of the phenomenon being investigated. (Moustakas, 1994, p.22)

The epoche process, "requires the elimination of suppositions and the raising of knowledge above every possible doubt" (Moustakas, 1994, p. 25).

In the transcendental phenomenological approach, the researcher must be open and receptive to the shared experiences of the participants. Any preconceived notions must be set aside to avoid prejudging or assigning meaning to the data (Moustakas, 1994). This approach allowed the researcher to set aside any prior judgments in order to analyze the meaning of the participant responses as they appeared in their essence.

The qualitative transcendental phenomenological portion of the study was conducted using interviews conducted by a research assistant. The interviews were audio-recorded and transcribed in order for the participants to remain anonymous to the researcher. Once the data was collected a process of horizonalization was implemented. Horizonalization is demonstrated by the clustering of data (Creswell, 2014). The data analyzed during the horizonalization process were grouped into common themes.

Through the interviews, the research methodology explored the common phenomenon between spiritual formation level and spiritual formation opportunities for SRNAs participating in spiritual formation opportunities during their hospital residency. Interviews were audio-recorded and transcribed with field notes by the research assistant. The analysis was ongoing throughout to allow for emergent themes to be categorized. The function of the qualitative data was to explore the findings of the quantitative analysis to determine if in the perceptions of the sample group, engagement in spiritual formation opportunities during their hospital residency played a role in spiritual formation level as well as stress mitigation.

Setting

This study focused on SRNA's attending the Union University Doctorate of Nursing Practice (DNP) anesthesia track which is a faith-based Southern Baptist nurse

anesthesia program located in Tennessee. Union University is the only accredited

Southern Baptist nurse anesthesia program in the United States (Council on

Accreditation, 2020). The Union University DNP nurse anesthesia track is accredited by

the Council on Accreditation of Nurse Anesthesia Educational Programs as well as the

Commission on Collegiate Nursing Education (CCNE) and the Southern Association of

Colleges and Schools (SACS). Both Junior and Senior students in hospital residency

were surveyed.

Participants

A purposive convenience sample of participants was utilized for this study. "The

idea behind qualitative research is to purposefully select participants or sites that will best

help the researcher understand the problem and research question" (Creswell, 2014, p.

189). The participants were attending Union University's NAT program and those who

meet the requirements, responded to the quantitative survey and were willing to

participate were utilized. There were 28 SRNAs in Union University's Senior class and

26 SRNA's in the Junior class for a total of 54 potential participants.

Role of the Researcher

The researcher's role in qualitative research is critical, as the data is collected and

analysis is implemented (Creswell, 2014). Therefore, this researcher's role in the study

was that of an observer-as-participant. The researcher was the primary data collector and

analyzer for quantitative surveys while the qualitative interviews were accomplished by a

research assistant who has no academic connection to the students. The quantitative and

qualitative portions were accomplished in order to uncover emerging concepts and

patterns.

There was the potential for bias the part of this researcher, which could have impacted the outcome of the study. The researcher is a professor at the university where the SRNA's are attending anesthesia school. Potential bias could have been present due to the researcher's role as one of the students' professors. To avoid this potential bias, this researcher was unaware of which students elected to participate in the study as well as only read the transcribed interviews. This researcher did not listen to any audio recordings obtained by the research assistant as the participants' voices might have been recognized. This researcher sought to remain objective and nonjudgmental throughout the process.

This association with the students could also have aided in data collection, inductive analysis, and the understanding of the phenomena being studied. This researcher has also endured the stressors of nurse anesthesia residency as it needs to be truly experienced before having the ability to clearly appreciate the struggle. This researcher kept a personal journal to document thoughts and feelings through the whole process, which was used to further document the relationship between the data and analysis. Furthermore, using the process helped to control researcher bias.

Ethical Considerations

Ethical considerations were given high priority with precautions taken to maintain confidentiality. A research assistant unknown to the students and without any association with the nurse anesthesia program was utilized for the qualitative interviews. This assisted to lessen any bias on the part of this researcher. The research assistant gathered the data under a pseudonym system in order for the students to remain anonymous to the primary researcher. All meetings with the participant in person or via electronic means

were kept confidential. Meetings occurred at a private neutral location. This was accomplished through carefully scripted interview questions from which no deviation occurred.

Instrument

The qualitative method of research allows the researcher to interview and understand the subjects they are studying. "The qualitative approach is based on the philosophical orientation called phenomenology, which focuses on peoples' questions about the area under investigation" (Roberts, 2010, p. 143). "Qualitative methods rely on text and image data, have unique steps in data analysis, and draw on diverse designs" (Creswell, 2014, p. 183).

The study entailed a qualitative transcendental phenomenological study. "A major concern for qualitative researchers is to find ways to systematically analyze large amounts of field data" (McFarland, Mixer, Webhe-Alamah, & Burk, 2012, p. 89). "These studies document valuable, evidence-based knowledge and culturally congruent care practices that are potentially transferable for use by health care providers in other disciplines" (McFarland et al., 2012, p. 268). The qualitative portion utilized questions created by the researcher. There was no validity/reliability with this tool.

Certain confounding variables were possible. Students who scored high in spiritual formation level on the FMS tool may be more likely to be attracted to mission trips and participation in devotionals. This motivation may also be a confounding variable in how they answer the qualitative questions.

Data Collection

In qualitative research, a question is answered through purposeful sampling which is a perfect fit when studying a population. "Qualitative research uses purposeful sampling instead of drawing a random sample and addressing the assumptions of statistical analysis techniques" (Hanson, Balmer, & Giardino, 2011, p. 377)**.** "The articulation of a qualitative research question begins with curiosity about something the researcher has experienced, observed, or wants to know" (Hanson et al., 2011, p. 376). Qualitative research allows the researcher to be a key instrument (Creswell, 2014). "They may use a protocol or an instrument for collecting data, but the researchers are the ones who actually gather the information" (Creswell, 2014, p. 185).

The top 30 individuals who scored the highest on the FMS tool were interviewed by the research assistant. Qualitative interviews "involve unstructured and generally open-ended questions that are few in number and intended to elicit views and opinions from the participants" (Creswell, 2014, p. 190). The interview questions explored the common phenomenon between spiritual formation level and spiritual formation opportunities (interview questions Appendix F). All the SRNA's interviewed were asked the same questions about their experience with the spiritual formation opportunities, residency stressors, and spiritual formation. The questions were categorized and coded accordingly. Each answer was written down and audio-recorded by the research assistant.

Data Analysis

During data analysis, the data was organized categorically, reviewed repeatedly, and continually monitored (Creswell, 2014). The audio-recorded interview transcriptions and field notes were reviewed on a regular basis.

The qualitative data were analyzed via the process of horizonalization. "Horizonalization is a method for understanding data through a phenomenological reduction by reducing the number of words and replacing the vocabulary with similar terms in which the researcher places equal value on each statement or piece of data" ("Horizonalization", 2008, p 2). Considering the researcher did not personally interview the participants, horizonalization allowed the researcher to take each statement individually as truthful and valued. "The process of horizonalization assists the researcher by reducing potential researcher bias" ("Horizonalization", 2008, p 2).

This researcher developed qualitative themes, categories, and codes to look for emerging themes among the qualitative interview answers (Appendix G). This allowed for the classification of data into themes to find meanings in the data (Leedy, Ormrod & Johnson, 2019). Preliminary categories were created to utilize during the data collection with additions being made as needed as data analysis occurred.

Summary of Chapter

In this chapter, the methodological design for a mixed-methods study researching spiritual formation level and spiritual formation opportunities during the stressors of nurse anesthesia residency was outlined. SRNAs participated in surveys to obtain quantitative data and the most statistically significant participants were interviewed for

the qualitative data. This chapter also explained the approach utilized for data analysis as

well as the ethical considerations taken into account.

CHAPTER FOUR: ANALYSIS OF FINDINGS

Overview

The goal of this research was to gain a clear understanding of what significance spiritual formation opportunities offered during the stressors of anesthesia residency have on nurse anesthesia students' spiritual formation level. This research is advantageous to understanding interventions that may help to cultivate continued spiritual formation during the stressors of anesthesia residency.

This chapter presents the results of the data analysis of this mixed-methods case study. The data is a result of both a quantitative online survey and a qualitative interview. The first set of data was collected through online surveys with 45 students participating. The second set of data was collected by interviewing the top 30 scoring participants on the FMS tool. The chapter is organized by a compilation of the protocol and measures, a presentation of the demographic and sample data, the data analysis and findings, followed by a summary of the themes and lastly, an evaluation of the research design has been provided.

Compilation Protocol and Measures

This chapter focuses on the results and is organized around the themes discussed in the following research questions:

RQ1. What difference exists, if any, between spiritual formation level and medical mission trip participation in student registered nurse anesthetists during the stressors of hospital residency?

RQ2. What difference exists, if any, between spiritual formation level and class devotional participation in student registered nurse anesthetists during the stressors of hospital residency?

RQ3. How do student nurse registered anesthetists in hospital residency perceive that spiritual formation opportunities contribute to spiritual formation level?

RQ4. How do student registered nurse anesthetists who have participated in spiritual formation opportunities perceive their ability to handle the stressors of hospital residency?

Participants in the study provided information in the form of an online survey as well as structured interviews regarding the spiritual formation opportunities offered to them during the stressors of anesthesia residency and the effect these opportunities had on their spiritual formation level. The first set of data was an online survey distributed via email with 45 of 54 students responding to the survey. The second source of data was 30 interviews conducted by the research assistant with the qualifying nurse anesthesia students currently in their hospital residency.

Quantitative Survey

The quantitative survey was conducted via email invitation on the *Survey Monkey* platform. After the SRNA consented to participate in the research they were asked if they were a Christian. If a participant answered that they were not a Christian, the survey ended before the demographic questions and the Faith Maturity Scale tool. Those who acknowledged being a Christian moved on to answer the demographic questions and lastly to the questions on the Faith Maturity Scale tool. Of the respondents, 43 of 45 claimed to be a Christian and moved forward in the survey to the Faith Maturity Scale tool. The Faith Maturity Scale tool is displayed in Table 1.

Table 1

Faith Maturity Scale Tool

Tool

Qualitative Interview

The qualitative portion of the research was conducted by a research assistant via interviews according to the protocol approved by the IRBs. These interviews consisted of four questions. All interviews were conducted in a private neutral location. Each participant was asked the same question. The four interview questions are displayed in Table 2.

Table 2

Interview Questions

1. How do you perceive your ability to handle the stressors of hospital residency?

2. How did your medical mission trip participation affect your spiritual formation?

3. How did your class devotional participation affect your spiritual formation?

4. How did your spiritual formation opportunities contribute to spiritual formation maturity level during your hospital residency?

Once the interviews were completed they were transcribed with each participant's answers listed under a pseudonym in order for the SRNAs to remain anonymous to the researcher. Through analyzing the transcribed data, categories began to emerge. Once the categories were amassed four themes began to emerge. A code chart was created by the researcher in order to code each participant's answers to the interview questions. The chart is displayed in Table 3.

Table 3

Interview Codes

Anesthesia Residency How are you coping with stressors:
Easily
Moderately
Minimally
Not Handling Residency
Spiritual Formation Mission Trip Opportunities:
Helpful
Strongly
Moderately
Not Helpful
Did Not Change Anything
Spiritual Formation Classroom Devotional Opportunities:
Helpful
Strongly
Moderately
Not Helpful
Did Not Change Anything
Spiritual Formation Opportunities contribute to Spiritual Maturity:
Helpful
Strongly
Moderately
Not Helpful
Did Not Change Anything

Demographic and Sample Data

Quantitative Participants

For the quantitative portion participants were nurse anesthesia students attending a hospital residency training at a Christian university nurse anesthesia program in the southeastern United States. Purposeful sampling was utilized to select the participants. "Purposive sampling entails choosing those individuals or objects that will yield the most information about the topic under investigation" (Leedy et al., 2019, p. 242). Each participant was required to be in anesthesia residency training while exposed to devotional and mission trip spiritual formation opportunities.

For phase one the identities of the students remained anonymous to the researcher through an online survey. Out of 54 invitations, there were 45 total respondents with two participants claiming to be non-Christian which ended their survey. Therefore, 43 total SRNAs participated in the complete quantitative survey.

