

THE IMPACT OF MISSIONARY SERVICE ON THE SPIRITUAL DEVELOPMENT
AND PSYCHOLOGICAL WELLBEING OF MORMON COLLEGE STUDENTS

by

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Dedication

This is dedicated my wife, Donna, one of the most loving and spiritual people I know.

It is dedicated to my children, Diane, Jacqueline, and Katrina, who remind me the most important things in life are what we do within our own families and not in the outside world.

It is dedicated to my mother Rose, who at the age of 90 still provides great advice and wisdom.

To my grandchildren, Austin, Brooklee, and Rose, in hopes that as they continue to progress they will know they are children of loving heavenly parents.

Finally, this is dedicated to all those students who wonder from time to time if they can still find a place in a skeptical world where they can find their own spiritual selves.

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Abstract

THE IMPACT OF MISSIONARY SERVICE ON THE SPIRITUAL DEVELOPMENT AND PSYCHOLOGICAL WELLBEING OF MORMON COLLEGE STUDENTS

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Mormon college students may leave or delay their studies to serve missions for their church, typically for 18 to 24 months. This dissertation studies the impact of serving a mission on the spiritual development and psychological wellbeing of these students. Using a two-factor ANOVA fixed-effects, nonexperimental design, five measurement scales on spiritual development were assessed of males and females who served and had not served as Mormon missionaries. These measures were equanimity, ecumenical worldview, religious engagement, religious struggle, and spiritual quest. A sixth measurement scale was used to address psychological wellbeing. The 46-item survey was from the College Spiritual and Belief Values (CSBV) survey, from the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA). The survey was completed by 373 Mormon college students, 179 of whom had served missions. The survey participants were students from one of two universities, one a large public institution in Utah, and the other a small private university in Virginia. The

study found that students who had served missions scored significantly better than those who had not. Responses from student participants who served missions indicated they feel more at peace, find greater meaning in personal hardships, and feel happier about the direction their life is heading. They are more accepting of other religious traditions, cultures, and values, and have a greater sense of connection with humanity. They are stronger in their own spiritual and religious beliefs, while at the same time view life itself as an ongoing process of finding purpose and meaning. These students also have a greater sense of emotional and psychological wellbeing. The study also found that for those who had not served missions, females tended to score better than their male counterparts in all six measures. Yet this gap disappeared for those who served missions. At the same time, once students returned to college after their missions, their levels of spiritual development and psychological wellbeing stabilized. However, care should be taken in assessing the impact of the time students had been back from their missions as only two of the six scales, religious engagement and religious struggle, were statistically significant. This study discusses how these findings relate to previous studies, especially those of Fowler (1981); Gilligan (1982); Astin, Astin, and Lindholm (2011b); and Welch and Koth (2013). The study provides recommendations based on these findings. These include the need to assist students in their own spiritual development, look closer at gender roles within The Church of Jesus Christ of Latter-Day Saints (LDS) faith, and examine how the larger higher education community beyond just the Mormon faith can support college student spiritual and emotional development through service opportunities.

Chapter One: Introduction

Background

On February 27, 2010, Chile was hit by a magnitude 8.8 earthquake, the sixth strongest earthquake in the world recorded since 1900, the fifth strongest ever recorded in Chile since the 1500s. In the town of San Javier, in the middle of the night, four sister missionaries were shaken awake by the power of the earthquake that lasted for more than three minutes. The small house they lived in was made of wood and mortar, and survived the impact. However, as they waited for dawn, they became increasingly concerned about their friends and neighbors in the area. When they stepped outside the next morning, they found many of the adobe homes had been leveled, although fortunately in their village there were no casualties.

One of the sister missionaries, Jackie, had only arrived in Chile a month before, and until now she had never experienced a tremor let alone a full earthquake. As a missionary of The Church of Jesus Christ of Latter-Day Saints (LDS), more commonly known as Mormons, she had come to Chile to share her faith and testimony with the Chilean people. Like many young Mormon missionaries, Jackie had taken time off from her college studies to serve for 18 months as an unpaid volunteer.

Because of this devastating earthquake, the missionaries would spend much of their time over the next several months in cleanup and recovery efforts. Jackie did not

mind the work, and felt she was providing service to others, as she believed Christ would serve them. A couple of days after the earthquake, there was a baptism scheduled for a family that Jackie and her companion had been teaching. Because the baptismal font at the church was unusable, the baptism would be held in the family swimming pool. Eleven year-old Maria Jesus asked Jackie if she would perform the baptism. However, in the Mormon faith, only men are authorized to perform baptisms and other ordinances. Maria Jesus asked if this meant the men were considered more spiritual than the women, or if the women felt less valued than their male counterparts. Jackie explained that although she could not perform the baptism, she did not feel slighted but was excited she could be part of the family joining the church.

Over the next 16 months, Jackie would face other challenges as she continued her missionary work in Chile. She caught a staph infection that swelled her face to the point that church members did not recognize her. Her companion gave her a new hairstyle to cover the huge abscess on her forehead. X-rays were taken to make sure the infection had not penetrated to her brain. In addition to the medical help she received from the Chilean doctors and nurses, Jackie was also given a blessing of healing by two of the male missionaries.

During her mission, Jackie and her companions experienced an untold number of aftershocks, stray dogs that chased them through the streets, rocks thrown at them, and threats from unknown individuals. Still, she felt the good experiences far outweighed the bad. She came to know and love the Chilean people and their culture. Through a lot of prayer and scripture study, she gained a greater understanding of her faith. She also

believed that she grew in her own spirituality far more than she would have by remaining in college.

This real-life story introduces many thought-provoking questions when examining the spiritual development, wellbeing, and personal growth of young adults serving as Mormon missionaries. What defines spirituality? What makes up spiritual development? How does spiritual development affect the wellbeing of young adults? How do we measure spiritual development? Is there a difference in how young adults develop spiritually based on gender? What inspires young adults in the Mormon faith to sacrifice 18 to 24 months of their lives to serve as missionaries for their faith with no material reward? For the college students who put a hold on their college studies, how much do they grow spiritually from the experience?

Astin, Astin, and Lindholm (2011a) point out that definitions and understanding of spirituality are so varied that it is critical for the researcher to define it up front. Most researchers note that spirituality is a complex subject, with multiple definitions. Religious backgrounds, the role of personal wellbeing, psychological makeup of individuals, and cultural and societal perceptions of what makes up a spiritual life are all part of what drives this myriad of definitions (Astin, Astin, & Lindholm, 2011b; Estanek, 2006; Welch & Koth, 2013). Spirituality has been described as what makes up our inner, subjective life and is closely tied to personal wellbeing. It entails our most cherished values, finding our own authenticity, and driving us to find our purpose for being here (Astin et al., 2011b). This includes connecting with and serving others (Welch & Koth, 2013), and being open to exploring a relationship with something that transcends the

physical universe around us (Astin et al., 2011b). For the purpose of this study, spirituality is what makes up our inner selves, provides purpose and meaning in our lives, defines who we are, and helps us make sense of the world around us.

Traditional-age college students are at a critical point in their personal development. This goes beyond academics and includes other areas of development such as the physical, intellectual and cognitive, moral and ethical, emotional, and spiritual. Student spiritual development has gained increasing recognition over the past few years (Astin et al., 2011b). Spiritual development is closely associated with wellbeing and understanding how college students develop their own spirituality can help them find purpose and meaning in life. Spiritual wellbeing is also dependent on other factors such as religious affiliation, cultural background, and personal preferences (Small & Bowman, 2012). This is even more pronounced in faiths where much of family and community actions revolve around a strong religious culture (Dalton, 2001; Rogers, 2009). For good or bad, these strong cultures profoundly impact individuals' spiritual development and personal wellbeing.

Spirituality touches several parts of people's development, both internally in how they develop a sense of who they are (Bobilya, Akey, & Mitchell, 2011), and externally in how they fit into a wider universe and within their own communities (Estanek, 2006). The connection between spiritual wellbeing and life purpose has also been studied from the perspective of service to others. This aspect of spiritual wellbeing helps individuals develop interconnections in their quest for something larger and engaging in meaningful endeavors outside themselves (Welch & Koth, 2013).

Diener, Fujita, Tay, and Biswas-Diener (2012) studied the extent that pleasure, purpose in life, interest, and mood predicts satisfaction with life, with one's self, and with one's day. They described two forms of psychological wellbeing: hedonic wellbeing based on pleasure and eudaimonic wellbeing based on exercising virtues. Steger, Kashdan, and Oishi (2008) found that the more individuals reported engaging in eudaimonic behaviors, the greater the wellbeing reported in terms of meaning in life and life satisfaction. As a missionary, Jackie found greater purpose and meaning in her life, whether the service she provided was proselyting and sharing her faith, or being involved more directly in people's lives through earthquake relief efforts.

Current theory and research supports the idea there are distinct differences in spiritual development and spirituality based upon gender (Astin et al., 2011b; Bryant, 2007; Rennick, Smedley, Fisher, Wallace, & Kim, 2013). The reasons for these differences are a combination of the psychological makeup of males and females, and the culture in which they are brought up (Bryant, 2007; Gilligan, 1982). Gilligan's (1982) theory on moral development, closely related to spiritual development, was developed specifically for women. This was driven by recognized differences in how the genders as a whole have different perspectives on what constitutes moral behavior. For example, several previous gender studies consistently found female moral orientation geared more toward caring, while male moral orientation was geared more toward the idea of justice (Evans, Forney, Guido, Patton, & Renn, 2010). From this perspective, Jackie's comments that she cared more about Maria Jesus being baptized than the fact that the baptism had to be performed by her male counterpart is understandable. She views this

as part of the faith she believes in and thus is a nonissue. Following Gilligan's logic, the male missionary performing the baptism, although still happy for the family's decision, may see his role primarily as fulfilling the requirement that the ordinance is performed properly.

Although researchers have attempted to measure college student spiritual development, the most recent, robust, and widely cited model today comes from the work at UCLA's Higher Education Research Institute (HERI) by Astin et al. (2011b). This longitudinal study involved thousands of student participants from institutions across the country and contained a deeper level of detail than had been done to that point. This resulted in significant insights about student behavior and provided greater context to the existing faith development theories. Astin et al.'s (2011b) model developed 10 measures of spirituality and religiousness. Although not unique, these measures capture the most critical aspects of student spiritual development today. When validated, the measures fell into one of three groupings: religiousness, spirituality, and religious struggle. The four measures within the religiousness grouping included religious commitment, religious engagement, religious skepticism, and religious/social conservatism where all four were found to be highly correlated with one another. The five measures of spirituality were also correlated with each other, although not to the same level as the religious grouping. This spiritual grouping included charitable involvement, spiritual quest, equanimity, ecumenical worldview, and ethic of caring. One measure, religious struggle, was not strongly correlated with any of the other measures, and was set apart as its own distinct group.

Members of the Mormon faith have a culture that emphasizes close family and community relations (The Church of Jesus Christ of Latter-Day Saints, 2010). This culture brings with it a relatively high level of expectations. Mormon males are encouraged throughout their lives to serve 2-year missions after they turn 18 for the church and are sent to various locations around the world. Women are also allowed to serve 18-month missions. In 2012, the minimum age for women serving missions dropped from 21 to 19 years (Monson, 2012) resulting in many more women choosing to serve missions and raising the total number of missionaries from 55,410 to 85,147 between 2011 and 2014 (Hales, 2012, 2015).

The Mormon faith, as with other faiths, has been challenged in recent years as young adults in the United States have a desire to grow spiritually but are less concerned about religion (Astin et al., 2011b). Yet compared to most other faiths where religious participation dropped, the Mormon faith has continued to grow from 14.9 million when the missionary age was changed in 2012 to 15.4 million by the end of 2014. This continued growth is due in part to a culture that strongly encourages missionary service from their young adults (Hales, 2012, 2015). But challenges for these missionaries include balancing the roles of proselyting and helping meet the temporal needs of others, recognizing potential equity issues of current and future women's roles in a historically patriarchal religious culture, and determining how to support the growth and wellbeing of Mormon missionaries once they return to college. By examining how serving as a Mormon missionary during their college years impacts the spiritual development of

Mormon college students, we gain a better idea of these students' needs in terms of overall personal development and wellbeing.

Purpose of the Study

Despite growing evidence that spirituality contributes to overall student development and personal wellbeing, many educators are reluctant to address spirituality with their students. They worry about legal ramifications of being associated with particular religious or faith groups (Astin et al., 2011b). Even those who may be spiritual or religious themselves do not want to appear they are advocating their own personal beliefs with their students (Astin et al., 2011b; Estanek, 2006; Welch & Koth, 2013). There are misunderstandings of what spirituality means or how to address it to meet the diverse needs and cultures of their student populations. These concerns have led many universities and colleges to ignore the spiritual development of their students (Astin et al., 2011b). Dalton (2001) argued that even when higher education does address spiritual development, it has a tendency to do so from the perspective of self-development and finding oneself, but not necessarily in developing spiritual wellbeing.

As studies in student spiritual development have looked at various demographics and aspects of college students, there are few studies on Mormon college students. More specifically, there are no studies on the impact that an 18- to 24-month mission has on their spiritual development and wellbeing. This study looked at how these missions affect the spiritual development and wellbeing of these college students compared to those who have not served missions within the Mormon culture. It also looked at the

differences in spiritual wellbeing between male and female students who serve Mormon missions.

For the purposes of this study, the specific research questions to be addressed were:

1. What is the impact of serving a Mormon mission on the spiritual development and psychological wellbeing of college students, compared to Mormon students who have not served missions?
2. Is the level of spiritual development and psychological wellbeing different for Mormon students who have gone on a mission after certain time intervals?
3. What is the difference in spiritual development and wellbeing between males and females who participated in a Mormon mission?

Definition of Terms

There are a few terms that need to be defined and put into proper context for this study. These terms include the following:

Charitable involvement. Charitable involvement refers to personal behavior and action. Examples of charitable involvement activities include community service, donating money to charity, and helping others (Astin et al., 2011b).

Ecumenical worldview. An ecumenical worldview is an externally directed aspect of a person's spirituality. It refers to the extent a person is interested in learning about different religious traditions, seeks understanding of other countries and cultures, and feels an overall strong connection with humanity (Astin et al., 2011b).

Ethic of caring. Ethic of caring refers to the one's commitment to helping others in need, promoting understanding, and making the world a better place (Astin et al., 2011b).

Equanimity. Equanimity is an internally directed aspect of a person's spirituality. It refers to the extent to which someone feels centered and at peace, is able to find meaning in times of hardship, and feels happy about the direction their life is heading (Astin et al., 2011b).

Faith development. Faith development refers to the way individuals grow or develop spiritually. It is closely tied to, and in some cases used synonymously with, spiritual development (Evans et al., 2010).

Global citizenship. Global citizenship refers to an individual's concern about helping others and how they identify with the global community. It includes such items as such as trying to correct perceived injustices, reducing pain and suffering, and feeling a strong connection to the rest of humanity (Astin et al., 2011b).

Moral development. Moral development is described as the transformations that occur in individuals' thoughts in regard to what is right or necessary (Evans et al., 2010).

Psychological wellbeing. Psychological wellbeing refers to the state or condition of existence related to an individual's personal and emotional health and happiness. It entails personal life aspects such as levels of depression, sense of being overwhelmed, and levels of stress in one's life (Astin et al., 2011b).

Religious commitment. Religious commitment is the internal measure of religiousness. It is a measure of the extent to which spiritual and religious beliefs play a role in an individual's life (Astin et al., 2011b).

Religious engagement. Religious engagement is an external measure of religiousness. It is an outward expression of one's religious worldview. Examples include such things as how much a person prays, how often the person attends church, or whether they read scriptures on a regular basis (Astin et al., 2011b).

Religious struggle. Religious struggle is the extent a person feels uncertain about religion or distant from God. It is also expressed by how much they argue with family or others about religious matters, or question their religious beliefs (Astin et al., 2011b).

Religiousness. Religiousness is the interaction of the individual within a religious faith or community. It reflects how much the person interacts from no involvement at all to devoting most of their time to their religion. It involves interaction with others in the community and participation in rituals or ceremonies. It may be characterized by the individual's involvement in specific behavioral, social, doctrinal, and denominational activities (Astin et al., 2011b).

Spiritual development. Spiritual development, closely related to faith development, is the growth process individuals go through in defining who they are and how they fit in the world. It integrates the cognitive, moral, emotional, and social aspects of personal development with the attributes of integrity, wholeness, and self-transcendence (Astin et al., 2011b).

Spiritual quest. Spiritual quest reflects a person's interest in searching for purpose and meaning in life. It includes attaining inner harmony or developing a meaningful philosophy of life (Astin et al., 2011b).

Spirituality. For the purpose of this study, spirituality is what makes up our inner selves, provides purpose and meaning in our lives, defines who we are, and helps us make sense of the world around us.

Spiritual wellbeing. Wellbeing refers to a state or condition of existence, and is described from different aspects of life such as physical, emotional, or spiritual. Spiritual wellbeing refers to the sense of happiness or satisfaction tied to one's spirituality (Astin et al., 2011b).

Student development. Student development has different and vague definitions. One of the more widely accepted definitions is the way students grow or develop their capabilities due to their enrollment in a higher education institution. It has also been defined as the application of human development in a postsecondary setting (Evans et al., 2011).

Significance of this Study

The faith development theories by such scholars as Fowler (1981, 2000) and Parks (2000) provide a framework from which we can examine how traditional-age college students develop spiritually. However, these frameworks are of little value unless we can apply them to our students who bring their own unique personalities, cultures, backgrounds, values, goals, and spirituality. Young adults are also influenced by the cultures of their generation such as the Generation X and Millennial generations

(Coomes, 2004). Howard (2009) argued that in today's environment, persons and groups struggle to find where and how they fit in with the rest of society. At the same time, spiritual development can be enhanced through the whole college experience (Fife, Adegoke, McCoy, & Brewer, 2011). Students who participate in religious activities or report higher levels of spirituality may benefit from a greater sense of wellbeing (Byron and Miller-Perrin, 2009; Greenfield, Vaillant, & Marks, 2009; Wnuk, & Marcinkowski, 2014). Several other researchers have also observed this connection between spiritual wellbeing and life purpose (Diener et al., 2012; Steger & Kashdan, 2013; Steger et al., 2008; Wehmer, Quinn Griffin, White, & Fitzpatrick, 2010).

When we understand this relationship between student spiritual development, wellbeing, and the existing theories and frameworks, it becomes clear why this study is significant. First, there have been no significant studies that examine the impact on the spiritual development of college students who take time out of their studies to perform missionary service. Although missionary service by young adults cuts across other religions, they are typically for a school term or a few weeks. The Mormon faith encourages young adults to serve missions for extended periods of time of up to two years. This is driven by both religious doctrine and the religious culture. Barry and Nelson (2005) noted that Mormon students were more inclined to adopt their existing cultural beliefs and values than most other college students. Compared to students from other religious backgrounds, Mormon students place greater emphasis on interdependence, norm compliance, biological acceptance, and family capacities. The Mormon culture also tended to provide greater structure that outlines the emerging

adult's roles and responsibilities (Barry & Nelson, 2005). Thus, if young adults within the Mormon culture serve missions, it should be expected to find a difference in their spiritual development compared to those who do not serve.

Second, there have been limited studies on the differences between Mormon college students who have served as missionaries and those who have not. Astin et al. (2011b) provides overall data for those students who identify as Mormon, however the study does not make a distinction between those who have or have not served as missionaries. This can be broken down into three groups: those who served as missionaries, those who plan to serve missions, and those who do not plan to serve missions. This distinction provides much more clarity in our understanding of the spiritual development of young adult. However, due to the difficulty of measuring a person's intent, this current study only used two categories: those who served missions, and those who have not.

