THE SPIRITUAL THERAPEUTIC PREFERENCES OF ONLINE LEARNERS AND ON-CAMPUS LEARNERS AT A CHRISTIAN COLLEGE

by

Debra Lynne Masterson

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

Liberty University, Lynchburg, VA

October, 2014
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ABSTRACT

The purpose of this quantitative study was to see if there was a difference in the spiritual therapeutic preferences of students at a Christian college who stay on-campus or students who take classes online. This study also investigated for differences in preferences between males and females as well as graduate students compared to undergraduate students. This study tested to see if there was a relationship between stress and spiritual therapeutic preferences among on-campus students and online students. Relative spiritual therapeutic preferences were assessed by the Nurse Spiritual Therapeutic Scale, and relative levels of stress were assessed by the Perceived Stress Scale. This study provides insight into what types of spiritual therapeutic actions are most preferred, or not preferred for college students when provided by a college health nurse as part of the student support services team. The results showed that there were no overall significant differences or statistically significant relationships among the spiritual therapeutic preferences for the groups studied. Suggestions are given for further research.

Keywords: student satisfaction, online learners, on-campus learners, spirituality, spiritual support, coping, religion, humor, retention, stress and health promotion
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CHAPTER ONE: INTRODUCTION

Background

College health nurses are employed on college campuses to promote the health and wellness of college students. When students attend college academic growth is essential, but spiritual health is also important. According to Astin (2004) less attention has been given to the spiritual development of college students in recent years. Having a strong sense of spirituality is associated with better emotional health and a better ability to cope (Gurklis & Menke, 1988; Kotarba, 1983; Miller, 1985). In addition, health promotion and disease prevention have become a major priority in the United States as America moves away from an acute care model, where people seek treatment once they are sick, to a model where people are expected to live healthier lifestyles to prevent illness in the first place (Bastable, 2008). Even though many colleges use counselors to support the mental health of students, college health nurses should not be overlooked as a vital part of the student support health services team that could be used to promote the spiritual health of college students.

Since spirituality is positively associated with wellness, colleges could look at improved ways to utilize nurses to provide better spiritual care for college students (Gurklis & Menke, 1988; Kotarba, 1983; Miller, 1985). It is also becoming common for colleges to combine health, wellness, and recreation services under one umbrella and sometimes within one facility (Fullerton, 2011). Nurses could be utilized quite effectively in this type of center due to the diversified training that nurses receive in all of these areas (Bastable, 2008). Nurses do not work in isolation, but rather are part of multidisciplinary teams that could include individuals from counseling, health sciences, and other college departments that have an effect on student health and wellness. Providing spiritually therapeutic services could be incorporated into wellness
center activities and educational presentations, to name only a couple of areas. The ability for nurses to effectively offer spiritually therapeutic services to online students should not be ignored. This study sheds some light on what types of spiritually therapeutic practices provided by nurses, who are part of the students support services of a college, were preferred by various subsets of college students. Understanding more about student preferences could lead to improvements at the experimental college, could provide insights for other colleges, and could expand the literature in this field.

**Theoretical Constructs**

Based on Erikson’s Stages of Psychosocial Development Theory, research has supported that college students, based on their age, would benefit from spiritual therapeutics because of their developmental needs for understanding their identity, developing connections with others, or their need to feel productive (Erikson, 1997). Another theory of importance for this study was Evans’ Attitudes Virtues theory which is based on the idea that students who give control to God and have a strong sense of spirituality will be able to make meaning out of hardships, which is why promoting spirituality in beneficial ways can lead to better coping for students. Rusbult’s Investment Model asserts that when students feel connected and have invested time and money in a college they will be more likely to stay at that college (Reis & Sprecher, 2009). Offering spiritual actions that students prefer could allow students to feel more connected to the college. Fowler (1981) developed the Faith Development theory, which describes how people go through many stages of faith development as a way to make meaning out of their lives. If a college’s purpose is to provide a holistic education, faith development should be a priority as well. Parks (2000) also relates the need for college students to explore their spirituality in an independent and imaginative way as they venture out into the world where they had once been under strong
parental authority. Bronfenbrenner’s (1979) Ecology of Human Development theory illustrates how it is possible for online learning to promote spirituality for online students. Students are influenced by spirituality that is found within themselves as well as from the influences that are found outside of themselves within their environment. Watson’s Caring theory can be used as a framework to guide nurses as they offer spiritually therapeutic actions in a way that promotes health and prevents sickness (Watson, 2009).

**Problem Statement**

It was not known what types of spiritually therapeutic actions college students, either on-campus or online, prefer to have available, which could hinder a college’s ability to provide effective spiritual therapeutics. Lack of spiritual therapeutics, or using the wrong spiritual therapeutics could result in dissatisfaction with the college, lead to a student withdrawing from the college, and could possibly affect a student’s health in a negative way. Improving upon spiritual therapeutics offered by a college is an ongoing process, especially since more and more classes are being offered online.

**Purpose of the Study**

The purpose of this quantitative study was to see if there is a difference in the spiritual therapeutic preferences of online students as compared to on-campus students who attend the same Christian college and also determine if there was a relationship between spiritual therapeutic preferences, gender, and level of academic degree attained as measured by the *Nurse Spiritual Therapeutic Scale* (NSTS). The *Perceived Stress Scale*, also referred to as the PSS10, was used to measure relative levels of stress among on-campus and online students as a way to determine if there was a relationship between stress and spiritual therapeutic preferences (Taylor & Mamier, 2005; Yu & Ho, 2010). College campuses are an ideal place to promote student
wellness that includes the mind, body, and soul, and this study took place at a Christian college that understands the value of spiritual therapeutics for students. Assessing what spiritual therapeutics were most helpful from the students’ perspective could allow the college to determine what types of spiritual therapeutics to offer in the future.

**Significance of the Study**

This study was significant for many reasons. First of all, research has shown that students think that spirituality is important and many students feel that their colleges do not put enough emphasis on spirituality (Hartley, 2004; HERI, 2003). Secondly, this study was significant because little is known about what types of spiritual therapeutic actions college students prefer. Thirdly, when colleges offer preferred spiritually therapeutic actions it could lead to better health, better coping with problems and better psychosocial adjustment of students (Brillhart, 2005; Davis, 2005; Gibson, 2003; Hampton & Weinert, 2006; Jesse & Reed; 2004; Kaye & Robinson, 1994; Meraviglia, 2004; Reynolds, 2006; Sin Logeffo, Belza & Cunningham, 2004; Tang, Aaronson, & Forbes, 2004; Tanyi & Werner, 2003; Tuck, McCain & Elswick, 2001; Westlake et. al., 2002). Lastly, this research could benefit the college as well because a focus on spirituality could lead to higher student satisfaction and higher retention rates (Dennis, Muller, Miller, & Banjee, 2004; Frankel & Hewitt, 1994; Kuh & Gonyea, 2006; Molcar & Stuempfig, 1988; Mooney, 2010; Saggio & Rendón, 2004; Shin, 2002).

**Research Questions and Null Hypotheses**

There are seven research questions and null hypotheses.

**Research Question One.** Does the setting in which college students take classes affect their spiritual therapeutic preferences?
Research Question Two. Does gender make a difference in the spiritual therapeutic preferences of online college students?

Research Question Three. Does gender make a difference in the spiritual therapeutic preferences of on-campus students?

Research Question Four. Is there a relationship between stress levels and the spiritual therapeutic preferences of online college students?

Research Question Five. Is there a relationship between stress levels and the spiritual therapeutic preferences of on-campus students?

Research Question Six. Does the level of college degree affect the spiritual therapeutic preferences of online college students?

Research Question Seven. Does the level of college degree affect the spiritual therapeutic preferences of on-campus students?

Null Hypothesis One. There will be no significant differences in the spiritual therapeutic preferences of on-campus students as compared to online students at the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

Null Hypothesis Two. There will be no significant differences in the spiritual therapeutic preferences of online female students as compared to online male students at the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

Null Hypothesis Three. There will be no significant differences in the spiritual therapeutic preferences of on-campus female students as compared to on-campus male students at the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

Null Hypothesis Four. There is no statistically significant relationship between the spiritual therapeutic preferences of online students and stress levels at the Christian
Null Hypothesis Five. There is no statistically significant relationship between the spiritual therapeutic preferences of on-campus students at the Christian college as measured by the Nurse Spiritual Therapeutic Scale and the Perceived Stress Scale.

Null Hypothesis Six. There will be no significant differences in the spiritual therapeutic preferences of online undergraduate students as compared to online graduate students in the Christian college setting as measured by the Nurse Spiritual Therapeutic Scale.

Null Hypothesis Seven. There will be no significant differences in the spiritual therapeutic preferences of on-campus undergraduate students as compared to on-campus graduate students in the Christian college setting as measured by the Nurse Spiritual Therapeutic Scale.

Definition of Terms

The researcher has defined the following terms to aid in understanding the research.

Nurse Spiritual Therapeutic Scale (NSTS)

The NSTS is an instrument that includes 20 items that measures the degree to which a client, or in this case a college student, prefers a nurse provided spiritual action. A copy of the NSTS is located in Appendix A (Taylor & Mamier, 2005).

On-Campus Students

These are students who take classes primarily on-campus and were identified by the college as being on-campus students.

Online Students
These are students enrolled in an online program and were identified by the college as being an online student.

**Perceived Stress Scale (PSS10)**

This is a 10 item instrument that measures the perceived stress level that was self-reported by participants in a questionnaire format, and a copy is located in Appendix A (Cohen, Kamarck, & Mermelstein, 1983). Students were asked about whether their lives have felt out of control, unpredictable, or overwhelming in the last month.

**Stress**

Stress is “the application of tension, force, or pressure (a stimulus) to an organism. The appraisal of the stimulus as overwhelming. That is, the organism perceives an inability to meet the challenge. A measurable response by the organism to the stimulus” (Goodnite, 2013).

**Spirituality**

Spirituality is defined as “all forms of reflection and introspection in which the primary goal is to explore one’s relationship to the transcendent in order to deepen and enrich personal meaning, purpose, authenticity and wholeness” (Dalton, Eberhardt, Bracken, & Echols, 2006).

**Spiritual Therapeutics**

Spiritual therapeutics are helpful actions based on research, that are given by nurses, to promote spiritual health, such as prayer or making a referral for a chaplain (Taylor & Mamier, 2005).

**Conclusion**

The spiritual therapeutic interventions that are included in the NSTS are mostly geared toward a face-to-face visit between a nurse and a student, such as would be typical on the traditional campus. However, it is important to realize that having insight into what all types of
students might find helpful is a first step into offering potential nurse spiritual therapeutics to different groups of students based on their preferences. Asking traditional students, online students, male students, female students, graduate students, undergraduate students, and students with varying levels of stress about their preferences was a way to see if their needs are similar or different. For example, one of the statements on the NSTS states, “In general, I would want my nurse to listen to the stories of my life.” If on-campus students prefer to have a nurse listen to the stories of their lives it does not necessarily mean that an online student prefers the same thing. However, if traditional and online students both prefer to have a nurse listen to the stories of their lives then further research could demonstrate the best way to offer this nurse therapeutic action, especially for students who live at a distance. While traditional students might have an in person visit with a nurse it is possible that online students might enjoy having an online virtual face-to-face visit with a nurse. It is also possible that just the opposite is true and all students might only prefer an actual in person visit. This was not the focus of this study, but rather this study provides a starting point for determining which nurse therapeutics are the most preferred by all types of students.

While offering spiritually therapeutic opportunities may not make a student more spiritual, it is important to encourage and support opportunities for the spiritual growth of college students (Lowe, 2010). It is also important to keep in mind that students are on their own journey and while they may not find spiritual therapeutics something that they are interested in all of the time, it could be something that they appreciate if they are going through a struggle or are at a time when they are trying to find meaning in their lives. All students who participated in the study had an opportunity to provide insights on which spiritual therapeutics would be helpful or not helpful to them by answering the NSTS. This could help colleges in the future to decide
what spiritual therapeutics to offer which could lead to higher student satisfaction, higher retention and better health for students. This research has been an attempt to fill a gap in the literature because it was not known what types of spiritual therapeutics were preferred by college students.
CHAPTER TWO: REVIEW OF THE LITERATURE

Introduction

The purpose of this study was to see if there was a difference in the spiritual therapeutic preferences of students at a Christian college who stayed on-campus or students who took classes online. Within each of these groups males were compared to females, and undergraduate students were compared to graduate students. This study was also done to see if there was a relationship between stress and spiritual therapeutic preferences. Spiritual therapeutics can be defined as "therapeutic strategies that incorporate a spiritual or religious dimension as a central component of the intervention" (Hodge, 2006, p. 157). A literature review led to an understanding of the contributing factors related to this research. Current, as well as historical research has been included. This literature review included multiple databases, such as ERIC, ProQuest, and CINAHL as well as other databases that included peer reviewed journals and books. Common keywords that were used to find published articles were “student satisfaction”, “online learners”, “spirituality”, “spiritual support”, “coping”, “religion”, “humor”, “retention”, “stress” and “health promotion”.