Of the 43 remaining total, 46.5% were male (n=20) and 51.2% were female (n=22) participants with one participant (2.3%) choosing not to answer the gender question. Table 4 displays the age range of the participants. Approximately 84% (n=36) of the students ranged in age from 25-34 years old, 14% (n=6) ranged from 35-44 years old and 2.3% (n=1) ranged from 18-24 years old. The race/ethnicity described in the greatest percentage by the participants was White/Caucasian at 65% (n=28). African Americans made up 23% (n=10) of the participants with 9% (n=4) claiming to be Asian/Pacific Islander and 2.3% (n=1) who specified their race/ethnicity as Other. An almost even distribution of Senior and Junior students was seen with 51.2% (n=22) in their senior rotation and 48.8% (n=21) in their junior rotation. The distributions are displayed in Tables 4, 5, 6, and 7.

Table 4

Gender

		Frequency	Percent
	Female	22	51.2
	Male	20	46.5
	Total	42	97.7
Missing	System	1	2.3
Total		43	100.0

Table 5

Age

	Frequency	Percent
25-34	36	83.7
35-44	6	14.0
18-24	1	2.3
Total	43	100.0

Table 6

Race/Ethnicity

	Frequency	Percent
Other	1	2.3
Asian/Pacific Islander	4	9.3
African American	10	23.3
White/Caucasian	28	65.1
Total	43	100.0

Table 7

Junior/Senior

	Frequency	Percent
Juniors	21	48.8
Seniors	22	51.2
Total	43	100.0

The majority of participants had completed some graduate school education at approximately 70% (*n*=30), 23% (*n*=10) had completed a bachelor's degree with 7% (*n*=3) previously completing graduate school. A large number of participants claim the state of Tennessee as their residence at 77% (*n*=33). This percentage correlates with the program they are attending being located in the state of Tennessee. Second were the states of Texas (*n*=2) and Mississippi (*n*=2). Five additional states were identified by a single participant. The distributions are displayed in Tables 8 and 9.

Table 8

Education Level

	Frequency	Percent
Bachelor's Degree	10	23.3
Some Graduate School	30	69.8
Completed Graduate School	3	7.0
Total	43	100.0

Table 9

State of Residency

	Frequency	Percent
Alabama	1	2.3
Arizona	1	2.3
Florida	1	2.3
Georgia	1	2.3
Mississippi	2	4.7
Tennessee	33	76.7
Texas	2	4.7
Utah	1	2.3
Washington	1	2.3
Total	43	100.0

Qualitative Participants

In the qualitative portion, the 30 nurse anesthesia students in residency who scored the highest on the FMS tool were interviewed individually by a research assistant. To maintain anonymity the research assistant audio-recorded each interview and transcribed the answers using pseudonyms for each student. The researcher was given the transcriptions with pseudonyms in place of student names to mitigate bias. The qualitative portion gave the researcher the ability to collect personal descriptions of experiences from each participant. The descriptions of the qualitative participants are outlined by the following:

Quantitative Participant A. Participant A was a Junior Caucasian male between the ages of 35-44. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant B. Participant B was a Senior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant C. Participant C was a Senior Caucasian male between the ages of 25-34. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant D. Participant D was a Senior African American female between the ages of 45-54. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant E. Participant E was a Junior Caucasian male between the ages of 25-34. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant F. Participant F was a Senior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Georgia as her state of residence.

Quantitative Participant G. Participant G was a Junior Caucasian male between the ages of 25-34. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant H. Participant H was a Senior Caucasian male between the ages of 25-34. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant I. Participant I was a Junior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant J. Participant J was a Junior Caucasian male between the ages of 25-34. He has some graduate school completed and claims Alabama as his state of residence.

Quantitative Participant K. Participant K was a Junior Asian male between the ages of 25-34. He is a college graduate and claims Tennessee as his state of residence.

Quantitative Participant L. Participant L was a Junior African American female between the ages of 25-34. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant M. Participant M was a Junior African American female between the ages of 35-44. She is a college graduate and claims Tennessee as her state of residence.

Quantitative Participant N. Participant N was a Senior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Mississippi as her state of residence.

Quantitative Participant O. Participant O was a Senior African American male between the ages 25-34. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant P. Participant P was a Junior Asian female between the ages of 25-34. She is a college graduate who claims Texas as her state of residence.

Quantitative Participant Q. Participant Q was a Junior Caucasian male between the ages of 25-34. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant R. Participant R was a Junior African American female between the ages of 25-34. She is a college graduate who claims Tennessee as her state of residence.

Quantitative Participant S. Participant S was a Senior Caucasian male between the ages of 35-44. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant T. Participant T was a Senior African American male between the ages of 25-34. He has some graduate school completed and claims Washington as his state of residence.

Quantitative Participant U. Participant U is a Senior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant V. Participant V is a Junior Caucasian male between the ages of 25-34. He has some graduate school completed and claims Tennessee as his state of residence.

Quantitative Participant W. Participant W is a Senior African American female between the ages of 25-34. She has some graduate school completed and claims Florida as her state of residence.

Quantitative Participant X. Participant X is a Senior African American female between the ages of 25-34. She is a college graduate and claims Tennessee as her state of residence.

Quantitative Participant Y. Participant Y is a Senior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant Z. Participant Z is a Junior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant AA. Participant AA is a Senior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant BB. Participant BB is a Senior Asian female between the ages of 25-34. She has some graduate school completed and claims Tennessee as her state of residence.

Quantitative Participant CC. Participant CC is a Senior Caucasian female between the ages of 25-34. She has some graduate school completed and claims Utah as her state of residence.

Quantitative Participant DD. Participant DD is a Senior African American female between the ages of 35-44. She is a college graduate who claims Texas as her state of residence.

<div align="center">

Data Analysis and Findings

</div>

Quantitative Data

This section is organized according to the participant responses to the FMS tool and subsequently describes the results of the FMS scores demonstrated in Figures 1-12.

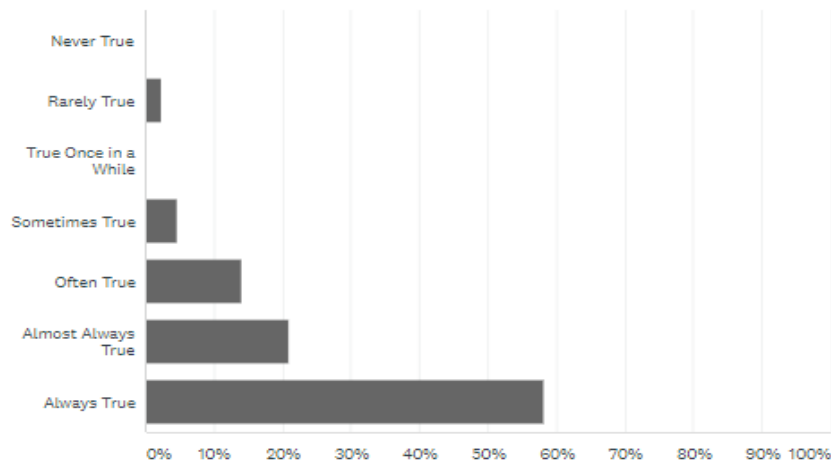*Figure 1*. FMS Question 1

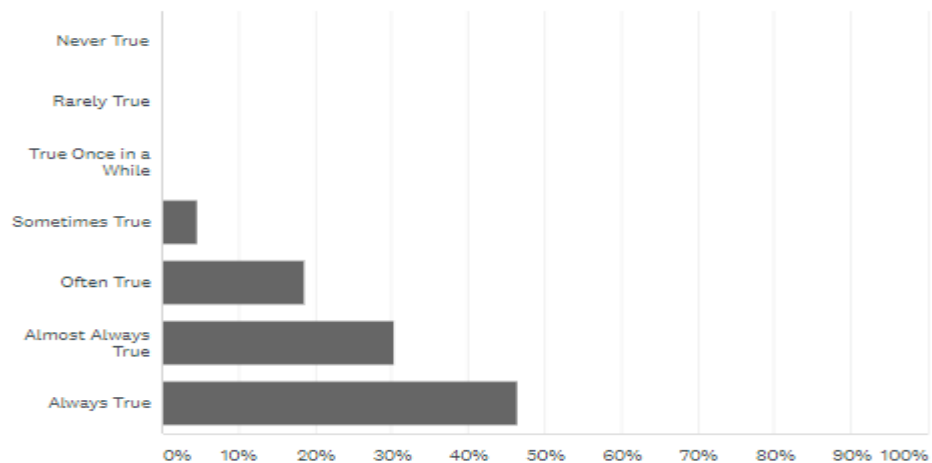*Figure 2.* FMS Question 2
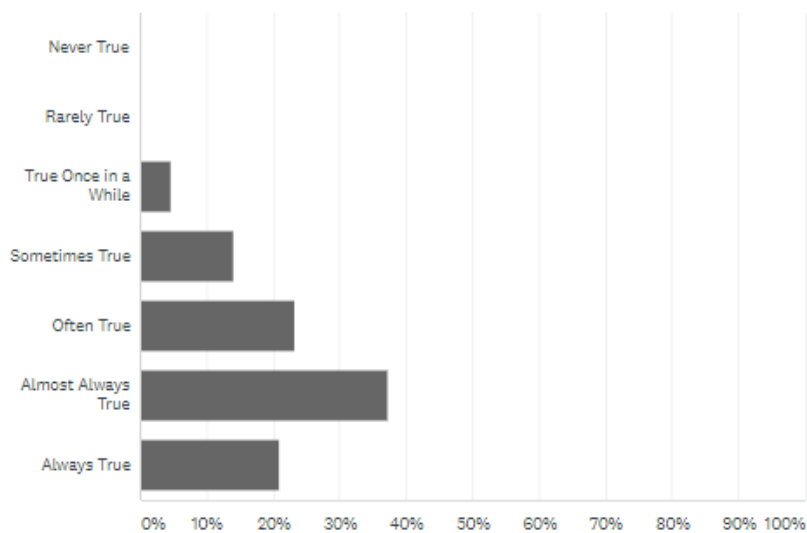
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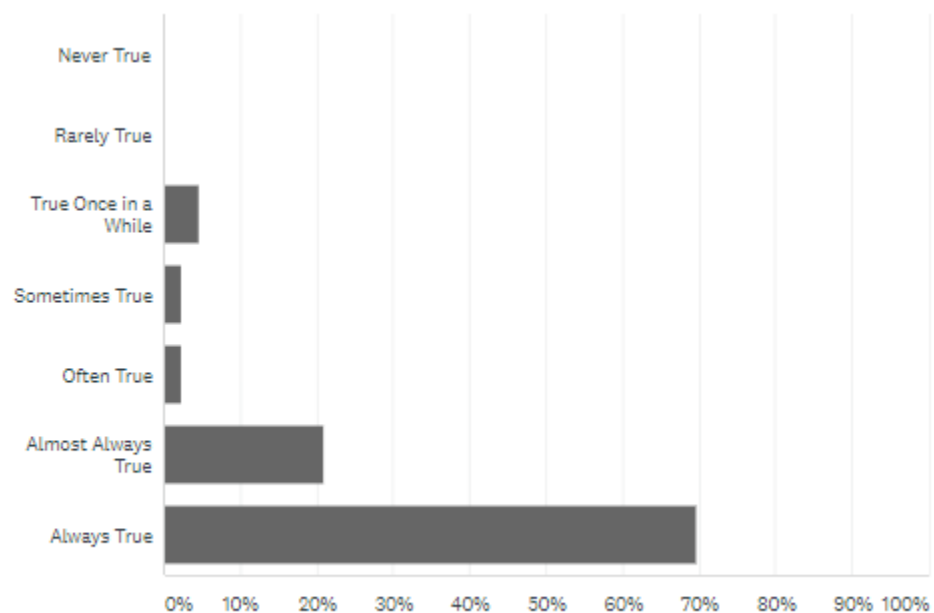
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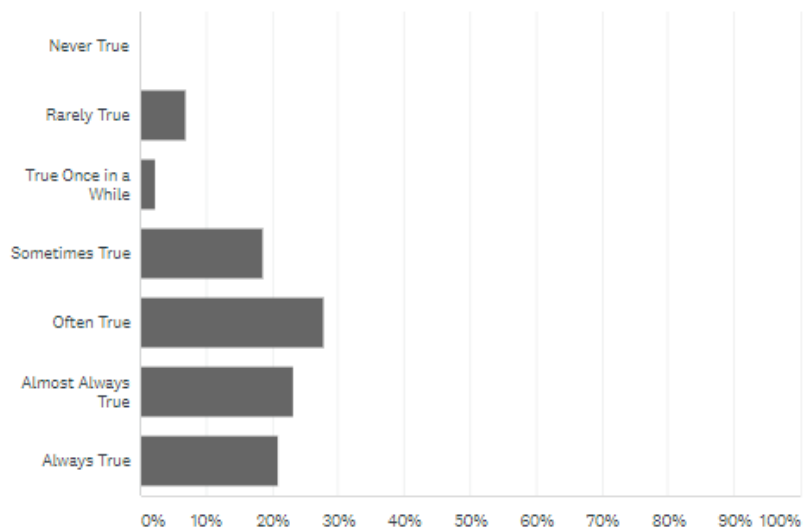
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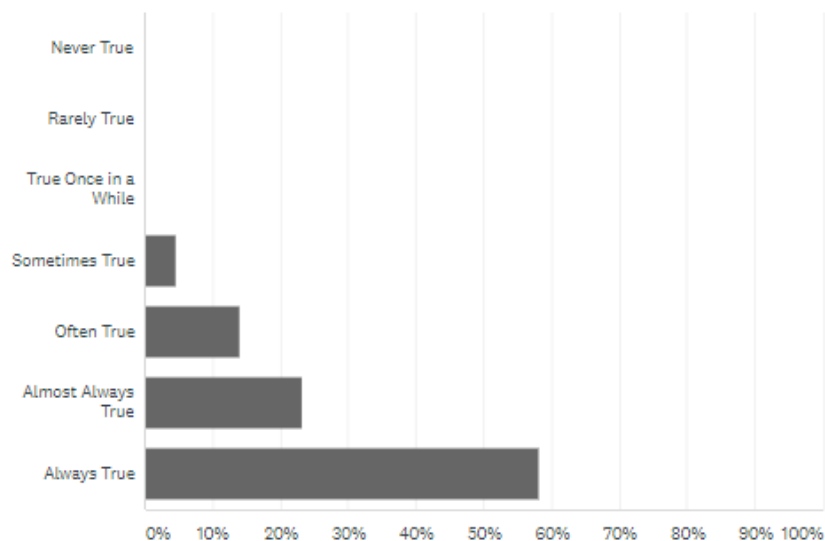
Figure 6. FMS Question 6