Finally, there has been no significant research on how the Mormon culture itself impacts the sister missionaries who serve within a patriarchal organizational structure. Schein (2010) noted that religious, educational, and social organizational missions are derived based upon a set of shared assumptions. Thus, how this patriarchal structure within the Mormon culture impacts the spiritual development of women who serve Mormon missions is unclear. This becomes even more important with the lowering of the age that women could serve missions in 2012. This may also have longer-term ramifications as the spiritual development of the sister missionaries may drive how the church views the roles of women in the future.

By examining the spiritual development of Mormons from their missionary service, we may learn whether this type of service helps college students gain a greater sense of wellbeing. We will also be better prepared to discuss future roles for both men and women within the church.

Framework

This study was structured on a conceptual framework and a practical framework. The conceptual framework is based on a combination Fowler's (1981, 2000) theory of faith development, which rests on the assumption that faith is universal, and Welch and Koth's (2012) idea that individual spiritual development can be enhanced through service learning opportunities. For this study, missionary service is considered a service learning opportunity. Spiritual development is not just a static process, but can be intentionally pursued. It is influenced by our demographics, our experiences, our culture, and our unique personalities.

In Fowler's (1981) theory, faith takes the form of unconscious structures that consist of one prestage and six development stages. These stages of faith development are compared to a spiral, where each subsequent stage is a more complex and comprehensive way of understandings one's own faith. In order from stage zero to six, these stages of faith are listed as: Primal or Undifferentiated faith, Intuitive-Projective faith, Mythic-Literal faith, Synthetic-Conventional faith, Individuative-Reflective faith, Conjunctive faith, and Universalizing faith. Most college students will identify themselves between the Synthetic-Conventional faith stage and the Conjunctive faith stage (Fowler, 2000).

The conceptual framework for this study was also influenced by other theories in both moral and faith development. These include Kohlberg's (1984) moral development theory, Rest's neo-Kohlberg theory (1986, as cited in Evans et al., 2010), and Gilligan's (1982) theories on moral development, as well as the faith development theories of Fowler (1981), Parks (2000), and Welch and Koth (2013).

The practical framework was how I measured spiritual development within the students. For this research, I focused on five measurement scales developed by Astin et al. (2011b) relevant to spiritual development and wellbeing to college students who served as Mormon missionaries: equanimity, religious struggle, spiritual quest, religious engagement, and ecumenical worldview. In their study, Astin et al. (2011b) examined how these measures of spiritual development, except ecumenical worldview, related to psychological wellbeing, finding significant correlations between psychological wellbeing and spiritual development for equanimity, religious struggle, and spiritual quest. Instead of ecumenical worldview, Astin et al. (2011b) used a different measure, global citizenship, which combined items from ecumenical worldview and ethic of caring. Ecumenical worldview was used in this study over global citizenship due to stronger correlations and reliability, along with the items making up the measure being more closely related to the purpose of this study.

Measuring equanimity should give an indication of whether missionary service results in a stronger ability to face hardships and challenges, and provides a greater sense of happiness. This idea is illustrated by the challenges Jackie faced in Chile while growing from what she considered an overall positive experience.

Religious struggle measures the level of uncertainty the student feels toward religion and God. It should be expected this measure would be lower for those who already served missions compared to those who have not served.

Spiritual quest refers to the student's interest in searching for purpose and meaning. Astin et al. (2011b) reported that Mormons just entering college recorded the highest level in this measure compared to other religions. It is interesting to see how those who served missions scored on this and what it means in terms of wellbeing. Did they score lower because they have supposedly gained a greater sense of purpose and meaning through their mission? Or, did they score higher as they gained an ongoing sense of study and reflection on spiritual matters?

Although religious engagement and ecumenical worldview were not significantly correlated with psychological wellbeing, this study addressed them as well. In the Astin et al. (2011b) studies, Mormon freshman students recorded the highest ratings in religious engagement (59%) compared to the overall freshman religion engagement (23%), which may be influenced by a combination of factors such as Mormon students anticipating and serving missions, and the expectations of the Mormon culture for their college-aged members to serve missions. Although Mormon missionaries serve throughout the world and experience other cultures, they did not score high on ecumenical worldview in Astin et al. (2011b). This may be due to missionaries being encouraged to learn about the culture as long as it does not distract from their work.

Chapter Two: Literature Review

Spiritual Development, Theory and Models

Spirituality and spiritual development defined. Despite growing evidence that spirituality contributes to overall student development, many faculty and staff members are reluctant to address it (Astin et al., 2011b; Speck, 2005; Temkin & Evans, 1998). They cite three main concerns. First, there are misunderstandings of what spirituality means and how it can be addressed to meet the diverse needs and cultures across student populations (Astin et al., 2011b). Second, academics at secular institutions worry about legal ramifications of being associated with particular religious or faith groups and the separation of church and state (Astin et al., 2011b; Clark, 2001; Speck, 2005). Third, others who may be spiritual or religious themselves do not want to appear they are pushing their own beliefs onto their students (Astin et al., 2011b; Estanek, 2006; Speck, 2005; Welch & Koth, 2013). These concerns among faculty and staff have led many institutions of higher education to ignore this critical part of their students' development (Astin et al., 2011b). Dalton (2001) argued that higher education does not significantly address spiritual development, and that when it does, it is more inclined to do so from the perspective of self-development and finding oneself, but not necessarily with the purpose of developing spiritual wellbeing.

Speck (2005) cited several diverse definitions on spirituality including the following: It is the living out of the organizing story of one's life (Bennett, 2003, as cited in Speck, 2005). It is the experience of the transcendent that welcomes religious beliefs without requiring them (Bento, 2000, as cited in Speck, 2005). It is the part of our heart that holds the questions about our purpose in the world and reflects in our actions (Campbell, 2003, as cited in Speck, 2005). It refers to the noncorporate aspect of human beings, separate from the mind (Clark, 2001, as cited in Speck, 2005). It is the ability to experience connections and create meaning (Fried, 2001, as cited in Speck, 2005). It is the inner experience of the individual (Lewis & Geroy, 2000, as cited in Speck, 2005). It is a sense of compassion; nonviolence; truthfulness; loving kindness; being connected to the whole; and living a simple, peaceful harmonious life (Massoudi, 2003, as cited in Speck, 2005). It is the pursuit of trans-personal and trans-temporal reality that serves as the ontological ground for an ethic of compassion and service (Mayes, 2001, as cited in Speck, 2005). It is the eternal human yearning to be connected with something larger than our own egos (Palmer, 2003, as cited in Speck, 2005).

Although it may be difficult to identify one specific definition, more recent researchers suggest that spirituality can at least be defined by some common attributes found among most definitions. Spirituality is described as what makes up our inner, subjective life. It entails our most cherished values, finding our own authenticity, and driving us to find our purpose for being here (Astin et al., 2011b). Hindman (2002) describes spirituality as a dynamic expression of who we truly are. Welch and Koth (2013) propose that spirituality involves developing interconnectedness between our self,

others, and something larger. Astin et al. (2011b) states it means being open to exploring a relationship with something that transcends the physical universe around us. It is from understanding these descriptions that we can approach spirituality and how we understand student spiritual development. College provides students opportunities to examine and rethink spirituality, values, and faith (Hindman, 2002). However, in understanding student spiritual development, we need to examine the underlying moral and faith development theories.

Moral and faith development theories. The most widely used theories for evaluating spiritual development are referred to as faith development theories. These theories were initially founded on moral development theory, which is significant in understanding how they are viewed in the literature. For example, Kohlberg's (1984) theory argued that moral development is strongly tied to cognitive development and thus, moral reasoning will be more developed where there is a more advanced intellect (Evans et al., 2010). Faith development theory suggests that spirituality is something more complex than just the cognitive, and is a critical part of individuals finding meaning and sense making (Astin et al., 2011b). Thus, the studies that show correlation between moral reasoning and spirituality may also indicate a correlation between cognitive skills and spiritual development levels (Cartwright, 2001; Love, 2002).

Kohlberg's moral development theory. Kohlberg's (1984) moral development theory was based on a combination of psychology and moral philosophy. The theoretical model consists of six stages. The stages are in sequential order with each consecutive one representing a higher level of moral development.

Stage 1: Heteronomous morality. In this stage individuals define morals as obeying the rules to avoid punishment and refraining from physical harm to others and their property.

Stage 2: Individualism, instrumental purpose, and exchange. In this stage right is defined by what is fair. Individuals realize that others have needs that may conflict with theirs.

Stage 3: Mutual interpersonal expectations, relationships, and interpersonal conformity. In this stage individuals try to meet the expectations of others they feel close to.

Stage 4: Social systems and conscience. In this stage individuals see that social systems are made up of a consistent set of rules that apply equally to everyone.

Stage 5: Social contract or utility and individual rights. In this next stage individuals now see the system as a social contract that they freely choose to be a part of.

Stage 6: Universal ethical principles. In this stage individuals give equal consideration of the points of view of all involved in a moral situation.

Rest's neo-Kohlbergian theory of moral development. Rest's neo-Kohlbergian theory (1986, as cited in Evans et al., 2010) adapted Kohlberg's theory to derive an objective measure that took a broader view of moral development than Kohlberg envisioned. While using much of Kohlberg's basic structure, Rest assumed that an individual is not always in one stage, but that the individual will be in different stages depending upon the particular situation. He also rejected the idea that moral development was a sequential process, but that the stages were more permeable (Evans et al., 2010).

Gilligan's theory on women's moral development. Gilligan's (1982) theory on women's moral development diverges from Kohlberg's ideas of how people create meaning of their world. Rather than going through a sequential process of moral development, Gilligan showed that women identified care and responsibility as their moral compass. She developed a three-level framework with transition periods between each one.

Gilligan's theory was developed specifically for women rather than males. This gender difference is supported by other studies that consistently find female moral orientation geared toward caring, while male moral orientation is geared toward the idea of justice (Evans et al., 2010). Fowler (2000) noted that Gilligan's study began partially from findings related to Kohlberg's research. Kohlberg's model found a much larger number of women were assigned to Kohlberg's Stage 3 while there were very few females assigned to Stage 4. Fowler summarized from these studies that neither males nor females were more developed than the other, but that they do have different orientations. Women

approach situations of moral choice with a tendency to see the actors and the affected parties in the situation as woven together in a web of relationships....

Decisions about moral actions, therefore, have to be made in terms of their impact on the total web of relations, in the present and in the future. (Fowler, 2000, p. 29-30)

However, males "tended to emphasize the image and self-expectation of an increasingly autonomous moral actor...the basic image here is one of detachment from distorting

values and relationships” (Fowler, 2000, p. 30). This supports Rest and Gilligan’s perspectives that movement between stages is more permeable. If the stages are permeable, then moral development may not be strictly a function of cognitive skills as Kohlberg suggests. Determining the relationship between spiritual development and moral development is problematic. Although one’s spiritual development will also impact their moral values, moral development can exist without regard to spirituality (Astin et al., 2011b). While the leading theories in moral development focus on the cognitive function, the spiritual development theories focus on both cognitive and affective domains (Evans et al., 2010). Using these key moral development theories as a starting point, we get a clearer understanding of the evolution of the spiritual and faith development models.

Fowler’s theory on faith development. Fowler’s (1981, 2000) theory of faith development rests on the assumption that faith is universal. Faith takes the form of unconscious structures that consist of one prestage and six development stages. Although it has a similar structure as Kohlberg’s moral development model, these stages of faith development are like a spiral, with each subsequent stage being a more complex and comprehensive way of understandings one’s own faith.

Stage 0: Primal or undifferentiated faith. This stage occurs in the first years of life in the context of one’s relationship with primary caregivers. These relationships form the first basis for the person’s image of God (Fowler, 1981, 2000).

Stage 1: Intuitive-Projective faith. At this stage children develop their image of God based on perceptions and feelings resulting from stories and images shared by

significant others. This usually happens at about two years of age when perception, feelings, and imagination make up the child's principal way of learning (Fowler, 1981, 2000).

Stage 2: Mythic-Literal faith. At this stage children develop the ability to see other people's perspectives, but naturally accept the narratives they learned as the basis for their beliefs. Fowler noted that as adults, some individuals might continue to function at this stage. He argued that some college students' spiritual development might only be at this stage when they enter college as young adults. Although they are able to see other people's perspectives, they will still rely on what they have learned previously as their own basis of beliefs (Fowler, 1981, 2000).

Stage 3: Synthetic-Conventional faith. This stage is mostly associated with the adolescent years where individuals develop the ability to think abstractly and integrate ideas from several sources. They find their faith meaningful, but are not yet able to consider it critically. Many students will fall within this stage, which Fowler most heavily identifies with adolescents, those preparing to enter college, who have the ability to think abstractly and integrate new ideas but have not necessarily applied these ideas to their own faith background (Fowler, 1981, 2000). Similarly, Astin et al. (2011b) observed that many college students may find their faith meaningful, but do not consider it critically.

Stage 4: Individuative-Reflective faith. At this stage the individual's system of beliefs and values become more coherent and meaningful. Fowler (1981, 2000) initially

proposed that individuals move into Stage 4 as young adults, the age of traditional college students.

Stage 5: Conjunctive faith. Stage 5 reflects an increasing awareness of life's complexities where individuals more readily accept other people's faith perspectives while maintaining a deep commitment to their own (Fowler, 1981, 2000).

Stage 6: Universalizing faith. In this final stage individuals can see the world through the eyes of others and gain a greater appreciation for both God and other people (Fowler, 1981, 2000).

Fowler's stages of faith development have been widely accepted and used in other academic studies. For example, Gathman and Nesson (1997) used Fowler's framework to evaluate change in a science-and-religion honors course. Stamm (2006) noted that despite possible questions on their universal application, Fowler's and Parks' theories on faith development are still the most thorough to date.

Parks' theory on faith development. Parks studied the role of higher education in the faith development of young adults. Parks' theory is based on the premise that during young adulthood, individuals begin to consciously reflect on life's meaning (Parks, 2000). This exploration of faith often continues during graduate school and their first professional position after college (Bowman & Wessel, 2002; Parks, 2000). She defined faith as "the activity of seeking and discovering meaning in the comprehensive dimensions of our experience" (Evans et al., 2010, p. 202). Faith is validated through life experiences and is a broader concept than religious belief. Although faith and religion overlap, Parks viewed spirituality as a search for meaning and purpose (Love, 2001).

Parks (2000) identified three forms of development: cognition or knowing, dependence, and community, and ties them into four time periods associated with spiritual development with the second timeframe corresponding most to the young adult and traditional-aged college student.

According to Parks (2000), each of the three forms of development can be broken down into lower-level elements, and she identifies those most closely related to the young adult. The young adult element tied to cognition and knowing is probing commitment, which entails tentative commitments based on critical exploration.

Fragile inner dependence is the sub element under the dependence form most tied to young adults. It reflects the idea that individuals are still vulnerable and need support from mentors to guide and reinforce newly formed faith-based identities. For the third form of community, the young adult college student mostly identifies with the mentoring community, those groups and individuals the student identifies with and looks to for support. Such communities support young adults as they form their own dependence, especially if their new identity is dramatically different from their previous identity (Evans et al., 2010).

Welch and Koth model on spiritual development. More recently Welch and Koth (2013) developed a model that attempted to incorporate aspects of developmental psychology and spiritual development. They were interested in developing a model that could be used in a practical way, especially in how students could be motivated in providing service to others. As they studied the connection between spirituality and service learning, they developed an operational definition of spirituality where spirituality

is viewed as a dynamic process that leads toward a greater sense of self and a transcendent relationship with others and the outside world. For their model, they defined spirituality as “a dynamic process in which an individual forms personal meaning and purpose of his or her sense of self and its transcendent relationship with others and the world at large” (Welch & Koth, 2013, p. 616). This definition allowed for the discussion of spirituality without necessarily involving religion. This supports Gilley’s (2005) observation that for many individuals religion and spirituality are unrelated concepts. Welch and Koth (2013) also argued that spiritual movement is constantly in flux as individuals move between varying phases, where different aspects of their lives can be in different phases.

Welch and Koth’s model views an individual’s spiritual development as a process involving six relational spaces, connoting a condition where one can move, explore, and evolve. A key assumption in this model is that spiritual development requires intentional effort on the part of the individual. In other words, spiritual development is not just a static process but can be intentionally pursued. For college students and educators, activities, curriculum, and other situations where students are engaged privately or with others, are opportunities to directly influence spiritual development (Welch & Koth, 2013).

Models and tools for examining spiritual development and wellbeing. Over the past 30 years, there have been several attempts to measure spiritual development. Although there have been a few qualitative studies used to evaluate spirituality, the most widely used assessments have been quantitative in nature (Hodge, 2001). One of the first

notable models was Paloutzian and Ellison's (1983) Spiritual Well Being Scale (SWBS) (as cited by Genia, 2001). The 20-item SWBS assesses perceptions on spiritual quality of life through two subscales, religious wellbeing (RWB) and existential wellbeing (EWB). Genia (2001) validated the SWBS, confirming that RWB was related to faith, fundamentalism, and worship service, while EWB was associated with lower depression and higher self-esteem.

A critical study by Sandvik, Diener, and Seidlitz (1993) examined how spiritual development and wellbeing models and tools relied heavily on self-report measures. Their study addressed the validity of self-report measures for subjective wellbeing (SWB) compared to non-self-report measures. The researchers found that the most common form of wellbeing assessment was through self-reported data. However, they were concerned that there were reasons not to always accept responses on these measures as valid. Descriptive statistics and correlations of the subjective wellbeing measures were calculated and analyzed. Correlations of self-reports to alternative measures were considered "very respectable" at .78. This was supported by other statistical tests on the data. The study concluded that the use of self-reports in assessing wellbeing is adequate for most research purposes due to high convergent validity between the self-report and the alternative measures. The use of self-reports was also supported in a study by Chan et al. (2014), which focused on validating a self-report assessment instrument based on an affliction-equanimity model of holistic wellbeing, focusing on both Eastern and Western religious cultures.

Piedmont (1999) studied two models used in assessing spirituality and personality, the Spiritual Transcendence Scale and the Five-Factor Model of Personality (FFM). This study showed that the Spiritual Transcendence Scale was independent of measures of the FFM and predicted a wide range of psychologically salient outcomes. It was argued that Spiritual Transcendence represents a broad-based motivational domain of comparable breadth to those constructs contained in the FFM and ought to be considered another major dimension of personality. Rican and Janosova (2010) conducted their own study on defining spirituality as its own dimension. Developing and using their Prague Spirituality Questionnaire (from 2005) on Czech youth who largely reject organized religion, they confirmed Piedmont's concept that spirituality should be considered as a dimension, or set of dimensions, of individual differences.

There are other notable models that assess spirituality and wellbeing. Kassab and MacDonald (2011) examined the psychometric properties of Fletcher's (2007) Spiritual Fitness Assessment (SFA) to gather client spirituality data to be used as part of an overall holistic evaluation for purposes of health and fitness. Robertson (2010) discussed the development of the Spiritual Competency Scale (SCS), and how it reflects understanding of spiritual and religious counseling among counselors of higher education. Rowold (2011) studied the validity of the Spiritual Wellbeing Questionnaire (SWBQ) by Gomez and Fisher (2003) consisting of four facets of wellbeing: personal, communal, environmental, and transcendental.

The 20-item Faith and Civic Engagement (FACE) scale looks at the relationship between civic and political engagement and the extent of one's faith-based beliefs and

behaviors. Droege and Ferrari (2012) noted that a positive relationship between these variables has been the basis for a growing field of research (e.g., they cited Becker & Dhingra, 2001; Chickering, 2006; Dalton, 2006, King, 2008; and Uslaner, 2002). Using confirmatory factor analysis, they identified five reliable and valid subscales: civic engagement, faith life, political importance, university influences on spiritual growth, and university influences on personal growth.

Johnson, Sheets, and Kristeller (2008) noted that numerous measures of Religiousness and Spirituality (R/S) exist, but the number and type of dimensions represented by these measures remain unclear. They identified five dimensions of R/S: Religious/Spiritual Involvement, Search for Meaning, Religious Struggle, Quest, and Spiritual Wellbeing.