Since it was important to understand all of the contributing factors related to this research it was necessary to examine the historical and current research. The areas that were focused on included; educational learning formats, spirituality and satisfaction with college, spirituality and coping, spirituality and health, spirituality and humor, positive effects of spirituality, negative effects of spirituality, Erikson’s stages of psychosocial development, Attitudes-Virtues theory, Rusbult’s Investment Model, Ecology of Human Development, Jean Watson’s Caring theory, online learners, spiritual support services, retention, spiritual interventions, graduate students, undergraduate students, and health promotion.
Educational Learning Formats

Educational learning delivery options and formats have come a long way in recent years. In years past, most students in higher education took classes on a traditional campus and in a classroom where all participants saw each other and interacted in a face-to-face manner. However, in recent years, as many as one in four students took at least one class in an online format (Allen & Seaman, 2010). Some colleges offer programs that can be completed in a completely online format. Other programs might utilize a combination of face-to-face classes and online classes, also referred to as hybrid classes. There are also many variations in instructional methods within each of the online and hybrid classes. Some online or hybrid classes are synchronous and all participants are required to be online at the same time. Other online and hybrid classes are asynchronous and students can participate at times that are convenient for them. Some colleges have online and hybrid classes that utilize technology to the fullest extent using all of the latest software to enhance the online platform whereas other colleges just post a previous classroom lecture online and not much time and attention is used to tailor a course to the online environment. Distance learning not only includes online learning but could also be referring to correspondence courses and educational television. The latest trend is that some colleges have started offering free massive open online courses, also known as MOOCs, for those students who are not enrolled as an official student at a college; they are permitted to take a college course to gain information without receiving official college credit. There are only 2.6% of colleges offering a MOOC, but more colleges are planning to start offering a MOOC (Waldrop, 2013). Time will tell whether or not confusion will result due to students claiming MOOC credentials but lacking a higher educational degree. With so many variations in classroom delivery methods, it is not always easy to tell from the research whether
it is the mode of content delivery that is responsible for desirable educational outcomes or whether it is some other variable that is responsible. When looking at the research it is good to keep all of the above thoughts in mind.

There is now a lot of research available about online learning. A meta-analysis of 45 studies showed that online and face-to-face classes are equally effective at achieving favorable educational outcomes while hybrid courses have a slightly higher positive effect on educational outcomes (Means, Toyama, Murphy, & Baki, 2013). Colleges must feel satisfied that online learning is effective since over 69% have included online learning as a part of their long term plans (Allen & Seaman, 2013). While the attrition rate for online students remains higher than for students in face-to-face classes it is hard to always pinpoint an exact reason (Ali & Leeds, 2009). A study by Cho and Shen (2013) showed that success in online learning was related to the ability for students to self regulate their own learning. Perhaps it is the student’s own intrinsic motivation that leads to success which may not have as much to do with outside factors.

Finances may be a reason for the increasing demand for online classes by colleges and also by students. High unemployment rates in America and an economic recession have fueled a need for affordable educational alternatives (Bowen, Nygren, Lack, & Chingos, 2013). Offering online classes can be advantageous for colleges for many reasons. The Centers for College Affordability and Productivity created a report that outlines numerous ways that colleges can cut costs and then pass the savings on to the students through online classes (Vedder et al., 2010). Here are some of the ways mentioned in the report: Colleges can increase enrollments by offering classes to the entire world rather than to just a small geographic area that is within commuting distance. Colleges can also recruit qualified faculty from all over the world. Rural colleges may be located in areas with a lower cost of living and a small pool of applicants, so by
offering online classes they could still compete with brick and mortar colleges in more expensive areas of the world. Students may also find it helpful to be able to price comparison shop many more colleges than just the ones in their own geographic area if they are willing to take classes online. There would also be savings related to gas and tolls if students are not required to commute. Students could have much less interruption in their work schedules if taking asynchronous online classes. Whereas students in face-to-face classes would have to make sure that their work schedule did not interfere with classes, an online student could keep their regular work schedule and salaries would not be affected.

**Definition of Spirituality**

It is important to note that spirituality may not include religion at all for some people, but religion might be a part of spirituality for others. A definition for spirituality that could apply to the college setting is, “all forms of reflection and introspection in which the primary goal is to explore one’s relationship to the transcendent in order to deepen and enrich personal meaning, purpose, authenticity, and wholeness” (Dalton, Eberhardt, Bracken, & Echols, 2006). It is only when spirituality is seen as truth and something that it is part of all human beings, that it will stop being utilized by colleges in an extracurricular kind of way (Zajonc, 2003).

Since this study was conducted at a Christian college, it was necessary to have a more specific definition of Christian spirituality. Perrin (2007) offers the following definition of Christian spirituality:

Christian spirituality is the experience of transformation in the Divine human relationship as modeled by Jesus Christ and inspired by the Holy Spirit. Christian spirituality is appropriated as a lifestyle within all relationships in the broader Christian community as well as in society in general. While Christian spirituality embraces Christian traditions
and beliefs, it also exceeds the boundaries of established religions and their theologies. As such, Christian spirituality is always open to new and unexpected expressions of the way the Spirit of God is actively incarnated in human history, whether within the Christian traditions or from outside of them. (p. 32).

It is important not to assume that all students that attend a Christian college have a personal relationship with Jesus Christ, but this does not eliminate the fact that everyone has spiritual needs. Tisdell (2003) a researcher and professor in the higher educational setting has made some general assumptions about spirituality in the higher educational setting. Spirituality and religion are not the same but they are interrelated for some people. Spirituality is a way to make meaning out of life. Just because a student does not acknowledge that spirituality exists, it does not change the fact that it always exists (Tisdell). Since students come from diverse spiritual perspectives, the definition given by Dalton, Eberhardt, Bracken, and Echols was used for the purpose of this study (2006).

**Student Interest in Spirituality**

A synthetic review of numerous scientific studies showed that college students were very interested in spirituality (Hartley, 2004). The Higher Education Research Institute at the University of California, Los Angeles conducted a study that included 3,640 students from 46 different types of colleges across the United States to find out more information about spirituality among college students. The findings of this study overwhelmingly showed that the majority of college students wanted spirituality to be a part of their college experience. For over 70% of the college students in the study, praying, talking about religion or spirituality with friends, feeling like religion is helpful and believing that their religious or spirituality beliefs had helped to shape their identity was reported (HERI, 2003). Unfortunately 45% of the students in the study
expressed disappointment because their college experience did not provide them with enough opportunities for religious or spiritual reflection (HERI).

**Spirituality and Satisfaction with College**

When students are satisfied with the college experience it is beneficial to both the students and the college. Satisfaction is the result of meeting or surpassing the expectations of a student (Szymanski & Henard, 2001). All students come to a college with their own personal set of expectations. However, understanding what makes college students satisfied, and what students’ expectations are is harder to determine. Elliott and Healy (2001) state that “student life is a web of interconnected experiences which overlap and influence student satisfaction” (p. 2). The entire college experience needs to be taken into account when determining what makes students satisfied. Although good academics is important, it would not be enough for a college to just provide good academics and ignore all other aspects of the college experience if it was their desire to have satisfied students. Colleges need to consider the social, physical, and spiritual experiences of the students as well (Sevier, 1996). When students reported that college experiences contributed to a deepened sense of spirituality it led to feeling supported in nonacademic and social areas of their lives as well (Lovik, 2010).

The benefits of spirituality for college students have been documented by researchers. Research supports that students that have a high level of spirituality in college are more likely to be satisfied in life and with college (Dennis, Muller, Miller, & Banjee, 2004; Kuh & Gonyea, 2006). College students who are involved in faith groups were more satisfied with their lives than college students who were not involved in faith groups (Frankel & Hewitt, 1994; Mooney, 2010). College students who had a worldview that included a belief in a God who was personal
had more of a sense of purpose in their lives and were more satisfied with their overall goals (Molcar & Stuempfig, 1988).

**Spirituality and Retention**

Whether or not a student is satisfied often determines if a student will stay at the college. Colleges should be concerned with the retention of students. It is more cost effective to retain the students that a college has rather than paying for numerous recruitment programs and campaigns. Satisfied students are much more likely to recommend the college to their friends and family whereas unsatisfied students could withdraw from the college. Even though many people do not view a college as a business, the college market is very competitive, and colleges need to stay financially strong. A study by Shin (2002) found that when there was a sense of interconnectedness online, and student retention was impacted in a positive way. Another study found that when the students’ worldview was a good spiritual fit with their college and there were opportunities for spiritual growth, it was a very strong predictor of retention (Morris, Beck, & Smith, 2004). Saggio and Rendón, (2004) also found that spirituality was a strong predictor of college student persistence. It is important for colleges to look for the holes in their retention policies and see where students might be falling through the cracks and withdrawing from the college (Nichols, 2010). It is possible that a lack of good spiritual intervention services for both online and in classroom students could be one of those holes.

Many colleges have programs for new incoming freshman to introduce them to the college and to help to prepare them socially and academically. This type of program goes by many different names, and each college may call it something different, but it is sometimes referred to as the First Year Experience (Hoffshire, Ralston, & Lacho, 2013; Krackow, 2013). For colleges that value spirituality for their students, programs for incoming freshmen or transfer
students could incorporate activities and discussions that promote spirituality. There has been research to support that these programs help students to acclimate to the college environment with a goal that students will be successful, will stay at the college and eventually graduate (Noble, Flynn, Lee & Hilton, 2008). These programs are helpful for making sure that the mission of the college is supported and that students will integrate into the college environment successfully by making new connections. When students feel connected to a college they are more likely to stay at a college (Shinn, 2002).

**Spirituality and Health**

The lives of college students are often filled with many challenges. Exercise, spirituality, and health promoting activities might become less important when faced with the academic and social demands of college. Some college students are living away from home for the first time, and challenges could include living with roommates, making new friends and facing peer pressure to fit in. Living at home with parents may have meant that healthy food options were promoted, while living at college might mean students are tempted to make poor food choices. In college, there is less free time available. Students may have had more time to engage in leisure activities before coming to college because many of their needs had been met by their parents. Attending religious services or focusing on spiritual health needs might become less important when so many competing demands are experienced. When college students practice health-promoting behaviors that include attention to their spiritual health it leads to less depression and better coping with the stress of college (Hsiao, Chien, Wu, Chiang, & Huang, 2010).

The benefits of spirituality are far reaching and research supports that health and wellness, coping, satisfaction with life, recovery from illness and healing, hope and good
psychosocial adjustment are positively affected by spirituality (Brillhart, 2005; Davis, 2005; Gibson, 2003; Hampton & Weinert, 2006; Jesse & Reed, 2004; Kaye & Robinson, 1994; Meraviglia, 2004; Reynolds, 2006; Sin Logeffo, Belza, & Cunningham, 2004; Tang, Aaronson, & Forbes, 2004; Tanyi & Werner, 2003; Tuck, McCain & Elswick, 2001; Westlake et. al., 2002). Since health issues could negatively impact a student in all areas of life it is important to focus on ways to keep students healthy. When students participate in spiritually therapeutic activities that they find helpful, it could prevent illness and lead to better health.

**Spirituality and Coping with Stressful Issues**

College students may experience high levels of stress related to their academic course load in addition to any personal issues that they may be experiencing. Being religious or having a sense of spirituality allowed college students to be able to cope better with personal struggles (Knox, Langheough, Walters & Rowley, 1998; Patton & McClure, 2009). Spirituality can be a way to lessen the harmful effects of personal distress among college students (Schafer, 1997). Similar results were found among international college students (Hsu, Krageloh, Shepherd, & Billington, 2009). Students who were interested in spirituality participated in more alternative health practices, and religious students reported less depression (Burke, Eliason & Van Olphen, 2009). College students that incorporated spirituality into their lives have better health outcomes (Nelms, Hutchins, Hutchins, & Pursley, 2007). Minority college students attending predominantly white institutions depended more on their spirituality for support and as a coping mechanism (Weddle-West, Hagan, & Norwood, 2013). College students who had a strong sense of spiritual direction reported less antisocial behaviors (Knox, Langheough, Walters, & Rowley). In one study, 89% of college students reported that they felt overwhelmed with their demands, which included academic work, relationship issues, financial problems, and health concerns for
themselves or a family member (Ernst & Ernst, 2011). College campuses could also be a dangerous place if students who are at risk for carrying out violent acts are not identified and offered help. Recent campus shootings show that better attention and better intervention strategies need to be investigated to prevent further violent incidences (Ernst & Ernst, 2011).

Positive Effects of Spirituality in the Lives of College Students

The positive effects of spirituality in the lives of college students make it easier for them to view their college experience positively as well. College students who had a stronger spiritual orientation toward life had a higher score for self-esteem (Knox, Langehough, Walters, & Rowley, 1998). Students who were more involved in spiritual practices were more likely to be involved in college activities which led to being more satisfied with their total college experience (Kuh & Gonyea, 2006). Students who had higher levels of spirituality in their lives had higher academic performance (Walker & Dixon, 2002). College students who had a lack of spirituality had more psychological symptoms (Bonab, B. G. & Habibi, H., 2010; Addis, Traux, & Jacobson, 1995; Debats, Drost, & Hansen, 1995; Mascaro & Rosen, 2005; Zika, Zika, & Chamberlin, 1992). When there is a focus on spiritual development, college students show higher levels of well-being, and they are able to find meaning and purpose in their lives (Zhang et al., 2013).

Positive Effects of Spirituality for all Populations

There are vast amounts of research that show that spirituality is an important quality to have, not only for college students but for everyone in all stages of life. Spirituality has positive effects on general health and wellness, coping, satisfaction with life, recovery from illness and healing, hope, and psychosocial adjustment (Brillhart, 2005; Davis, 2005; Gibson, 2003; Hampton & Weinert, 2006; Jesse & Reed; 2004; Kaye & Robinson, 1994; Meraviglia, 2004; Reynolds, 2006; Sin Logeffo, Belza, & Cunningham, 2004; Tang, Aaronson, & Forbes, 2004;
Tanyi & Werner, 2003; Tuck, McCain, & Elswick, 2001; Westlake et. al., 2002). Engaging in religious practices and having faith can have a positive effect on health issues including HIV/AIDS, stress, anxiety, cardiovascular problems, arthritis, inflammatory bowel disease, rheumatoid arthritis, and wound healing (Koenig, King, & Carson, 2012). Since research supports the positive effects of spirituality in all aspects of life it would make sense that spirituality is an important part of life for college students. Spirituality should be incorporated into college life and the curriculum.