██.
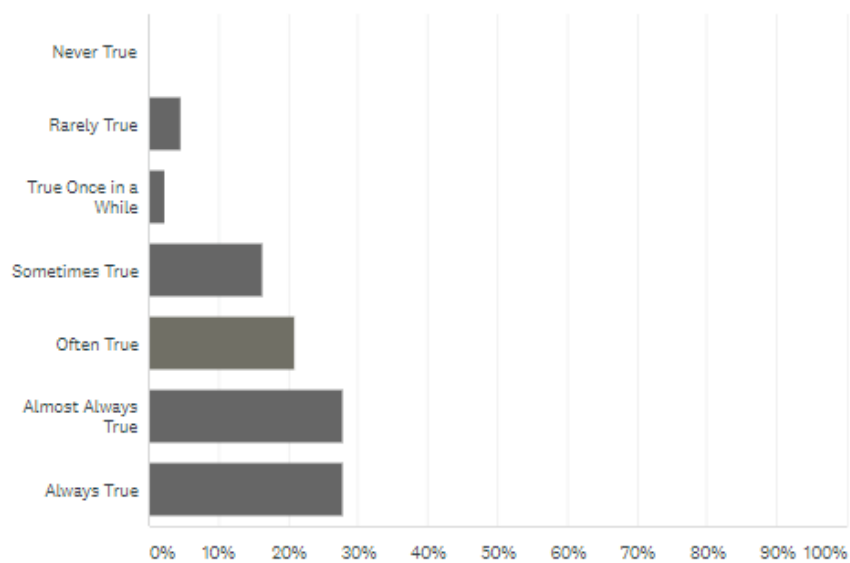
Figure 7. FMS Question 7

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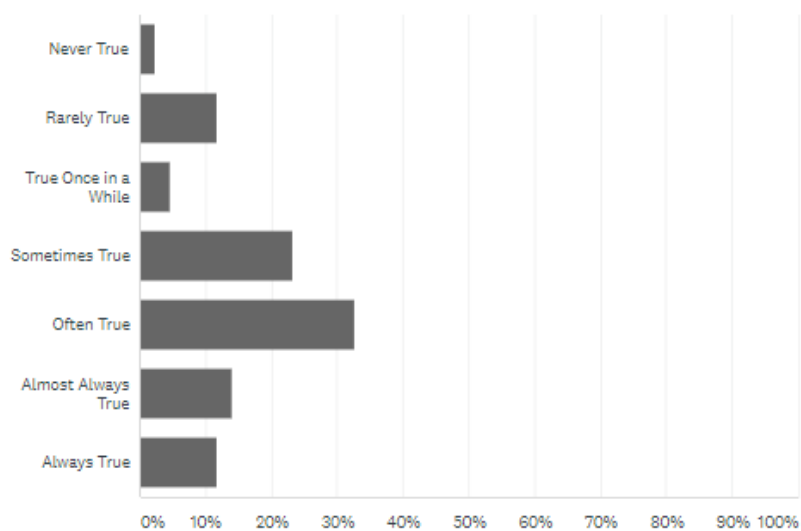
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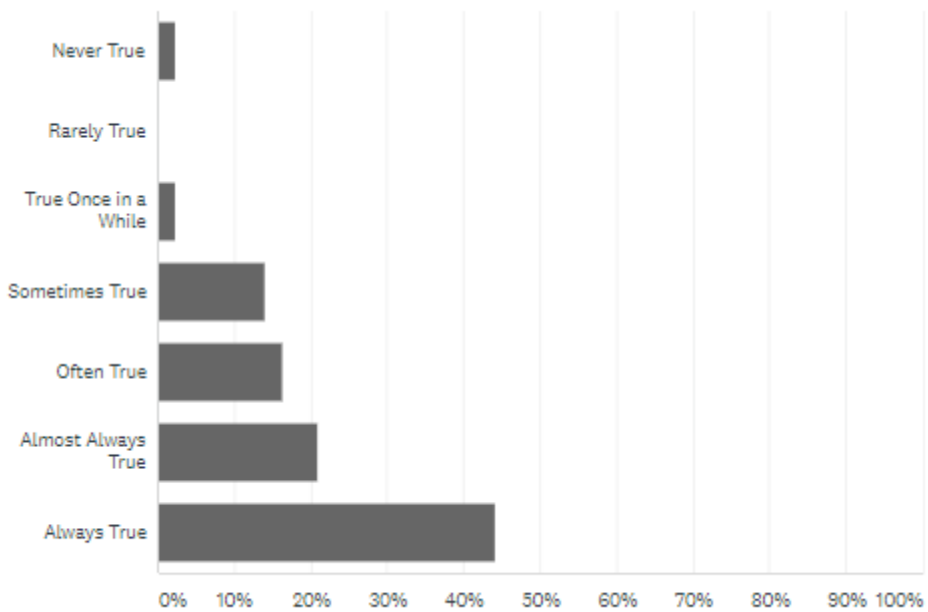
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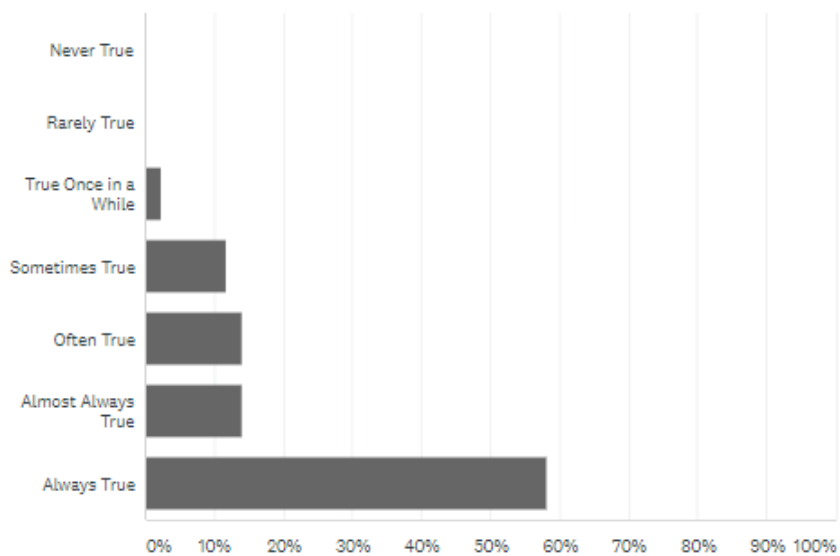
Figure 10. FMS Question 10
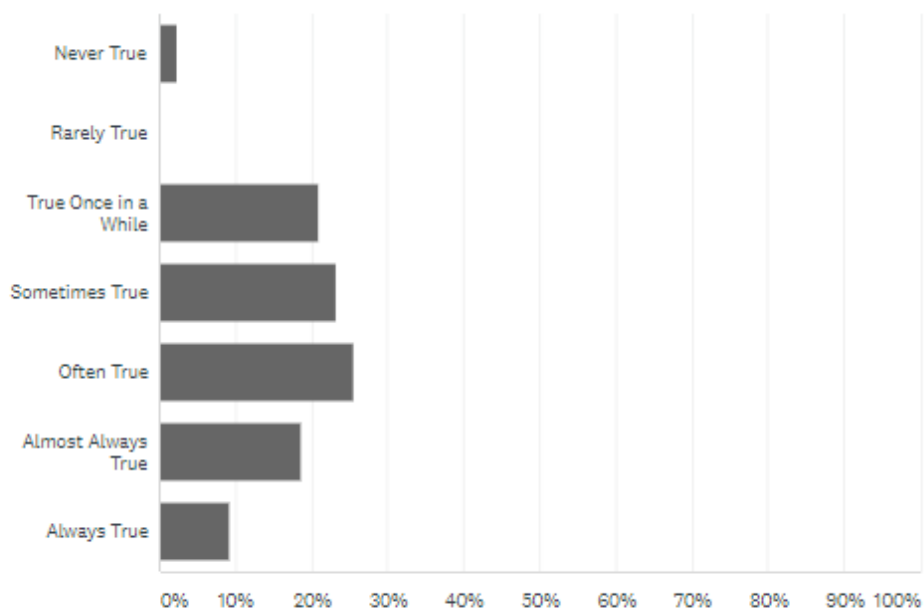
Figure 11. FMS Question 11
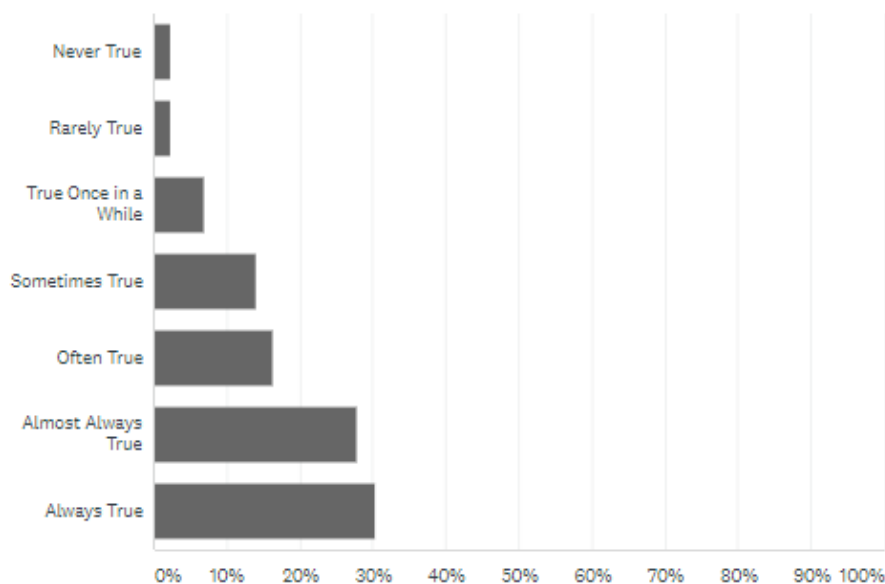
Figure 12. FMS Question 12

The results of the quantitative phase allowed the researcher to compare Junior and Senior SRNA's in hospital residency spiritual formation levels via the FMS tool. In the data analysis, the independent variable is the year of study. Table 10 displays the means and standard deviation scores for comparison of the Junior SRNAs versus the Senior SRNAs faith maturity levels. The composite score on the Faith Maturity Scale for the Juniors was a mean of 5.63 (*SD* 0.74) while the Senior's score was a mean of 5.73 (*SD* 0.99) and demonstrates a high level of faith maturity in both levels of student participants. A two-tailed t-test between the two groups revealed a variance of $p=0.696$ which does not reach the level of statistical significance set for this project which was $p=0.05$. These data revealed that regardless of whether the nurse anesthesia resident is in their junior or senior year they were overall very high in their faith maturity.