Kneipp, Kelly, and Cyphers (2009) incorporated several models in examining the relationship between religiousness, spirituality, and college adjustment. This combination of models included the Sethi and Seligman Religiousness Measure (1993), Paloutzian and Ellison's SWBS (1982), and Baker and Siryk's Student Adaptation to College Questionnaire (1984, 1989). Through regression analysis they found that both religious and spirituality variables make a significant, unique contribution to college adjustment.

Richards et al. (2004) developed the Theistic Spiritual Outcome Survey (TSOS) to measure the spiritual outcomes of psychotherapy from a theistic spiritual perspective. Three factors emerging from this study were Love of God, Love of Others, and Love of Self subscales.

However, the most recent, robust and widely cited measure is the work from UCLA's Higher Education Research Institute (HERI) by Astin et al. (2011b). This model is also one of very few models specifically designed for assessing traditional college age students. Because the study was conducted over several years, involved hundreds of student participants from institutions across the country, included a follow-up survey to provide a longitudinal perspective, and contained a deeper level of detail than typically seen at the time, it provided significant insights into student behavior and greater context to the faith development theories. Astin et al. (2011b) recognized that despite years of theorists and researchers working in the field of student spiritual development, there were few systematic studies being done. For example, Pascarella and Terenzini (1991, 2005, as cited in Astin et al., 2011b) completed the two most comprehensive reviews of the research literature. The first review showed no listing for either spirituality or spiritual development. The second review was limited to a small listing of references for religious attitudes, values, and religious identity development (Astin et al., 2011b).

Evaluating several existing models, Astin et al. (2011b) cited three major limitations: spirituality is often equated with traditional religious practices and beliefs; there was no distinction between an individual's spirituality and theological perspective; and there was no distinction between how people manifest their spirituality and the difference between the inner- and outer-manifestation. Based upon these limitations, the researchers developed four requirements for their model: (a) make no assumptions regarding a student's religious perspective or belief system; (b) limit references to God,

Supreme Being, and other such terms but allow students to specify what the concept means to them; (c) examine spiritual beliefs, perspectives, practices, and behaviors while avoiding the use of specific denominational or sectarian terminology; and (d) accommodate all participants regardless of how they define spirituality (Astin et al., 2011b).

Astin et al.'s (2011b) study eventually resulted in 10 measurement scales being developed to assess spiritual development. Four of the 10 measurements survey the participant's religiousness. Religious commitment consists of 12 items to assess the student's self-rating on religiousness and how well the student tries to follow religious teachings. Religious engagement consists of 9 items assessing the level of behavioral commitment the student displays, such as attending religious services, praying, or studying scriptures. Religious/Social conservatism consists of 7 items reflecting perspective on specific social issues such as sex and abortion. Religious skepticism consists of 9 items assessing opinions tied to balancing science and religion, including questions on such things as creation of the universe and whether there is life after death (Astin et al., 2011b).

Five of the 10 measurements survey the participant's spirituality. Spiritual quest is a 9-item measure that assesses the student's interest in searching for meaning and purpose in life. The 5-item equanimity measure concerns the extent to which a student feels centered or at peace, and is able to find meaning in difficult situations. The 8-item ethic of caring measure assesses the student's degree of commitment to values such as reducing pain and suffering, promoting understanding, and changing things for the better.

Charitable involvement is a 7-item behavioral measure of involvement in helping others. Ecumenical worldview is a 12-item measure indicating the extent a student is interested in other religions, countries, and cultures in a positive light (Astin et al., 2011b).

Religious struggle is a 7-item measure reflecting how much a student feels unsettled about religious matters, disagrees with family members on religious subjects, questions his or her own religious beliefs, or feels distant from God. Originally designed as another measure of religiousness, religious struggle was separated from the others as analysis showed no inter-relationship with any of the other measures, with correlations measuring between $-.06$ and $.34$ (Astin et al., 2011b).

Astin et al. (2011b) demonstrated the validity of the model in several ways. A longitudinal analysis demonstrated concurrent validity as scores from freshman students in 2004 correlated significantly with a 2007 follow-up survey. Content of the scales compared favorably with models such as Allport and Ross (2004, as cited in Astin et al., 2011b). They also found other models that matched up well with their model in terms of the specific areas and for the overall study (Astin et al., 2011b).

Astin et al. (2011b) also found differences between student spiritual development and the type of institution students attend. Entering freshmen attending faith-based private schools tended to show a higher level of spiritual development than those attending public institutions. It was also found that those who attended public schools tended to be challenged more in their own faith acceptance as they continued through their college years. This was evident for those attending public school even if they had initially scored higher in spiritual development. At the same time, once in higher

education, those in public institutions tended to grow spiritually at a faster rate than their counterparts in faith-based institutions. This may be due to two factors: the students were at a lower level of spiritual development thus having greater room for spiritual growth, and the students experienced greater challenges within their campus environment leading to greater self-reflection and strengthening of their faith.

Astin et al. (2011b) concluded that their measurement scales could provide student development researchers with a new tool that could be used to assess student spiritual development. Although these measures are not unique to their study, they do capture the most common, key elements of student spiritual development today. This has been borne out as other researchers have used the results or at least the data from the model to look at other aspects of student spiritual development. For example Bowman and Small (2010) used the data to examine the issue of religious privilege. Small (2007) noted the study when looking at the apparent dichotomy of academic leaders overall not being concerned about student spiritual development compared to studies showing a high level of student interest in spirituality and searching for meaning and purpose in life. Bryant (2011) used data from the model to examine how students develop an ecumenical worldview. Paredes-Collins and Collins (2011) used data to look at how underrepresented students and their spiritual development are affected in an environment where spiritual growth is considered part of the institution's mission. Welch and Koth (2013) also referred to the study in discussing how service learning plays a role in student spiritual development.

Wellbeing and Purpose in Life

Impact of spirituality and faith on wellbeing. As spiritual development gained more attention, progress has also been made in showing how it relates to personal wellbeing. Fabricatore, Handal, and Fenzel (2000) examined spirituality's role in moderating the effects of stressors, both significant life events and everyday challenges, finding that both could contribute to negative outcomes. Part of their study even suggested that the everyday challenges might have a greater impact than significant life events.

Wnuk and Marcinkowski (2014) examined the relationships among spiritual experiences, hope, meaning of life, and psychological wellbeing and how these impacted satisfaction with life. Religiosity was related to psychological wellbeing outcomes, based primarily on church attendance, prayer, and wellbeing. They also found that spiritual experiences were indirectly related to life satisfaction. A key conclusion was that the meaning of life and hope are related to both cognitive and emotional measures of psychological wellbeing (Wnuk & Marcinkowski, 2014). Ryff and Heidrich (1997) studied how past life experiences affect adults' assessments of their present and future wellbeing. Byron and Miller-Perrin (2009) examined the relationship between faith, life purpose, and wellbeing. They found that both faith and life purpose were significant predictors of wellbeing. Due to the increased interest in spiritual wellbeing among college students, Grabovac, Clark, and McKenna (2008) found that psychiatry students taking specialized training on religious and spiritual issues showed increased competency in serving their clients.

Impact of life purpose and meaning making on coping and resilience.

Adams, Beznar, Drabbs, Zambrano, and Steinhardt (2010) found that among college students both an optimistic outlook and sense of coherence must be present for life purpose to enhance a sense of overall wellbeing. Raftopoulos and Bates (2011) observed that resilience was fostered by three dimensions of spirituality: a transcendental perspective expressed as a relationship with a higher power, a sense of meaning, and a connection with one's inner self. These aspects of spirituality provided students (a) a sense of protection, comfort, and security; (b) a sense of meaning, coherence, and optimism; and (c) the opportunity for increased self-awareness and self-efficacy.

Stoyles, Chadwick, and Caputi (2015) studied the relationship between purpose of life, hope, and spiritual sensitivity. They proposed that spirituality consisted of several domains such as search for meaning of life, encounters with transcendence, a sense of community, search for an ultimate truth, appreciation for the mystery of creation, and personal transformation. They noted from previous research that adolescents are naturally drawn to the spiritual sensitivity of others.

Rehm and Allison (2009) interviewed 25 students from a senior-level course and found that spirituality can be a source of resilience. These students viewed spirituality as the influence of a higher power in their lives. Because of this view, the students believed that their career-related experiences were meaningful and part of a logical plan despite the challenges they might face.

Weber and Cummings (2003) examined the relationships among spirituality, childhood mistreatment, social support, and symptoms of distress among college

students. They argued that receiving counseling for maltreatment was beneficial for those with high symptoms of distress and low support from family, thus, significantly contributing toward wellbeing and resilience among students who have a history of being abused in the past. Along the same line, Taliaferro, Rienzo, Pigg, Miller, and Dodd (2009) found that higher levels of spiritual and existential wellbeing related to reduced suicidal inclinations.

Ahrens, Abeling, Ahmad, and Hinman (2009) studied the predictors and outcomes of religious coping, and the use of religious practices to cope with trauma, among sexual assault survivors. Positive religious coping was related to higher levels of psychological wellbeing and lower levels of depression, while negative religious coping was related to higher levels of depression. The study found that some who viewed God as a source of protection also found God as a way to provide solace after an assault, resulting in lower stress. Others found that they felt isolated from God and became more disengaged from religious practice. This seemed particularly true when individuals felt conflicted with their external support group, especially if that support group was connected with family and church communities.

Desai and Pargament (2015) examined predictors of growth and decline outcomes following a spiritual struggle. Drawing upon Pargament's 1997 theory of religious orienting systems (ROS), four potential predictors were identified: spiritual struggle characteristics, religious history, positive religious coping, and support. They found that the greater the struggle, the more these predictors would weaken, resulting in a decline in positive psychological outcomes. At the same time, finding meaning tended to lead to

positive growth outcomes, while not finding meaning from a struggle led to a greater decline.

Brown, Carney, Parrish, and Klem (2013) found a relationship between spiritual wellbeing with two psychological variables, anxiety and depression. They also found that individuals reporting higher levels of religiosity and spiritual wellbeing might also experience a reduction in mental and emotional illness. Steffen and Fearing (2007) also observed that religiosity was related to positive psychosocial adjustment across several studies.

Cognitive benefits of spiritual wellbeing. As previously discussed, the moral development theories are focused primarily on our cognitive functions, while the faith development theories are tied to both the cognitive and affective functions. In comparing cognitive development with spiritual development, Love (2002) looked to several of the major theorists in both fields (Perry, 1970; Fowler, 1981, 1996; Belenky, Clinchy, Goldberg, & Tarule, 1986; Helminiak, 1987, 1996; Parks, 1986, 2000; Magolda, 1992; and King & Kitchener, 1994). Through this study, Love found connections between both the cognitive and spiritual dimensions of students.

Of particular note from the spiritual dimension, Love (2001, 2002) singled out Parks' description of spirituality as a personal search for meaning and transcendence. He also looked closely at Helminiak (1987, 1996), who proposed that authentic self-transcendence is a prime criterion of spiritual development where authentic refers to the individual pursuing spiritual development as a deliberate process that involves a whole-person approach. This becomes a critical point in the sense that individuals involved too

deeply in the religion and dogma may sacrifice their spiritual development in looking for their own spiritual core (Love, 2002).

Dalton (2001) observed that within the cognitive realm, spirituality has been closely linked to deeper learning. During their college years, students ponder and question their own spirituality, where they fit into the world, and their search for finding meaning and purpose in life. This form of deeper learning means the student is asking questions about transcendence and finding their ultimate meaning in life.

Bailey (2012) purposed a critical thinking skills model to help teachers develop courses supportive in developing skills for independent faith-based integration. He also argued that developing critical thinking skills, especially in a faith-based environment, required looking beyond just the critical thinking aspect, and finding ways to keep students actively engaged in the process. Walvoord (2008) studied how introductory theology and religion courses across different types of institutions of higher education can help develop critical thinking skills. Through the use of teaching techniques to help students bring their own experiences and beliefs in line with course material and critical thinking, teachers were more likely to help students develop these skills. These teaching techniques were also considered crucial steps in helping students think critically and more deeply about their own spirituality, questioning their assumptions, and developing (or at least recognizing) their own level of spirituality. Owen (1999) found a relationship between self-direction and wellness, proposing that intellectual wellness is correlated with spirituality and that creative intellectual pursuits have the potential to become spiritual experiences.

Anand, Jones, and Gill (2013) found that U.S. students with higher spirituality scores reported better health and life satisfaction. One of the first studies out of the United Kingdom to explore the relationship between spirituality, health, and life satisfaction of undergraduate students, it used an online questionnaire with responses from over 500 undergraduates. The study also found that although there may be significant differences in spirituality scores across colleges, ethnicities, and religious beliefs, there still appeared to be a desire for spirituality among students.

Purpose in life through service and exercise of virtue. The connection between spiritual wellbeing and life purpose has also been studied from the perspective of service to others. This aspect of spiritual wellbeing helps individuals develop interconnections in their quest for meaningful and purposeful endeavors outside themselves (Welch & Koth, 2013). Diener et al. (2012) studied the extent that pleasure, purpose in life, interest, and mood predicts satisfaction with life, with one's self, and with one's day. They found that daily satisfaction correlated strongly with interest and pleasant feelings. Daily satisfaction also correlated with purpose in life, and the sense of pleasure and pain. But life satisfaction was more correlated with purpose in life as well as pleasant and unpleasant feelings. Self-esteem was predicted by purpose in life, unpleasant feelings, and pleasures versus pain.

Steger et al. (2008) looked at eudaimonic theories of wellbeing and the importance of achieving one's full potential through engaging in meaningful endeavors. They found that the more individuals reported engaging in eudaimonic behaviors, the greater the wellbeing reported by meaning in life and life satisfaction. They also

observed that behavior reports were unrelated to social desirability, supporting the idea that eudaimonic activity is more related to meaning of life, life satisfaction, and positive affect. Their overall conclusion was that individuals who reported engaging in eudaimonic behaviors felt their lives were more meaningful and satisfying in both global terms and daily levels of living.

Steger and Kashdan (2013) conducted two studies that looked at the impact of social functioning on life meaning. They observed that if perceptions of life meaning revolved around social functioning, then fluctuations in that meaning might be more relevant in interpersonal difficulties. Both studies also showed that an unstable meaning of life for an individual was related to lower wellbeing.

Wehmer et al. (2010) observed that through their sense of spirituality and wellbeing, nursing students reported more positivity toward their role in the world than in their ability to affect their own lives and make decisions. Students reported the most frequent spiritual experiences included being thankful for blessings, feeling close to God, selfless caring for others, and finding comfort in their own religion and spirituality.

Dalton, Eberhardt, and Crosby (2006b) argued that for college students the connections between spiritual growth and service learning are readily apparent. Koth (2003) observed that as institutions of higher learning have expanded into the use of service learning opportunities, these institutions might be missing out on opportunities to assist in the spiritual development of their students by not taking the time to build a connection between the two concepts of service and spirituality through deeper thought.

Like Dalton (2001), Koth also argued that to develop and strengthen their commitment to serve, institutions needed to reinforce the spiritual aspects in students' lives.

Welch and Koth (2013) argued that although service learning can benefit both students and faculty in terms of academic growth and community involvement, without recognizing the spiritual component, students miss opportunities for deeper learning by not examining how the service relates to their spiritual wellbeing. Referring to Astin et al. (2011b), service learning may play a major role in student spiritual development. This was found through service learning participants expressing thoughts and feelings about something bigger, the idea of something beyond just the service itself, and a feeling of personal transformation or transcendence.

Muñoz-Garcia and Aviles-Herrera (2014) found a relationship between academic dishonesty and spiritual wellbeing, as well as other aspects of wellbeing. They also found that academic dishonesty was associated with less satisfaction in both life and learning.

Other benefits of student spiritual development in higher education.

Research has shown positive relationships between spiritual development and several traits associated with student and adult success. Among the benefits that impact both the affective and cognitive sides of our wellbeing, some of the most prominent ones include higher GPAs and enhanced academic performance (Astin et al., 2011b; Rennick et al., 2013); improvements in physical, mental, and emotional health (Hill & Pargament, 2003; McGee, Nagel & Moore, 2003; Rennick et al., 2013) including recovery from sexual abuse, assault, alcohol and drug abuse, and traumatic events (McGee et al., 2003;

Rennick et al., 2013); gaining a greater sense of wellbeing tied to greater moral and ethical behavior (Fife et al., 2011; Rennick et al., 2013); higher levels of self-esteem (Hammermeister & Peterson, 2001); enhanced coping skills (Gnanaprakash, 2013); greater development of leadership skills (Gehrke, 2008); and lower antisocial behavior (Fife et al., 2011; VonDras, Schmitt, & Marx, 2007).

Other researchers have found that spiritual development is enhanced through the whole college experience (Fife et al., 2011). If an individual enters college with a fairly strong level of spiritual development to start with, their college experience will most likely cause a greater growth in that spiritual development, and thus a greater sense of wellbeing.

Johnstone et al. (2012) found that better mental health is significantly related to increased spirituality, increased positive personality traits, and decreases in negative personality traits. Looking at college students across five different religions, the study also found that although there were no significant differences in health overall, there were group differences in spirituality and religiosity.

Some researchers have observed other health-related benefits tied to student spiritual development. Anye, Gallien, Bian, and Moulton (2013) found a strong relationship between spiritual wellbeing (SWB) and specific health-related quality of life (HRQL) aspects among college students. The HRQL was based on four measures of general health status, unhealthy data, healthy days, and health-related quality of life. Students who reported a high sense of SWB (83.4%) also reported participating in religious activities at least once a week.

Significance to student affairs and other health care professionals. Love

(2001) argued that student involvement in social, volunteer, leadership, and community service activities, religious activities, and other spiritually related activities are manifestations of spiritual development and a quest for meaning. The relationship between faith and other development theories, especially cognitive development theory, allows student affairs staff to create experiences, activities, and environments that enhance spiritual development. Braskamp, Trautvetter, and Ward (2008) provided some suggestions and a framework that educators could use to create student environments to help students develop meaning and purpose. Gear, Krumrei, and Pargament (2009) discuss a successful intervention program that was designed to help students address spiritual struggles within a nondenominational environment. To meet student spiritual needs, some campuses have actively worked to encourage spirituality without being accused of indoctrination (Dalton, Eberhardt & Crosby, 2006a). Love (2001) argued that student affairs professionals needed to understand what spirituality means both to themselves and to their students. This includes student affairs reflecting on their own spiritual development and defining how they create meaning and purpose for themselves (Love, 2001). Lindholm and Astin (2008) even found that faculty who self-reported higher levels of spirituality were also more inclined to use student-centered pedagogies.

Eagan et al. (2015) reported that for 2015 there was an increase in the percentage of entering college freshmen who did not identify with any particular religion (29.5%). This compares to 27.5% for 2014, 25% for 2013, and 17% in 1970 when the question was first asked. However, this increase in those not identifying with a particular religious

faith does not necessarily mean a decline in spiritual development. Love and Talbot (2009) found that although students may not be as inclined to attend religious service, over the past few years there has been a surge in traditional-age college students' quest for spiritual and religious fulfillment. To fill the void from less religious activity, they advocated for the inclusion of spirituality and spiritual development in the realm of student affairs and student development. Their key assumptions were that (a) the quest for spiritual development is innate within human development; (b) spirituality and spiritual development are interchangeable in that they both represent an ongoing process; and (c) openness is a prerequisite to spiritual development, even if this openness might not be conscious or intentional.

Hindman (2002) proposed that students' spiritual development can be assisted as faculty and staff acknowledge what is personally sacred and valuable; institutions commit to assisting in such development; and communities strive for consistency in mission, goals, and actions. This study also proposed that student spiritual development can be enhanced by providing time and space for reflection and growth, expressing genuine care, offering service opportunities, and sharing living models and images of the spirited life. It was also found helpful to student spiritual development when faculty and staff attended to their own spiritual development by living together as a spirited community. Similarly, Anand et al. (2013) argued from their findings that regardless of the type of college or student demographics, universities have a role in supporting students' search for meaning and purpose.