**Negative Effects of Spirituality**

Overall the literature suggests that giving attention to spirituality in one’s life is very beneficial. However, it is necessary to look at the small number of studies that did not show the benefits of spirituality. Taylor (2002) discusses how spirituality can be an addiction for some people and when used as an escape can actually hurt a person if reality is denied or if a person does not deal with his or her feelings. A study by Schaefer and King (1990) showed that religiousness made no difference in stress levels in the lives of college students. On the contrary, if a student’s faith is put to the test some studies show that students may report higher levels of stress and anger (Schaeffer, 1997; Schaeffer & King, 1990; Winterowd et al. 2005). Another study showed that when religious activity is done out of obligation, there is probably little if any spiritual benefit (Cashwell & Young, 2005).

**Spirituality in the Online Classroom**

Incorporating spirituality into traditional classrooms has been overlooked by some colleges; in addition, with the increased number of students now taking classes in an online format the same challenges exist but with little understanding on how to effectively incorporate spirituality into this educational setting. It is necessary to explore the literature for research in
this area and make sure that spirituality is not left out of the educational setting. Students would be better off if they could engage in “reflective dialogue where they do not have to artificially divorce their personal or spiritual selves from their academic selves” (Bryant, Choi, & Yasuno, 2003, p. 741). Maddix & Estep (2010) give the following explanation,

We cannot simply pretend that because the Internet has changed our way of life that it is innately wrong or devoid of any potential for use in spiritual formation. The mediums at our disposal may have changed, but not the central message. If we wholeheartedly reject online spiritual formation, then are our online programs to be devoid of spiritual content, devoid of spiritual nurture or benefit? If our institutions choose to engage in online learning and provide online program options, then we must likewise choose to engage in spiritual formation. (p. 430)

Ignoring the problem is not the answer. Online classes are not going away as research has clearly demonstrated the value and effectiveness of learning in this format (United States Department of Education [USDOE], 2009). There were 5.6 million students that took a class in an online format in 2009 (Allen & Seaman, 2010). Research is greatly needed in the area of spirituality and online learners. Education that is holistic in nature is essential.

Online learning communities are one way to help students to connect to each other, their professors, and the college itself. Not only do learning communities promote academic growth as students learn from their professors and each other, but they can promote spiritual growth as well (Maddix, 2013). Since online learning replaces a physical presence in the classroom colleges need to make sure that the values of the college are being incorporated so online learning communities are a great way to incorporate the mission of the college and promote spiritual growth.
Theoretical Framework

Erikson’s Stages of Psychosocial Development

There are many developmental reasons why a focus on spirituality is important for the satisfaction of college students. Erik Erikson (1997) was a psychologist who has done extensive research on the developmental stages of humans. Erikson’s work includes eight stages of psychosocial development. This research expanded upon Freud’s work, which included the eight psychosexual phases.

Many college students are still in the developmental stage of young adulthood, which spans from about 12 years of age to about 20 years of age. This is the stage of identity vs. role confusion, a time in a person’s life when understanding one’s values and beliefs is very important. Young adults are trying to find out who they really are, and this is often tied to a spiritual pursuit because reflection and a search for meaning and purpose is necessary. Deciding on a career often involves searching for a calling and a way to make a difference in the world (Dalton, Eberhardt, Bracken, & Echols, 2006), and students will take time to reflect inwardly when choosing a career path. Focusing on spirituality in college could allow students more of a chance to focus on their identity.

College students who fall between the ages of 20 to 24 would likely be in the phase of intimacy vs. isolation (Erikson, 1997). Students in this stage will have a desire to have deeper connections to others and forge stronger relationships. Fostering a holistic learning environment could promote stronger and more meaningful connections between the student, teachers and the college. If the student can develop these connections it is more likely that the student will be satisfied with the college experience, continue to attend college, and experience greater wellness.
Students who fall within the ages of 25-64 are in the phase of generativity vs. stagnation (Erikson, 1997). It is in this stage when students will be evaluating their lives to see if they are fulfilling their purpose in life. A sense of regret might occur if students believe that they are not meeting their life goals or if they are not headed in the right direction. Allowing students to reflect on their purpose in life and their future may allow them to feel more satisfied with where they are headed in the future. A college that is focused on offering spiritual interventions can help students in this phase, which could allow the students to remain at the college, and feel more satisfied with life and college in general. This could lead to better health as well.

**Faith Development Theory**

Fowler (1981) developed the Faith Development Theory, which describes developmental faith stages that all people experience in some way. This continuum starts out with Stage 0 which is called Primal Faith. Primal Faith is present in the beginning of life and even though the child would not be able to verbalize these attitudes, it would include feelings of hope about self and environment. The last stage, which is Stage 6, describes a universalizing faith that encompasses all that one is, and not everyone is said to reach this stage. Furthermore, each person will enter some of these phases in his or her own way and in his or her own time frame, while not everyone will go through all of the stages.

Since college students are moving through the faith stages, this study can help to shed light on what spiritual therapeutics would be helpful for them. For example, Stage 4 is called Individuative-Reflective Faith (Fowler, 1981). College students in this stage would be looking for truth and may be questioning the views of those in authority to find their own understanding. If spiritual therapeutics are offered to students within the college setting, it could help students to develop spiritually, just as the academics that are provided by the college help them to grow.
The desired end result would be that students would receive a holistic educational experience.

**Attitudes-Virtues Theory**

Donald Evans (Carr & Haldane, 2003) is a theorist with a self-pronounced Christian worldview who was heavily influenced by Erikson (1997) and builds upon his theory further by explaining that spirituality provides a way to be content even when things are not going well. Evans’ attitudes-virtues theory explains different stances of being in the world and these are what he considers the basis for human fulfillment. These stages complement Erikson’s stages and are the moral and ethical components of the stages. They include: basic trust, humility, self-acceptance, responsibility, self-commitment, love-friendliness, concern, and contemplation.

People will become more themselves when they lose themselves in God. By being humble people give up their pride and God lives in them and through them. Giving up parts of themselves helps people to have more fulfillment in life even though it involves a letting go of themselves. It is in this way that college students who have a strong sense of spirituality could make meaning out of hardship and remain satisfied with the college experience and with their lives in general. Evans (Carr & Haldane, 2003) asserts that spiritually mature people realize that they have value even if things are not going well. It is this type of thinking that allows people to feel satisfied and that their life has meaning even if some of their needs are not being met.

**Rusbult’s Investment Model**

Rusbult’s Investment Model (Reis & Sprecher, 2009) is one that can be used to help explain why students who receive spiritual support would be more satisfied and might remain at a college. First, people are more satisfied when their needs for belonging and feeling connected are being met. When spiritual support services that students find helpful are provided it could
lead to a stronger sense of connection for students. Secondly, students who have chosen to attend a specific college may feel like they have made an investment of time and money into the college. If they were to transfer out of the college that they have chosen, it could mean that all of the credits may not transfer to a new college, and it may take them longer to complete their degree. Third, the longer that a student attends the college the more committed they will become and stronger commitment leads to higher satisfaction (Reis & Sprecher).

The Ecology of Human Development

Many people are concerned that spiritual support and growth is unlikely to occur when classes are given in an online format (Lowe & Lowe, 2010). Some have even suggested that giving spiritual support online would be an inferior way to promote spiritual growth as compared to face-to-face classes. One only needs to look at the definition of spirituality to see how false this assumption is. God, or what some might refer to as a higher power, cannot be confined to the four walls of a traditional classroom. Self-reflection, wholeness of personhood, meaning and a sense of purpose still exist for students who take online classes. For example, God was able to use Paul’s letters that are found in the Bible to give spiritual support to the churches even though Paul was far away. Spirituality transcends space and time. However, if one is to believe that it is possible to include spiritually enhancing resources that can impact online students positively then it is good to understand the theory for how online spiritual support could be effective for students.

Bronfenbrenner’s (1979) Ecology of Human Development theory illustrates how it is possible for online learning to promote spirituality for online students. Bronfenbrenner was influenced by psychologists Kurt Lewin and Lev Vygotsky. It was Lewin who postulated that it was both nature and nurture that had an influence on people. Vygotsky’s work encompassed
areas of cultural and historical psychology including the holistic nature of persons. Bronfenbrenner did much of his research on the developing child but this research can be easily applied to the online student. Bronfenbrenner compares human development to a set of Russian nesting dolls that sit one inside the other. The doll in the center of all of the other dolls would represent the developing person, which is referred to as the microsystem. For the online student this microsystem includes the student’s family, church, neighborhood, teachers, and classmates that influence the person at this level. It is easy to see how the people that the student directly interacts with could affect the student’s spirituality. Does the student have Christian friends and family for support? Does the student attend a religious college? These things will have an impact on the student.

The layer that surrounds the microsystem is the mesosystem. The online student does not directly interact with the mesosystem but is affected by it. For instance, if the online student’s husband has to work late at the office then he will not be able to watch the children so that the online student can complete her assignments. Students may be indirectly affected by the families of the students in the online class. An online student might pray for a classmate’s daughter even though the student may not personally know the classmate’s daughter.

The next layer would be referred to as the exosystem, which includes the broader community. This could include the health systems in the area, the media, friends of the family and workplaces. For instance, if the internet service providers systems are interrupted it affects the online student’s ability to access the class. Another example of how the exosystem affects a student is if the policies change regarding student loans and the student can no longer afford to go to college.
The most outer layer is referred to the macrosystems. This includes the culture and norms of society in general. For instance, if society ignores the fact that humans are holistic and spiritual then less attention might be paid to spirituality. This may affect the perception of spirituality in an online student’s life. This theory explains how the interactions between an online student and all of the other layers are constantly affecting each other. The student has an effect on the other layers just as much as the outer layers affect the student. This is a never ending and ongoing process that is constantly changing.

**Jean Watson’s Caring Theory**

The practice of Nursing is based on many nursing theories that are grounded in holistic nursing practice where patients are cared for not only physically, but mentally and spiritually as well. Jean Watson is a nurse whose Caring theory is one that focuses on spirituality as a way to promote health and prevent sickness (Watson, 2009). Scientific medical knowledge is combined with the nurse’s capacity to offer a caring relationship with the patient as a way to promote holistic health. If someone is sick spiritually, illness can manifest itself through physical symptoms. On the other hand, if someone is healthy spiritually, it could promote good health. It is through interactive caring relationships with patients, whether they are sick or well, that patients can be educated, accepted, and cared for in ways that can promote optimal health. Using Watson’s theory to guide nursing practice in a college health setting is useful to promote the spiritual growth of students.

**Related Literature**

**Analysis of Stress**

Stress is difficult to define because while some may view stress as being caused by something in their environment, such as a death in the family, others may view stress as a
feeling. A definition by Kasl (1984) encompasses both possibilities of stress that could lead to negative health consequences which includes:

1. selected environmental conditions and experiences;
2. variables thought to be reactions to such environmental conditions;
3. indicators of distress or tension, whether or not they are linked up to any particular environmental condition; and
4. stable personal traits or characteristics that may link up with chronic or repeated exposures or with reactions of distress and tension (p. 321).

It is also necessary to mention that not all stress is bad. No stress at all might lead to boredom, while good stress could lead to feeling a sense of accomplishment when a goal is reached. By using the Perceived Stress Scale (PSS10) as a way to measure stress it allows participants to decide whether their perception of stress in their life is good or bad. What one student might perceive as stress, another student might see as inconsequential, so looking at the student’s own perception is the key to understanding how feelings of being under stress could lead to negative outcomes for the student. Since bad stress can lead to health conditions, monitoring how a student feels about his or her level of stress could be a way to identify students who could benefit from health promotion strategies (Fleming et al., 1987; Krantz & Manuck, 1984). Offering spiritual therapeutic interventions could be one way to help students to cope with stress.

**Stress and Health**

Higher levels of perceived stress were related to a lower level of self esteem, and there was increased incidence of depression among participants (Lee, Joo, & Choi, 2012). Chronic stress can lead to high blood pressure, cardiovascular disease, higher rates of smoking and more susceptibility to the common cold (Fleming et al., 1987; Krantz & Manuck, 1984; Colby et al.,
Stress could also lead to sleep problems and autoimmune disease exacerbation (Harbuz, Chover-Gonzalez, & Jessop, 2003; Harvey & Schmidt, 2003). Men and women who attend school have a greater chance for chronic illness (Denton, Prus, & Walters, 2004).

**Spiritual Intervention Preferences**

There has been limited research conducted that focused on what types of spiritual support college students find helpful. However, the need for good spiritual interventions is essential. Research shows that providing spiritual interventions can cause people to feel valued for their uniqueness, cared for, and better able to cope (Narayanasamy & Owens, 2001). Some of the research that has been conducted was in the area of nursing where the study participants were patients. However, some of these studies did include participants who were well. Taylor (2005) developed and used the Nurse Spiritual Therapeutics Scale to find out what the most preferred spiritual support interventions of patients and caregivers were when interventions were given by nurses. This study showed that there was not a significant difference between the spiritual support preferences of patients and caregivers. Both groups preferred spiritual support that was less intimate in nature. For example, helping someone to laugh, telling someone about spiritual resources, and helping someone to have quiet time was preferred over more personal types of interventions such as writing about one’s own spirituality or talking about the difficulties of praying when sick. Overall, it was concluded that the spiritual interventions that were most appreciated were less religious, less intimate, and more traditional in nature.