Table 10

Junior vs Senior Comparison

Group Statistics

Year in school	N	Mean	Std. Deviation	Std. Error Mean
Junior	21	5.63	.74	.16
Senior	22	5.73	.99	.21

Table 11 is the independent samples test that displays the results of a two-tailed t-test for the equality of means. The null hypothesis was defined in this study as no significant difference between the Junior and Senior nurse anesthesia students. The level of statistical significance is defined as the priori probability value of $p \leq 0.05$. The t-test results demonstrated a p-value of 0.696 with equal variances assumed and a p-value of 0.694 with equal variances not assumed. The mean difference for both was -0.11. A priori probability of $p \leq 0.05$ was not achieved and thus the study accepted the null. Therefore, the statistics derived from the quantitative study demonstrate that there is no significant difference in the spiritual formation level of the Junior SRNAs compared to the Senior SRNAs in hospital residency.

Table 11

t-test for Equality of Means

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
					Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
	F	Sig.	t	df				Lower	Upper
Equal variances assumed	1.16	.288	-.393	41	.696	-.11	.26744	-.64526	.43496
Equal variances not assumed			-.396	38.77	.694	-.11	.26563	-.64254	.43224

Qualitative Data

This section is organized according to the participant responses to the phase two interview questions and subsequently describes the themes that emerged from the participants' answers to the interview questions. The results of the quantitative interviews are as follows.

The results of the interview answers were categorized, coded and assembled into themes. Categorization identifies themes and classifies each piece of data accordingly (Leedy et al., 2019). Themes were organized via the process of horizonalization where noteworthy statements were identified and categorized. "The process of horizonalization assists the researcher by reducing potential researcher bias" ("Horizonalization", 2008, p 2). The identified themes, categories, and codes are displayed in Table 12.

Table 12

Themes, Categories, and Codes

Theme	Category/Code
Coping	Easily Handling Residency
	Moderately Handling Residency
Poor Coping	Minimally Handling Residency
	Not Handling Residency
Positive Benefit	Strongly Influenced
	Moderately Influenced
No Benefit	Not Helpful
	Did Not Change Anything

All the quotes from the participants are presented verbatim in order to capture the original intent and experience of each student interviewed. Grammatical errors in speech

are included to preserve the experience of the student. The following four themes and

categories emerged from the data provided by interviews. Each theme and category is

listed and followed by narratives from the participants in order to communicate the

phenomenon experienced by the participants

Theme one: Coping. Coping with residency was the most common theme that

evolved from all the data collected in the qualitative portion of the research. The two

categories that described the nurse anesthesia students' ability to handle the stressors of

hospital residency were: easily handling residency and moderating handling residency.

Easily handling residency. When describing their ability to handle the stressors

of hospital residency some of the Junior and Senior nurse anesthesia students expressed

statements of a strong ability to handle the residency stressors. The Junior and Senior

responses were closely mixed. Participant J stated a strong positive ability to handle the

stressors of hospital residency when she said:

> One of the things they taught us in the summer semester was setting up a
>
> mnemonic for setting up our OR and the last letter is S for 'say a prayer', and that's
>
> something that I've really tried to stick with. I'm just in prayer every morning I get
>
> into the OR, because I know that God ultimately has the control and for him just
>
> to use me to accomplish whatever he wants to happen for the day, and that he
>
> guards the patients and keeps them safe. (Participant J)

Participant R also referenced the stressors of nurse anesthesia residency when she stated:

> I take it day by day. It gets better each day because I've grown stronger in dealing
>
> with my stressors from the initial rotations we've had. It gets stronger and

stronger day by day. Devotions before getting to clinical and listening to worship beforehand has helped. (Participant R)

Moderately handling residency. When describing their ability to handle the stressors of hospital residency some nurse anesthesia students expressed statements of moderate ability to handle the residency stressors. The Junior and Senior responses were closely mixed. Participant C stated a moderate ability to handle the stressors of hospital residency when he said, "Right now I'm coping with everything. Lack of sleep is probably my main obstacle" (Participant C). Participant G also referenced moderate coping with the stressors of nurse anesthesia residency when he was asked how he was handling the stress and he stated:

> Pretty good. I am kind of the understanding that I obviously want to do my best, but I know that I'm going to mess up. I know that's part of learning and part of being a student. I think as far as the stressor and learning, I think I handle pretty well. It can be pretty fast past and I like I'm good with going with the flow. If my assignment gets changed, that's one thing that not really a big deal. I think it affects some people more than it does me. (Participant G)

Theme two: Poor coping. The theme of not coping with residency was a rare theme that evolved from all the data collected in the qualitative portion of the research. The two categories that described the nurse anesthesia students' ability to handle the stressors of hospital residency were: minimally handling residency and not handling residency.

Minimally handling residency. When describing their experiences very few felt they were only minimally handling the stressors of nurse anesthesia residency. Only

Junior students fell into this category. Participant L referenced the stressors of nurse anesthesia residency when she stated, "I perceive to handle them fairly. I think being in the hospital with different CRNAs at different times can be a little stressful in trying to deal with their personalities" (Participant L). Participant Q, when asked about how he handles the stressors of hospital residency, stated, "Sometimes, somewhat better than others and sometimes not well at all. Sometimes things can get overwhelming, but for the most part, I tend to handle it" (Participant Q).

Not handling residency. No student expressed that they were not handling residency. A few did disclose that at the beginning of their hospital residency they were not coping but in time they were more able to handle the stressors. The Junior and Senior responses were evenly mixed. When asked about the ability to handle the hospital residency stressors Participant B stated:

> That is a real deal in our nurse anesthesia residency. Stress is extremely high, but I tend to pray in the morning and pray over my patients and put the rest in God's hands, honestly. When it comes to people and different personalities, I show up and I keep trying. Persistence and put my faith in the Lord and he'll take it from there, and he has. (Participant B)

When describing how she is handling the stressors of nurse anesthesia residency Participant Y said:

> I am not handling it very well and I did not see that coming. Before I started I was like I'm fine, I did it for nursing, and it'll be okay. When I got in there, it was a lot of different personalities. Everybody does it differently, literally. It's not a joke when they say anesthesia can be done a million ways. I had never been in an OR

for more than a week, other than a few hours at a time, and it was just a lot. I'm

finally doing better. There was a rough patch there for a while. (Participant

Y)

The results from how the nurse anesthesia students are coping with the stressors of

hospital residency are listed by theme in Table 13.

Table 13

Themes and Codes Results Coping

Theme	Code	All (*n* =30)		Junior (*n* =13)		Senior (*n* =17)	
		n	%	*n*	%	*n*	%
Coping	Easily Handling Residency	11	37	7	54	5	29
	Moderately Handling Residency	16	53	5	38	11	65
	Total	**27**	**90**	**12**	**92**	**16**	**94**
Poor Coping	Minimally Handling Residency	2	7	2	15	0	0
	Not Handling Residency	1	3	0	0	1	6
	Total	**3**	**10**	**2**	**15**	**1**	**6**

Theme three: Positive benefit. Positive benefit of participation in the medical

mission trips and classroom devotionals was the central theme surrounding these spiritual

formation opportunities that evolved from all the data collected in the qualitative portion

of the research. The majority of the nurse anesthesia students asserted that the medical mission trip and classroom devotional spiritual formation opportunities provided a positive benefit to their spiritual formation. Others identified the spiritual formation opportunities having a positive benefit on their ability to handle the stressors of nurse anesthesia hospital residency. The two categories that described the positive benefits of spiritual formation opportunities during hospital residency were: strongly influenced and moderately influenced.

   Strongly influenced. Out of the 30 nurse anesthesia students interviewed in the qualitative portion of the study, 14 attended a medical mission trip. Of those 14 nurse anesthesia students, some indicated how the medical mission trip spiritual formation opportunities had a strong positive influence on their spiritual formation level. The Junior and Senior responses were closely mixed. When asked about the influence of medical mission trips Participant F stated:

   I did go on the medical mission trip and it greatly affected my spiritual formation.

   I feel like we are definitely out of our comfort zone with people who don't speak

   the same language as us, and we have to be Spirit lead in that situation. That was

   my prayer all throughout the week of the mission trip to just rely on the Lord and

   be spirit lead throughout the week. (Participant F)

Participant I stated:

   I feel like it was life-changing for me. I've never even left the country. Seeing

   how those people have their faith with very little, was very life-changing. I

   do feel like that formed and reinforced my spiritual beliefs as well. (Participant I)

When asked about the influence of medical mission trips Participant M stated:

I did go on the medical mission trip. As far as my spiritual formation, going there

was phenomenal. I went there to help and pray for other people, and I came back

feeling naïve, in a sense, and more convicted by God to ask myself what am I

doing on a daily basis to show God just how grateful I am to him. The people

there blessed me and blessed my life. They challenged me. I'm pretty quiet

still in a small group. But to have to pray out loud, in groups, for people that I

don't know, and finding a way to emulate God, was a challenge but a great

challenge that brought me back to myself, my own personal struggles and things.

(Participant M)

Next nurse anesthesia students were asked if the classroom devotional spiritual formation

opportunities influenced their spiritual formation level. Many expressed a strong positive

influence. The Junior and Senior responses were closely mixed. When asked about the

influence of classroom devotionals Participant B stated:

I personally love the devotionals before each class. They are always spot on. I felt

God is behind it of course and it was perfectly planned each time. It helped me to

know that our professors were faithful and put their trust in God and was able to

share that with us along the journey, praying before a test and praying over us.

This gave me a sense of security. (Participant B)

Participant C stated:

I feel like I'm closer to God even more so before I came here because I've had to

lean on him for everything, through every step of the way of anesthesia school;

especially toward the end. Things are getting tight and family life is getting tight

with me being gone out of town all the time. (Participant C)

When asked about the influence of classroom devotionals Participant H stated:

> Class devotionals are super needed for me. You kind of grow to expect them but they always, somehow and someway, whatever the teacher decides to talk about always seem to be right on point with what I'm trying to learn in my own walk with Christ or had been struggling with in my walk. It always seems to really encourage me at exactly the right time. (Participant H)

When asked about the influence of classroom devotionals Participant M stated:

> I love our devotionals. Every time they do a devotional, I'm usually writing down the scriptures and talking about is so I can go back and reference it. Somehow it gets me through my day. Going through grad school is not easy. I have no family here with me, so those devotional really hit home for me and they kind of push me through to continue to realize that God is with me regardless of where I am and who's not around me physically. (Participant M)

Participant Q stated:

> This one is really big for me. Sometimes the stress of anesthesia school and daily life, in general, gets to be overwhelming and you kind of look past some of those things or maybe don't have or think you don't have time to do your devotional to stay plugged in with God. So to have professors that do those before every class solidifies how important those things are and how important it is for us to always keep those things in mind and relate those things into everything we do.
> (Participant Q)

Participant X stated, "I feel as though the devotionals were always right on time. God knew exactly what was needed at that moment and used the professors as a vessel"

(Participant X). When asked about the influence of classroom devotionals Participant Y stated:

> Those actually really helped. A lot of the times, before class or before a test, it was the most stressful time and we just took a minute and gave it to God, so that really actually helped a lot and made me feel more at peace. Sometimes I would go in there and think I have no idea what's going on. I've studied but don't feel like I'm doing to do that well and I'd feel like just praying really helped everything. (Participant Y)

Lastly, nurse anesthesia students were asked if all the spiritual formation opportunities influenced their spiritual formation level. Many expressed a strong positive influence of spiritual formation opportunities on their spiritual formation level. The Junior and Senior responses were closely mixed. When asked about the influence of the spiritual formation opportunities Participant B stated:

> I feel like I've grown closer to God in an exceptional high level of stress. I've always gone to church, always prayed, always read the bible, but I've really had to dig deeper throughout this journey. I have a family and three kids, and I'm actually a Sunday school assistant teacher now and I feel like all this has fallen into place. I got into school, my relationship with God has gotten stronger and He laid this out in front of me, and I knew it was for me to do. So I feel like it's all just perfectly planned. God plans are great and he's got us all the way. To look back on that and see how far you've come, and he's definitely brought me this far. it's definitely a God-thing. (Participant B)

When asked about the influence of spiritual formation opportunities Participant C:

I feel like my opportunities through this have been great to get closer to God. I talk to him every morning, throughout the day, and every evening. And I thank him for the ability to get up to do this program. He's definitely carried me through the way, more than I've carried myself. He's actually carried me all the way through and I've not done anything. All the glory to God on this. (Participant C)

Participant H stated:

I think the opportunities that the four teachers in the anesthesia program have done an incredible job with is not only utilizing devotions in class but also reaching out to us outside of class and always encouraging us and always praying for us and always, which has always encourage me to want to dive into my own walking it deeper. Whenever I have people in my life like that, it always encourages me to get into my own walk with Christ and pushes me to be more Christ-like better version of myself, even though I don't know if I want to say that in my own walk. When I go into the residency, Christ shines his light through me, even though I try to push it down and be my own person, but it's like when I'm walking closer to Christ, I always feel like I'm better received at clinical and I'm nicer at clinical and I'm more willing to learn at clinical. I just have a better attitude in general, which obviously makes the day much better and it can cause relationships that you never thought were possible to become possible, and encourage people who you have no idea what they're going through too. (Participant H)

When asked about the influence of spiritual formation opportunities Participant I stated:

My faith is the center of all I do. Our teachers help to solidify those concepts. That's what life is about, being able to incorporate that in everyday life and practice, not only affects my clinical performance but also my patients. I have noticed a difference in that, and even my preceptors have said that as well. (Participant I)

When asked about the influence of spiritual formation opportunities Participant L stated:

It contributes to your maturity because it gives you the different resources your need to handle different situations and because you're under stress, you kind of deal with stress differently. Having that spiritual side allows you to appropriately handle things and not feel like you're alone. (Participant L)

Participant Q stated:

For me, this is where the rubber meets the road. You can do devotionals and you can know what to do in theory, and have all the devotion time in the world, but if you don't put that into practice and you don't allow that to shape your life and your practice, we're really not doing what we need to be doing. So I think that is a big thing for me and it's allowed me to further my spiritual walk and practice. (Participant Q)

Moderately influenced. Of the 14 nurse anesthesia students who participated in medical mission trip spiritual formation opportunities, some discussed a moderate positive influence on their spiritual formation level. The Junior and Senior responses were closely mixed. When asked about the influence of medical mission trips Participant L stated:

I did go on the medical mission trip and the medical mission kind of brought me closer to God because I see how blessed I am and just to see so many people with so little, be so happy, made me more aware of my stuff and I need to be more grateful for the things that I have now. (Participant L)

Participant R stated:

The medical mission trip was a nice encouragement for me. It definitely helped me develop my faith even more, but if anything, it strengthened the baseline of faith that I have. It was very humbling and helped enrich what I have now. It made me realize that the problems we have now are not as big as some people may be facing. It was nice to take a step back from our reality and strengthen my walk with Christ. (Participant R)

Participant S stated:

Yes, I did go on the medical mission trip. In regards to my spiritual formation, the biggest thing would be that despite the fact that people of the Dominican don't have many of the materialistic things that we have here, that their faith in God is significantly strong, probably stronger than those of us in a first world country. They depend on that faith, it seems like in a family environment, just to get by on a day to day basis. You can tell that the little things make them so much happier. Their faith was so huge, it seems that...in first world country, our lives are consumed by so many stressors coming from all angles but their faith occupies much more of their ideals, compared to ours. (Participant S)

Participant CC stated:

>Yes, I did go on the medical mission trip and it helped me to find more confidence in carrying out my holistic care and being more brave in the aspect of praying with patients and not being afraid. (Participant CC)

Next nurse anesthesia students were asked if the classroom devotional spiritual formation opportunities influenced their spiritual formation level. Some expressed a moderate positive influence of classroom devotionals on their spiritual formation level. The Junior and Senior responses were closely mixed. When asked about the influence of the classroom devotional spiritual formation opportunities Participant G stated:

>I do enjoy it. It puts where we're at in perspective. We're at a different part of our lives where we have put our lives on hold as we're going through school, and it's nice to have that brought back into the picture, as far as it seems like it's never going to end. We're constantly in school and busy but that's not the end. That's not the main thing. The devotionals help to shift our perspective from the trials we're going through, to help us see the big picture. (Participant G)

Participant K stated:

>Being spiritual in class helps us to calm ourselves, and always feel like there is someone watching over us and protecting, and we're here for a reason and that reason is to serve in his name. Class devotionals really help in that aspect. Nurse anesthesia students summarized how all the spiritual formation opportunities had a strong positive influence on their spiritual formation level. (Participant K)

When asked about the influence of classroom devotionals Participant L stated:

Class devotionals enhance my spiritual journey only because you get to hear other

people's stories and you're not alone in this journey. Everybody has gone through

something but we've all made it out and we're all pushing through it, so it actually

kind of strengthened all our relationships with each other. (Participant L)

Participant P stated:

Having those devotionals as a class, praying and being able to feel that support,

helped me to see the light at the end of the tunnel even better. I felt like it gave me

hope and made me stronger and made me realize that I can get through this no

matter what. (Participant P)

Participant S stated:

It re-centers you. A lot of times when we're coming in for class or to take a test,

our minds are full of all this knowledge we've been studying, the devotional

centers you and brings you back to your relationship with Jesus Christ, and a lot

of times you realize that what really matters and not how you're going to do on

this particular exam. (Participant S)

Participant AA stated, "Mainly before a test, it really helped me to take a deep breath and

realize that God is in control, and everything always works out. Our instructors were

really good about praying with us before every single class" (Participant AA). Participant

CC expressed:

I feel like they positively affected my spiritual formation because anesthesia

school is really stressful, and so one of the ways of my coping mechanism is with

my faith and through God. Knowing that your teachers are on the same page, that

they are rooting for you and loving you and wanting to share a little piece of their

life and testimony with you is really important.

Lastly, nurse anesthesia students were asked if the overall spiritual formation

opportunities influenced their spiritual formation level. Many expressed a moderate

positive influence. The Junior and Senior responses were closely mixed. When asked

about the influence of the spiritual formation opportunities Participant F stated, "Just the

ability to rely on the Lord and just know that not everything can be under your control is

greatly how I've been able mature under hospital residency" (Participant F). Participant G

expressed:

The spiritual formation opportunities help my life and struggles from a different

perspective. It helps me to that in mind whenever I may not be having the best

day in clinical or whatever, my struggles physically don't make me less valuable

spiritually. (Participant G)

Participant X stated:

As human beings we tend to worry and fear over things we have no control over;

however, I can say that this journey has definitely increased my faith and made

me a better Christian. I no longer worry about what the day may bring because I

trust that God has great plans for my life. And those plans are for me to prosper

and give me hope and a future. (Participant X)

Participant CC stated, "I feel like it positively affected my residency and made me a

better anesthetist" (Participant CC).

Theme four: No benefit. A theme of no benefit was not seen in the data

collection. One student did describe no change in their spiritual formation level due to the

offered spiritual formation opportunities due to their prior established spiritual formation habits.

Not helpful. When describing their experiences no student remarked that the offered spiritual formation opportunities were not helpful.

Did not change anything. Only one student expressed that their prior spiritual formation level was the foundation of their growth. When discussing the ability to handle the stressors of hospital residency Participant M who is a Junior stated:

> I believe my ability to handle stressors have been fairly well. I feel like I've grown up in a household that was quite loud, living with a bunch of people and so I've learned to adapt and flexible in different types of environments. I feel as though I can adapt pretty well because of my childhood experiences. (Participant M)

The compilation of the results from how the nurse anesthesia students benefited from the medical mission trips, classroom devotionals, and overall spiritual formation opportunities during the stressors of hospital residency are listed by theme in Tables 14, 15, and 16.

Table 14

Themes and Codes Results Medical Mission Trip

Theme	Mission Trip Benefit	All (n =14)		Junior (n =4)		Senior (n =10)	
		n	%	n	%	n	%
Positive Benefit	Strongly Influential	8	57	2	50	6	60
	Moderately Influential	6	43	2	50	4	40
	Total	**14**	**100**	**4**	**100**	**10**	**100**
No Benefit	Not Helpful	0	0	0	0	0	0
	Did Not Change Anything	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**	**0**

Table 15

Themes and Codes Results Classroom Devotionals

Theme	Classroom Devotional Benefit	All (*n* =30)		Junior (*n* =13)		Senior (*n* =17)	
		n	%	*n*	%	*n*	%
Positive Benefit	Strongly Influential	19	67	6	46	13	76
	Moderately Influential	11	37	7	54	4	24
	Total	**30**	**100**	**13**	**100**	**17**	**100**
No Benefit	Not Helpful	0	0	0	0	0	0
	Did Not Change Anything	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**	**0**

Table 16

Themes and Codes Results Spiritual Formation Opportunities

Theme	Spiritual Formation Opportunity Benefit	All (*n* =30)		Junior (*n* =13)		Senior (*n* =17)	
		n	%	*n*	%	*n*	%
Positive Benefit	Strongly Influential	19	63	8	62	11	65
	Moderately Influential	10	33	4	31	6	35
	Total	**29**	**97**	**12**	**92**	**17**	**100**
No Benefit	Not Helpful	0	0	0	0	0	0
	Did Not Change Anything	1	3	1	8	0	0
	Total	**1**	**3**	**0**	**0**	**0**	**0**

The data from the qualitative portion of the study provided answers to the four research questions. In this section, each research question is addressed with the emerging themes from the interviews summarized.

Research Question One

The first research question asked, "What difference exists, if any, between spiritual formation level and medical mission trip participation in student registered nurse anesthetists during the stressors of hospital residency?" This research was conducted in an attempt to understand what effect if any mission trip participation has on the nurse anesthesia residents' spiritual formation level. This question identified one common theme among the mission trip participants: positive benefit. The positive benefits described by the participants in the study included feelings on how the medical mission trip provided a strong or moderate influence in the nurse anesthesia resident's spiritual formation level. There was an insufficient number of students who participated in the research who attended the medical mission trip in order to compare this variable.

Research Question Two

The second research question asked, "What difference exists, if any, between spiritual formation level and class devotional participation in student registered nurse anesthetists during the stressors of hospital residency?" This study was conducted in an attempt to understand what effect if any classroom devotional participation has on the nurse anesthesia residents' spiritual formation level. This question identified a common theme: positive benefit. The positive benefits described by the participants in the study included feelings the classroom devotionals provided a strong or moderate influence in the nurse anesthesia resident's spiritual formation level.

Research Question Three

The third research question asked, "How do student nurse registered anesthetists in hospital residency perceive that spiritual formation opportunities contribute to spiritual formation level?" This research was conducted in an attempt to understand what effect if any the spiritual formation opportunities of medical mission trips and classroom devotional participation has on the nurse anesthesia residents' spiritual formation level. While the previous two questions addressed the individual spiritual formation opportunities of medical mission trips and classroom devotionals, research question three encompassed all spiritual formation opportunities offered to the students. This question identified one common theme among the spiritual formation opportunity participants: positive benefit. The positive benefits described by the participants in the study included feelings the spiritual formation opportunities being a strong or moderate influence in the nurse anesthesia resident's spiritual formation level.

Research Question Four

The final research question asked, "How do student registered nurse anesthetists who have participated in spiritual formation opportunities perceive their ability to handle the stressors of hospital residency?" This research was conducted in an attempt to understand what effect if any the spiritual formation opportunities of medical mission trips and classroom devotional participation has on the nurse anesthesia residents' spiritual formation level. This question identified more diverse experiences than in the previous research questions.   The most common theme among the nurse anesthesia

students participating in hospital residency was a moderate ability to handle the stressors of nurse anesthesia residency.

For this study, the themes most prevalently identified were a positive benefit of mission trips on spiritual formation level, a positive benefit of classroom devotionals on spiritual formation level, a positive benefit of spiritual formation opportunities on spiritual formation level and a moderate ability to handle the stressors of hospital residency. These findings led to the overall theme of spiritual formation opportunities showing a positive benefit to the student nurse anesthesia resident.

Evaluation of the Research Design

In an evaluation of the research design, this researcher was able to demonstrate the validity and effectiveness of the chosen design. The study was relevant to understand the influence of spiritual formation opportunism on spiritual formation level in nurse anesthesia students under the stressors of residency. "Health professionals in training not only must deal with the occupational stressors inherent in their chosen field, they also must manage the added stress that accompanies learning" (Kendrick, 2000, p. 116). The lack of available research addressing the spiritual formation of nurse anesthesia students or how their spiritual formation is impacted by participation in their educational program indicated a need for studies of this type. "Stress in SRNAs is well documented in the current nurse anesthesia literature" (Stone, 2012, p. 29).

The methodology chosen was a mixed-methods design. The design conformed to the standards of scientific research. A mixed-methods design involves not only collecting, analyzing, and interpreting both quantitative and qualitative data but also integrating findings from the two kinds of data into a cohesive whole" (Leedy et al.,

2019, p. 259). This researcher analyzed both quantitative and qualitative data and found the results were complementary to one another via the explanatory sequential design. The explanatory sequential design is a "two-phase mixed-methods design in which quantitative data collection is followed by the collection of qualitative information that can help clarify the meanings of the quantitative findings" (Leedy et al., 2019, p. 414). By looking at data that occurred in two phases, the researcher was able to compare a greater amount of information in order to reach the appropriate conclusions.