Droege and Ferrari (2012) found that higher education programs that encourage students' exploration and expression of faith and spirituality might promote a favorable attitude concerning civic engagement. Kneipp et al. (2009) suggested from their study that mental health professionals could better assist students who struggled with issues of college adjustment by acknowledging the coexistence of spiritual concerns with mental health problems.

Cannister (1999) found that faculty mentoring on the spiritual wellbeing could benefit college freshmen. Surveys conducted at the beginning and end of the semester on spiritual wellbeing of two groups, with one group having participated in a freshman seminar program, found statistically significant differences between the groups at the end of the study. Three aspects of mentoring—career, academic, and developmental—were positively correlated with spiritual wellbeing.

Oman, Flinders, and Thoresen (2008) described a college course that integrated religion and spirituality with wellbeing. Using a social cognitive and spiritual modeling approach, the course included standard academic content with a practical component, analogous to a laboratory section or to training in applied professional skills. They proposed that this approach could be adapted to various academic or applied settings. Lerner (2008) examined the Oman et al. (2008) study further and noted that the creative and heuristic pedagogical plan they developed for using spiritual models enhanced academic attainment and wellbeing.

Student Demographics and Subgroups

Educational demographics and the impact on student spiritual wellbeing. As mentioned earlier, the moral and faith development theories provide the conceptual framework from which we can examine how traditional-age college students develop spiritually. However, this framework is of little value unless we can apply it to our students who bring their own unique personalities, cultures, backgrounds, values, goals, and spirituality. Tisdell (2003) argued that understanding how culture influences spiritual development, and how spirituality helps students in making meaning of the world, will help educators provide their students with a more transformative and culturally relevant educational experience. Thus, we want to build a practical framework that takes these factors into account. Howard (2009) argued that in today's environment, persons and groups struggle to find where and how they fit in with the rest of society. Our sense of meaning of life emerges from the interaction of four variables: our perspective on the nature of things in general, our most fundamental values, the social system that surrounds us, and the particulars of the life we are living. Today, college students are uncertain of the purpose of modern education, and are challenged by changes in the world revolving around the family and connection. In regard to religion, many feel disillusioned by the church, or that it is something too foreign for them to relate to (Howard, 2009).

Researchers have started to look at spiritual development and wellbeing of demographic subgroups within the college student population. Some researchers have even built upon the research of Astin et al. (2011b). Following are a few of the demographics researchers have focused on.

Gender. When Astin et al. (2011b) asked how students rated themselves in terms of spiritual quest, women were more inclined to seek out spiritual purpose and scored higher than men. A stronger sense of spirituality has been seen in women involved in the nursing profession. Women's spirituality has also been influenced by external factors and activities such as participation in nature orientation camps and retreats (Soet & Martin, 2007).

Rennick et al. (2013) examined the effects of spiritual and religious engagement of undergraduates on affective outcomes among different gender groups. They found a relatively equal percent of males (33.2%) and females (33.7%) participated in spiritual/religious activity in a typical week. But they also found that although more females (26.6%) compared to males (23.5%) spent 1 to 5 hours in spiritual/religious activity, more males (9.7%) than females (7.8%) spent over 6 hours weekly in these activities.

Bryant (2007) showed that women had a greater inclination toward religion in terms of both belief and commitment than men. Women also scored higher in terms of spirituality, spiritual quest, and self-rated spiritual and religious growth. They were more likely to report spiritual experiences and more prone to seek out spiritual virtues in life. They also tended to be more active in charitable activities, showed more social activism, and were more likely to see themselves as compassionate individuals. In terms of spiritual wellbeing, women were more likely to experience equanimity, while men showed lower levels of spiritual struggle.

Ferssizidis et al. (2010) examined how motives and commitment to social values influence wellbeing in men and women of different ages. College students and older adults in the community reported on their motivational orientation (intrinsic vs. extrinsic), behavioral commitment to social values, and their current wellbeing (satisfaction with life, positive and negative affect). They found that behavioral commitment to intrinsically motivating social values was related to greater life satisfaction and positive affect, whereas being committed to extrinsically motivating values was related to greater negative affect. Meaningful gender differences emerged across value-based motivations, commitment, and indices of wellbeing. Also related to social values and life satisfaction, Zhang (2013) examined the relationship between female young adults' personal views of their spiritual values and their personal body image. This research showed that although many students are interested in faith and spiritual development, they were still affected by feelings of body dissatisfaction. However, religion and spiritual values did seem to provide some behavioral protection.

Religion and religious affiliation. Mayhew (2004) found that students with different religious worldviews have a common idea that spirituality is the human attempt to develop meaning between the internal self and the external world. This will influence their life decisions. For example, when selecting a college or university, an individual's or family's religious preference can play a big role in students choosing the institutions they will attend, especially when considering private, faith-based schools. The majority of students at faith-based universities are typically members of that faith. Although this does not necessarily reflect the students' individual level of spiritual development, Astin

et al. (2011b) identified religious engagement as one measure of spirituality. They found that once in college, students have a tendency to become less engaged, meaning they attend religious services less. However, the reason was not a change in the students' spirituality as much as struggling to meet the increased demands college life placed on their time. This is supported by Rennick et al.'s (2013) research showing that most students (64.5%) do not allocate time to weekly spiritual or religious activities.

Although this was prevalent at all institutions, Astin et al. (2011b) found it was less so at several of the faith-based institutions. They also found that entering freshmen students at the faith-based institutions scored higher than average in key measures of spiritual development tied to charitable service and caring, supporting the idea that students' selection of these schools is partly influenced by their level of spiritual development as well as their religious affiliation to the school. As a group, these students tended to score higher on Astin et al.'s (2011b) key spiritual development indicators and were more willing to agree to live by standards that are part of the organizational culture of the institution as described by Schein (2010).

Greenfield et al. (2009) looked at whether individuals' frequency of religious participation and their spiritual perceptions are associated with eight dimensions of psychological wellbeing: negative effect, positive effect, purpose in life, positive relations with others, personal growth, self-acceptance, environmental mastery, and autonomy. Results from the study indicated that higher levels of spirituality were independently associated with better psychological wellbeing across all dimensions. Although religious participation was independently associated with purpose in life and

personal growth, spirituality was shown to go further than religious participation by playing an important role in individual lives and was tied to other positive characteristics such as higher levels of positive affect, personal growth, purpose in life, positive relations with others, self-acceptance, environmental mastery, and autonomy.

Religious minorities. In both public and private faith-based institutions of higher education there is evidence that some religious minorities do not advance in their spiritual development as much as other groups (Bowman & Small, 2010). Bowman and Small's study discovered that double minorities—those considered to be part of a religious minority in terms of both their campus and society at large—and also those who reported no religious affiliation, would experience less spiritual development than mainline Christians. It also found that those who attended religiously affiliated schools tied to their own faith backgrounds experienced greater spiritual development than their religious peers at other institutions. At the same time, those attending faith-based institutions but coming from other faith backgrounds did not experience the same level of spiritual development as others at the particular institution. Although the results showed differences for religious minorities from the larger religious groups across several measures of spirituality, they did not indicate that spiritual development did not happen, only that it did not happen to the level that might have occurred were the students not part of a religious minority. They concluded that addressing these specific students as they develop their own spirituality might enhance educational experiences for those in these religious minorities (Bowman & Small, 2010).

As minority religious groups continue to grow in the United States, and traditional religious groups are becoming more diverse, Berry, Bass, Forawi, Neumann, and Abdullah (2011) conducted a study to identify how religion/spirituality (R/S) influences substance abuse, depression, and anxiety across religions, and whether the influence of religiosity persists across religious groups. In the U.S., where religious freedom is a key part of the culture, individual experiences of this freedom can vary considerably, especially where the individual is part of the religious minority at their institution. At the same time, conducting research in this area of religious minorities is challenging as researchers bring their own biases and beliefs. Building a research team with diverse religious backgrounds can help in achieving balance, but building such teams takes time in order to establish relationships among team members (Berry et al., 2011).

Ethnic and racial minorities. Rennick et al. (2013) observed differences in psychological wellbeing between African Americans and other races, regardless of the racial makeup of the student body. Spofford, Nevels, Gontkovsky, and Bell (2014) focused on the relationships between mindfulness, alcohol use, social desirability, spiritual experiences, and religion among college students at a Historically Black College and University (HBCU). They reported significant positive correlations between mindfulness and religion, and between spirituality and meditative practices. They also found that those reporting to be religious were more likely to have higher emotional intelligence and better verbal expressive abilities.

But even where students do not identify as part of the religious minority, those who are part of an ethnic or racial minority in their particular institutions spiritually

develop differently than others. In one study, White students scored significantly higher on religious commitment while non-White students scored significantly higher on ethic of caring. Over time religious commitment went down for both groups while ethic of caring went up. However, although the levels were different between the groups, the rate of increase or decrease between them was fairly consistent (Paredes-Collins & Collins, 2011). Other research showed African Americans attending predominantly White institutions had higher levels of spirituality with significant differences in spiritual beliefs and spiritual actions (Weddle-West, Hagan, & Norwood, 2013).

Beyond the reported differences of minority spiritual development, there is potential conflict within students who struggle to balance differences between religious culture and ethnic culture. For example, spirituality levels for African American students attending an HBCU were lower than those attending White-dominated institutions. It was speculated that Black male students at an HBCU might score lower due to higher self-confidence tied to identifying more to their cultural heritage than a religious culture (Weddle-West et al., 2013). At the same time, Eagan et al. (2015) reported that African American freshman students were the most likely to identify with a particular religion (85.8%) over all freshman students (70.5%). Watt (2003), using the theoretical frameworks of Fowler and Parks, found that spiritual development was important in how African American female college students approach coping and develop their identities.

Steffen (2012) noted that across a large number of studies R/S was linked to positive health outcomes, with the strongest levels found among disadvantaged groups such as minorities, women, and those of lower socioeconomic status. Given that

disadvantaged groups typically have worse health outcomes and not better, it is not clear why the effects of R/S are stronger for disadvantaged groups. Health and wellbeing is typically assessed from the hedonic perspective, which emphasizes pleasure and happiness as important outcomes and assumes that difficult life situations contribute to negative health. In contrast, the eudaimonic perspective emphasizes meaning and relationships, and assumes that difficult life situations can contribute to increased meaning in life and stronger relationships. Because of the differences between the hedonic and eudaimonic perspectives, Steffen (2012) argues that the eudaimonic perspective provides a better framework for understanding why R/S leads to better health for disadvantaged groups.

Turner-Musa and Wilson (2006) examined the role of religious orientation and social support in health-promoting behaviors of African American college students. They found that students with proreligious orientations compared to those with antireligious orientations were more likely to engage in health-promoting behaviors. Students with high levels of social support had significantly higher mean scores for health-promoting behaviors in the areas of spiritual growth, interpersonal relations, and stress management.

More closely related to Mormon culture, Merrill, Steffen, and Hunter (2012) studied how religious orientation was influenced by race and ethnicity as well as four religious orientations (intrinsic, extrinsic, proreligious, and nonreligious) in explaining differences in both physical and psychological health. A representative sample of 250 Hispanics and 236 non-Hispanic Whites in Utah was drawn and analyzed for differences in health (self-rated health, life satisfaction, exercise) according to race and ethnicity,

religious orientation, and religious attendance. Responses to the Religious Orientation Scale differed significantly by race and ethnicity. However, for both Whites and Hispanics within their own ethnic groups, proreligious individuals reported higher life satisfaction scores.

International perspective. Similarities and differences in student spiritual wellbeing have been observed in some limited studies for students of other countries. Mormon missionaries serve in many different locations around the world. As this service continues, more missionaries will even come from these other countries. Understanding how missionaries interact with other cultures on the international stage could have an impact in how students grow spiritually from these experiences, so it is worthwhile to see what these studies say about spiritual development in other cultures, as well as what similarities and difference may exist.

Casas, Gonzalez, Figuer, and Malo (2009) looked at adolescents and college-age students in the Catalonia region of Spain and their perceptions of religion, spirituality, and wellbeing. They found students had a reactive, negative position toward traditional religion with little importance to wellbeing. However, spirituality was perceived as more closely related to wellbeing, although with several variations on what spirituality meant to them. Because these university students viewed spirituality as important and of value to wellbeing, we can see common threads with U.S. students in the context of Fowler's (2000) theory and the idea that traditional-age college students are also going through a significant time in their lives for spiritual development.

Fisher (2009) studied spiritual wellbeing of college education in Australia, comparing the views between state and Christian universities. Spiritual wellbeing was expressed through four domains of personal, communal, environmental, and transcendental. Students reported more support for their spiritual wellbeing in Christian universities than in the state universities. This is consistent with findings in U.S. studies where students also feel more support in their spiritual development from religious universities. Students from both countries, regardless of religious background or school attended, regarded spirituality to be more important than being religious. Thus, spirituality has an impact on personal wellbeing, with religious practice potentially supporting, but not overriding, spiritual development.

Fisher (2007) also found similar ideas among the teachers from state, Catholic, Christian and other independent schools in Victoria, Australia. This study examined teachers' views on spiritual wellbeing personally from his four domains of personal, communal, environmental, and transcendental and the perceived help students gain from the schools in this aspect of their lives. The study found that teachers viewed their own lived experiences as not measuring up to their ideals, but still generally higher than the views they held compared to the help schools provide in the area of spiritual wellbeing (Fisher, 2007). This supports the same ideas found in the U.S. where there is often a lack of attention among faculty in addressing the spiritual development of their students (Astin et al., 2011b).

Zhang and Yu (2012) showed a positive correlation between students' intrinsic goals and their spiritual values in Singapore. This supported the same idea seen in U.S.

universities that encouraging the development of spiritual values may promote wellbeing by enabling college students in their search for meaning and purpose.

Spiritual Wellbeing Measures Impacting Mormon Students

The problem of separating spirituality from religion spills over in how we approach spiritual development. Western culture leans toward a religious Judeo-Christian philosophy that tends to view how people develop spiritually as being aligned with their faith (Astin et al., 2011b). This view is that spiritual development is more than just part of one's personal development, but also reflects the individual's culture. Culture has been defined as

a pattern of shared basic assumptions that a group learned as it solved its problem of external adaptation and integration that has worked well enough to be considered valid and therefore to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (Schein, 2010, p. 18)

In making the distinction between religion and spirituality, Love (2001) alludes to this idea of religion being tied closely to culture. He defines religion as a shared system of beliefs, principles, and doctrines tied to an overarching belief and worship of a greater power. He notes that two of the leading theorists on faith development, Parks (2000) and Fowler (1981), viewed faith as the process of meaning making, a process of discovering and creating connections among experiences and events.

Current research addresses this potential issue by defining spiritual development in terms that are more accepting of the wide range of thoughts and ideas we now see within higher education students. In developing their research study on spiritual

development, Astin et al. (2011b) incorporated two key principles: that spirituality is a multidimensional concept, and that the expression of spirituality through organized religion varied greatly among students. They conscientiously developed their model to address the spiritual development of students during their college experience regardless of any particular religion or faith perspective. Astin et al.'s (2011b) spiritual development study also allowed the researchers to look at critical themes for most young adult students and see how self-reported spiritual development levels influenced the students across these themes. These themes included sense making revolving around education; students' personal lives; developing a sense of purpose; values and belief perspectives; and the role of religion, the sacred, and the mystical in their lives.

This current study focused on five of the elements as described by Astin et al. (2011b) relevant to spiritual development and wellbeing within the Mormon culture. These elements are equanimity, spiritual quest, religious struggle, religious engagement, and ecumenical worldview.

Equanimity. Astin et al. (2011b) described equanimity as a complex and abstract quality that one would expect to see in a highly spiritually developed individual. Huber and MacDonald (2012) looked at the relationship between altruism, empathy, and spirituality in college students. Previous research showed that altruism and empathy are related to each other. However, research also showed their relationship to spirituality was more complex and multidirectional. Empathy was positively related to nonreligious spiritual cognitions, religiousness, and spiritual experiences, while being negatively related to existential wellbeing. On the other hand, altruism was strongly related to

spiritual experiences followed by spiritual cognitions. Spirituality, altruism and empathy were also significantly correlated with each other.

Spiritual quest. Astin et al. (2011b) found that college students are more likely to engage in spiritual quest as juniors than they are as freshmen, with seven of the nine items for this measure showing increases over this time period. At this point in their lives, these students are searching for their identities, drawing meaning in their lives, and exploring their place in the world. At the same time, the transition to college may cause a sense of disequilibrium that leads them to reflect on life's meaning and purpose as well as question their own identity and character (Astin et al., 2011b). Genia (1996) found that spiritual quest was tied to lower spiritual wellbeing and more psychological and personal distress. Klaassen and McDonald (2002) found that although there is a negative relationship between spiritual quest and spiritual wellbeing, it can be mediated by finding personal identity and meaning. Hindman (2002) recognizes this need for spiritual quest as an area where colleges can provide student support.

Schulkin (2007) argues that spiritual quest is a fundamental human need. "What underlie spiritual quests are (1) heightened vigilance and some discomfort or unrest about human existence, (2) a search to come to terms with this fact, and (3) the much-appreciated moments of peace and quietude" (p. 307).

Astin et al. (2011b) found that Mormon students are the most likely to be high scorers on spiritual quest when entering college than students of other faith backgrounds. Overall, the percentage of high scorers for spiritual quest for all college students is 24% and increases to 33% by their junior year. However, high scores among Mormon

students were found to already be at 54% when they entered as college freshman (Astin et al., 2011b).

This is an interesting dichotomy, where Mormon college students score the highest on spiritual quest, religious commitment, and religious engagement. Could this be driven by a religious culture that asks their youth to consider their spiritual development at an earlier age than most others? This may help explain why, compared to other college students who are still exploring their own belief systems, Mormon students are more inclined to adopt their existing cultural beliefs and values early on (Barry & Nelson, 2005).

Astin et al. (2011b) also point out several other factors that support spiritual questing which would be expected to be found with many Mormon college students. These include support from faculty and staff, community service, and college curriculum. Mormon students, especially those attending Mormon-sponsored institutions, receive religious mentoring support from the faculty and staff. Course curriculum at these schools includes religion classes as part of their graduation requirements. Church institutes are established near many other public colleges where students can attend religion courses outside their regular academic work. Community service programs are also arranged through the church-sponsored colleges, the church institutes, and the local church congregations.

Religious struggle. Small and Bowman (2012) found that religious majority groups experience greater religious struggle compared to religious minority student groups. Small (2007) argued that faculty and student affairs administrators should

understand student needs in discussing spirituality and finding identity. By encouraging open dialogue within focus groups, this study found that open discussion of spiritual thought developed greater understanding and provided a forum for self-reflection and personal spiritual development. The study ties these findings to Parks' (2000) idea of mentoring communities. Open dialogue between administrators and students is critical to student spiritual development, as many students will go through a spiritual struggle as they grow and develop.

As individuals go through a crisis of fitting other views of the world within their own worldview, there is a greater internal religious and spiritual struggle (Bryant, 2011). Falling back on Fowler's (1981) theory of spiritual development, these changes introduce disequilibrium requiring changes in how the individual adapts this new information. Parks (2000) related this to developing a more complex sense of meaning and faith. This disequilibrium is perhaps even more critical to college students, where a key predictor of religious and spiritual struggles is tied directly to the new experiences students have in college, which can result in some negative outcomes in terms of physical and psychological wellbeing (Bryant, 2011).

Building off of the Astin et al. (2011b) data to focus on the connection between religious/spiritual struggles and developing an ecumenical worldview, Bryant (2011) found that more challenging cocurricular experiences that expose students to religion, spirituality, and diversity provoked religious/spiritual struggle that leads to a greater ecumenical worldview. The study also showed that a college open to students' spiritual expression diminishes struggle, and that a more accepting environment that actively

encourages expression directly increases students' capacity for understanding and acceptance of diverse perspectives. The significance of these findings is twofold. First, student exposure to worldview and other forms of diversity increases acceptance and understanding of others. Second, religious/spiritual struggles, although difficult for students, may have promising development implications. Thus, exposure to worldview diversity provokes crises, which leads to more openness and acceptance of others (Bryant, 2011). From an LDS perspective, college-age missionaries as a group, although sharing their own faith and religious perspectives, are exposed to a large diversity of cultures and belief systems as they serve throughout the world.