A study by Reed (1991) compared the spiritual care preferences of terminally ill hospitalized adults, non-terminally ill hospitalized adults, and well adults. This study concluded that the terminally ill adults had the following spiritual support preferences which are listed in
order of importance: arranging a visit with clergy, allowing personal time for reading, prayer, or meditation, providing family time that would include prayer, talking or reading, talking with the nurse about their concerns and beliefs, reading with the nurse or to the nurse, and having the nurse help the patient to attend chapel at the hospital. The spiritual care preferences of the hospitalized adults who were non-terminal included the following interventions by the nurse that are ranked by the most important first; arranging for clergy to visit the patient, helping the patient to attend the hospital chapel, talking about beliefs and concerns with the nurse, allowing the patient time to read, pray or meditate, providing time for family to talk, read and pray with the patient, and allowing the opportunity for the patient to read to the nurse or with the nurse.

The top three spiritual interventions that well adults wanted from a nurse were arranging for a visit with clergy, providing time with family, and allowing time for personal prayer.

A study by Sodestrom and Martinson (1987) examined what hospitalized patients felt the most beneficial spiritual activities that helped them to cope were. The most helpful spiritual activities were personal prayer and asking for prayer from others. Having spiritual resources available in their environment was considered important as well such as religious objects, radio, music, and books that promote a patient’s spirituality. Patients reported that the best ways for a nurse to help a patient spiritually was to allow patients to talk about their spirituality, arrange for patients to meet with clergy, and to make privacy available for prayer.

Males. Gender may have an effect on spiritual intervention preferences. One study found that college men were less spiritual in general than women (Astin et. al, 2005). In contrast, a study by Rich (2012) found that women are not more spiritual than men, but rather expressed their spirituality differently. African-American men were found to be more spiritual and more involved in religious activities than white men (Walker & Dixon, 2002; Blaine & Crocker,
African-American men who held strong religious beliefs experienced benefits such as higher grades, more academic awards, and lower levels of distress (Walker & Dixon, 2002; Jang, 2004). Another qualitative study that included African American men showed that they felt that spiritual development was very important (Constantine et al., 2006)

**Females.** Women may perceive the college experience differently than men due to their different societal roles. When female students were also mothers it led to difficulties in balancing being a student with family obligations (Arric, Young, Harris, & Farrow, 2011; Home, 1997). Female students with children who take classes on campus are at the highest risk for dropping out of graduate school (Lynch, 2008). The option of taking classes online has helped with allowing women to attend college on their own schedules.

Women may have higher levels of perceived stress as compared to men which could be related to biological, social, or psychological reasons (Lavoie & Douglas, 2011). Chronic stress in women was associated with depression, anxiety, social difficulties, and somatic symptoms (Matud et al., 2004). Women reported more health problems than men possibly related to the demands of their social roles (McDonough & Walters, 2001). When women had strong social support they reported better health (Denton & Walters, 1999).

**Graduate Students.** Graduate students face slightly different demands as compared to undergraduate students. Since graduate students already have a degree, they understand the world of academia, but they may be experiencing different types of stressors. For instance, many graduate students are working full time. They may still be paying off loans from their undergraduate degrees and many have children. One study reported that the main concerns of online female graduate students are health, finances, and role strain (Arric, Young, Harris, & Farrow, 2011). Spirituality along with strong social support had a very positive effect on
graduate students and their ability to cope with the rigorous academic demands of college (Calicchia & Graham, 2006).

**Undergraduate Students.** Research supports that undergraduate students want to have spiritual support (Hartley, 2004; HERI, 2003). In a doctoral dissertation by Lovik (2010) evidence showed that prayer, meditation, worship, participation in service learning and being able to have class discussions that included various perspectives were effective ways to promote spiritual growth for undergraduate students. Even though undergraduates may attend religious services less than before they entered college, research showed that students felt that the need for spirituality in their lives was essential (Bryant, Choi, & Yasuno, 2003).

**Sacred Spaces.** Literature supports the idea of providing a space for spiritual reflection. This does not necessarily need to be a physical place, but for some people a physical space is helpful. Gilmour (1999) views schools as sacred places:

Sacred space envelops people like waters of an ocean. It encloses consciousness in the midst of a swirling snow….Personal sacred spaces are places of individual experience; corporate sacred spaces are places of common history. Both are places of memory.

Sacred spaces may also be implicitly or explicitly spiritual. They may exist on a stretch of beach or in a coffeehouse, or a storefront church or a great mosque (p. 136).

The founder of a 24-hour, seven day a week prayer initiative started by Pete Greg has been supporting prayer rooms for college campuses and feels that there has been a grass roots movement on campuses for prayer (Sherman, 2009). Jesus Christ gives us an illustration of the need for getting away from the chaos and going to a quiet place to pray in Mark 14:32. A sacred space could be a healing environment where the nurse and patient are present (Quinn, 1992;


Gilmour, 2006). A sacred space could also just be a public place that has been set aside for the purpose of spiritual support (Reimer-Kirkham et al., 2012).

Virtual spaces are being used for prayer and church (Mullins, 2011). With the world embracing social networking it is no surprise that communities of faith would be interested in worshiping and joining together with others of similar faith. Virtual opportunities to express spirituality should not be ignored as a viable outlet for spiritual growth. The ability to experience God and His omnipresence wherever we are is support for students to gather together in virtual sacred spaces (Lytle, 2010).

Spirituality and Humor. Humor was found to be a way to cope and could lead to spiritual growth and healing for some (Carson, 1989). Spirituality and humor have been shown to have a positive effect on life satisfaction (Owens, Albertson, Eisner, & Cox, 1999). Even when people have been diagnosed with a life-threatening illness, humor and spirituality have been shown to be important coping mechanisms (Johnson, 2002). Based on these studies, it could be helpful for students to be given opportunities for humor either in the classroom or as a part of campus life to improve well-being.

Spirituality and Meeting with Minister. Although there are many ways that a college could provide spiritual interventions, it has been shown that many people prefer to meet with a chaplain, minister, or spiritual mentor (Johnston Taylor, 2005; Reed, 1991; Weaver, Flannelly, & Oppenheimer, 2003). For online students this could be a virtual meeting or a phone call. Most colleges, even secular colleges, offer religious student clubs, campus ministries, and chaplains so this could likely be arranged without difficulty as long as the student is aware of these services.

Nurses are accustomed to making a referral to a chaplain or clergy. However, clergy are not always comfortable asking a nurse to assist in the spiritual care needs of a client (Cavendish...
et al., 2007). Sometimes the best way to meet the needs of clients involves a close collaboration between clergy and a nurse. It is easy to see that when a health problem might be present there could be questions about a disease etiology or medication side effects. Clergy may not fully understand the medical aspects surrounding a disease or condition and working with a nurse could allow for more insight.

**Prayer and Spirituality.** Prayer could be offered to college students as a spiritual intervention (Maddix & Estep, 2010). Some people find prayer with others to be a way to enhance connections with each other and with God and feel encouraged (Meyerhoff, Van Hofwegen, Harwood, Drury, & Emblen, 2002). While some people might be comfortable when someone prays with them, others might feel more comfortable if prayers are said for the person later in private (Johnston Taylor, 2005). Taylor and Mamier (2005) found that caregivers of patients preferred types of spiritual support that were less intimate such as when a nurse prays for a patient later while alone. It is necessary to take the feelings of the person who is being prayed for into consideration.

**Spirituality and Reflection.** A study by Reed (1991) found that the most beneficial spiritual support action after arranging a visit with clergy was allowing time for spiritual reflection and family involvement in spiritual activities. One way to reflect on spirituality would be to assign students to keep a journal. As students record their thoughts and beliefs it could allow them to grow spiritually (Callister, Bond, Matsumura, & Mangum, 2004). As the professor reads the journals and makes comments, it allows the students to feel that they have been heard. Self-reflection, which may or may not include writing, is a beneficial way to promote spiritual growth (Astin, 2004; Lovik, 2010; Tisdell, 2003).
Nurses Offering Information about Spiritual Resources. It has been suggested that college health nurses could serve as primary health care providers for students since students are a population that could benefit from health promotion and disease prevention services (Clark, 2009). College health nurses are already known for being available to treat students for acute illnesses or to administer physicals and immunizations. However, these nursing actions are only a small part of what nurses could be doing for a college population. In order to promote total health and wellness, nurses need to do more. With regard to spiritual support services, nurses are trained and educated to be able to provide for the diverse spiritual needs of students in many different ways.

Nurses are well suited to be coordinators for spiritual care support services. With access to health databases already and the training to keep reliable and accurate health records, nurses are experienced in providing care when appropriate or referring patients to other professionals when needed. Nurses are also trained to follow up on the patients that they have referred out to other professionals and then document the outcomes.

When colleges begin to include spiritual support service projects in their annual plans, then ongoing attention to this area will occur because of the need to meet the goals and objectives within the plan. Changes to college campuses do not happen automatically. Support from college administrators is necessary for significant and ongoing changes in this area. Standing committees could be created to incorporate these changes into colleges gradually (Clark, 2009). Representatives from different areas of the college and local community could include, but not be limited to, college administrators, campus ministry, counseling, residence hall directors, and even the local public health department. Virtual online forums could be created to
promote ongoing communication about ways to promote spirituality. It could be prudent to include input from other colleges who are also working towards the same goals.

Public health nurses are already providing holistic care to those within communities so it is imperative for colleges to work together with the local health department when appropriate. The main goal for public health nurses is to keep populations within the community healthy (Currie, 2008). It is likely that the local public health department in the towns in which most colleges are located is already offering services that could benefit college students. It would be unwise for a college to duplicate services that are already being offered. It would also make sense to collaborate with the public health department and give feedback, which could help to support the needs for college students in the future (Clark, 2009).

Nurses who practice in the role of college health nurse have identified barriers to fulfilling the role adequately. Research by Peterson (1991) showed that college health nurses have stated that they do not have much of a voice in college policy development. This had led to dissatisfaction in the role and a feeling of powerlessness to change the problems with the role and feeling inadequate to make an impact on the lives of the students. Stereotypes about what nurses do have led to nurses who work in college settings feeling that they are not able to overcome the barriers to be able to truly provide holistic care in this setting. As nurses advocate for their role and for the students these barriers can be made known as a way to work towards healthy change (Kowal, 1994).

When nurses are able to assist clients with their spiritual needs or offer their clients spiritual resources, the clients may feel supported and comforted (Moadel et al., 1999; Narayanasamy, and Owens, 2001). The family may also feel comforted by these actions of the nurse because the positive effects on their loved ones put them at ease (Narayanasamy and
Owens, 2001). Offering spiritual resources is a way to assist people with coping (Bussing, Balzat, & Heusser, 2010).

**College Support Services.** College support services can tailor their programs to suit the needs of the students using research as a guide. Research shows that when students encounter other students with different spiritual beliefs or when classes offer a new perspective on what they have believed to be true it can lead to questioning of one’s own beliefs. When different worldviews are presented in a college setting, this can lead to spiritual struggles for some students (Rockenbach, Walker, & Luzader, 2012). As a result, colleges could offer many different types of support services such as mentoring programs, opportunities for students to be listened to, activities that allow for personal reflection, and first year experiences for new students.

Mentoring is a way to help students to overcome spiritual struggles (Rockenbach, Walker, & Luzader, 2012). It is also a way to find support and encouragement. When college support services offer mentoring programs it could be helpful in so many ways for students. This is a way to enrich the lives of both mentees and mentors. This is also a holistic way to help students in all aspects of their lives. For women, research has shown that as friendships form in college, such as through sororities or sports, women are less likely to reach out and make new friends. If spiritual struggles begin to surface then women may not be likely to seek out new friendships or relationships with others who could help them to work through these struggles and where these topics can be talked about and dealt with (Holmes, Roedder, & Flowers, 2004). Sometimes the groups to which college women belong encourage silence as it relates to spirituality because expressions of religion or faith could lead to making others feel
uncomfortable and so is therefore discouraged. A mentoring program might be a way to meet the needs of women for expressing their faith.

A study by Holmes, Roedder, and Flowers (2004) showed that men tend to make new friends throughout their college career and will find others of similar faith and beliefs to help them to deal with issues and to provide for their own emotional and spiritual support. This study also showed that men used their faith to empower them to forge new relationships and it also led to opportunities to share their faith with others who are open to it. While men had many acquaintances, this study showed that finding a core group of people either from church or campus ministry was the best way to find fellowship and meet their spiritual needs (Holmes, Roedder, & Flowers, 2004). Men who are interested in opportunities to share their faith or to discuss struggles with spirituality might find a mentoring program to be effective for spiritual growth.

An innate desire for college students, and for people in general, is to feel heard and listened to. College support services could provide more opportunities for this to happen. The concept of listening has been studied in the literature and has many common attributes according to the evidence (Shipley, 2010). Good listening involves showing empathy for the person being listened to. The listener should be comfortable with silence. The listener is also attentive to the nonverbal as well as verbal communication cues. The person who is listening does not convey judgment and is accepting of the person who is being listened to. Being attentive to another person without a personal agenda does not happen automatically. Even though it seems like a simple task, preparation needs to occur to be an effective listener. The skill of listening also needs to be practiced to become more effective at it (Stickley and Freshwater, 2006). If listeners are making mental grocery lists or trying to think about what to say next, then true listening is
not taking place. Focusing on being present in the moment and giving all attention to the one who is speaking is very hard to do for most people. Many times conversations are redirected, manipulated or guided with an agenda towards a certain goal. This can diminish the thoughts and beliefs of the one being listened to. When this happens it can lead to a person feeling dismissed or frustrated. Good relationships are built on trust and when the listeners perceived that they were being truly listened to it led to stronger relationships (Gilbert, 2004). The ultimate goal of listening is to create an interaction with the patient that fosters "healing potential" (Stickley & Freshwater, 2006, p. 14).