The quantitative portion included a quasi-experimental design via a convenience sample. A quasi-experimental design utilizes individuals that are not randomly assigned (Creswell, 2014). Because the available population for this study was small, random selection was not an option. The study was conducted at a single nurse anesthesia program in the southeastern United States. Therefore a convenience sample was the most appropriate sample option.

The qualitative portion utilized a transcendental phenomenological approach to the research. Phenomenological research is an approach "in which the focus of investigation is on how people perceive and experience themselves and certain aspects of their world" (Leedy et al., 2019, p. 417). Transcendental phenomenological research is research focused on the description of the experiences of the research participants rather than the interpretations of the researcher (Creswell, 2014). Because this study required the students to describe their experiences and explain how the spiritual formation opportunities influenced their spiritual formation level, a transcendental phenomenological approach was pertinent.

The research was conducted so that the students remained anonymous to this researcher throughout the study. This anonymity of the students allowed this researcher to implement the Epoche process through the transcendental phenomenological method of research. Keeping the identity of the students from the researcher proved to be beneficial to the study.

The study was original in its subject matter and the results are pertinent to the advancement of knowledge on spiritual formation opportunities influence on spiritual formation level in nurse anesthesia students under the stressors of residency. No ethical problems were encountered throughout the study.

CHAPTER FIVE: CONCLUSIONS

Overview

This chapter presents a summary of the research findings for the study regarding the influence of spiritual formation opportunities on spiritual formation level in nurse anesthesia students under the stressors of hospital residency. This researcher examines the significance of these findings. The chapter is organized by a compilation of the restatement of the research purpose and the research questions, next, the research conclusions, implications, and applications, followed by the research limitations and lastly, an evaluation of further research needs.

Research Purpose

The purpose of this mixed-methods case study was to understand and describe the influence of participating in spiritual formation opportunities during nurse anesthesia hospital residency on students' spiritual formation level and their ability to handle stressors of hospital residency. By measuring the relationship between spiritual formation opportunities and their influence on spiritual formation level while experiencing the stressors of nurse anesthesia school, this writer was able to identify relationships between spiritual formation level and spiritual formation opportunities. The study also provided information on the students' ability to cope with the stressors of anesthesia hospital residency.

Research Questions

Insights became apparent in the participants' answers to the four research questions.

RQ1. What difference exists, if any, between spiritual formation level and medical mission trip participation in student registered nurse anesthetists during the stressors of hospital residency?

RQ2. What difference exists, if any, between spiritual formation level and class devotional participation in student registered nurse anesthetists during the stressors of hospital residency?

RQ3. How do student nurse registered anesthetists in hospital residency perceive that spiritual formation opportunities contribute to spiritual formation level?

RQ4. How do student registered nurse anesthetists who have participated in spiritual formation opportunities perceive their ability to handle the stressors of hospital residency?

These observations also provided insight into the overall research question of how do student registered nurse anesthetists who have participated in spiritual formation opportunities perceive their ability to handle the stressors of hospital residency.

Research Conclusions, Implications, and Applications

Conclusions

The objective of this study was to examine nurse anesthesia students experiencing the stressors of hospital residency to determine if spiritual formation opportunities such as medical mission trips and classroom devotionals led to increased spiritual formation level. The findings of the research clearly support a perceived positive benefit to spiritual formation level among nurse anesthesia residency students who participate in classroom devotional and mission trip spiritual formation opportunities. Furthermore, the study supports a perceived positive influence of spiritual formation opportunities on spiritual formation level during the stressor of nurse anesthesia residency. Since their spiritual maturity level was not measured before participation, it is unclear if there was growth from the beginning of their anesthesia residency and this information should be considered in future studies.

Research Question One.

RQ1is: what difference exists, if any, between spiritual formation level and medical mission trip participation in student registered nurse anesthetists during the stressors of hospital residency? The first question identified a common theme between participants which was that of a strongly positive influence of medical mission trips on spiritual formation levels. As Participant I stated, "I feel like it was life-changing for me. I do feel like that it formed and reinforced my spiritual beliefs as well". Participant F also identified the mission trip as strongly influential on their spiritual formation. She said, "I did go on the medical mission trip and it greatly affected my spiritual formation. My prayer all throughout the week of the mission trip to just rely on the Lord and be Spirit lead throughout the week."

There was an insufficient number of students who participated in the research who attended the medical mission trip to significantly compare this variable. Although only 14 of the 30 interviewed nurse anesthesia residents attended the medical mission trip, all 14 attendees expressed that the medical mission trip was a positive benefit to their spiritual formation during the stressors of hospital residency. Six students expressed that the medical mission trip was moderately influential and eight of the participants felt the trip was strongly influential on their spiritual formation level. Participant I summed this theme up when she stated, "I feel like it was life-changing for me" (Participant I).

There was no difference in the theme that emerged between the Junior and Senior students who attended the medical mission trip. The study revealed that all the Junior 100% (*n=4*) and Senior 100% (*n=10*) nurse anesthesia participants believed the medical mission trips were positively beneficial to their spiritual formation level while

experiencing the stressors of hospital residency. Based upon this researcher's perceived excitement and engagement by the students during past medical mission trips this researcher was not surprised to find that they rated the medical mission trips as positively influential on their spiritual formation level.

From the high spiritual formation level FMS scores as well as the results of the qualitative interviews, research question one shows an enormously positive influence of the medical mission trips on spiritual formation level during the stressors of nurse anesthesia residency for both Junior and Senior students who attended the medical mission trips.

Research Question Two.

RQ2 is: what difference exists, if any, between spiritual formation level and class devotional participation in student registered nurse anesthetists during the stressors of hospital residency? The second question identified a common theme between participants which was that of a positive influential benefit of classroom devotionals on spiritual formation levels. Based upon this researcher's perceived lack of engagement by the students during morning devotionals this researcher was surprised to find that they rated this as positively influential. All 30 of the interviewed SRNAs conveyed that classroom devotionals were positively influential in their spiritual formation during the stressors of hospital residency. Of the participants, 11 perceived the classroom devotionals were moderately influential and 19 of the participants indicated the classroom devotionals were strongly influential on their spiritual formation level. Participant G summed this theme up when he stated, "The devotionals help to shift our perspective from the trials we're going through, to help us see the big picture" (Participant G).

There was no difference in the theme that emerged between the Junior and Senior students who participated in classroom devotionals. The study revealed all the Junior 100% (n=13) and Senior 100% (n=17) nurse anesthesia students perceived the classroom devotionals were positively beneficial to their spiritual formation level while experiencing the stressors of hospital residency. Based on the high spiritual formation level FMS scores as well as the results of the qualitative interviews, research question two shows a vastly positive influence of the classroom devotionals on spiritual formation level during the stressors of nurse anesthesia residency for both Junior and Senior nurse anesthesia students.

Research Question Three.

RQ3 is: how do student nurse registered anesthetists in hospital residency perceive that spiritual formation opportunities contribute to spiritual formation level? The third question identified a common theme between participants which was that of spiritual formation opportunities having a positive influence on spiritual formation level. Overall, the majority of participants 97% (n=29) expressed that the spiritual formation opportunities were positively influential in their spiritual formation during the stressors of hospital residency. Participant B summed this theme up when she stated, "I feel like I've grown closer to God in an exceptional high level of stress" (Participant B). Only one participant expressed no connection between the offered spiritual formation opportunities and their spiritual formation level.

There was minimal difference in the theme that emerged between the Junior and Senior nurse anesthesia students who participated in spiritual formation opportunities. The study revealed the Juniors 92% (n=12) and Seniors 100% (n=17) believed the

spiritual formation opportunities were positively beneficial to their spiritual formation level while undergoing the stressors of hospital residency.

Based on the high spiritual formation level FMS scores as well as the results of the qualitative interviews, research question three shows a majority positive influence of the spiritual formation opportunities on spiritual formation level during the stressors of nurse anesthesia residency for both Junior and Senior students.

Research Question Four.

RQ4 is: how do student registered nurse anesthetists who have participated in spiritual formation opportunities perceive their ability to handle the stressors of hospital residency? The fourth question identified a common theme between participants which was that of an ability to handle the stressors of hospital residency. Some (n=11) expressed they were easily able to handle the stressors of nurse anesthesia residency. The majority %53 (n=16) expressed they were moderately able to handle the stressors of hospital residency. Some of the students communicated their ability to handle hospital residency stressors came from a dependence on God. Others expressed that they could not have continued to be successful without their relationship with God. Participant R summed things up when she commented on her ability to handle the stress of residency when she said, "It gets stronger and stronger day by day" (Participant R). Only three students fell into the theme of poorly coping with the stressors of anesthesia residency but each of those students expressed recent improvement in their coping.

Noting that the majority of the Junior and Senior SRNA's scored highly on the FMS tool, it is unknown if their spiritual formation level significantly affected their ability to handle the stressors of nurse anesthesia residency. There was minimal

difference in themes that emerged between the Junior and Senior nurse anesthesia students. The Juniors indicated a 92% (*n*=12) ability to cope with the stressors of hospital residency while the Seniors indicated a 94% (*n*=16) ability to cope with the stressors of hospital residency. The results of the quantitative portion and the qualitative interviews, research question four show a majority of the nurse anesthesia residents are coping 90% (*n*=27) under the stressors of nurse anesthesia residency.

Implications

The implications of this study are based on the data obtained through research. The overall analysis of the quantitative data demonstrated that both Junior and Senior SRNAs in nurse anesthesia students in hospital residency scored a high spiritual formation level on the FMS tool. This conclusion is significant to the study. Although it is encouraging that both Junior and Senior nurse anesthesia students scored high on the FMS tool, the lack of statistical significance between Junior and Senior SRNAs indicates that the extra year of spiritual formation opportunities experienced by the Senior SRNAs was of no benefit but not at the level of statistical significance to spiritual formation levels. This lack of statistical significance implies that the majority of both Junior and Senior SRNAs FMS scores were positively affected by spiritual formation opportunities they experienced but the number of spiritual formation opportunities did not reach a statistical significance. Therefore, although the Senior SRNAs had more exposure to spiritual formation opportunities, due to being a year longer in the program, the extra year and therefore more exposure to spiritual formation opportunities, demonstrated no advantage to an increased spiritual formation level.

In the qualitative phase, the first theme noted was that the majority of students perceived that they were able to cope with the stressors of nurse anesthesia residency. The majority expressed a moderate ability to handle the stressors of anesthesia residency. This study did not yield data showing a link between the SRNAs' spiritual formation level and the ability to handle the stressors of nurse anesthesia hospital residency. However, many students perceived that the spiritual formation opportunities did assist them in coping with the stressors of residency. It is unknown if their high scoring Faith Maturity Scores gave them enhanced religious coping abilities for the stressors of nurse anesthesia hospital residency.

Other themes that emerged were that of a positive influence of medical mission trips on the participants' spiritual formation level, as well as a positive influence of classroom devotionals on the participants' spiritual formation level. The overarching theme that emerged from the interviews was a positive influence of spiritual formation opportunities on the participants' spiritual formation level.

One common occurrence that became noteworthy was some of the nurse anesthesia students' references to the different preceptor personalities being a stressor. This researcher was surprised by the number who voiced a preceptor difficulty as a stressor to their residency. When answering the question on the students' ability to handle the stressors of nurse anesthesia residency, six of the 30 nurse anesthesia students referred to the difficulty of adapting to the different preceptor personalities and expectations of them as a student. This would certainly be an implication for future research on what specific stressors affect the nurse anesthesia students' ability to handle hospital residency.

This study surmises that nurse anesthesia students under the stressors of anesthesia residency who participate in medical mission trips and classroom devotionals show a positively influenced spiritual formation level. The implication of this study demonstrates that although nurse anesthesia residency is shown in the literature to be stressful, providing spiritual formation opportunities to the SRNA while under the stressors of hospital residency can deepen their spiritual formation level. There was no perception by the students of the spiritual formation opportunities' influencing their coping abilities during the stressors of anesthesia residency. However, it is posited by this researcher that there is a strong positive correlation between their high faith maturity level and their ability to cope with stressors to the degree that those stressors do not reach the cognitive level of experiencing them.

Theological Implications. The study results suggest that spiritual formation opportunities are advantageous in positively affecting spiritual formation levels during the rigors of nurse anesthesia residency. Spiritual formation is multifaceted. "Spiritual formation is not the result of a single factor, but of multiple factors, both individual and social, which coalesce within the individual" (Estep, 2002, p. 160). Utilizing both classroom devotionals and medical mission trips to influence spiritual formation in the nurse anesthesia resident allows the educator to utilize spiritual formation opportunities to contribute toward increasing a student's spiritual formation level.