Because of the ongoing positive results from these studies, Love (2001) and Love and Talbot (2009) argued that educators and student affairs professionals should focus on student spiritual development. They might work to accommodate students through student service organizations, allow clubs or groups to form on campus, sponsor service activities for students to develop their spiritual selves through service learning, organize centers focused on student wellbeing, and make spirituality part of an institutional approach of overall health and wellbeing (Love, 2001; Love & Talbot, 2009).

Bryant and Astin (2008) looked to determine if there were factors that predispose students to religious struggle. Using data from the Cooperative Institutional Research Program (CIRP) Freshman Survey of 2000 and the College Students' Beliefs and Values (CSBV) Survey of 2003, this study looked at whether these struggles have a negative impact on student physical wellbeing, self-esteem, and level of psychological distress. It also examined if religious struggles relate to growth in religiousness, spirituality, and

acceptance of others with differing religious and spiritual viewpoints. All of these might tie back to the Mormon culture and the expectations placed upon Mormon missionaries.

Religious commitment. Religious commitment reflects the degree students say they gain personal strength by believing and trusting in a higher power (Astin et al., 2011b). An individual's religious commitment is driven by both their internal nature as well as the religious culture in which they are raised. Because of the strong religious culture and expectations within the Mormon culture, comparing how Mormon college students internalize that commitment is important to understanding their spiritual development and overall wellbeing.

Small and Bowman (2012) examined how students' religious transformations during college are associated with their religious affiliation, their religious experiences, and the institutions' characteristics. The study found that students from religious majority groups generally experience increased religious commitment and decreased religious skepticism. Institutional religious affiliation and an inclusive religious campus environment support students' relationship between religious affiliation and their transformation. Also, the environment at the macro (campus) and micro (friendship groups) levels contributes to religious commitment. The study is based off of Stark's theories (as cited in Small & Bowman, 2012) on the relationship between religiosity and social context, espousing that religion encourages conformity within a group when the majority of the members validate the religion for motivating behavior. Kuh and Gonyea (2006) found students in religiously affiliated schools were more likely to engage in

spiritually enhancing activities and had a greater self-reported deepened sense of spirituality.

Tix, Dix, Johnson, and Steger (2013) studied how differences in religious traditions impact personal religiousness and subjective wellbeing. The study focused on Catholic, Evangelical Protestant, and Mainline Protestant religious traditions. The study addressed three questions: whether there are different levels of religious commitment and meaning in life across the three faith traditions; whether links between religious commitment and psychological distress differ across the three traditions; and whether the pattern of results from previous research extends to a positive index of mental health, or in other words does religious commitment predict greater meaning in life. Results showed that Evangelical Protestants demonstrated more religious commitment and meaning in life than Catholics and Mainline Protestants. Religious commitment was shown to be a predictor of greater wellbeing for Evangelical Protestants, greater meaning in life for Catholics, and greater anxiety for Mainline Protestants. These findings were consistent with Kelley's (1972, as cited in Tix et al., 2013) analysis of Christian religious traditions, where members of Evangelical Protestant churches may be more likely to believe they possess the truth, form closer relationships within their religious community, and seek to convince others of their beliefs. These same ideas and worldview may be similar to the Mormon perspective where there is a strong religious culture and missionary service is viewed positively.

Steffen (2014) examined potential mediators of the relationships between intrinsic and extrinsic religiosity and life satisfaction, with perfectionism and life aspirations being

two possible pathways through which religious orientation is related to outcome. It was found that intrinsic religiosity had a positive relationship with life satisfaction. Astin et al. (2011b) relate this intrinsic religiosity to religious commitment, while the extrinsic is reflected in their behavioral measure of religious engagement. Steffen's (2014) study also found that increased intrinsic religiosity led to greater life satisfaction. However, the extrinsic measure was indirectly tied to less life satisfaction. This is an interesting point in that of all 10 measures of the Astin et al. (2011b) study, the highest intercorrelation was between religious commitment and religious engagement at 83%. Still, Mormon students had the highest ratings of all religious groups in terms of both religious commitment (55%) and religious engagement (59%). All religious groups show a decline in religious attendance during college, much of it driven by the demands of college life. However Mormon students and some Christian religions showed declines of less than 35%, compared to other religious groups with declines as high as 75% (Astin et al., 2011b). For the Mormon college student, this may help explain Steffen's (2014) findings; Mormon college students may still be committed in terms of religious commitment and religious engagement, but demands of college still create an additional stress on their engagement.

Ecumenical worldview. Ecumenical worldview has been defined as “the extent to which the student is interested in different religious traditions, seeks to understand other countries and cultures, feels a strong connection to all humanity, and believes that love is at the root of all the great religions” (Astin et al., 2011b, p. 21). It has been closely tied to religious struggle.

Mayhew (2012) used a longitudinal study to examine the ecumenical worldview development of 13,932 students across 126 institutions. The results suggested that differences in ecumenical development trajectories could be partially explained by the average amount of religious struggle reported by students. The study adopted a multilevel model for explaining college's impact on ecumenical worldview development, which included organizational, peer group, and student entry characteristics as well as student experiences.

Mayhew (2012) also found that although an ecumenical worldview develops in college, public and other religiously affiliated institutions had a greater impact on students' ecumenical worldview than evangelical schools. As part of student and spiritual development, developing an ecumenical worldview could be partially explained by the amount of religious struggle. Within evangelical institutions, students are highly committed to their religious frameworks; they self-select into learning environments espousing similar commitment, institutionalized policies, and practices; agree to specific standards; and build a peer group community with the same ideals and perspectives. From a gender perspective, they rely heavily on patriarchal structures. Ecumenical worldview development may also be associated with participation in curricular opportunities with religious and spiritual content.

Mayhew's (2012) description of ecumenical development among evangelical institutions may also have some similarities to Mormon students. Rogers (2009) discussed the Mormon ideal of ecumenism and the practical exercise of it. Mormonism beliefs support ecumenism and the idea of learning from others, even those outside the

faith. However, members of the Mormon faith sometimes have difficulty being accepting of others, especially when it conflicts with their own worldview. This may create a dichotomy between the actual doctrine and stated beliefs of the faith with a culture that emphasizes close community and family relations.

Mormon Perspectives on Spirituality and Wellbeing

Bartz, Richards, Smith, and Fischer (2008) examined data from 1984, 1987, and 2001 on a sample of Mormon college students to better understand the process of religious development and the relationship between religiosity and mental health. This study examined the relationship between the students' devoutness and psychopathology over time, the correlations between intrinsic religiosity and indices of psychopathology, the stability of religious motivations over the course of adulthood, and the stability of two different religious development styles that were identified in 1984. This study found that these religiously devout individuals have consistently fallen within the normal range of the Minnesota Multiphasic Personality Inventory scale; there were no correlations between scores of intrinsic religiosity and psychopathology; these participants' religious motivations remained stable over the course of adulthood; and most of the participants eventually manifested a continuous style of religious development.

Mormon religious culture. Barry and Nelson (2005) examined the role of religious culture on the emerging adult college student, defined as those between the ages of 18-25 years. Participants in this study were 445 undergraduates between the ages of 18-20 years attending religious-affiliated and public institutions. The participant makeup consisted of Catholic (31 males, 89 females), Mormon (48 males, 200 females), and

public college students (21 males, 56 females). The institutions used in this study were Loyola College in Maryland, Brigham Young University, and the University of Maryland, College Park. The authors noted that the literature indicated emerging adults typically hold certain beliefs about adulthood, explore their beliefs and worldviews, and engage in risky behaviors such as drug and alcohol abuse, or unprotected sex. However, religious background and culture may result in study differences in how they endorse certain criteria, hold certain beliefs, and engage in behaviors that appear to differ from their emerging adult peers. This study takes this idea further by doing direct comparisons between Catholics, Mormons, and students attending public institutions, which had not been done previously. The overall purpose was to look at the role of religion in terms of the criteria deemed necessary for adulthood, the perceived achievement of those criteria, expected behavior of the age group, and to explore the personal beliefs and spirituality within this group.

These particular religious universities were chosen as (a) the students at these institutions were regularly exposed to the values and beliefs of the religious culture, and (b) the fact they chose to attend there may reflect their identification at least with their particular culture. The researchers found that in contrast to the public and Catholic college students who were exploring their beliefs as expected for most emerging adults, Mormon students were more inclined to adopt their existing cultural beliefs and values. They also placed greater emphasis on criteria considered important to the religious culture including interdependence, norm compliance, biological acceptance, and family capacities. Mormon students also rated themselves higher on variables aimed at

assessing spirituality. The authors concluded that although Catholics, Mormons, and other faiths represented in the public institutions have similar values and beliefs, the Mormon culture tended to provide greater structure that outlines the emerging adult's roles and responsibilities (Barry & Nelson, 2005).

Steffen and Merrill (2011) looked at the influence of religious affiliation on acculturation among Mexican immigrants to Utah. Compared with Catholics and other religious affiliations, Mormon Mexican immigrants tended to score significantly higher on Anglo cultural orientation, spirituality, and social support. Latter-Day Saint acculturation may have been partly due to greater interaction with the U.S. culture prior to coming to this country. Mormons also rated their subjective social status higher. The study concluded that membership in an organization that is dominant in the local community (e.g., the Mormon Church) contributes to the acculturation process, higher levels of spiritual wellbeing, and social support.

Another aspect of Mormon culture is a youth seminary program. Many Mormon high school students attend a daily seminary class to study the scriptures and church doctrine. Sweat (2014) explored the relationship between Mormon seminary students' in-class oral participation and their perceived in-class spiritual experiences. Findings indicated a statistically significant correlation ($r = .32, p < .01$) between amounts of in-class oral participation and perceived spiritual experience. The youth seminary program is a valuable part of the religious culture as many of these high school students will later attend college and serve missions.

Mormon missionary service. There are few studies that look at Mormon missionary service and spiritual development. Hui-Tzu (2013) focused on the perceived relationship between religiosity and life events among returned Mormon missionaries. Primarily focused on individuals raised by at least one Mormon parent in a Mormon community, the intent was to examine what kind of life events within this group increased, decreased, or left unchanged the individuals' level of religiosity. A qualitative study asked undergraduate students in Utah to list the three most positive and three most negative life events and how they felt these events impacted their religiosity. Participants were drawn from a state college where they were enrolled in a behavioral science class with 88 participants (36% male, 64% female). A total of 260 positive and 250 negative events were recorded. The top positive events were marriage (45%) and birth of a child (24%). Most also saw these events as increasing their religiosity: marriage (38 of 40), childbirth (20 of 24). The top negative events were the death of a loved one (48%), and problems with others outside the church (32%). These two types of events were factors for the 5 individuals, from the group of 88, who dropped out of the Mormon faith. One of the 5 had a Mormon father who died. The other 4 reported having 1 non-Mormon parent as an outside influence.

Hui-Tzu (2013) suggested two major mechanisms contribute to an increase or decrease in religiosity following a significant life event. The first is motivation where religion can help it strengthen in time of uncertainty, or decrease if the motivation is tied to a different alternative such as a new job, relationship, or something else that competes for the individual's time. The second mechanism is access to religious resources through

the faith itself or other individuals such as family members, who are strong in the faith. Religious resources include both material and quality of personal support. For example, because of the importance of both religiosity and spirituality within the Mormon culture, religious education is a requirement for all students attending Mormon institutions of higher education. Although significant financial resources are put into this educational effort, Hilton and Plummer (2013) found differences in the student religious and spiritual outcomes based on whether the professors are full or part time.

A unique aspect of serving a Mormon mission is the possibility of learning a new language skill for those called to serve in foreign-speaking areas. Previous studies had recognized that learning other languages helps develop students' cognitive skills. Pope (2006) studied the Mormon missionary program to see whether or not students who were assigned to learn a foreign language performed better in college. The results indicated that the increase in GPA due to serving a Mormon mission is the same for students that were assigned to a foreign-speaking mission relative to students that were assigned to an English-speaking mission. This supports the idea that, although students may improve their academic performance by developing their cognitive skills during their missions through such avenues as learning a new language, increased academic performance from the mission is more likely tied to the discipline of the service itself and the spiritual development the student goes through during this time.

Chapter Three: Methodology

There has been a decline in the number of people who consider themselves religious compared to just a few years ago. According to a Pew Research Center survey in 2014, 77% of U.S. adults think religion is either very or somewhat important, compared to 82% in 2007. Yet today, 94% of the U.S. adult members of the Mormon Church think it is at least somewhat important. This perspective on religion, spirituality, and even wellbeing is pervasive within the Mormon culture. The Pew survey showed that 77% of Mormon adults attend church services weekly, compared to 36% of all faiths combined. Daily prayer and weekly scripture reading among Mormons is 85% and 77% respectively, compared to 55% and 35% for the entire U.S. Feeling spiritual peace and wellbeing at least once a week was 81% for Mormons, compared to 59% for all of the U.S. (Pew Research Center, 2016). In addressing Mormon college students' perceptions in this current study, it should not be surprising to find similar differences between Mormon college students compared to the general college student population.

This chapter discusses the methodology that was used in addressing the three research questions. This study used a quantitative approach based on specific items from the College Spiritual and Belief Values (CSBV) survey, from the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA). The CSBV assessed student spiritual development levels in five measurement areas with a

separate measurement for psychological wellbeing. Key student demographic information was also collected for descriptive and comparison purposes.

The full CSBV addresses 10 measurement scales of student spiritual development with a total of 85 items. For purposes of this study only 5 of these scales addressing spiritual development were used for a total of 42 items. These scales are equanimity, spiritual quest, religious struggle, religious engagement, and ecumenical worldview. A sixth measurement scale of 4 items from the CSBV was also used to measure psychological wellbeing.

Research Questions

This study addressed the following research questions:

1. What is the impact of serving a Mormon mission on the spiritual development and psychological wellbeing of college students, compared to Mormon students who have not served missions?
2. Is the level of spiritual development and psychological wellbeing different for Mormon students who have gone on a mission after certain time intervals?
3. What is the difference in spiritual development and wellbeing between males and females who participated in a Mormon mission?

Sample Data

In order to gather a comprehensive sampling, one public and one private university participated in the survey to collect sample data. This combination of public and private universities allowed for a diverse educational background within the Mormon faith. The public university was a large institution of approximately 24,000 students

located in Utah. The private university was a small institution of less than 1,000 students located in Virginia. Although not a church-sponsored institution, the private university strictly adheres to most of the Mormon standards, policies, and beliefs as the church-sponsored universities. Thus, a key difference between the two universities is the public university offered a more neutral environment in terms religious involvement. The private university was structured in a way that reinforces the Mormon culture. These include such things as a student code of conduct designed around Mormon behaviors, beliefs, and social values; and approved on-campus and off-campus housing that meets specific criteria. Although the university does not include religion courses as part of its curriculum or graduation requirements, it encourages students to attend the LDS-sponsored institute program, which conducts religion courses similar to those taught at the church-sponsored institutions. It also encourages and in some cases provides access to on-campus facilities to conduct LDS church services through student church congregations called wards (private university's website, 2016). The combination of these public and private universities allowed for not only a more diverse LDS student group, it also helped temper potential bias by distinguishing how much of a student's response is tied to their missionary service, and how much is influenced by the school itself. Although not part of the actual research, where significant differences between the schools for any of the measures were found, these are addressed as appropriate in Chapters 4 and 5.

Data Collection Procedures and Protocol

Working with the Institutional Research and Information Office at the public university and the Office of Institutional Effectiveness at the private university, the CSBV survey was distributed via the schools' undergraduate e-mail systems to university students using Qualtrics, a commercially available survey platform.

The public university provided a random sample list of 2,500 undergraduates to participate in the survey. The survey was distributed directly to each of the students' e-mail accounts on October 10, 2016. Three reminders were sent to those who had not responded on the 14th, 20th, and 28th of October. Final acceptance of the survey was on November 12, 2016.

The private university distributed the survey via an anonymous link to all students on October 26, 2016. One reminder was sent out on November 4, 2016. Final acceptance of the survey was on November 12, 2016.

Students who started the survey were first provided the consent form that notified the students of any risks associated with the 55-item anonymous survey. Those who acknowledge the risks and chose to take the survey were then asked their age. If they identified themselves as being at least 18 years of age, they would then start the formal part of the survey. Students who did not agree with the consent form, or were under 18 years of age, were dropped from participating and received a message thanking them for their time.

Measures

Validity and reliability of the CSBV. Specific items from the validated College Spiritual and Belief Values (CSBV) survey tool were used in this study. A team made up of Higher Education Research Institute (HERI) researchers and an eight-member Technical Advisory Panel (TAP) developed the original CSBV survey, which was then administered to a sample of college juniors in Spring 2003. The team started by examining a comprehensive analysis by Hill and Hood from 1999 of 125 previously developed scales and their items. From this initial examination and discussions, the team developed an initial list of 175 survey items on spirituality and religion across 12 domains (Astin et al., 2011b; Astin, Astin, & Lindholm, 2010). The TAP selected the final items for each domain primarily on the basis of inter-reliability judgment.

To create a longitudinal sample the selected student participants had previously taken the Cooperative Institutional Research Program (CIRP) annual Survey of Entering Freshmen in 2000. For the 2003 pilot study, in addition to the new questions on spiritual development, post-test questions were given based on items from the initial 2000 freshman study. A total of 3,680 junior undergraduates across 46 colleges and universities, who completed the initial survey as freshmen in 2000, completed the pilot survey again in 2003 (Astin et al., 2011b).

After the CSBV pilot study, the HERI research team analyzed the survey data to determine the feasibility of developing measurement scales, which would combine items with similar content. These scales were developed to provide more reliable measures of the relevant constructs and help in interpreting results. Numerous iterations were

performed using factor analysis to examine correlations among the survey items. Ultimately, the analysis showed the identified groupings had consistent and coherent content while at the same time demonstrating a high degree of statistical internal consistency (Astin et al., 2010).

During this development process, when a promising scale was identified, a reliability analysis was performed to eliminate items that were not contributing to the scale reliability. Construct validity was then determined by correlating the final items in the scale with the other items in the scale and across the other developed scales. This was done to determine whether the chosen construct actually measured what was intended. Items that appeared on more than one scale were either eliminated or placed on the scale with the highest correlation. Subsequently 19 scales had verified constructs (Astin et al., 2010). Several scales that were not directly related to spiritual, religious constructs, or were found to not be relevant to first-year college students were taken out and a new scale for Ecumenical Worldview was developed and added into the mix. Ultimately there were 10 factor scales that were used in the final longitudinal studies of 2004 and 2007 (Astin et al., 2010).

Selected CSBV scales. The CSBV scales used for this study assessed student spiritual development levels in the five measurement areas of equanimity (5 items), spiritual quest (9 items), religious struggle (7 items), religious engagement (9 items), and ecumenical worldview (12 items). Astin et al. (2011b) selected these scales, except for ecumenical worldview, as the most representative for comparing spiritual development with desired positive outcomes tied directly to students' college experiences.

College experience outcomes. Astin et al. (2011b) discussed how their approach to student spiritual development treated spirituality and religiousness as an outcome of the college experience. Although this was one purpose of their study, they also wanted to determine if positive growth in spiritual development translated into positive outcomes in other areas of educational and personal growth. They added additional survey items to assess eight traditional outcomes: psychological wellbeing, leadership abilities and skills, satisfaction with college, grades in college, educational aspirations, intellectual self-esteem, growth in the ability to get along with people of different races and cultures, and growth in the importance placed on promoting racial understanding. For simplicity of analysis, they selected what they considered five representative subscales: equanimity, spiritual quest, religious struggle, religious engagement, and global citizenship. The 6-item global citizenship scale was a hybrid that took 3 items each from the ethic of caring (8 items) and ecumenical worldview (12 items) scales to simplify the comparison of spiritual development with the college outcomes.