College students are accustomed to listening to a professor and know that their perspective is not the focus of the educational experience, especially when formulas and facts are necessary to understand for a specific discipline of study. While discussions sometimes occur within the college classroom, the professor has an agenda to present required material. There is more value placed on the speaker in a classroom as opposed to the listener (Kagan, 2008). There are obvious reasons why specific information needs to be presented to students, and students are not always allowed to give their opinions or ideas related to certain topics, but one can see that allowing students to be truly heard outside of the classroom would be helpful. Listening to others is a way to show compassion and to put others first by taking the time to be with them. Our current society is very fast-paced and listening to the story of others is not always appreciated. However, taking the time to hear another’s story might be the best way to shed light on a person’s experience and help others understand.

Opportunities for storytelling are also an effective way to help listeners to feel heard. Storytelling allows the listener to better understand the storyteller and then offer support in ways
that could promote spiritual growth. Farrant (2014) states “storytelling is central to human understanding and knowledge. Through listening, reflecting, and retelling a story, new discoveries can be made and an unconcealment, of something that would otherwise remain hidden, occurs” (p. 461). Present day society is very fast-paced and society in general tends to put more value on gathering information rapidly using the least amount of words that are possible to get the point across such as is used in text messaging or social media like Twitter. However, we can better understand a person’s lived experience by taking the time to listen to a person’s story. Much scientific research has been gained through phenomenological research, which uses a storytelling type of approach to gain insights. Lewis (2011) describes this type of research as a “spiritual act, recognizing stories as sacred, honoring relationships, our being, and listening” (p. 507).

Conclusion

A Gap in the Literature

The best ways for college health nurses to provide spiritual interventions for college students are mostly unexplored. This study provides data about spiritual support preferences for online students and students who take on-campus classes. It is not known if spiritually therapeutic actions, when given by nurses, are more preferred by students with higher levels of stress. Past research supports the fact that the majority of students want spiritual support. Since spirituality is associated with satisfaction with college and higher levels of wellness it makes sense to explore this topic further.

Spiritual support interventions should be available to on-campus students and online students as well, along with all of the other support services that they need, such as technical support, advising support and easy access to other college offices like the registrar. It is
meaningful and intentional student support services that will allow for students to be successful (Kauffman, Watkins & Guerra, 2001). Students desire their college experience to be interactive and engaging, and they want good communication with their instructors, classmates, and even others in the college. When this does not happen they become dissatisfied (Hara & Kling, 2000). Not all students want to receive spiritual support at all times, but if it is available to them then they can access it when they want to. Students feel more satisfied when they have many tools and services in the online and on campus environment to help them (Menchaka & Bekele, 2008). This study allows for greater insight into what spiritual interventions are most preferred by college students.
CHAPTER THREE: METHODOLOGY

The purpose of this quantitative study was to see if there was a difference in the spiritual therapeutic preferences of online students as compared to on-campus students who attend the same Christian college and also determine if there was a difference between spiritual therapeutic preferences and gender as measured by the NTS. This study also sought to see if there was a relationship between stress level and spiritual therapeutic preferences as measured by the PSS10.

Even though some colleges provide spiritual therapeutics, there was not much research on what type of spiritual therapeutic actions students prefer. In order to assess these student preferences, the researcher used data obtained from a survey that was distributed via email to students who attend a Christian college in the Mid-Atlantic United States. This chapter describes the research design, procedures, and methods of analysis for the study. The description of the research methodology is explained in a manner that will allow for future researchers to be able to replicate this study.

Design

The research design for this study was quantitative and used a causal-comparative and correlational design. This research determined if there was a difference in the preferences of online students as compared to on-campus students to see if there was a difference based on gender and level of academic degree. The study also determined if there was a relationship between stress and spiritual therapeutic preferences.

Research Questions Null Hypotheses

There were seven research questions and null hypotheses.

Research Question One. Does the setting in which college students take classes affect their spiritual therapeutic preferences?
**Research Question Two.** Does gender make a difference in the spiritual therapeutic preferences of online college students?

**Research Question Three.** Does gender make a difference in the spiritual therapeutic preferences of on-campus students?

**Research Question Four.** Is there a relationship between stress levels and the spiritual therapeutic preferences of online college students?

**Research Question Five.** Is there a relationship between stress levels and the spiritual therapeutic preferences of on-campus students?

**Research Question Six.** Does the level of college degree affect the spiritual therapeutic preferences of online college students?

**Research Question Seven.** Does the level of college degree affect the spiritual therapeutic preferences of on-campus students?

**Null Hypothesis One.** There will be no significant differences in the spiritual therapeutic preferences of on-campus students as compared to online students at the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

**Null Hypothesis Two.** There will be no significant differences in the spiritual therapeutic preferences of online female students as compared to online male students at the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

**Null Hypothesis Three.** There will be no significant differences in the spiritual therapeutic preferences of on-campus female students as compared to on-campus male students at the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

**Null Hypothesis Four.** There is no statistically significant relationship between the spiritual therapeutic preferences of online students and stress levels at the Christian
college as measured by the Nurse Spiritual Therapeutic Scale and the Perceived Stress Scale.

**Null Hypothesis Five.** There is no statistically significant relationship between the spiritual therapeutic preferences of on-campus students at the Christian college as measured by the Nurse Spiritual Therapeutic Scale and the Perceived Stress Scale.

**Null Hypothesis Six.** There will be no significant differences in the spiritual therapeutic preferences of online undergraduate students as compared to online graduate students in the Christian college setting as measured by the Nurse Spiritual Therapeutic Scale.

**Null Hypothesis Seven.** There will be no significant differences in the spiritual therapeutic preferences of on-campus undergraduate students as compared to on-campus graduate students in the Christian college setting as measured by the Nurse Spiritual Therapeutic Scale.

**Description of Participants and Setting**

The study was conducted at a large Christian university in the Mid-Atlantic United States. The university had over 12,000 residential students and over 80,000 enrolled online students from every state in the country as well as students who come from 95 different countries. The university campus is located in a city with a population of over 75,000. The study will use nonrandomized participants. Purposive sampling will be used since students were already assigned to a group based on whether they attended classes on the college campus or online.

**Instrumentation**

**The Nurse Therapeutic Scale** The Nurse Therapeutic Scale (NSTS) is a survey instrument that measures the degree to which a client, or in this case a college student, prefers a nurse provided
spiritual action (Taylor & Mamier, 2005). Each item consists of a nurse-administered helpful action that is based on research and is used to promote spiritual health (Taylor & Mamier, 2005). The NSTS survey requires that the students choose whether they strongly disagree, disagree, agree, or strongly agree with each of 20 listed statements. The NSTS questionnaire starts out with the phrase “In general I would want my/my loved ones nurse to” followed by each action. To help the students to understand the context for the therapeutic actions, the beginning phrase was changed slightly to “In general, I would want the student support services at my college to” followed by all of the actions listed in the NSTS. See Appendix A. Since registered nurses who are employed by a college are part of the student support services, this does not change the meaning of the statements but will make it clear to the study participants that these actions are intended to occur in the college setting. Examples of actions listed on the survey are prayer and a referral to a chaplain. The instrument was developed as a way for nurses to deal with spiritual matters as they relate to health only. Johnston (2008) states that “spiritual matters unrelated to health are not the purview of nurses. For example, listening to a patient's recent spiritual insights would be relevant only if these were insights related in some way to health” (p. 157).

It is necessary for a researcher to make sure that a research instrument is reliable and valid; otherwise the data obtained through the research would not be meaningful. Taylor (2005) tested the face validity of the NSTS by consulting with a panel of six doctorally-prepared nurses with experience in the area of spirituality who agreed with the items included in the survey. A Cronbach’s alpha reliability of all 20 items together showed high internal reliability (r=0.97). Factor analysis indicated that the NSTS was unidimensional (Taylor, 2005).

The Perceived Stress Scale The 10 item Perceived Stress Scale (PSS10) was also a part of the online questionnaire and was used as a tool to assess students’ perceptions of stress levels within
each group (Cohen, Kamarck, & Mermelstein, 1983). This tool assessed how people perceived the level of stress in their life. Self-reported high stress levels have been linked to self-reported poor health as well as depression, high blood pressure, and vulnerability to infection (Cohen, Kamarck, & Mermelstein, 1983). This is a valid and reliable instrument. The internal consistency of the tool was measured with Cronbach’s alpha and was 0.81 with a test-retest reliability of 0.86 (Yu & Ho, 2010).

**Procedures**

Once all approvals were received, the NSTS, the PSS10 along with some general demographic questions were emailed to all on-campus and online students at the experimental university. There were 32 questions, which appear in Appendix A. The email stated that the survey would take between 10 and 15 minutes. Students had the option of participating in the study or not. They were able to respond to the answers in the survey and send it back electronically. Students were sent an email invitation to participate, and those who did not respond were given one reminder two weeks later. Students had two weeks from the time they received the second reminder to send back the survey.

**Ethical Considerations**

All Institutional Review Board procedures and policies that were required by Liberty University and the experimental university were followed. Only students who were age 18 or older were eligible to participate. The students were assigned a number instead of using their names so that they could remain anonymous.

**Data Analysis**

Microsoft Excel and VassarStats (2014) were used to analyze the data. The nurse spiritual therapeutic action preferences for the groups below were compared as follows. All online
students were compared to all on-campus students. Online male students were compared to female online students. On-campus male students were compared to on campus female students. Similarly, on-campus graduate students were compared to on-campus undergraduate students. Whether or not there was a relationship between stress and spiritual therapeutic preferences for online students and on-campus students was determined using the PSS10 and the NSTS.

Comparisons of the groups to determine differences were made using a Mann Whitney $U$ test. Each action in the NSTS for each group was analyzed and compared. Likert type questions are considered ordinal measurement, so this test was most appropriate. The alpha level was set at 0.05. Whether or not a relationship existed was determined using Spearman’s Rho Correlation.

**Summary of Methodology**

In conclusion, the spiritual therapeutic preferences of students at a Christian college were analyzed using the Nurse Spiritual Therapeutic Scale, which was administered as an online survey. The data also included gender, whether a student took classes online or on-campus, level of college degree, and a student perceived stress level as measured by the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, R 1983). A copy of this scale can be found in Appendix A. Microsoft Excel and VassarStats (2014) were used to analyze and compare the data using a Mann Whitney $U$ and Spearman’s Rho correlation.
CHAPTER FOUR: FINDINGS

The purpose of this study was to see if there was a difference in the spiritual therapeutic preferences of students at a Christian college who stay on-campus or those who take classes online. Within each of these groups males were compared to females, and graduate students were compared to undergraduate students. Whether or not a relationship existed between stress and spiritual therapeutic preferences was also tested. Relative spiritual therapeutic preferences were assessed by the Nurse Spiritual Therapeutic Scale, and relative levels of stress were assessed by the Perceived Stress Scale. The findings could assist colleges with decisions related to the types of spiritual support preferences that they could provide. The results will be presented in the same order as the seven research questions that were previously presented in Chapter One.

The survey was initially sent via email to a panel of 240 participants but even after a reminder email two weeks later, only ten students responded. The survey was sent again, a month later, to a different panel of 960 participants, who also received a reminder email, and this resulted in 66 additional responses. Researchers are never able to predict how many participants will respond to a survey. This survey had a low response rate of 6%. The survey was administered through Qualtrics, a survey software company, using an anonymous survey link. Data was compiled and reported through Qualtrics and then analyzed using Microsoft Excel and VassarStats, which is a statistical online calculator (VassarStats, 2014). The participants were allowed to leave some questions blank if they chose to. Because of this, the number of participant responses to each question within all groups varied slightly.

Demographics

There were a total of 76 students who responded to the study. There were 42 (55%) online students and 34 (45%) on-campus students who consented to this study. Within the online
group, there were 23 (55%) male students and 19 (45%) female students. Within the on-campus group there were 22 (65%) female students and 12 (35%) on-campus male students who responded. There were a total of 41 (54%) graduate students and 35 (46%) undergraduate participants. The researcher requested and received a panel from the entire college, across all majors, that included online and on-campus students within the undergraduate and graduate programs. The students included were full-time and part-time. It was the college that designated each student within the panels as being either an online student or an on-campus student.

**Mann-Whitney U**

The Mann-Whitney U test was used to measure whether there were significant differences between the groups for hypotheses one, two, three, six, and seven. The Mann-Whitney U is the non-parametric equivalent of the independent sample t-test and is able to determine significant differences in ordinal level data. The questionnaire in this study consisted of Likert scale type of questions, which is ordinal level data. Therefore, the Mann Whitney U was chosen for analysis purposes. The significance level was set at p <0.05 but if the number of participants in each group fell between five and 21 then adjacent critical intervals of .025 and .01 were also calculated as a precaution to avoid missing any significant findings. However, these additional calculations did not lead to a change in significance for any of the results. The mean of ranks, number of sample participants, value of U, value of p and if the scores were statistically significant were noted in this report.