Spiritual formation is "what God does to and for us, along with all he makes available to make this transformation possible, a process that never ends until he brings us to himself" (Pettit, 2008, p. 105). In this research, devotionals and medical mission trips were available to the students in order to study their effect on spiritual formation.

This researcher enjoyed the privilege to study how this spiritual formation occurred among nurse anesthesia residents.

Spirituality and nursing are often linked (Kilpatrick, 2002). Nursing professionals often demonstrate mercy to the patients they care for. "Blessed are the merciful, for they shall receive mercy" (Mathew 5:7 English Standard Version). Paul also built upon this concept with his instructions to, "carry each other's burdens, and in this way you will fulfill the law of Christ" (Galatians 6:2 New International Version). As the students described their medical mission trip experiences and as well as how those trips affected their spiritual formation, Paul's teachings were evident. This was confirmed when Participant X stated, "The mission trip reminded me of the wonderful works of God that he does through me on a daily basis" (Participant X).

As the students further explained their experiences on the medical mission trip it became clear that "healthcare missions exist to facilitate and encourage physical, emotional, and spiritual health" (Seager et al., 2010, p. 266). Participant R identified this best when she said, "It made me realize that the problems we have now are not as big as some people may be facing. It was nice to take a step back from our reality and strengthen my walk with Christ" (Participant R). Participant CC also identified this concept when she described her medical mission trip experience by saying, "it helped me to find more confidence in carrying out my holistic care and being more brave in the aspect of praying with patients and not being afraid" (Participant CC).

Additionally, the classroom led devotionals contributed to the students' spiritual formation level. As Paul wrote, "when you are assembled and I am with you in spirit,

and the power of our Lord Jesus is present" (I Corinthians 5:4, New International Version). Participant Y expressed this concept when she stated:

> A lot of the times, before class or before a test, it was the most stressful time and we just took a minute and gave it to God, so that really actually helped a lot and made me feel more at peace. (Participant Y)

The community that evolved through classroom devotionals was evident in the students' expression of their devotional experiences. Participant P acknowledge the support of the community when she stated, "Having those devotionals as a class, praying and being able to feel that support, helped me to see the light at the end of the tunnel even better" (Participant P). Participant L also described the community created through the classroom devotionals when she stated:

> Class devotionals enhance my spiritual journey only because you get to hear other people's stories and you're not alone in this journey. Everybody has gone through something but we've all made it out and we're all pushing through it, so it actually kind of strengthened all our relationships with each other. (Participant P).

The community created among those participating in devotionals contributed a positive influence on their spiritual formation level.

Theoretical Implications. As the student develops in life as well as in their knowledge of anesthesia practice, they also have the opportunity to develop in their spiritual formation level. Erikson's displayed this idea in his life-cycle theory. "It is a religious construct in the sense that Erikson increasingly incorporated existential and religious language in his life-cycle theory" (Zock, 2018, p. 438). The person develops through many stages of intellectual learning as well as in levels of spirituality.

High stress is unavoidable in graduate medical education, but how one copes with that stress can be the difference between success and failure (Varner, 2011). "People are not only social, psychological, and physical beings, they are also spiritual beings" (Pargament, 2008, p. 23). Providing spiritual formation opportunities to nurse anesthesia residents may help them to cope under the stressors of anesthesia residency. Participant B expressed this concept well when she described how she handled the stressors of anesthesia residency, "persistence and put my faith in the Lord and he'll take it from there, and he has" (Participant B).

As the student progresses in their anesthesia residency they can learn from their educational and spiritual experiences. Participant X expressed this well when she said:

> I pray daily for God to cover me throughout the day and pray for the hearts and minds of the individuals that I will encounter on that day. I take each day as a learning experience and find the good in the bad. (Participant X).

The Christian educator must not only teach the concepts of their craft but serve to minister to the spiritual formation of each student. Christian education is about changing the individual and helping them in their relationship with Christ (Virkler, 2017).

Coping during the stressors of anesthesia residency can be positively influenced by utilizing one's spirituality. "A growing body of literature suggests that people often turn to religion when coping with stressful events" (Ano & Vasconcelles, 2005, p. 461). The student can learn to cope through "the use of cognitive and behavioral techniques, in the face of stressful life events, that arise out of one's religion or spirituality" (Tix & Frazier, 1998, p. 411). Although this study did not definitively link spiritual formation

and the ability to handle the stressors of nurse anesthesia hospital residency, the literature suggests religious coping can be beneficial in stressful situations.

Applications

Without practical applications, this research would be invalid. There are applications that can be gleaned from this study. This information is useful to every nurse anesthesia program within the United States and may be beneficial to those programs based in other countries as well because while the individual students may differ, the stressors are similar. Faculty and students in all areas of the United States and abroad are actively searching for evidence-based interventions to mitigate the stressors of anesthesia residency.

Although this study was focused on nurse anesthesia residents in one specific program, many medical graduate study residencies exist and are also extremely stressful. While the curriculum may differ among medical graduate studies, the stressors may be similar. Therefore, this study could also apply to other medical graduate study residencies.

Another possible application is the use of spiritual formation opportunities in all types of graduate studies. This study focuses on medical training, but graduate-level education of all types may also benefit from this type of study. No matter which graduate study one embarks upon, spiritual formation opportunities may be shown to have a positive influence.

The spiritual formation opportunities for this study were specific to devotionals and medical mission trips. Other types of spiritual formation opportunities could be added in the future. Other opportunities that could be suggested are prayer, fasting,

biblical studies, service projects, scripture memorization, and worship. There are many possibilities of spiritual formation opportunities for the nurse anesthesia resident to utilize that could contribute to their spiritual formation level.

Research Limitations

Limitations in this study were observed. Only SRNAs presently participating in hospital residency were studied. Therefore, a purposeful convenience sampling of currently enrolled nurse anesthesia students encountering the stressors of hospital residency was utilized. There were 54 qualifying SRNA's at the chosen university at the time of the study. A larger sample group might give a broader sample view.

Extraneous factors such as school class schedule variability, number of hours spent in the hospital weekly, and grade point average differences were not considered and may play a role in the students' life stressors. The study also did not account for differences in external stressors such as family dynamics, finances, separation from family or friends and support systems.

The study also did not measure the level of spiritual formation as the students entered the program to gain a baseline for comparison with their Junior and Senior years. Other spiritually formative disciplines such as church attendance, personal Bible study, and individual prayer were not assessed and may have contributed to their spiritual formation level in addition to those offered for the study. Since their spiritual maturity level was not measured prior to school or study participation, it is unclear if there was growth and should be considered in future studies of this type.

The small sample size and use of a single nurse anesthesia program prevented the results from being representative of all nurse anesthesia students. The sample population

cannot be representative of the stress level of all SRNAs in hospital residency. Each

nurse anesthesia student is diverse in their study habits and how they cope with the stress

of hospital residency. The hours spent in the hospital versus classroom time differ for

each anesthesia program. Consequently, the research will not necessarily generalize to all

nurse anesthesia hospital residency programs.

Personal stress management strategies may differ for each nurse anesthesia

student. Students have established stress management strategies before graduate school

that may or may not work with the stressors of graduate school & residency. Each

student's personal stress management technique was not considered.

A student's response to spiritual formation opportunities may differ depending on

their spiritual maturity when entering hospital residency. Some spiritual formation

opportunities may be more influential to spiritual formation than others. Furthermore, the

study was limited to one tool in order to measure spiritual formation levels due to the

study time limitations.

Online anonymous surveys were chosen for the quantitative portion for student

convenience reasons. A research assistant unknown to the students and without any

association with the nurse anesthesia program was utilized for the qualitative interviews.

This was to lessen any bias on the part of the primary researcher but may have limited the

possibility of familiar comfortable communication between the research assistant and the

participant.

The categorization of themes utilized by the research for the qualitative portion of

the study had no proven validity. This limits the reliability of the method. It would be

advantageous to utilize a tool with proven validity and reliability for the qualitative

portion of this study.

Further Research

Recommendations for future research are a result of the implications as well as

the limitations and delimitations of the study. After reflecting on the results of this study

the following recommendations for future research are suggested:

1. Further research could consist of a more in-depth study of spiritual formation opportunity influence on spiritual formation level during the stressors of nurse anesthesia residency.

2. Other studies might also expand the level of knowledge of how the stressors of nurse anesthesia residency may influence one's spiritual formation level.

3. Research on the degree of spiritual formation growth through spiritual formation opportunities throughout graduate school education would be valuable to all types of graduate studies.

4. Additional research to determine the degree of influence of individual spiritual formation opportunities have on student coping would be valuable. This would expand the body of knowledge of which opportunities provide the best advantages in coping for the students during their hospital residencies.

5. As a result of the unexpected finding that multiple nurse anesthesia students mentioned difficulty with preceptor personalities, further research is needed to study how the preceptor differences are affecting the level of stress in the nurse anesthesia student during hospital residency. With these findings, future research may look to find a way to mitigate preceptor difficulties for the nurse anesthesia resident.

6. Ideally, a validated and reliable tool to measure the correlation between spiritual formation opportunities and changes in spiritual formation level would be invaluable. This instrument would have far-reaching implications in all areas of the Christian life not just in the area of the stressors of nurse anesthesia residency.

Summary

The purpose of this mixed-methods case study was to understand and describe the

influence of participating in spiritual formation opportunities during nurse anesthesia

hospital residency on students' spiritual formation level as well as their ability to handle stressors of hospital residency. The case study concluded that the spiritual formation level of nurse anesthesia students under the stressors of hospital residency is positively influenced by classroom devotional and mission trip spiritual formation opportunities. Both Junior and Senior nurse anesthesia students scored high on their spiritual formation level, but the lack of statistical significance between Junior and Senior SRNAs indicates that the extra year of spiritual formation opportunities experienced by the Senior SRNAs was of no benefit to their spiritual formation levels. This study did not find that the students were able to perceive that this spiritual development positively or negatively affected their ability to cope with the stressors of residency.

The stressors of nurse anesthesia hospital residency are challenging. This research demonstrated that although the nurse anesthesia students do perceive the stressful circumstances of hospital residency, the majority are coping with those stressors. Although the research did not show a correlation between spiritual formation opportunities to a decreased stress of residency it is positive that the students are coping with those stressors.

This researcher was deeply moved by the experiences conveyed by the nurse anesthesia students. The privilege to read what students experienced through the spiritual formation opportunities of medical mission trips and classroom devotionals was heartwarming and encouraging to this researcher. Providing devotionals and mission trip spiritual formation opportunities to nurse anesthesia residency students has proven to positively influence spiritual formation levels. The current study displays strong evidence

for creating spiritual formation opportunities even under the demanding rigors of a nurse

anesthesia program.

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APPENDICES

Appendix A

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

November 15, 2019

R. Dawn Whybrew
IRB Approval 3887.111519: A Mixed-Methods Case Study of Spiritual Formation and School-Induced Stress in Student Registered Nurse Anesthetists During Hospital Residency

Dear R. Dawn Whybrew,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Your study falls under the expedited review category (45 CFR 46.110), which is applicable to specific, minimal risk studies and minor changes to approved studies for the following reason(s):

> 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.)

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

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Appendix B

UNION UNIVERSITY
INSTITUTIONAL REVIEW BOARD

To:	Robbie Dawn Whybrew
From:	Michele Atkins, Ph.D. - Chair, Institutional Review Board
Protocol:	#0919-01189 "A Mixed-Methods Case Study of Spiritual Formation and School Induced Stress in Student Registered Nurse Anesthetists during Hospital Residency"

This is to notify you that the Institutional Review Board has approved the above referenced protocol. This project was reviewed in accordance with all applicable statutes and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. At the end of one year from the approval date, if the project is not finished or terminated, a Continuing Review application must be completed and approved to continue the project. If approval is not obtained, the human consent form is no longer valid and accrual of new subjects must stop. Continuing review is not required in instances where such review does little to protect subjects (e.g., where data collection is complete and only data analysis is still being performed).

2. Any adverse effects must be reported to the IRB on the Adverse Effects Form. Adverse events should be reported to the IRB within 10 working days. Examples include unexpected complications in a subject, missteps in the consent documentation, or breaches of confidentiality.

3. No change may be made in the approved protocol without board approval, except where necessary to eliminate apparent immediate hazards or threats to subjects. Such changes must be reported promptly to the board to obtain approval.