For the purposes of this current study, the full ecumenical worldview scale is more applicable than the global citizenship scale. Specific items of interest within the ecumenical worldview that were not part of the global citizenship scale included: having an interest in different religious traditions, believing in the goodness of all people, understanding of others, and accepting others as they are. Also, for consistency the statistical tests done for the ecumenical worldview scale were the same that were done for the other spiritual development scales but were not as robust for the global citizenship scale. For example, Cronbach alphas for both scales were acceptable, but where there

were two measurements done for all the spiritual development scales, including ecumenical worldview, there was only one measure done for the global citizenship scale.

This study assessed the traditional college student outcome of psychological wellbeing by utilizing the psychological wellbeing scale (4 items) resulting in a total of 46 survey items (Appendix A).

Counting additional items for demographic information in the survey there is a total of 17 questions entailing 55 survey items (Appendix B). Cronbach alphas were calculated for each of the measurement scales for both 2004 and 2007 to test for reliability. According to Warner (2013), acceptable Cronbach alphas are considered to be equal to or greater than .70. The composite scores for each scale are the raw point totals for all the items in any particular scale. Astin et al. (2011b) acknowledged that since the values across the items and scales had no absolute meaning, they conscientiously evaluated each scale to determine the low, medium, and high value ranges. Each item was given a value range from one to eight depending on the particular scale used for each item. Assumptions were made on what constituted a big value. For example, to be considered in the high range of a particular scale, the student would have to score at the highest level on a certain number of items, and the next highest level on the remaining items. This process would lead to the low, medium, and high values, which would then define the ranges. It should be noted that Astin et al. (2011) developed low, medium, and high ranges primarily for easier comparison by their readers. The deeper analysis they conducted, and how it was done in this current study, treats the dependent variable of the

composite score as a continuous variable, rather than a categorical (high, medium, low) variable.

Equanimity scale. The five-item equanimity scale measures the extent to which a student feels centered or at peace, and is able to find meaning in difficult situations. The composite score could range from 5 to 15, with low scores being less than 10 and high scores being greater than 13. The Cronbach alphas for 2004 and 2007 respectively were .76 and .72, which were within the acceptable range (Astin et al., 2011b).

Spiritual quest scale. The nine-item spiritual quest scale measures the student's interest in searching for meaning and purpose in life. The composite score could range from 9 to 34, with low scores being less than 20 and high scores being greater than 25. The Cronbach alphas for 2004 and 2007 respectively were .83 and .82 (Astin et al., 2011b).

Religious struggle scale. The seven-item religious struggle scale reflects how much a student feels unsettled about religious matters, disagrees with family members on religious subjects, questions their own religious beliefs, or feels distant from God. The composite score could range from 7 to 21, with low scores being less than 11 and high scores being greater than 18. The Cronbach alphas for 2004 and 2007 respectively were .75 and .77 (Astin et al., 2011b).

Ecumenical worldview scale. The 12-item ecumenical worldview scale indicates the extent a student is interested in learning about other religions, countries, and cultures in a positive light. The composite score could range from 12 to 45, with low scores being

less than 30 and high scores being greater than 37. The Cronbach alphas for 2004 and 2007 respectively were .72 and .70 (Astin et al., 2011b).

Religious engagement scale. The nine-item religious engagement scale assesses the level of behavioral commitment the student displays, such as attending religious services, praying, or studying scriptures. The composite score could range from 9 to 44, with low scores being less than 14 and high scores being greater than 28. The Cronbach alphas for 2004 and 2007 respectively were .87 and .88, which were within the acceptable range (Astin et al., 2011b).

Psychological wellbeing scale. The CSBV psychological wellbeing scale consists of the following items: “not feeling depressed,” “not feeling overwhelmed by everything I have to do,” “not feeling that my life is filled with stress and anxiety,” and a self-assessment of the student’s emotional health. Significant correlations ($p > .001$) based on partial beta coefficients were found between psychological wellbeing and the spiritual development measures of equanimity (.28), spiritual quest (-.08), and religious struggle (-.19). Correlations were not significant for religious engagement (.03) and global citizenship (-.03). However, for purposes of this study, aspects of these two scales may still be valuable. Religious engagement was still measured as it has strong correlations with the other religious scales of religious commitment (.81), religious/social conservatism (.80), and religious skepticism (-.72). Astin et al. (2011b) also found that Mormon college students had a greater percentage of high scores for religious engagement (59%) than for all religious groups. The full ecumenical worldview scale was used rather than the global citizenship scale as it captures more of the impact of

experiencing other cultures and religious traditions that could be experienced through Mormon missionary service.

CSBV permission. The CSBV is an open-sourced instrument that may be used for noncommercial, academic research. An e-mail requesting use of the instrument was sent on March 17, 2016 to the Higher Education Research Institute (HERI). That same day HERI sent a set of formal questions about the research. These were answered and returned on March 18, 2016. HERI gave approval on using the instrument on March 22, 2016 (Appendix C).

Data Analysis

This study used different statistical methods to analyze the data: analyzing the descriptive statistics, performing correlation analysis, and conducting two-factor analysis of variances (ANOVA). Data was analyzed using SPSS Version 22. In addressing the research questions, the data analysis focused on the five spiritual development scales and the psychological wellbeing scale from the CSBV. To adequately address the research questions specific demographic data were also collected and used. The demographics included items for religion, gender, age, and current year in school, whether the student went on a religious mission, and if so, how much time was served on the mission, and the amount of time the student has been back from the mission.

The primary statistical approach to answer the research questions was a two-factor ANOVA fixed-effects, nonexperimental design. The dependent variable (DV) is the composite score for each of the scales. The independent variables (IV) are (A) whether the participant served as a Mormon missionary, (B) the amount of time they

have been back from the mission, and (C) gender. There were multiple two-factor ANOVA statistical runs, one for each of the composite scales. Although there were three IVs, two-factor ANOVA was used based on how the IVs were split to answer the research questions. In other words, only two IVs were used to answer each question, but only one IV, gender, was used in all three questions.

Each of the three independent variables was broken into lower factor levels. There were two factor levels for whether the participant served a Mormon mission. These levels are (A1) Mormon students who have not served missions, and (A2) Mormon students who have served missions. There were five factor levels for the amount of time the student had been back from the mission: (B1) Mormon students who had been back from their missions for less than 6 months, (B2) Mormon students who had been back from their missions from 6 to 12 months, (B3) Mormon students who had been back from their missions from 13 to 24 months, (B4) Mormon students who had been back from their missions from 25 to 36 months, and (B5) Mormon students who had been back from their missions for more than 36 months. The use of more than three years for the last level is considered a logical grouping tied to the standard 4-year program with a freshman, sophomore, junior, and senior class structure, and the fact that most college students who serve missions will typically complete at least one year of school prior to their mission. It was recognized there may be students who continue their undergraduate studies beyond four years because of course loads, program requirements, and personal circumstances. However, it was assumed the number of participants at higher levels beyond three years would be small, raising concerns over whether there would be a

sufficient number of participants at that level, and that the rate of growth in spiritual development and psychological wellbeing due to the missionary service after being back more than three years would be minimal. This grouping provided a sufficient sample size for the total number of students. The levels for gender were (C1) male and (C2) female.

Because of the nonexperimental nature of the design where all three groups were naturally occurring rather than random assignment, there were an unequal number of participants across the cells (i.e. a nonorthogonal ANOVA). Because of this an assessment of the partitioning of variances was conducted by examining the mean square and *F* values for each of the main and interaction effects. Effect sizes were measured by calculating the partial eta squared for each of the main and interaction effects. The results were compared to Cohen's subjective standards for small, medium, and large effect. Observed power was also calculated for each of the main and interaction effects.

Question #1. To answer Research Question 1, the following statistical question was used: Is there a mean difference in student scores on the six measurement scales based on whether the students served missions for the Mormon Church? A two-factor ANOVA compared whether the student served a Mormon mission and gender with each of the six measurement scales. The two independent variables (IV) were (A) whether the participant served as a Mormon missionary, and (C) gender. The dependent variables (DV) were the composite scores for each of the scales. The cell interaction was 2 X 2 for a total of four cells for each of the six measurement scales. The analysis was conducted by calculating the *F*-statistic, the significance level (*p*-value), and effect size, ensuring there were sufficient observations for each cell, checking for outliers and violations of the

statistical assumptions, and reviewing the demographic data and descriptive statistics in light of the findings from the ANOVA. Correlations were also completed across the variables.

Question #2. To answer Research Question 2, the following statistical question was used: Is there a mean difference in student scores on the six measurement scales for students who have served Mormon missions based on how long they have been back from their missions? Other than changing one of the IVs from (A) whether the participant served as a Mormon missionary, to (B) the amount of time they have been back from the mission, the approach was similar to Question 1. A two-factor ANOVA was run to compare the amount of time they have been back from the mission and gender with each of the six measurement scales. The cell interaction was 5 X 2 for a total of 10 cells for each of the 6 measurement scales. The analysis was conducted by calculating the *F*-statistic, the significance level (*p*-value), and effect size, ensuring there were sufficient observations for each cell, checking for outliers and violations of the statistical assumptions, and reviewing the demographic data and descriptive statistics in light of the findings from the ANOVA. Correlations were also completed across the variables. Because this research question involved a variable concerning the passage of time, that is, how long has the student been back from his or her mission, additional analysis was conducted to see if there was a relationship between time back from mission with the two other passage of time variables: student age and year in school.

Question #3. To answer Research Question 3, the following statistical question was used: Is there a mean difference in student scores on the six measurement scales for

students who have served Mormon missions based on gender? The data for this question will have already been collected as part of Questions 1 and 2. The analysis of this question was done as an expansion to the other two questions.

Checking Assumptions

There are three major assumptions tied to a factorial ANOVA. The first is that the outcome variables are approximately normally distributed. Normality was checked during the analysis of the data by examining the frequency distribution, as well as the skewness and kurtosis of the distribution. The second assumption is that the variance scores will be reasonably homogeneous. Homogeneity was checked using the Lavene test. According to Warner (2013), factorial ANOVA is fairly robust to violations of the assumptions of normality and homogeneity of variances unless the number of cases in the cells is very small. According to Lomax and Hahs-Vaughn (2012), the effect of violating either of these assumptions decreases as the number of observations increase.

An a-priori power analysis was initially done using the G*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007) to determine an overall sample size for this study. The inputs were: Test family = *F* tests; Statistical test = ANOVA: Fixed effects, special, main effects and interactions; Type of power analysis = A priori: Compute required sample size; effect size – medium (0.25); probability level = .05; Power = .95; Numerator $df = (3-1)*(2-1) = 2$; Number of groupings = $3 * 2 = 6$. The suggested sample size was 251.

However, when the study was finally conducted, the number of levels for time back from mission was changed from three to five. This changed the numerator df to 4

and the number of groupings to 10. These changes would increase the suggested sample size to 303 for a medium effect size. The combined data set of 373 for all Mormon students met this sample size for answering Question 1 and part of 3. As Question 2 focused only on those who had served missions with a total sample size of 179, the desired sample size for a medium effect size was not met. It did, however, meet the suggested sample size of 122 to meet the large effect size of 0.40.

Faul et al. (2007) discuss using sensitivity analysis for evaluating effect size. Adjusting for small (.10), medium (.25), and large (.40) effect size in the model the resulting sample sizes for Question 1 were 1,301 (small), 210 (medium), and 84 (large) respectively. For Question 2 the sample sizes were 1,852 (large), 303 (medium), and 122 (large). This effect size impact is addressed in more detail in Chapters 4 and 5. Post hoc power analysis was also conducted during the analysis phase of the study.

The third assumption concerns independence of the observations. According to Warner (2013), for nonexperimental studies where factorial ANOVA is used, complete independence may be not be possible due to naturally occurring groupings. Similarly, because of the nature of this study, all the groups consisted of naturally recurring groupings. Although not required, it was anticipated that the large number of participants and the voluntary nature of completing the survey would help in mitigating any potential issues concerning the independence of observations.

Missing Data

Keeping the amount of missing data low was a major consideration in the design of the survey instrument. The survey flow was designed to eliminate missing data. The

first two questions, the consent form and age, were designed so that anyone who did not agree to the survey, or was under the age of 18, was dropped. The remaining questions were designed to be answered in succession. Participants could only advance to the next question by answering the current one. They could also not go back to previous questions once they were answered and advanced to the next question. Only when the participant answered the last question was that particular survey counted, thus eliminating the possibility of missing data among those who completed it. If surveys were not completed once started, participants could go back in where they left off to complete them. However, once the final date of survey completion passed, incomplete surveys were dropped.

Limitations

There were a few limitations in conducting the survey. The main one was that the study may have been more telling if it was a longitudinal survey where participants could have taken the survey before and after completing their missions. Being a one-time, cross-sectional survey, the long-term impact on student spiritual development was thus limited to extrapolation of results of different college year groups, rather than having a longitudinal study of the same student sample over time. There may have been some response bias as the respondents were self-selecting. Additionally, the self-selecting process created unequal cells in parts of the research, which was addressed as part of the nonorthogonal design. Because the study was limited to looking at spiritual development and psychological wellbeing of Mormon college students, it may be limited in its

application to missionaries who do not attend college. It was also limited in its applicability toward Mormon missionaries from other countries and cultures.

Another limitation is researcher bias. The author is a member of the Mormon faith, attended a church-sponsored university, and served as a Mormon missionary. The quantitative nature of the research helped mitigate some of the risk, as well as the researcher being continually aware of avoiding researcher bias during the execution, analysis, and execution of the research.

Chapter Four: Results

This chapter will discuss and describe the data that were collected. It will present the data findings and highlight the statistically significant findings from the analysis. To accomplish this, three distinct data sets were created: combined universities, public university, and private university. The combined data set was the primary data set consisting of the data from both the public and private universities, and will always be presented. In most cases where additional insight was gained without significantly compromising the validity of the data, analysis was also done for both the public and private universities.

The findings were first broken down by each of the three research questions. Each research question was analyzed for each of the three data sets: combined, public, and private. Each data set was then used to analyze each of the measurement scales in the following order: spiritual development (equanimity, ecumenical worldview, religious engagement, religious struggle, spiritual quest), and psychological wellbeing. Depending on the specific research question, each scale was examined based on the following independent variables: whether the student served an LDS mission, how long the student had been back from the mission, gender, age, and year in school. Although this chapter includes the most important information and significant statistical findings, full APA write-ups for each of the main 36 ANOVA runs are provided in Appendices D and E.

As already presented, the research questions for this study were:

1. What is the impact of serving a Mormon mission on the spiritual development and psychological wellbeing of college students, compared to Mormon students who have not served missions?
2. Is the level of spiritual development and psychological wellbeing different for Mormon students who have gone on a mission after certain time intervals?
3. What is the difference in spiritual development and wellbeing between males and females who participated in a Mormon mission?

Correlations Between the Measurement Scales

To keep the responses to the three research questions in perspective with the overall impact of student missionary service on student spiritual development and psychological wellbeing, correlations were run across the six scales for all three data sets (Table 1).

Table 1

Correlations of Spiritual Development and Psychological Wellbeing

Combined Universities - All Mormon Students	Equanimity	Ecumenical Worldview	Religious Engagement	Religious Struggle	Spiritual Quest	Psychological Wellbeing
- Equanimity	1					
- Ecumenical Worldview	0.316**	1				
- Religious Engagement	0.456**	0.174**	1			
- Religious Struggle	-0.415**	-0.018	-0.509**	1		
- Spiritual Quest	0.317**	0.476**	0.304**	-0.007	1	
- Psychological Wellbeing	0.492**	0.148**	0.214**	-0.359**	0.049	1

Research Question 1: Impact of Serving a Mormon Mission on College Students

The specific research question was “What is the impact of serving a Mormon mission on the spiritual development and psychological wellbeing of college students, compared to Mormon students who have not served missions?” In addressing the overall question, the statistical question was, “Is there a mean difference in student scores on the six measurement scales based on whether the students served missions for the Mormon Church?”

The primary analysis used was a two-way ANOVA on each of the six scales. The score for each scale was the dependent variable with the two independent variables being missionary service and gender. The examination of the first independent variable, missionary service, was the focus for answering Research Question 1. The examination of the second independent variable, gender, and the examination of the interaction between the two independent variables, was used for answering Research Question 3. The analysis was first run against the combined data set of 373 Mormon students. After the initial run, the output was checked for assumptions (Table 2). As needed, adjustments were made to the data through a step-by-step process of eliminating outliers. Once all assumptions were met, no more data points were eliminated, even if there were still outliers identified. In some cases not all assumptions could be met, even when all outliers were eliminated. In these cases, the items were identified along with the ramifications of not meeting all the assumptions. As both independent variables used in this part of the research each had only two levels, SPSS did not perform post hoc analysis. After the assumptions were addressed, results were examined to see whether

the difference in means was statistically significant for each of the six measurement scales for the combined data set (Table 3).

Table 2

Summary of Major Assumptions for Research Question 1: Impact of Serving a Mormon Mission on the Spiritual Development and Psychological Wellbeing of College Students

	N	Independence Scatter Graph Residual	Homogeneity of Variances Levene's Test (p-value)	Skewness	Normality Kurtosis	Outliers
Combined						
- Equanimity	364	Y	0.100	-0.504	-0.613	0
- Ecumenical Worldview	364	Y	0.057	-0.229	-0.389	0
- Religious Engagement	352	Y	0.004	-0.445	0.137	0
- Religious Struggle	353	Y	0.597	0.599	-0.268	0
- Spiritual Quest	373	Y	0.272	-0.378	0.082	5
- Psychological Wellbeing	372	Y	0.195	-0.260	-0.559	0

Table 3

Main Effects for Research Question 1: Impact of Serving a Mormon Mission on the Spiritual Development and Psychological Wellbeing of College Students

Combined	df	F	Sig	Partial Eta Squared	Observed Power
Main Effect - Mission Service					
- Equanimity	1	33.453	0.000	0.085	1.000
- Ecumenical Worldview	1	31.528	0.000	0.081	1.000
- Religious Engagement	1	33.214	0.000	0.087	1.000
- Religious Struggle	1	9.570	0.002	0.027	0.870
- Spiritual Quest	1	23.963	0.000	0.061	0.998
- Psychological Wellbeing	1	8.999	0.003	0.024	0.849

The same step-by-step analysis to adjust for outliers to best meet the ANOVA assumptions was done for both the public and private date sets. These runs looked at

each school type to see if there was a difference between the two. It also allowed for comparison to see if one school type had a stronger influence than the other on the combined results (Appendices F and G).

Astin et al. (2011b) identified a high-low range for each of the spiritual development scores, although they did not identify a range for psychological wellbeing. A comparison of the means for the spiritual development scales was made to see where students fell in relation to these ranges based on missionary service. The results for the combined data set are in Table 4 and results for the public and private universities are found in Appendix H.

Table 4

*Means, Standard Errors, Bounds, and Astin Ranges for Research Question 1
Combined Data Set: Impact of Serving a Mormon Mission on the Spiritual
Development and Psychological Wellbeing of College Students*

Combined	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range	Astin's High-Range
Equanimity							
- No Missionary Service	186	12.077	0.186	11.712	12.443	5-9	14-15
- Missionary Service	178	13.400	0.133	13.138	13.662	5-9	14-15
Ecumenical Worldview							
- No Missionary Service	186	35.775	0.316	35.133	36.416	12-29	38-45
- Missionary Service	178	38.013	0.229	37.562	38.464	12-29	38-45
Religious Engagement							
- No Missionary Service	179	31.609	0.454	30.715	32.503	9-13	29-44
- Missionary Service	173	34.763	0.305	34.163	35.362	9-13	29-44
Religious Struggle							
- No Missionary Service	179	10.404	0.228	9.957	10.852	7-10	16-21
- Missionary Service	174	9.539	0.163	9.219	9.859	7-10	16-21
Spiritual Quest							
- No Missionary Service	194	26.070	0.360	25.361	26.779	9-19	26-34
- Missionary Service	179	28.242	0.259	27.773	28.750	9-19	26-34
Psychological Wellbeing							
- No Missionary Service	194	8.550	0.240	8.079	9.022	N/A	N/A
- Missionary Service	179	9.436	0.172	9.097	9.774	N/A	N/A

The following paragraphs address the assumptions for each of the scales, the statistically significant findings, and where the scores fell on the Astin et al. (2011b) high-low range. The full APA write-ups for all 18 ANOVA runs are found in Appendix D.