**Spearman’s Rho**

A Spearman’s correlation coefficient rho is a non-parametric test that was chosen to test null hypotheses four and five to see if a relationship existed between stress and spiritual therapeutic preferences among online and on-campus students. Since it is ordinal data that was
being measured this test was chosen over using a Pearson’s product-moment correlation coefficient. A score of minus one would indicate a perfect negative correlation and a score of plus one equals a perfect positive correlation. A score of zero would mean that there is no correlation. An effect size can be determined using the following guide; .00 -.19 = very weak, .20 -.39 = weak, .40 - .59 = moderate, .60 - .79 = strong, and .80 – 1.0 = very strong.

**Descriptive Statistics**

Spiritual therapeutic preferences were measured by asking participants to rate the level of agreement with each of 20 statements as indicated in the NSTS. The responses were scored as follows: 1=strongly disagree, 2=disagree, 3=agree and 4=strongly agree.

**Research Question One.** Does the setting in which college students take classes affect their spiritual therapeutic preferences?

**Null Hypothesis One: ** There will be no significant differences in the spiritual therapeutic preferences of on-campus students as compared to online students at the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

The spiritual therapeutic preferences for online and on-campus participants, as indicated on the NSTS, were compared using a Mann Whitney U Test. There were 42 online student participants and 34 on-campus participants. It was necessary to assign a score for each online and on-campus student for the NSTS. As stated earlier, there were 20 questions on the NSTS and each response was given a value based on how strongly a statement was agreed upon. The scores for each question ranged from 1 to 4. For example, a score of 1 indicated that a student strongly disagreed with a statement, and 4 specified that a student strongly agreed with the statement. Higher scores indicated that the student more strongly preferred nurse-given spiritual therapeutic actions. If a student strongly agreed with every single spiritual therapeutic action the
highest possible score would be 80. If the student strongly disagreed with every single
spiritual therapeutic action, the lowest possible score would be 20. After comparing the total
NSTS scores for each group using a Mann Whitney $U$ test, the null hypothesis could not be rejected.

There was no significant difference in spiritual therapeutic preferences between online students
as compared to on-campus students as indicated in Table 1.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann Whitney $U$ Test for Spiritual Therapeutic Preferences of Online Students as Compared to On-campus Students</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean of Ranks</th>
<th>Mean of Ranks</th>
<th>$U$-value</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online</td>
<td>33.3</td>
<td>40.8</td>
<td>768.5</td>
</tr>
<tr>
<td>On-campus</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Research Question Two.** Does gender make a difference in the spiritual therapeutic
preferences of online college students?

**Null Hypothesis Two:** There will be no significant differences in the spiritual
therapeutic preferences of online female students as compared to online male students at
the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

Online student participants were compared by gender to see if there was a difference in
their spiritual therapeutic preferences. There were 23 online male participants compared to 18
online female participants. A total score for the NSTS was given for each student in the online
male group and the online female group in the same manner as described in hypothesis one. The
data was then analyzed for differences using the Mann Whitney $U$. The data showed that there
was not a significant difference in the spiritual therapeutic preferences of online male students as
compared to online female students as seen in Table 2. Null hypothesis 2 could not be rejected.
Table 2
Mann Whitney U Test for Spiritual Therapeutic Preferences of Online Male Students as Compared to Online Female Students

<table>
<thead>
<tr>
<th>Mean of Ranks Online Male</th>
<th>Mean of Ranks Online Female</th>
<th>U-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.5</td>
<td>20.3</td>
<td>194.5</td>
<td>0.749</td>
</tr>
</tbody>
</table>

**Research Question Three:** Does gender make a difference in the spiritual therapeutic preferences of on-campus students?

**Null Hypothesis Three:** There will be no significant differences in the spiritual therapeutic preferences of on-campus female students as compared to on-campus male students at the Christian college as shown by the Nurse Spiritual Therapeutic Scale.

The spiritual therapeutic preferences of 21 on-campus males and 21 on-campus females were compared using the Mann Whitney U test. The responses on the NSTS for both groups did not differ significantly. Based on the results that are found in Table 3 the null hypothesis could not be rejected and it was concluded that gender does not make a difference in the spiritual therapeutic preferences of on-campus students.

Table 3
Mann Whitney U Test for Spiritual Therapeutic Preferences of On-Campus Male Students as Compared to On-Campus Female Students

<table>
<thead>
<tr>
<th>Mean of Ranks On-Campus Male</th>
<th>Mean of Ranks On-Campus Female</th>
<th>U-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.5</td>
<td>21.5</td>
<td>220.5</td>
<td>0.992</td>
</tr>
</tbody>
</table>

**Research Question Four.** Is there a relationship between stress and the spiritual therapeutic preferences of online college students?
**Null Hypothesis Four.** There is no statistically significant relationship between the spiritual therapeutic preferences of online students and stress levels at the Christian college as measured by the Nurse Spiritual Therapeutic Scale and the Perceived Stress Scale.

To assess whether stress levels had a relationship to the spiritual therapeutic preferences of online college students it was necessary to determine the stress level score for each online student. The PSS10, which is a tool that measures stress level, was included in the questionnaires that were given to the students and then scored (See Appendix A). The values for each of the PSS10 questions were assigned within the Qualtrics software and then downloaded to Excel. The responses were coded as following: Never = 0, Almost Never = 1, Sometimes = 2, Fairly Often = 3, Very Often = 4. These values were applied to questions 1, 2, 3, 6, 9, and 10. It was necessary to reverse the values for the positively stated items on the PSS10 and this applied to questions 4, 5, 7, and 8. Since blank answers could affect the correlation, only those online students that answered every question in the entire survey were included. There were 38 online students who answered every question. After all of the scores were added up using Microsoft Excel it was determined that the mean score for the PSS10 was 21.19. The standard deviation was 3.777. The PSS10 scores ranged from 16 to 27. It was also necessary to assign a score for each online student for the NSTS. This was done in the same manner as described earlier.

In an effort to determine if stress levels had a relationship to the spiritual therapeutic preferences a Spearman’s Rho test was conducted using the PSS10 score and the NSTS score. Based on the results that are found in Table 4 the null hypothesis could not be rejected, the data showed that there was a very weak relationship between stress level and the spiritual therapeutic preferences of online students.
Table 4  
Spearman’s Rho Correlation between Stress Levels and Spiritual Therapeutic Preferences for Online Students

<table>
<thead>
<tr>
<th>$r_s$</th>
<th>$n$</th>
<th>Sig. 2-tailed</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.071</td>
<td>38</td>
<td>0.668</td>
</tr>
</tbody>
</table>

**Research Question Five:** Is there a relationship among stress and the spiritual therapeutic preferences of on-campus students?

**Null Hypothesis Five.** There is no statistically significant relationship between the spiritual therapeutic preferences of on-campus students at the Christian college as measured by the Nurse Spiritual Therapeutic Scale and the Perceived Stress Scale.

To determine if stress levels have an effect on the spiritual therapeutic preferences of on-campus students the same procedure was followed as for the online students as described in hypothesis four. There were 20 on-campus students included who answered every question. The mean stress level on the PSS10 for this group was 22 with a standard deviation 3.29. The NSTS results ranged from 47 to 75. Null hypothesis five could not be rejected and it was concluded that stress level has a weak relationship to spiritual therapeutic preferences of on-campus students. A summary of the results can be found in Table 5.

Table 5  
Spearman’s Rho Correlation between Stress Levels and Spiritual Therapeutic Preferences for On-campus Students

<table>
<thead>
<tr>
<th>$r_s$</th>
<th>$n$</th>
<th>Sig. 2-tailed</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.225</td>
<td>20</td>
<td>0.341</td>
</tr>
</tbody>
</table>

**Research Question Six:** Does the level of college degree affect the spiritual therapeutic preferences of online college students?
**Null Hypothesis Six:** There will be no significant differences in the spiritual therapeutic preferences of online undergraduate students as compared to online graduate students in the Christian college setting as measured by the Nurse Spiritual Therapeutic Scale.

The spiritual therapeutic preferences, as determined by the NSTS, of 22 online graduate students and 19 undergraduate students were compared using the Mann Whitney $U$ test. The responses in both groups did not differ significantly. Based on the results that are found in Table 6 the null hypothesis could not be rejected, and it was concluded that gender does not make a difference in the spiritual therapeutic preferences of online graduate students as compared to online undergraduate students.

*Table 6*

*Mann Whitney U Test for Spiritual Therapeutic Preferences of Online Graduate Students as Compared to Online Undergraduate Students*

<table>
<thead>
<tr>
<th>Mean of Ranks</th>
<th>Mean of Ranks</th>
<th>$U$-value</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Graduate</td>
<td>Online Undergraduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>23.9</td>
<td>252.5</td>
<td>0.2041</td>
</tr>
</tbody>
</table>

**Research Question Seven.** Does the level of college degree affect the spiritual therapeutic preferences of on-campus college students?

**Null Hypothesis Seven.** There will be no significant differences in the spiritual therapeutic preferences of on-campus undergraduate students as compared to on-campus graduate students in the Christian college setting as measured by the Nurse Spiritual Therapeutic Scale.

The spiritual therapeutic preferences of 18 on-campus graduate students and 16 on-campus undergraduate students were compared using the Mann Whitney $U$ test. The responses in both groups did not differ significantly. Based on the results that are found in Table 7 the null
hypothesis could not be rejected, and the evidence showed that the level of college degree does not make a difference in the spiritual therapeutic preferences of on-campus students.

Table 7
Mann Whitney U Test for Spiritual Therapeutic Preferences of Graduate On-Campus Students as Compared to Undergraduate On-Campus Students

<table>
<thead>
<tr>
<th>Mean of Ranks Graduate On-Campus</th>
<th>Mean of Ranks Undergraduate On-Campus</th>
<th>U-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.4</td>
<td>15.5</td>
<td>113</td>
<td>0.7949</td>
</tr>
</tbody>
</table>

Summary of Results
The purpose of this study was to see if there was a difference in the spiritual therapeutic preferences of students at a Christian college who stay on-campus or take classes online. Within each of these groups males were compared to females, and graduate students were compared to undergraduate students. Whether or not a relationship existed between stress and spiritual therapeutic preferences among online and on-campus students was tested. This study included a total of seven research questions. The study began with asking some demographic questions about gender and level of college degree. A brief set of PSS10 questions were asked to determine relative stress levels. The students also responded to 20 questions about their spiritual therapeutic preferences as measured by the NSTS and was then the data was analyzed for statistical significance using a Mann Whitney U and Spearman’s Rho correlation through Microsoft Excel and VassarStats, which is an online statistical calculator. None of the null hypotheses were rejected. The setting in which students take classes, gender and level of college degree does not have an effect on the spiritual therapeutic preferences of college students according to the data from this study. Also, a relationship between stress and spiritual therapeutic preferences for online or on-campus students was not found. The next chapter will
discuss these findings in greater detail in relation to current research and recommendations for future research will be offered.
CHAPTER FIVE: DISCUSSION

This chapter will discuss the results of this study as it relates to the spiritual therapeutic preferences of different groups of college students, which were compared in this causal-comparative and correlational study. The 20 statements on the NSTS are helpful actions that can be given by nurses to promote spiritual health (Taylor & Mamier, 2005). Not much research exists about which spiritual therapeutic actions are preferred when provided by nurses who work in conjunction with the student support services of a college. Understanding more about students’ spiritual therapeutic preferences could lead to colleges offering more specific and relevant student support services. This is turn could give students more options to promote their spiritual health, which has been shown to have a positive effect on physical health and overall wellness (Nelms, Hutchins, Hutchins, & Pursley, 2007). A summary and discussion of the findings are given. Relevant and current research will be discussed as it relates to this study. The limitations of this study will be shared along with implications for practice. Suggestions for future research are presented.

Summary of the Findings

Demographics

The study participants were 54% female and 46% male. The entire population at the experimental college had slightly more females (59%) enrolled than males (41%) but is somewhat similar to the study sample. After a literature review, the demographic gender percentages noted for other colleges showed similar trends. Fifty five percent of the participants in this study were online students. There were more online students (n=42) than on-campus (n=34) students. The entire population at the experimental college had 87% of students enrolled
as online students. Based on demographic trends, this is a much higher percentage of online students than is common at most colleges.

Discussion

This study confirmed the usefulness of the actions that are listed in the Nurse Spiritual Therapeutic Scale. All of the groups in this study agreed or strongly agreed that the 20 spiritually therapeutic actions would be helpful. This tool could be used as a guide for nurses when determining meaningful ways to offer spiritual support. The actions listed in this tool could also be a resource for colleges to use when planning what types of spiritual support could be given in the future. Although none of the null hypotheses could be rejected, there were some statistically significant findings for some of the individual statements within three of the subgroups that were included in the study, which were: online undergraduates, online males and on-campus students.

On-campus Students

The NSTS questions were numbered from 11 to 30. Questions 12, 13, and 15 conveyed statistical significance and indicated that on-campus students were in agreement more with the following statement: “listen to me talk about my spiritual concerns,” “listen to me talk about my spiritual strengths,” “and listen to the stories of my life” as indicated in Table 1. As a result, there is evidence to support that the setting in which classes are taken could affect some aspects related to a student’s spiritual therapeutic preferences. Even though the null hypothesis was rejected, a statistical analysis using a Mann Whitney U showed that for three out of 20 preferences listed there was a significant difference in spiritual therapeutic preferences.