4. The stamped, approved human subjects consent form must be used (if applicable). Photocopies of the form may be made.

If you have any questions, please call the Institutional Review Board office at 731.661.5580. The forms referred to above can be found on the Institutional Review Board website at http://www.uu.edu/programs/irb/.

November 1, 2019

_____
Michele Atkins, Ph.D.
Chair, Institutional Review Board
Union University

_____
Approval Date

Appendix C

CONSENT FORM

A MIXED-METHODS CASE STUDY OF SPIRITUAL FORMATION AND SCHOOL-
INDUCED STRESS IN STUDENT REGISTERED NURSE ANESTHETISTS DURING
HOSPITAL RESIDENCY
Dawn Whybrew
Liberty University
Rawlings School of Divinity

You are invited to participate in a research study on spiritual formation opportunities utilized during the student nurse anesthesia hospital residency and how these opportunities affect spiritual formation. You were selected as a possible participant because you are an adult graduate student nurse anesthetist (SRNA) presently in hospital residency attending a Christian University in the Southeast United States. Please read this form and ask any questions you may have before agreeing to be in the study.

R. Dawn Whybrew, a doctoral candidate in the Rawlings School of Divinity at Liberty University, is conducting this study.

Background Information: The purpose of this study is to seek to understand and describe the perceived influence of participation in spiritual formation opportunities in nurse anesthesia hospital residency on students' spiritual formation level. By separating out the perceived influence of participation in spiritual formation opportunities and the level of spiritual formation during the stressors of nurse anesthesia school, this writer hopes to identify any relationship between one's spiritual formation level and spiritual formation opportunities during nurse anesthesia residency.

Procedures: If you agree to be in this study, I would ask you to do the following things:
1. Participate in an online survey on your faith maturity as well as your participation in spiritual formation opportunities while in hospital residency. This procedure should take no longer than 15 minutes.
2. The top 30 individuals who have the highest scores on the FMS tool will be asked to participate in an interview with a research assistant about your experiences in hospital residency and how you perceive spiritual formation opportunities affect your spirituality. This interview should take no longer than 30 minutes. The interview will be audio-recorded for transcription purposes.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include understanding nurse anesthesia hospital residency stressors and how spiritual formation growth can occur while under these stressors.

Compensation: Participants will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researchers will have access to the records.

- Participants will be assigned a pseudonym. The research assistant will conduct the qualitative interviews in a location where others will not easily overhear the conversation.
- Electronic data will be stored on a password protected computer. All paper documentation will be stored in a locked cabinet in a locked office. The data will be maintained for three years after the completion of the study. After three years the electronic survey data will be permanently deleted, the audio files will be permanently deleted, and all paper documentation will be shredded through a secure shredding service.
- Interviews will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only the researcher and the research assistant will have access to these recordings.

Conflicts of Interest Disclosure: The researcher serves as a professor at Union University. To limit potential conflicts, a research assistant will conduct the recorded interviews. This disclosure is made so that you can decide if this relationship will affect your willingness to participate in this study. No action will be taken against an individual based on his or her decision to participate in this study.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Contacts and Questions: The researcher conducting this study is R. Dawn Whybrew. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at ▮▮▮▮▮▮▮ or ▮▮▮▮▮▮▮▮▮ You may also contact the researcher's faculty chair, Dr. Gary Bredfeldt, at ▮▮▮▮▮▮▮▮▮

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to audio-record me as part of my participation in this study.

_____

Signature of Participant   Date

_____

Signature of Investigator   Date

Appendix D

INFORMED CONSENT FOR RESEARCH ASSISTANT
TO ASSIST WITH RESEARCH STUDY

Purpose of the Study:
The purpose of this mixed-methods case study will be to seek to understand and describe the perceived influence of participation in spiritual formation opportunities, defined as medical mission trip participation and class devotional participation, during nurse anesthesia hospital residency on students' spiritual formation level and their ability to handle the stressors of hospital residency.

Study Procedures:
Study participants will be asked to complete an online survey and participate in an interview. Pseudonyms for each participant will be assigned by the SurveyMonkey platform, however participants will also be asked to electronically sign the online consent form. Once the surveys are complete, you will be asked to de-identify the survey data and deliver it to a secure location I will identify, where I will collect them. Only you will have a list that connects the participant's name and their pseudonym. After I have analyzed the surveys and determined those who qualify, you will be asked to contact approximately 30 participants to set up an audio-recorded interview. This is a qualitative interview to research the perceived influence of participation in spiritual formation opportunities, defined as medical mission trip participation and class devotional participation, during nurse anesthesia hospital residency on students' spiritual formation level and their ability to handle the stressors of hospital residency. Each participant will be asked five questions. You will record and transcribe each of their answers under their assigned pseudonym in order for the participants' identities to remain anonymous to the primary researcher. There is no compensation associated with the assistance of this study.

Risks and Benefits:
The possible risks for assisting in this study are low and primarily involve your time. Taking part in this study may increase your understanding of the topic.

Voluntary Nature and Confidentiality of the Study:
Assisting in this study is your decision alone. If you choose not to be a part of this study, there will be no penalties and you may withdraw your assistance at any time. I will ensure the confidentiality of all data and records and will report the data in a dissertation as well as possible presentations and/or publications.

Contact Information:
If you have any questions about this study you may contact R. Dawn Whybrew MSN, APRN, CRNA at ▇▇▇▇▇▇▇▇ or the dissertation supervisor Dr. Gary Bredfeldt by email at ▇▇▇▇▇▇▇▇

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu or the Union University Institutional Review Board Office at 731-661-5580 or email at irb@uu.edu.

Your consent to be part of the study will be based upon you signing below after reading this form. Please retain a copy of this letter for your records. Thank you for assisting with this study.

Sincerely,

R. Dawn Whybrew MSN, APRN, CRNA

Research Assistant Signature ▇▇▇▇▇▇▇▇ Date ___12-03-19___

Primary Investigator Signature ▇▇▇▇▇▇▇▇ Date ___12/03/19___

Appendix E

Robbie Dawn Whybrew

From:	Lydia Thompson <lydiat@search-institute.org>
Sent:	Friday, November 1, 2019 8:42 AM
To:	Robbie Dawn Whybrew
Subject:	[EXTERNAL] - Faith Maturity Scale
Attachments:	faith-maturity-scale.pdf; Benson, Donahue & Erickson, 1993(FMS)corrected version.pdf

Hello Ms. Whybrew,

You have been granted permission for the use of the Faith Maturity Scale. Please see attached materials.

Let me know if you have any questions!

Best,

█████████████████

--
Lydia Thompson
Survey & Data Specialist
Search Institute • 3001 Broadway Street NE, Suite 310 • Minneapolis, MN 55413
Direct Phone: 612-399-0235 • Fax: 612-692-5553 • www.search-institute.org

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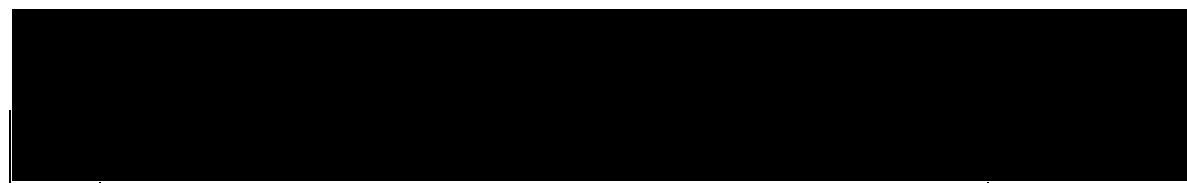
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Appendix F

Research Protocol

After the candidates have completed and consented to informed consent via the *Survey*

Monkey website they were asked the following questions:

1. Do you profess to be a Christian?

2. The participants completed the Faith Maturity Scale tool.

Faith Maturity Scale Tool

███
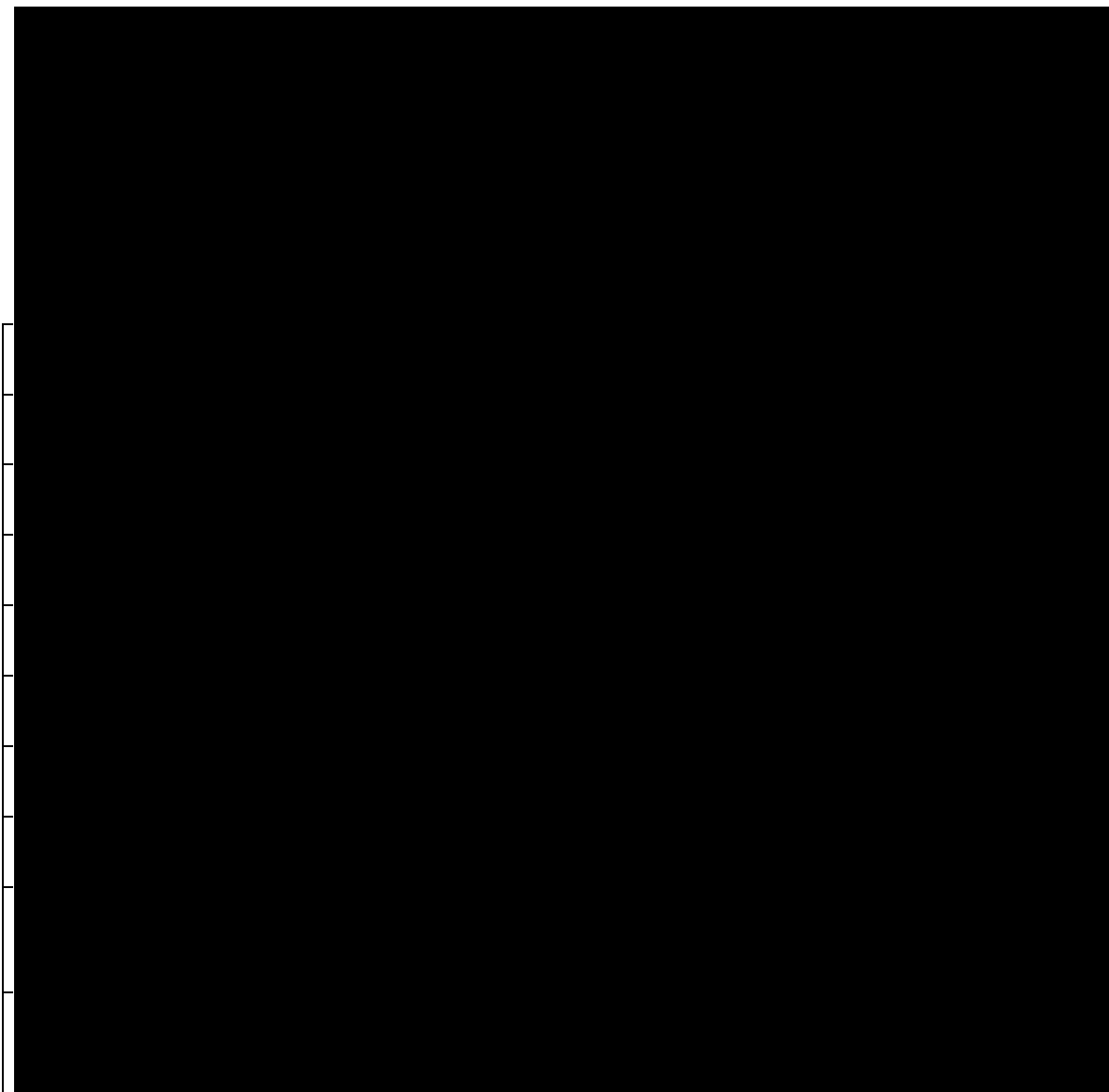
Next, the research assistant interviewed 30 participants individually in a private neutral location. The interview lasted no longer than 30 minutes. Each participant was asked the exact same questions. The participants' answers to the questions were categorized according to the categories listed in Appendix G.

Qualitative Questions

1. How do you perceive your ability to handle the stressors of hospital residency?

2. Did you go on the medical mission trip and if so how did your medical mission trip participation affect your spiritual formation?

3. How did your class devotional participation affect your spiritual formation?

4. How did your spiritual formation opportunities contribute to spiritual formation maturity level during your hospital residency?

Appendix G

Interview Categories

Anesthesia Residency How are you coping with stressors:
        Easily
        Moderately
        Minimally
        Not Handling Residency
Spiritual Formation Mission Trip Opportunities:
    Helpful
        Strongly
        Moderately
        Not Helpful
        Did Not Change Anything
Spiritual Formation Classroom Devotional Opportunities:
    Helpful
        Strongly
        Moderately
        Not Helpful
        Did Not Change Anything
Spiritual Formation Opportunities contribute to Spiritual Maturity:
    Helpful
        Strongly
        Moderately
        Not Helpful
        Did Not Change Anything