Equanimity. The two-way ANOVA was conducted to determine if the mean score for equanimity for students differed based on whether the student had served a religious mission and the student's gender. This was first conducted on the combined data set of 373. In order to meet the assumptions, 9 outliers were eliminated resulting in a total sample size of 364. From this sample size, the assumptions of normality, homogeneity of variance, and independence were tested and met (Appendix D). Table 3 shows a statistically significant main effect for serving a mission ($F_{mission} = 33.453$, $df = 1, 360$, $p = .000$).

The means, standard errors, and the upper and lower bounds were compared between those who served missions and those who had not. These were compared to Astin et al.'s (2011b) identified equanimity scores of 5-9 for low and 14-15 for high. The results show that Mormon students who served missions scored significantly higher than those who had not served missions, although the mean of both groups were still under the high range (Table 4). This held true whether the students attended the public or private school (Appendix H).

Two-way ANOVA was conducted on both the public and private data sets to examine the difference between the public and private universities. For the public university, all assumptions were met on a total sample size of 180, after an adjustment for

1 outlier (Appendix F). Appendix G shows a statistically significant main effect ($F_{mission} = 29.257, df = 1, 176, p = .000$). For the private university, all assumptions were met on a total sample size of 188, with an adjustment for 4 outliers. Appendix G shows a statistically significant main effect for serving a mission ($F_{mission} = 7.298, df = 1, 184, p = .008$).

Ecumenical worldview. A two-way factorial ANOVA was conducted to determine if the mean score for ecumenical worldview for students differed based on whether the student had served a religious mission and the student's gender. This was conducted on the total sample size of 373. In order to meet the assumptions, 9 outliers were eliminated resulting in a total sample size of 364. From this sample size, the assumptions of normality, homogeneity of variances, and independence were tested and met (Appendix D). Table 3 shows a statistically significant main effect for serving a mission ($F_{mission} = 31.528, df = 1, 360, p = .000$).

The means, standard errors, and the upper and lower bounds were compared between those who served missions and those who had not. These were compared to Astin et al.'s (2011b) identified ecumenical worldview scores of 12-29 for low and 38-45 for high. The results show that Mormon students who served missions scored significantly higher than those who had not served missions. It also shows that the mean of those who served missions was in the high range (Table 4). This held true whether the students attended the public or private school (Appendix H).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between a public and private institution. For the public

university, all assumptions were met on a total sample size of 181. The main effect for serving a mission was statistically significant ($F_{mission} = 32.881, df = 1, 174, p = .000$).

For the private university, all assumptions were met on a total sample size of 191, with an adjustment for 1 outlier. The main effect for serving a mission with the private university was also statistically significant ($F_{mission} = 4.605, df = 1, 183, p = .033$) (Appendix G).

Religious engagement. A two-way factorial ANOVA was conducted to determine if the mean score for religious engagement for students differed based on whether the student had served a religious mission and the student's gender. This was conducted on the total sample size of 373. In order to meet the assumptions, 21 outliers were eliminated resulting in a total sample size of 352. From this sample size, the assumptions of normality and independence were tested and met. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(3, 348) = 4.500, p = .004$]. This was observed with the combined data set as well as both the public and private university data sets. This appears to be due primarily to low sample sizes in cells with lower numbers of observations but greater standard deviations. For example, males who had not served missions in the combined data set had only 20 data points with the lowest mean (29.40) and the highest standard deviation (5.15) of any cell. In comparison, males who served missions had 112 data points with one of the highest means (34.6) and the lowest standard deviation (3.21) of any cell. However, the effect of violating homogeneity of variances decreases as n increases (Lomax & Hahs-Vaughn, 2012). Although recognized as a limitation, it may not have a critical impact on the final

conclusions (Appendix D). Table 3 shows that there was a statistically significant main effect for serving a mission ($F_{mission} = 33.214, df = 1, 348, p = .000$).

The means, standard errors, and the upper and lower bounds were compared between those who served missions and those who had not. These were compared to Astin et al.'s (2011b) identified religious engagement scores of 9-13 for low and 29-44 for high. The results show that Mormon students who served missions scored significantly higher than those who had not served missions. At the same time, both groups still scored in the high range (Table 4). This held true whether the students attended the public or private school (Appendix H).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between the public and private university. For the public university, all assumptions except homogeneity of variances were met on a total sample size of 168, after an adjustment for 13 outliers. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(3, 164) = 8.877, p = .000$] (Appendix D). There was a statistically significant main effect for serving a mission ($F_{mission} = 26.363, df = 1, 164, p = .000$) (Appendix G).

For the private university, all assumptions except for homogeneity of variances were met on a total sample size of 184, with an adjustment for 8 outliers. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(3, 180) = 4.778, p = .003$] (Appendix D). There was a statistically significant main effect for serving a mission ($F_{mission} = 8.049, df = 1, 183, p = .005$) (Appendix G).

Religious struggle. The two-way ANOVA was conducted to determine if the mean score for religious struggle for students differed based on whether the student had served a religious mission and the student's gender. This was conducted on the total sample size of 373. In order to meet the assumptions, 20 outliers were eliminated resulting in a total sample size of 353. From this sample size, the assumptions of normality, homogeneity of variances, and independence were tested and met (Appendix D). Table 3 shows a statistically significant main effect on serving a mission ($F_{mission} = 9.570, df = 1, 349, p = .002$).

The means, standard errors, and the upper and lower bounds were compared between those who served missions and those who had not. These were compared to Astin et al.'s (2011b) identified religious struggle scores of 7-10 for low and 16-21 for high. The results show that Mormon students who served missions scored significantly lower than those who had not served missions. Those who served missions also scored in the low range, meaning they have less religious struggle than most other students (Table 4). This held true regardless of whether they attended the public or private school (Appendix H).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between the public and private universities. For the public university, all assumptions were met on a total sample size of 173, after an adjustment for 8 outliers (Appendix D). Appendix G shows that for the public school there was a statistically significant main effect for serving a mission ($F_{mission} = 6.094, df = 1, 169, p = .015$).

For the private university, all assumptions were met on a total sample size of 187, with an adjustment for 5 outliers. There was a statistically significant main effect for serving a mission ($F_{mission} = 8.049$, $df = 1, 183$, $p = .005$) (Appendix G).

Spiritual quest. The two-way ANOVA was conducted to determine if the mean score for spiritual quest for students differed based on whether the student had served a religious mission and the student's gender. This was first conducted on the total sample size of 373. From this sample size, the assumptions of normality, homogeneity of variances, and independence were tested and met (Appendix D). Table 3 shows a statistically significant main effect for serving a mission ($F_{mission} = 23.963$, $df = 1, 369$, $p = .000$).

The means, standard errors, and the upper and lower bounds were compared between those who served missions and those who had not. These were compared to Astin et al.'s (2011b) identified spiritual quest scores of 9-19 for low and 26-34 for high. The results show that Mormon students who served missions scored significantly higher than those who had not served missions. At the same time, both groups still scored in the high range (Table 4). This held true whether the students attended the public or private school except for those who had not served missions from the public school, who scored just below the high range (Appendix H).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between a public and private institution. For the public university, all assumptions were met on a total sample size of 181 (Appendix D). There was a statistically significant main effect for serving a mission ($F_{mission} = 25.968$, $df = 1$,

177, $p = .000$). For the private university, all assumptions were met on a total sample size of 190, with an adjustment for 2 outliers, but there were no statistically significant findings (Appendix G).

Psychological wellbeing. The two-way ANOVA was conducted to determine if the mean score for psychological wellbeing for students differed based on whether the student had served a religious mission and the student's gender. This was first conducted on the total sample size of 373. In order to meet the assumptions, 1 outlier was eliminated resulting in a total sample size of 372. From this sample size, the assumptions of normality, homogeneity of variances, and independence were tested and met (Appendix D). Table 3 shows that the main effect for mission was statistically significant ($F_{mission} = 8.999$, $df = 1, 369$, $p = .003$). Effect size was small ($\eta_p^2 = .024$), and observed power was .846.

Two-way ANOVA was conducted on both the public and private universities independently. For the public university, all assumptions were met on a total sample size of 181 (Appendix D). There was a statistically significant main effect for serving a mission ($F_{mission} = 4.991$, $df = 1, 177$, $p = .027$). For the private university, all assumptions were met on a total sample size of 192. There was not a statistically significant main effect for the private school ($F_{mission} = .002$, $df = 1, 188$, $p = .965$) (Appendix G).

In summary, the results show that the difference in spiritual development and psychological wellbeing between Mormon college students who serve missions and those who do not serve missions is significant. For all six scales this difference is evident by

showing no overlap of the ranges for the two groups. Those who served missions scored in or near the high ranges in the four spiritual development scales of equanimity, ecumenical worldview, religious engagement, and spiritual quest. They also scored in the desired low range for religious struggle. These results indicate that serving missions has a significant, positive impact on Mormon college students in terms of spiritual development and psychological wellbeing.

Research Question 2: Continued Student Development After Returning from a Mission

The specific research question was “Is the level of spiritual development and psychological wellbeing different for Mormon students who have gone on a mission after certain time intervals?” In addressing the overall question, the statistical question was, “Is there a mean difference in student scores on the six measurement scales for students who have served Mormon missions based on how long they have been back from their missions?”

The primary analysis used was a two-way ANOVA on each of the six scales. The score for each scale was the dependent variable with the two independent variables being how long the student had been back from his or her mission and gender. The examination of the first independent variable, how long the student had been back from serving a mission, was the focus for answering Research Question 2. The examination of the second independent variable, gender, and the examination of the interaction between the two independent variables, was used to help answer Research Question 3. The analysis was first run against the entire sample data set of 179 Mormon students who had

served missions from both institutions combined. After the initial run, the output was checked for assumptions (Table 5). As needed, adjustments were made to the data through a step-by-step process of eliminating outliers. Once all assumptions were met, no more data points were eliminated, even if there were still outliers identified. In some cases not all assumptions could be met, even when all outliers were eliminated. In these cases, the items were identified along with the ramifications of not meeting all the assumptions. Post hoc analysis was conducted on the time back from mission variable. This same process was also conducted individually on the public and private universities (Appendix I).

Table 5

Summary of Major Assumptions for Research Question 2: Difference in Level of Spiritual Development and Psychological Wellbeing for Mormon Students Who Have Gone on a Mission After Certain Time Intervals

	N	Independence Scatter Graph Residual	Homogeneity of Variances Levene's Test (p-value)	Skewness	Normality Kurtosis	Outliers
Combined						
- Equanimity	175	Y	0.059	-0.529	-0.796	0
- Ecumenical Worldview	179	Y	0.053	-0.457	0.744	1
- Religious Engagement	168	Y	0.281	-0.152	-0.398	0
- Religious Struggle	173	Y	0.003	0.444	-0.096	0
- Spiritual Quest	177	Y	0.155	-0.139	-0.629	0
- Psychological Wellbeing	179	Y	0.102	-0.372	-0.409	0

A limitation with the assumptions on Research Question 2 was for homogeneity of variances. This was observed in two general groups. First, violation of the assumption was observed in the combined data set as well as the breakouts for both the public and private data sets for religious struggle. Second, violation of the assumption was observed

in two more of the public university data sets (equanimity, ecumenical worldview) and one more scale with the private university (psychological wellbeing). These violations of the assumption appear to be due primarily to low sample sizes in cells with lower numbers of observations but greater standard deviations. Although recognized as a limitation, it did not have a critical impact on the final conclusions. The violations of homogeneity are noted in the applicable paragraphs below and summarized in Table 5. After the assumptions were addressed, results were examined to see whether the difference in means was statistically significant for each of the six measurement scales for the combined data set (Table 6).

The same step-by-step analysis to adjust for outliers to best meet the ANOVA assumptions was done for each of the public and private data sets. These runs looked at each school type to see if there was a difference between the two. The analysis on the individual public and private data sets are presented in Appendix J.

Table 6

Main Effect for Research Question 2: Difference in Level of Spiritual Development and Psychological Wellbeing for Mormon Students Who Have Gone on a Mission After Certain Time Intervals

Combined	df	F	Sig	Partial Eta Squared	Observed Power
Main Effect - Time Since Mission					
- Equanimity	4	0.914	0.457	0.022	0.286
- Ecumenical Worldview	4	1.130	0.344	0.026	0.035
- Religious Engagement	4	3.087	0.018	0.072	0.802
- Religious Struggle	4	2.952	0.022	0.068	0.782
- Spiritual Quest	4	0.534	0.711	0.013	0.177
- Psychological Wellbeing	4	0.286	0.887	0.007	0.112

Similar to Research Question 1, means and ranges were calculated for each scale. A comparison of the means was then made to identify where each scale fell within the Astin et al. (2011b) high-low ranges based on how long the students had been back from their missions. The results for the combined data set are in Table 7 and the results for the public and private universities are found in Appendix K.

Table 7

Means, Standard Errors, Bounds and Astin Ranges for Research Question 2 Combined Data Set: Difference in Level of Spiritual Development and Psychological Wellbeing for Mormon Students Who Have Gone on a Mission After Certain Time Intervals

Combined	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity							
-- Less than 6 month	24	14.016	0.380	13.265	14.766		
-- 6-12 months	27	13.288	0.291	12.713	13.864		
-- 13-24 months	52	13.464	0.210	13.047	13.876		
-- 25-36 months	29	13.693	0.314	13.073	14.314		
-- More than 36 months	43	13.232	0.283	12.672	13.792		
- Ecumenical Worldview						12-29	38-45
-- Less than 6 month	24	37.884	0.705	36.492	39.277		
-- 6-12 months	27	37.777	0.540	36.710	38.844		
-- 13-24 months	53	37.383	0.386	36.622	38.144		
-- 25-36 months	29	38.530	0.583	37.379	39.681		
-- More than 36 months	46	38.541	0.522	37.511	39.570		
- Religious Engagement						9-13	29-44
-- Less than 6 month	23	36.522	0.759	35.022	38.022		
-- 6-12 months	26	35.654	0.589	34.490	36.818		
-- 13-24 months	49	34.741	0.429	33.893	35.589		
-- 25-36 months	28	33.363	0.628	32.121	34.604		
-- More than 36 months	42	35.033	0.590	33.867	36.199		
- Religious Struggle						7-10	16-21
-- Less than 6 month	24	8.847	0.484	7.891	9.804		
-- 6-12 months	26	9.885	0.378	9.138	10.631		
-- 13-24 months	51	9.179	0.270	8.646	9.712		
-- 25-36 months	28	9.588	0.403	8.791	10.384		
-- More than 36 months	44	10.511	0.360	9.800	11.222		
- Spiritual Quest						9-19	26-34
-- Less than 6 month	24	28.468	0.744	27.000	29.937		
-- 6-12 months	27	28.000	0.570	26.897	29.147		
-- 13-24 months	53	28.130	0.407	27.327	28.932		
-- 25-36 months	29	28.176	0.615	26.962	29.390		
-- More than 36 months	44	29.008	0.553	27.916	30.100		
- Psychological Wellbeing						N/A	N/A
-- Less than 6 month	24	9.834	0.543	8.759	10.904		
-- 6-12 months	27	9.462	0.416	8.604	10.247		
-- 13-24 months	51	9.578	0.297	8.992	10.164		
-- 25-36 months	29	9.188	0.449	8.301	10.074		
-- More than 36 months	46	9.309	0.402	8.517	10.102		

The following paragraphs address the assumptions of each of the scales, the significant statistical findings, and where the scores fall on the Astin et al. (2011b) high-

low ranges. The full APA writings for all 18 of these ANOVA runs are found in Appendix E.

Equanimity. A two-way factorial ANOVA was conducted to determine if the mean score for equanimity for students who had served missions differed based on how long it had been since the students returned from their religious mission and the students' gender. This was conducted on the combined data of 179. In order to meet the assumptions, 4 outliers were eliminated resulting in a total sample size of 175. From this sample size, the assumptions of normality, homogeneity of variances, and independence were tested and met (Table 5).

Table 6 shows the main effect for time back was not statistically significant ($F_{tb} = .914, df = 1, 165, p = .457$). Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

The means, standard errors, and the upper and lower bounds were compared based on the time they had been back from their missions. These were compared to Astin et al.'s (2011b) identified equanimity scores of 5-9 for low and 14-15 for high. The results show that although equanimity scores were significantly higher compared to those who had not served missions, there was statistically no difference due to the amount of time they have been back from serving their mission. In other words, although all the scores were close to or within the high range, they did not necessarily continue to grow (Table 7). This held true whether the students attended the public or private school (Appendix K).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between a public and private institution. All assumptions were met for the public university with a total sample size of 99, and the private university with a total sample size of 79. No outliers were found for these samples (Appendix I). There was no statistically significant main effect for either type of institution (Appendix J). Tukey HSD post hoc tests showed no statistically significant differences in any of the levels of time back for either type of institution ($p < .05$).

Ecumenical worldview. A two-way factorial ANOVA was conducted to determine if the mean score for ecumenical worldview for students who had served missions differed based on how long it had been since the students returned from their religious mission and the students' gender. This was conducted on the combined data of 179. As all assumptions were met, no adjustments were necessary for outliers. From this sample size, the assumptions of normality, homogeneity of variances, and independence were tested and met (Table 5).

Table 6 shows the main effect for time back was not statistically significant ($F_{tb} = 1.130$, $df = 4, 169$, $p = .344$). Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

The means, standard errors, and the upper and lower bounds were compared based on the time they had been back from their missions. These were compared to Astin et al.'s (2011b) identified ecumenical worldview scores of 12-29 for low and 38-45 for high. The results show that although scores were significantly higher compared to those who had not served missions, there was statistically no difference due to the amount of

time they have been back from serving their mission. In other words, although all the scores were close to or within the high range, they did not necessarily continue to grow (Table 7). This also held true for the held true whether the students attended the public or private school (Appendix K).

Two-way ANOVA was conducted on each of the schools independently to examine the differences between a public and private institution. For the public university, on a sample size of 98, the assumption of homogeneity of variances, according to the Levene's test, was not satisfied [$F(9, 86) = 2.535, p = .012$]. The private university with a sample size of 79 met all assumptions (Appendix I). There was no statistically significant main effect for either type of institution (Appendix J). Tukey HSD post hoc tests were conducted on all possible pairwise contrasts showing no statistically significant differences in any of the levels of time back for either type of institution ($p < .05$).

Religious engagement. A two-way factorial ANOVA was conducted to determine if the mean score for religious engagement for students who had served missions differed based on how long it had been since the students returned from their religious mission and the students' gender. This was conducted on the combined data of 179. In order to meet the assumptions, 11 outliers were eliminated resulting in a total sample size of 168. From this sample size, the assumptions of normality, homogeneity of variances, and independence were tested and met (Table 5).

Table 6 shows a statistically significant main effect for time back from mission ($F_{mission} = 3.087, df = 4, 158, p = .018$). Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

The means, standard errors, and the upper and lower bounds were compared based on the time they had been back from their missions. These were compared to Astin et al.'s (2011b) identified religious engagement scores of 9-13 for low and 29-44 for high. The results show that although the scores were all in the high range, there was statistically no difference due to the amount of time they have been back from serving their mission (Table 7). This held true whether the students attended the public or private school (Appendix K).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between a public and private institution. For the public university, all assumptions were met on a total sample size of 94. The private university with a total sample size of 76 also met all assumptions (Appendix I). There was no statistically significant main effect for either type of institution (Appendix J). Tukey HSD post hoc tests were conducted on all possible pairwise contrasts showing no statistically significant differences in any of the levels of time back for either type of institution ($p < .05$).