Listening. On-campus students agreed with the statements: “listen to me talk about my spiritual concerns,” “listen to me talk about my spiritual strengths,” “and listen to the stories of
my life.” These three statements have to do with self-reflection and expression. Research supports that self-reflection can lead to positive spiritual development (Astin, 2004; Astin et al., 2006; Bryant & Astin, 2008; Lovik, 2010; Tisdell, 2003). One way to be supportive is to listen. Based on this statistically significant finding, it would be highly recommended to make listening to students reflect on their lives, especially as it relates to their spiritual health, a necessary component of all student support services, and especially for students who take classes on-campus. Listening is a way to empower others (Browning & Waite, 2010). Listening is not the same as spiritual counseling. Listening without a personal agenda is a way to honor another person and build relationships (Wright, 2006). Many times people hold the answers to their own dilemmas and by talking things out with a nurse who is truly listening allows a person to deal with things within their lives (Browning & Waite). These results are similar to another study, which included hospitalized patients who reported that one of the best ways for a nurse to help someone spiritually was to allow them to talk about their spirituality (Sodestrom and Martinson, 1987). The results for these statements are found in Table 8.
### Table 8

**Mann Whitney U Test for Spiritual Therapeutic Preferences of Online Students as Compared to On-campus Students as listed by each statement**

<table>
<thead>
<tr>
<th>Spiritual Therapeutic Preferences</th>
<th>Mean of Ranks Online</th>
<th>Mean of Ranks On-Campus</th>
<th>U-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Help me to have quiet times or space</td>
<td>36.5</td>
<td>36.5</td>
<td>635.5</td>
<td>0.99292</td>
</tr>
<tr>
<td>12. Listen to me talk about my spiritual concerns</td>
<td>31.88</td>
<td>42.61</td>
<td>446</td>
<td>0.03156*</td>
</tr>
<tr>
<td>13. Listen to me talk about my spiritual strengths</td>
<td>32.1</td>
<td>42.32</td>
<td>455</td>
<td>0.04036*</td>
</tr>
<tr>
<td>14. Teach me about ways to draw or write about my spirituality</td>
<td>33.48</td>
<td>40.5</td>
<td>511.5</td>
<td>0.16152</td>
</tr>
<tr>
<td>15. Listen to the stories of my life</td>
<td>31.61</td>
<td>42.97</td>
<td>435</td>
<td>0.0232*</td>
</tr>
<tr>
<td>16. Tell me about spiritual resources nearby that I can use</td>
<td>33.62</td>
<td>40.31</td>
<td>517.5</td>
<td>0.18024</td>
</tr>
<tr>
<td>17. Help me to think about my dreams</td>
<td>33.35</td>
<td>39.62</td>
<td>506.5</td>
<td>0.20766</td>
</tr>
<tr>
<td>18. Bring me humorous things</td>
<td>35.93</td>
<td>37.26</td>
<td>612</td>
<td>0.79486</td>
</tr>
<tr>
<td>19. Help me laugh</td>
<td>34.83</td>
<td>38.71</td>
<td>567</td>
<td>0.4413</td>
</tr>
<tr>
<td>20. Help me, if I needed, with my religious practices</td>
<td>37.06</td>
<td>34.55</td>
<td>571.5</td>
<td>0.61708</td>
</tr>
<tr>
<td>21. Arrange for my minister or a spiritual mentor to visit me</td>
<td>33.6</td>
<td>38.19</td>
<td>516.5</td>
<td>0.35758</td>
</tr>
<tr>
<td>22. Arrange for a chaplain to visit me</td>
<td>35.65</td>
<td>35.29</td>
<td>588.5</td>
<td>0.9442</td>
</tr>
<tr>
<td>23. Offer to talk with me about meditation or…</td>
<td>34.21</td>
<td>34.94</td>
<td>541.5</td>
<td>0.88866</td>
</tr>
<tr>
<td>24. Offer to talk with me about the difficulties of praying when sick</td>
<td>33.81</td>
<td>36.64</td>
<td>532.5</td>
<td>0.56868</td>
</tr>
<tr>
<td>25. Offer to pray privately for me (i.e. nurse prays for me later while alone)</td>
<td>34.2</td>
<td>37.34</td>
<td>541</td>
<td>0.5287</td>
</tr>
<tr>
<td>26. Offer to pray with me</td>
<td>34.56</td>
<td>36.83</td>
<td>556</td>
<td>0.65272</td>
</tr>
<tr>
<td>27. Ask me about my spiritual beliefs</td>
<td>33.2</td>
<td>37.48</td>
<td>508</td>
<td>0.3843</td>
</tr>
<tr>
<td>28. Ask me about what gives my life meaning</td>
<td>32.84</td>
<td>38.16</td>
<td>485.5</td>
<td>0.28014</td>
</tr>
<tr>
<td>29. Ask me about how I relate to God (or whatever is that Ultimate Other)</td>
<td>33.8</td>
<td>37.9</td>
<td>525</td>
<td>0.41222</td>
</tr>
<tr>
<td>30. Ask me about religious practices</td>
<td>33.54</td>
<td>35.5</td>
<td>514</td>
<td>0.34212</td>
</tr>
</tbody>
</table>

Notes: Online \( n=42 \), On-campus \( n=34 \), * indicates statistical significance, \( p<0.05 \)

### Online Male Students

The results of the Mann Whitney \( U \) indicated statistical significance for question number...
Online male participants agreed with the following statement more strongly, arrange for my minister or a spiritual mentor to visit me. The other statements were not statistically significant. Online males strongly agreed that arranging for a minister or spiritual mentor visit would be helpful.

**Arranging for a minister or spiritual mentor visit.** This finding has been supported by other studies that included both males and females (Johnston Taylor, 2005; Reed, 1991; Weaver, Flannelly, & Oppenheimer, 2003). One of the top three spiritual interventions that well adults wanted from a nurse was arranging for a visit with clergy (Reed, 1991). Results for the preference of meeting with a minister have been mixed. While this study showed that online males preferred that arrangements be made for a minister or spiritual mentor visit it also showed that females reported that this was not highly preferable. On the other hand, a study by Lovik (2010) showed that a campus chaplain or support from a campus ministry would not be very helpful for spiritual growth among college students. A possible reason for the variation could possibly be that the population in Lovik’s (2010) study was mostly from secular institutions whereas the sample in this study was from a Christian college. Whether this spiritual therapeutic action is helpful or not can be further studied as a way to obtain more conclusive evidence. Perhaps this helpful action is dependent upon gender, population type, or some other variable. Based on this statistically significant finding it would be recommended to offer students, especially online males, this spiritually therapeutic option and leave it up to the student to decide if they would want this.
Table 9

*Mann Whitney U Test for Spiritual Therapeutic Preferences of Online Male Students as Compared to Online Female Students as Listed by each Statement*

<table>
<thead>
<tr>
<th>Spiritual Therapeutic Preferences</th>
<th>Mean of Ranks Online Male</th>
<th>Mean of Ranks Online Female</th>
<th>U-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Help me to have quiet times or space</td>
<td>21.5</td>
<td>20.3</td>
<td>195</td>
<td>0.3821</td>
</tr>
<tr>
<td>12. Listen to me talk about my spiritual concerns</td>
<td>22.2</td>
<td>19.4</td>
<td>178.5</td>
<td>0.4593</td>
</tr>
<tr>
<td>13. Listen to me talk about my spiritual strengths</td>
<td>21.3</td>
<td>20.6</td>
<td>199.5</td>
<td>0.8572</td>
</tr>
<tr>
<td>14. Teach me about ways to draw or write about my spirituality</td>
<td>22.9</td>
<td>18.5</td>
<td>162.5</td>
<td>0.2646</td>
</tr>
<tr>
<td>15. Listen to the stories of my life</td>
<td>21.4</td>
<td>20.4</td>
<td>197</td>
<td>0.8026</td>
</tr>
<tr>
<td>16. Tell me about spiritual resources nearby that I can use</td>
<td>22</td>
<td>21.1</td>
<td>183</td>
<td>0.5353</td>
</tr>
<tr>
<td>17. Help me to think about my dreams</td>
<td>20.9</td>
<td>21.1</td>
<td>209.5</td>
<td>0.9601</td>
</tr>
<tr>
<td>18. Bring me humorous things</td>
<td>20.5</td>
<td>21.6</td>
<td>217.5</td>
<td>0.7949</td>
</tr>
<tr>
<td>19. Help me laugh</td>
<td>20.3</td>
<td>21.9</td>
<td>222.5</td>
<td>0.6965</td>
</tr>
<tr>
<td>20. Help me, if I needed, with my religious practices</td>
<td>22.5</td>
<td>19.1</td>
<td>172</td>
<td>0.3628</td>
</tr>
<tr>
<td>21. Arrange for my minister or a spiritual mentor to visit me</td>
<td>25.2</td>
<td>15.7</td>
<td>111</td>
<td>0.0121*</td>
</tr>
<tr>
<td>22. Arrange for a chaplain to visit me</td>
<td>23.7</td>
<td>17.6</td>
<td>145.5</td>
<td>0.1096</td>
</tr>
<tr>
<td>23. Offer to talk with me about meditation or…</td>
<td>21.6</td>
<td>20.2</td>
<td>192.5</td>
<td>0.7114</td>
</tr>
<tr>
<td>24. Offer to talk with me about the difficulties of praying when sick</td>
<td>20.7</td>
<td>20.3</td>
<td>192</td>
<td>0.9362</td>
</tr>
<tr>
<td>25. Offer to pray privately for me (i.e. nurse prays for me later while alone)</td>
<td>22.7</td>
<td>18.8</td>
<td>168</td>
<td>0.3125</td>
</tr>
<tr>
<td>26. Offer to pray with me</td>
<td>20.8</td>
<td>21.3</td>
<td>211.5</td>
<td>0.9124</td>
</tr>
<tr>
<td>27. Ask me about my spiritual beliefs</td>
<td>21.6</td>
<td>19</td>
<td>170.5</td>
<td>0.5029</td>
</tr>
<tr>
<td>28. Ask me about what gives my life meaning</td>
<td>20.5</td>
<td>21.7</td>
<td>219.5</td>
<td>0.749</td>
</tr>
<tr>
<td>29. Ask me about how I relate to God (or whatever is that Ultimate Other)</td>
<td>21.4</td>
<td>20.5</td>
<td>198</td>
<td>0.8529</td>
</tr>
<tr>
<td>30. Ask me about religious practices</td>
<td>21</td>
<td>21</td>
<td>207</td>
<td>0.992</td>
</tr>
</tbody>
</table>

Notes: Online male n=23, Online female n=19,
* indicates statistical significance, p<0.05
**Online Undergraduate Students**

The online undergraduate students agreed more strongly with the statement, “help me to have quiet times or space.” The responses on the NSTS differed significantly for statement number 11 only. The level of college degree did not have a significant difference for overall spiritual therapeutic preferences but when looking at each statement one by one it was determined that online undergraduates agreed that assistance with having quiet times or space would be helpful.

**Quiet Times or Space.** The idea of having quiet times or space is supported by a review of the literature which mentions that sacred spaces can be healing environments where a nurse and patient are present (Quinn, 1992; Gilmour, 2006). The fact that healthy environmental settings improve overall health has been well documented over time. Florence Nightingale showed in her research that spaces, which were well ventilated, have good lighting and were not crowded led to better health outcomes (Schweitzer, Gilpin & Frampton, 2004). Perhaps online undergraduates who are learning at home in their own environments need support, advice, or assistance in creating spaces where they can promote spiritual health. Have colleges been intentional about educating online students about the needs for having healthy spaces at home to learn and reflect? It could be possible that talking about options for having quiet times and space along with creating an individualized plan with each student could be helpful. Some things to consider about environments for online students’ homes could be noise, smell, temperature, light, ventilation, nature, chemicals, clutter, music, humor, and positive distractions such as entertainment (Schweitzer, Gilpin, & Frampton, 2004). Online undergraduate students may be unaware of the impact that their environment has on learning, spirituality and health. If colleges
were to make sharing this information with students a priority then it might lead to positive results for students.
Table 10

*Mann Whitney U Test for Spiritual Therapeutic Preferences of Online Graduate Students as Compared to Online undergraduate Students*

<table>
<thead>
<tr>
<th>Spiritual Therapeutic Preferences</th>
<th>Mean of Ranks</th>
<th>Mean of Ranks</th>
<th>U-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Online Graduate</td>
<td>Online Undergrad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Help me to have quiet times or space</td>
<td>17.7</td>
<td>25.7</td>
<td>283.5</td>
<td>0.0366*</td>
</tr>
<tr>
<td>12. Listen to me talk about my spiritual concerns</td>
<td>19.6</td>
<td>22.9</td>
<td>236.5</td>
<td>0.3953</td>
</tr>
<tr>
<td>13. Listen to me talk about my spiritual strengths</td>
<td>21.3</td>
<td>20.6</td>
<td>197.5</td>
<td>0.8729</td>
</tr>
<tr>
<td>14. Teach me about ways to draw or write about my spirituality</td>
<td>19</td>
<td>23.8</td>
<td>251</td>
<td>0.2187</td>
</tr>
<tr>
<td>15. Listen to the stories of my life</td>
<td>20.1</td>
<td>22.3</td>
<td>225.5</td>
<td>0.5755</td>
</tr>
<tr>
<td>16. Tell me about spiritual resources nearby that I can use</td>
<td>20.7</td>
<td>21.5</td>
<td>212</td>
<td>0.8413</td>
</tr>
<tr>
<td>17. Help me to think about my dreams</td>
<td>19.6</td>
<td>23</td>
<td>237.5</td>
<td>0.3843</td>
</tr>
<tr>
<td>18. Bring me humorous things</td>
<td>20</td>
<td>22.4</td>
<td>228.5</td>
<td>0.5222</td>
</tr>
<tr>
<td>19. Help me laugh</td>
<td>20.3</td>
<td>21.9</td>
<td>220</td>
<td>0.6818</td>
</tr>
<tr>
<td>20. Help me, if I needed, with my religious practices</td>
<td>20.1</td>
<td>22.2</td>
<td>225</td>
<td>0.5892</td>
</tr>
<tr>
<td>21. Arrange for my minister or a spiritual mentor to visit me</td>
<td>19.1</td>
<td>23.7</td>
<td>250.5</td>
<td>0.2225</td>
</tr>
<tr>
<td>22. Arrange for a chaplain to visit me</td>
<td>21.3</td>
<td>20.5</td>
<td>196</td>
<td>0.8415</td>
</tr>
<tr>
<td>23. Offer to talk with me about meditation or…</td>
<td>18.7</td>
<td>24.2</td>
<td>258.5</td>
<td>0.1527</td>
</tr>
<tr>
<td>24. Offer to talk with me about the difficulties of praying when sick</td>
<td>19.9</td>
<td>21.3</td>
<td>209</td>
<td>0.7188</td>
</tr>
<tr>
<td>25. Offer to pray privately for me (i.e. nurse prays for me later while alone)</td>
<td>20.6</td>
<td>21.6</td>
<td>213.5</td>
<td>0.8103</td>
</tr>
<tr>
<td>26. Offer to pray with me</td>
<td>20.8</td>
<td>21.3</td>
<td>208.5</td>
<td>0.9124</td>
</tr>
<tr>
<td>27. Ask me about my spiritual beliefs</td>
<td>21.3</td>
<td>19.4</td>
<td>174</td>
<td>0.6312</td>
</tr>
<tr>
<td>28. Ask me about what gives my life meaning</td>
<td>20.4</td>
<td>21.9</td>
<td>218.5</td>
<td>0.7114</td>
</tr>
<tr>
<td>29. Ask me about how I relate to God (or whatever is that Ultimate Other)</td>
<td>22</td>
<td>19.6</td>
<td>179.5</td>
<td>0.5222</td>
</tr>
<tr>
<td>30. Ask me about religious practices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Online graduate n=22, Online Undergraduate n=19, * indicates statistical significance, p<0.05

**Stress Level.** A relationship between spiritual therapeutic preferences and stress level among college students was not found to be statistically significant in this study. It was
reasonable to suppose that students who were experiencing more stress would more strongly welcome spiritually therapeutic actions as a possible way to reduce stress more than the lower stressed students. However, this was not found to be true. Reasons for this could be varied. One possible reason could be that students with lower levels of stress are more open to outside help as a way to reduce their stress, which could be why they have lower levels of stress in the first place. It is possible that students with high levels of stress ignore outside options as ways to help them to handle their stress and that is why they have higher levels of stress.

In a recent study by Li and Lindsey (2013), which also used the Perceived Stress Scale to measure stress levels of college students, the students had similar overall scores as the participants in this study. The results showed that those students who engaged more in positive health behaviors such as exercising or eating healthy had lower levels of stress. Even though students that had higher levels of stress could have also engaged in the same health promoting activities, they did not choose to do so. It is necessary to consider that motivation on the part of the student could also be a factor. Just because a service is offered does not mean that a student will decide to utilize a service.

**Topics of Concern.** There was one question within the NSTS that allowed student participants to type in something that they would like to talk to a nurse about. Eleven students typed in an answer. The answers were varied. Four students listed “prayer” but the rest of the answers were “anything”, “relationships”, “forgiveness and letting go of past hurts,” “personal time with the Lord,” “spiritual warfare,” “spiritual reflection,” and “physical health.” These answers reflect important subject matter and expose the importance of spiritual support for students. The researcher is reminded of the great commission in Matthew 28:19a which says, "Therefore, go and make disciples of all the nations.” Discipleship is necessary among Christian
communities. Proverbs 27:17 (NAS) tells us that “Iron sharpens iron, so one man sharpens another.” Offering students spiritually therapeutic support either from a nurse or by the nurse serving as a resource person to connect students with other college support services is a way to help students improve their spiritual health and grow in their relationship with the Lord.

**Implications**

There are implications for the profession of nursing. College students are a segment of the population that can be targeted by nurses to promote health and prevent disease. Prevention is the key to promoting disease and keeping people healthy. Nurses are trained to provide holistic care, including spiritual care. Research regarding spiritually therapeutic helpful actions for college students give nurses the research based evidence that is needed to effectively guide practice. This research is able to shed more light on which spiritually therapeutic actions are most helpful, when given by a nurse to specific groups of college students. Applying these research findings to the college health setting could lead to better health, higher college retention rates and higher student satisfaction. Applying this research to nursing practice would also be a way to help work towards improving the health of the nation. Healthy People 2020, which is a major health initiative established by the U. S. Department of Health and Human Services (2014) established goals to improve the health of all groups.

There are implications for how theory can guide nursing practice. Erikson’s Stages of Psychosocial Development Theory is one theory that could be used as a guideline for providing spiritual care based on a student’s developmental stage. Students could benefit from spiritual therapeutics when their developmental needs for understanding their identity, developing connections with others or their need to feel productive are taken into account (Erikson, 1997).
Another theory that could guide nurses when providing spiritually therapeutic actions is Jean Watson’s Caring Theory (Watson, 2009). Watson (2009) has included ten carative actions within her theory, all of which promote spiritual health. It is interesting to note that Watson specifically mentions the importance of addressing negative environments. Since this study showed that quiet times and space was important to undergraduate online students, Watson asserts that it is necessary for nurses to promote environments that are supportive, protective, and spiritually healthy and to make changes in these environments when needed. Watson (2009) also identifies the importance of developing helping-trust relationships and the need for sensitivity to others. Since this study identified that on-campust students feel that being listened to would be helpful, establishing trusting relationships and sensitivity would also be conducive for therapeutic listening.

There are implications for colleges. Rusbult’s Investment Model helps to explain why students who feel like they have an investment in a particular college will stay (Reis & Spreecher, 2009). Developing connections with students can lead to a deeper sense of belonging. Implementing student spiritual therapeutic preferences could improve the spiritual health of students through relationships. This could lead to higher student satisfaction rates. This in turn could result in higher retention rates.

There are implications for students. Students could be given more spiritually therapeutic options that are based on their own preferences. This could benefit students not only spiritually, but physically as well. Students could be able to cope better with the issues that they must deal with. Students use spirituality as a way to find meaning in their lives, which could help them to stay focused in the right direction.
Study Limitations

This study had some limitations. One limitation was due to the fact that the results were based on self-report. If the statements were misunderstood or read too quickly it could be possible for a participant to miss the meaning of each of the statements. In order to generate an accurate analysis of the spiritual therapeutic preferences it was hoped that participants answered all of the questions honestly. Some students left some of the questions blank, which could also affect the results.

Another limitation of this study is that a non-probability sampling technique was utilized. Since only those participants who wanted to participate in the study were included, it is possible that this sample was not representative of the entire college student body. This study had a low response rate of 6%. This was likely due to the fact that the survey was sent in the summer when some students may have been on a break.

A threat to external validity was due to the fact that this study was conducted at a large Christian college and future researchers may find it hard to reproduce similar results at other colleges with different demographics. The student preferences at the experimental college may differ from other types of colleges and so the results may not be able to be generalized to other types of colleges.

Even though the students were divided into groups, such as graduate or undergraduate, there may have been other factors that contributed to their differences in preferences besides their academic level such as age, ethnicity or geographic location to name only a few. While not all possible factors were taken into account, as more studies in this area are conducted more can be understood about the variables that were included.
Recommendations for Future Research

Based on the results from this study the researcher has some recommendations for future research. Future research should focus on how the physical environment impacts online learners. If there are ways that the environment could positively impact a student’s holistic health then students could be educated about them. It could be helpful for students to incorporate evidence-based changes into their environment which would promote quiet times and space. Research would also need to be done as to how this is best accomplished. For example, a college nurse or a student support service advocate could help students to design and implement a plan for the physical spaces where they engage in online coursework. A tool could be developed for identifying problems in a student’s environment that might hinder spiritual development, learning and health.

Many colleges have implemented virtual chat rooms, virtual classrooms, and spaces for online students to meet and this trend should continue based on the results from this study. It is not known which approach, a physical or virtual space, is best for intentionally creating helpful spaces. Will virtual spaces, physical spaces, or both types of spaces lead to better spiritual health? Also, what characteristics should these spaces possess? How can college health nurses assist students to improve their environments?

Another recommendation is for future research to address the best strategies for incorporating intentional listening strategies with a college population. Should all college personnel be trained specifically to listen? Should a specific model be adopted for intentional listening such as the JUST listening model which is non-judgmental and is based on the idea that people hold their own solutions to their problems within themselves or another type of listening
model (Browning & Waite, 2010)? Listening does not come naturally for some people. Listening without an agenda can be an important way to help students.

The researcher also recommends that more research be conducted on how college health nurses can reach out and collaborate more with the college community to promote spiritual health. What are the best ways for college health nurses to work together with clergy, student support services, campus ministries, and counselors? Good communication between disciplines and departments is necessary to allow for positive changes for a focus on student preferences for student spiritual therapeutic services.

It would be helpful to have future research conducted on this same topic that includes different types of colleges rather than just one Christian college. Secular, private, and two-year colleges could be included as a way to see how and if their spiritual therapeutic preferences differ based on which type of college that they attended. Since this topic has been studied so little, there are many opportunities for researchers who are interested in this area of research.
REFERENCES


Arric, L., Young, K., Harris, S., & Farrow, V. (2011). An analysis of stress levels of female graduate students in an online program. *Advancing Women In Leadership, 31*(1), 144-152.


Clark, A. (2009). Forming a collaborative college: primary health care nurses should have a more powerful voice, once the college of primary health care nurses has been established. *Kai Tiaki: Nursing New Zealand 15*(3), 32.


Nichols, M. (2010). Student perceptions of support services and the influence of targeted interventions on retention in distance education. Distance Education, 31(1), 93-113. doi:10.1080/015879111003725048


*Nursing Inquiry, 19*: 202–212.


APPENDIX A

Student support services are offered by colleges to help students get the most out of their college experience. I am a doctoral student conducting a study about spiritual support services and what you as a student, might find helpful or not helpful. The first part of the questionnaire will ask you a few questions about yourself and about your current level of stress. The second part of the questionnaire will ask you how you feel about different types of support services. Keep in mind that all of the services that will be asked about could be offered in person or could be adapted for online students as well.

For example, you will be asked if it would be helpful for someone from student support services to listen to you talk about your spiritual strengths. For a student who lives on campus this could mean a face-to-face meeting, phone call or an online chat with audio while using a webcam. For an online student, this would likely mean a phone call or online chat with audio while using a webcam rather than a face-to-face visit, since online students usually live too far away for an in person visit. The important point to keep in mind is that all of the interventions that are listed could be offered in person, through the internet or through a telephone call.

Responding to this survey means that you are agreeing to participate in this study. You must be at least 18 years of age to participate in this study. You will not be asked for your name and you will remain anonymous. There are 32 questions, which should take approximately 10-15 minutes to complete.
Study Questionnaire

1. Please choose your gender.
   - Male
   - Female

2. Are you a graduate or undergraduate student?
   - Undergraduate student
   - Graduate student

Instructions: The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

2. In the last month, how often have you felt that you were unable to control the important things in your life?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

3. In the last month, how often have you felt nervous and "stressed"?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often
4. In the last month, how often have you felt confident about your ability to handle your personal problems?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

5. In the last month, how often have you felt that things were going your way?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

7. In the last month, how often have you been able to control irritations in your life?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

8. In the last month, how often have you felt that you were on top of things?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

9. In the last month, how often have you been angered because of things that were outside of your control?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?
0=never 1=almost never 2=sometimes 3=fairly often 4=very often

Respond to the following statements by choosing whether you strongly disagree, disagree, agree or strongly agree.

In general, I would want the student support services at my college to:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
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<tbody>
<tr>
<td>11. Help me to have quiet times or space</td>
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<td>12. Listen to me talk about my spiritual concerns</td>
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<td>13. Listen to me talk about my spiritual strengths</td>
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<td>14. Teach me about ways to draw or write about my spirituality</td>
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<td>15. Listen to the stories of my life</td>
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<td>16. Tell me about spiritual resources nearby that I can use</td>
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<td>17. Help me to think about my dreams</td>
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<td>18. Bring me humorous things</td>
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<td>19. Help me laugh</td>
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<td>20. Help me, if I needed, with my religious practices</td>
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<td>21. Arrange for my minister or a spiritual mentor to visit me</td>
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<td>22. Arrange for a chaplain to visit me</td>
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<td>23. Offer to talk with me about meditation or…</td>
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<td>24. Offer to talk with me about the difficulties of praying when sick</td>
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<td>25. Offer to pray privately for me (i.e. nurse prays for me later while alone)</td>
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<td>26. Offer to pray with me</td>
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<td>27. Ask me about my spiritual beliefs</td>
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<td>28. Ask me about what gives my life meaning</td>
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<td>29. Ask me about how I relate to God (or whatever is that Ultimate Other)</td>
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<tr>
<td>30. Ask me about religious practices</td>
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APPENDIX B

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INSTITUTIONAL REVIEW BOARD

September 30, 2013

Debra Masterson
IRB Exemption 1670.093013: The Spiritual Therapeutic Preferences of Online Learners and On-Campus Learners at a Christian College

Dear Debra,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and that no further IRB oversight is required.

Your study falls under exemption category 46.101 (b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:

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Please note that this exemption only applies to your current research application, and that any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption, or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

Fernando Garzon, Psy.D.
Professor, IRB Chair
Counseling

(434) 592-4054

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