Religious struggle. A two-way factorial ANOVA was conducted to determine if the mean score for religious struggle for students who had served missions differed based on how long it had been since the students returned from their religious mission and the students' gender. This was first conducted on the total sample size of 179 from the

combined results of the public and private school. In order to meet the assumptions, 6 outliers were eliminated resulting in a total sample size of 173. From this sample size, the assumptions of normality and independence were tested and met. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(9, 163) = 2.953, p = .003$] (Table 5). This was also observed with the public [$F(9, 86) = 2.535, p = .012$] and private [$F(9, 68) = 2.343, p = .023$] universities (Appendix I).

Table 6 shows that there was a statistically significant main effect for time back from mission ($F_{tb} = 2.952, df = 4, 163, p = .022$). Post hoc analysis was conducted on the levels of time back from mission. Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

The means, standard errors, and the upper and lower bounds were compared based on the time they had been back from their missions. These were compared to Astin et al.'s (2011b) identified religious struggle scores of 7-10 for low and 16-21 for high. The results show that although the scores were all in the preferred low range, there was statistically no difference due to the amount of time they have been back from serving for the first four levels. However, it was observed that those who had been back from their missions over 36 months, the fifth level, actually had the highest scores just outside the low range (Table 7). This held true whether the students attended the public or private school (Appendix K).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between a public and private institution. For the public university with a sample size of 96, there was no statistically significant main effect. For the private

university with a sample size of 78, the main effect for time back from mission was statistically significant ($F_{tb} = 2.745$, $df = 4, 68$, $p = .035$) (Appendix J).

Spiritual quest. A two-way factorial ANOVA was conducted to determine if the mean score for spiritual quest for students who had served missions differed based on how long it had been since the students returned from their religious mission and the students' gender. This was conducted on the combined data of 179. In order to meet the assumptions, 2 outliers were eliminated resulting in a total sample size of 177. From this sample size, the assumptions of normality, homogeneity of variances, and independence were tested and met (Table 5).

Table 6 shows that there was no statistically significant main effect for time back from mission ($F_{mission} = .534$, $df = 4, 167$, $p = .711$). Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

The means, standard errors, and the upper and lower bounds were compared based on the time they had been back from their missions. These were compared to Astin et al.'s (2011b) identified spiritual quest scores of 9-19 for low and 26-34 for high. The results show that although the scores were all in the high range, there was statistically no difference due to the amount of time they have been back from serving their mission (Table 7). This held true whether the students attended the public or private school (Appendix K).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between a public and private institution. All assumptions were

met for the public university with a total sample size of 99, and the private university with a total sample size of 79. Two outliers found with the public university did not affect validation of the assumptions (Appendix I). There were no statistically significant main effects for either type of institution (Appendix J). Tukey HSD post hoc tests showed no statistically significant differences in any of the levels of time back for either type of institution ($p < .05$).

Psychological wellbeing. A two-way factorial ANOVA was conducted to determine if the mean score for psychological wellbeing for students who had served missions differed based on how long it had been since the students returned from their religious mission and the students' gender. This was conducted on the total sample size of 179 from the combined results of the public and private school. From this sample size, the assumption of normality was tested and met via the examination of the residuals. The assumptions of normality, homogeneity of variances, and independence were tested and met (Table 5).

Table 6 shows that there was not a statistically significant main effect for time back from mission ($F_{tb} = 1.607$, $df = 4, 167$, $p = .175$). Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

Two-way ANOVA was conducted on each of the schools independently to examine the difference between a public and private institution. For the public university, all assumptions were met on a total sample size of 100. The private university also met all the assumptions with a total sample size of 79. Appendix I shows that there

was no statistically significant main effect for either the public or private institution. Tukey HSD post hoc tests were conducted on all possible pairwise contrasts showing no statistically significant differences in any of the levels of time back for either type of institution ($p < .05$).

The impact of age and year in school. In answering Research Question 2, additional factorial ANOVA runs were completed to see how much of any change in spiritual development and wellbeing was related to having served a mission compared to age or the student's year in school. The ANOVA was conducted on the combined school data examining the main effects on three factors: missionary service, their age, and their year in school. The interactions were comparing mission with age, mission with year in school, and age with year in school. A second factorial ANOVA was also completed comparing how long those who had served missions had been back, age, and year in school. These factorial ANOVAs were run against the combined data set only. Even with 373 observations within the combined data set, the analysis was limited due to a potential of 48 cells. All the ANOVA runs met the assumptions except for homogeneity of variances. Although this limitation may be partially offset by the number in the sample size (Lomax & Hahn-Vaughn, 2012), analysis was not done on the public university or private university data sets due to the limited number of data points. Even with this limitation, there were some telling results. To help validate the results of the ANOVA, correlations were also run for all the scales.

Comparing serving a mission with age and year in school. When looking across the combined schools, there was a sample size of 373. Assumptions were met, except for

4 scales where homogeneity of variances was not met. Only statistically significant interaction or main effects are cited in the following paragraphs. An overall summary is in Appendix L.

Equanimity. Levene's test for homogeneity of variance was not met [$F(42, 330) = 1.941, p = .001$]. There was one statistically significant main effect for whether the student served a mission ($F_{mission} = 6.633, df = 1, 330, p = .010$).

Ecumenical worldview. Levene's test for homogeneity of variance was not met [$F(42, 330) = 2.127, p = .000$]. There was one statistically significant main effect for whether the student served a mission ($F_{mission} = 4.710, df = 1, 330, p = .031$).

Religious engagement. There was one statistically significant main effect for whether the student served a mission ($F_{mission} = 5.227, df = 1, 330, p = .023$).

Religious struggle. There were no statistically significant findings.

Spiritual quest. Levene's test for homogeneity of variance was not met [$F(42, 330) = 1.733, p = .005$]. There were no statistically significant findings.

Psychological wellbeing. There was one statistically significant main effect for whether the student served a mission ($F_{mission} = 20.439, df = 1, 330, p = .000$).

These factorial ANOVA showing that only missionary service was related to the spiritual development scales were supported when running correlations. Correlations compared each of the scales with missionary service, age, and year in school (Table 8). For the combined data, serving a mission was significantly correlated with four scales: religious engagement, religious struggle, spiritual quest, and psychological wellbeing. For the public school, serving a mission was significantly correlated with all six scales.

For the private school, serving a mission was significantly correlated with two scales: equanimity and religious engagement. In comparison, age was not significantly correlated with any of the scales. Year in school was only significantly correlated on the combined data for religious struggle (Appendix M).

Table 8

Serving a Mission, Age, and Year in School Correlations

Combined Universities - All Mormon Students	N	Served Mission	Age	Year in School
- Equanimity	373	0.212	-0.001	-0.057
- Ecumenical Worldview	373	0.120	-0.004	-0.610
- Religious Engagement	373	0.192**	-0.101	0.055
- Religious Struggle	373	-0.135**	0.067	0.120*
- Spiritual Quest	373	0.120*	-0.004	-0.061
- Psychological Wellbeing	373	0.235**	0.061	-0.028

* Correlations significant at 0.05 level (2-tailed)

** Correlations significant at 0.01 level (2-tailed)

Comparing time back from mission with age and year in school. The sample size for those who had returned from missions was 179. Except as noted in the particular scales, all assumptions were met. In 2 scales, homogeneity of variances was not met. Only statistically significant interaction or main effects are cited in the following paragraphs. An overall summary is in Appendix N.

Equanimity. Levene's test for homogeneity of variance was not met [$F(42, 136) = 2.426, p = .000$]. There were no statistically significant findings.

Ecumenical worldview. There was one statistically significant main effect for how long the student had been back from the mission ($F_{mission} = 3.069, df = 4, 136, p = .019$).

Religious engagement. There were no statistically significant findings.

Religious struggle. Levene's test for homogeneity of variance was not met [$F(42, 136) = 1.783, p = .007$]. Kurtosis (3.588) indicates a more peaked, leptokurtic distribution. There were no statistically significant findings.

Spiritual quest. There were no statistically significant findings.

Psychological wellbeing. There were no statistically significant findings.

The factorial ANOVA shows that overall there were no statistically significant impacts for any of the three factors (time back from mission, age, and year in school) across most of the six scales; with one exception for time back from mission being related to ecumenical worldview. This was also supported when examining the correlations of these variables (Table 9). For the combined schools, time back from mission was significantly correlated with religious engagement. Age and year in school was significantly correlated with religious struggle. For the public school, time back from mission was significantly correlated with religious engagement and religious struggle. Age and year in school were also significantly correlated with religious struggle. No variables were significantly correlated with the private school. In other words, there were only 7 out of 54 variable combinations that showed any strong correlations (Appendix O).

Table 9

Time Back From Mission, Age, and Year in School Correlations

Combined Universities - Missionary Students	N	Time Back from Mission	Age	Year in School
- Equanimity	179	-0.114	-0.067	-0.132
- Ecumenical Worldview	179	0.060	0.057	0.047
- Religious Engagement	179	-0.181*	-0.137	-0.144
- Religious Struggle	179	0.136	0.159*	0.186*
- Spiritual Quest	179	0.030	-0.019	-0.035
- Psychological Wellbeing	179	-0.044	0.031	-0.031

* Correlations significant at 0.05 level (2-tailed)

In summary, although Mormon college students experience significant growth in spiritual development and psychological wellbeing from serving missions, there is no statistically significant difference in spiritual development and psychological wellbeing over time once they return. There is a slight, but still statistically significant, lower score over time for religious engagement, although it is still in the high range. This is also confirmed by a significant negative correlation between religious engagement and time back from mission. There is also a statistically significant higher score for religious struggle, but it is still within the desired low range.

Research Question 3: Differences Due to Gender

The specific research question was “What is the difference in spiritual development and wellbeing between males and females who participated in a Mormon mission?” This question expands upon the first two questions by looking at the differences related to gender and thus has two distinct parts. The statistical question tied

to the first part was, “Is there a mean difference in student scores on the six measurement scales based on whether the students served missions and gender?” The statistical question tied to the second part was, “Is there a mean difference in student scores on the six measurement scales for students who have served missions based on how long they have been back from their missions and gender?”

The primary analysis used for both questions was a two-way ANOVA on each of the six scales. Concerning whether the students had served missions, the score for each scale was the dependent variable with the two independent variables being whether the student served a mission and gender. For the second part concerning how long the students had been back from their missions, the variables were the same except for replacing the independent variable of students who had served missions, with the amount of time the students had been back. The initial combined data set was 373 for those Mormon students who may or may not have served mission. The initial combined data set for those who had served missions was 179 Mormon students combined at both universities.

Assumptions for the model were already checked and addressed as part of the analysis of the first two questions (Tables 2 and 5). The adjusted data used in the analysis of those questions was the exact same data used in addressing Research Question 3. In other words, there was no need to adjust data for outliers any further than what was already accomplished for the first two questions. After the assumptions were addressed, the final output was examined for statistical significance.

As with the previous questions, additional analysis was done to examine the differences between the public and private institution. The total number of runs completed for answering Research Question 3 was 36. The following sections address each of the scales. The actual APA write-ups are the same already used for Research Questions 1 and 2, and are found in Appendices D and E.

Differences due to gender based on whether the student served a mission.

Looking at the differences based on whether the student served a mission, there were four pairings: men who served missions, men who did not serve missions, women who served missions, and women who did not serve missions. The results for the combined data are in Table 10 and results for the public and private universities are found in Appendix P.

Table 10

Main and Interaction Effect Based on Mission Service and Gender

Combined	df	F	Sig	Partial Eta Squared	Observed Power
- Equanimity					
-- Main Effect - Mission Service	1	33.453	0.000	0.085	1.000
-- Main Effect - Gender	1	14.660	0.000	0.039	0.968
-- Interaction - Mission Service, Gender	1	17.086	0.000	0.045	0.985
- Ecumenical Worldview					
-- Main Effect - Mission Service	1	31.528	0.000	0.081	1.000
-- Main Effect - Gender	1	12.423	0.000	0.033	0.940
-- Interaction - Mission Service, Gender	1	16.556	0.000	0.044	0.982
- Religious Engagement					
-- Main Effect - Mission Service	1	33.214	0.000	0.087	1.000
-- Main Effect - Gender	1	18.666	0.000	0.051	0.991
-- Interaction - Mission Service, Gender	1	14.079	0.000	0.039	0.963
- Religious Struggle					
-- Main Effect - Mission Service	1	9.570	0.002	0.027	0.870
-- Main Effect - Gender	1	4.999	0.026	0.014	0.606
-- Interaction - Mission Service, Gender	1	10.678	0.001	0.030	0.903
- Spiritual Quest					
-- Main Effect - Mission Service	1	23.963	0.000	0.061	0.998
-- Main Effect - Gender	1	19.222	0.000	0.050	0.992
-- Interaction - Mission Service, Gender	1	10.600	0.001	0.028	0.901
- Psychological Wellbeing					
-- Main Effect - Mission Service	1	8.999	0.003	0.024	0.849
-- Main Effect - Gender	1	3.859	0.050	0.010	0.500
-- Interaction - Mission Service, Gender	1	3.034	0.082	0.008	0.412

A comparison of the means for the scales was made to identify which of these scales fell within the Astin et al. (2011b) high or low range based on whether students served missions and gender. The results for the combined data set are in Table 11 and results for the public and private universities are found in Appendix Q.

Table 11

Mean and Confidence Ranges Based on Mission Service and Gender

Combined	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity							
-- No Mission Service - Males	24	11.167	0.347	10.485	11.849		
-- No Mission Service - Females	162	12.988	0.134	12.725	13.250		
-- Mission Service - Males	115	13.435	0.159	13.123	13.747		
-- Mission Service - Females	63	13.365	0.214	12.944	13.786		
- Ecumenical Worldview						12-29	38-45
-- No Mission Service - Males	23	34.261	0.610	33.060	35.461		
-- No Mission Service - Females	163	37.288	0.229	36.837	37.739		
-- Mission Service - Males	115	38.122	0.273	37.585	38.659		
-- Mission Service - Females	63	37.905	0.369	37.179	38.630		
- Religious Engagement						9-13	29-44
-- No Mission Service - Males	20	29.400	0.857	27.715	31.085		
-- No Mission Service - Females	159	33.818	0.304	33.220	34.415		
-- Mission Service - Males	112	34.607	0.362	33.895	35.319		
-- Mission Service - Females	61	34.918	0.491	33.958	35.883		
- Religious Struggle						7-10	16-21
-- No Mission Service - Males	23	11.174	0.425	10.338	12.010		
-- No Mission Service - Females	156	9.685	0.163	9.314	9.956		
-- Mission Service - Males	114	9.395	0.191	9.019	9.770		
-- Mission Service - Females	60	9.683	0.263	9.166	10.201		
- Spiritual Quest						9-19	26-34
-- No Mission Service - Males	24	24.375	0.675	23.048	25.702		
-- No Mission Service - Females	170	27.765	0.254	27.266	28.263		
-- Mission Service - Males	116	27.991	0.307	27.388	28.595		
-- Mission Service - Females	63	28.492	0.417	27.673	29.311		
- Psychological Wellbeing						N/A	N/A
-- No Mission Service - Males	24	8.583	0.449	7.701	9.466		
-- No Mission Service - Females	170	8.516	0.169	8.186	8.849		
-- Mission Service - Males	116	9.983	0.204	9.581	10.384		
-- Mission Service - Females	62	8.889	0.277	8.344	9.434		

Equanimity. Table 10 shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{integration}} = 17.086$, $df = 1, 360$, $p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 33.453$, $df = 1, 360$, $p = .000$; $F_{\text{gender}} = 14.440$, $df = 1, 360$, $p = .000$).

Astin et al. (2011b) identified equanimity scores of 5-9 for low and 14-15 for high. In Table 11, all four groups were between the high and low ranges. However,

males and females who had served missions scored higher than those who had not served missions.

For the public university, the interaction of serving a mission by gender was statistically significant ($F_{integration} = 8.866, df = 1, 176, p = .003$), and there were statistically significant main effects for both serving a mission and gender ($F_{mission} = 29.257, df = 1, 176, p = .000$; $F_{gender} = 8.071, df = 1, 176, p = .005$). For the private university, the interaction of serving a mission by gender was statistically significant ($F_{integration} = 4.233, df = 1, 184, p = .041$), and there was a statistically significant main effect for serving a mission ($F_{mission} = 7.298, df = 1, 184, p = .008$) (Appendix P).

Ecumenical worldview. Table 10 shows a statistically significant main effect for both serving a mission and gender ($F_{mission} = 31.528, df = 1, 360, p = .000$; $F_{gender} = 12.243, df = 1, 360, p = .000$).

For the public university, the main effects for gender were statistically significant ($F_{gender} = 6.749, df = 1, 177, p = .019$). For the private university, there was a statistically significant main effect on serving a mission ($F_{mission} = 4.605, df = 1, 183, p = .033$) (Appendix P).

Astin et al. (2011b) identified ecumenical worldview scores of 12-29 for low and 38-45 for high. In Table 11, based on this, males who had served missions scored in the high range. Females who had served missions scored an average of 37.9, relatively close to the high range assuming rounding. Males and females who had not served missions scored in between the low and high ranges, with a distinct difference between males who had not served missions and the other 3.

Religious engagement. Table 10 shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{integration}} = 14.079$, $df = 1, 348$, $p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 33.214$, $df = 1, 348$, $p = .000$; $F_{\text{gender}} = 18.666$, $df = 1, 348$, $p = .000$).

Astin et al. (2011b) identified religious engagement scores of 9-13 for low and 29-44 for high. In Table 11, based on this, all 4 demographics scored in the high range, with a distinct difference between males who had not served missions and the other 3.

For the public university, the interaction of serving a mission by gender was statistically significant ($F_{\text{integration}} = 19.880$, $df = 1, 164$, $p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 26.363$, $df = 1, 164$, $p = .000$; $F_{\text{gender}} = 21.983$, $df = 1, 164$, $p = .000$). For the private university, the interaction of serving a mission by gender was statistically significant ($F_{\text{integration}} = 6.697$, $df = 1, 183$, $p = .010$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 8.049$, $df = 1, 183$, $p = .005$; $F_{\text{gender}} = 4.054$, $df = 1, 183$, $p = .046$) (Appendix P).

Religious struggle. Table 10 shows the interaction of serving a mission by gender was statistically significant ($F_{\text{integration}} = 10.678$, $df = 1, 349$, $p = .030$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 9.570$, $df = 1, 349$, $p = .002$; $F_{\text{gender}} = 4.999$, $df = 1, 349$, $p = .025$).

Astin et al. (2011b) identified religious struggle scores of 7-10 for low and 16-21 for high. In Table 11, based on this, 3 demographics scored in the low range: males who had served missions, females who had served missions, and females who had not served.

Males who had not served missions fell between the low and high ranges. It should be remembered that for this scale a low score was considered better from the perspective of spiritual development.

For the public school, the interaction of serving a mission by gender was statistically significant ($F_{integration} = 5.533, df = 1, 169, p = .020$), and there was a statistically significant main effect for serving a mission ($F_{mission} = 6.094, df = 1, 169, p = .015$). For the private university the interaction of serving a mission by gender was statistically significant ($F_{integration} = 6.697, df = 1, 183, p = .010$), and there were statistically significant main effects for both serving a mission and gender ($F_{mission} = 8.049, df = 1, 183, p = .005$; $F_{gender} = 4.054, df = 1, 183, p = .046$) (Appendix P).

Spiritual quest. Table 10 shows the interaction of serving a mission by gender was statistically significant ($F_{integration} = 10.600, df = 1, 369, p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{mission} = 23.963, df = 1, 369, p = .000$; $F_{gender} = 19.222, df = 1, 369, p = .000$).

Astin et al. (2011b) identified spiritual quest scores of 9-19 for low and 26-34 for high. In Table 11, based on this, 3 demographics scored in the high range: males who had served missions, females who had served missions, and females who had not served. Males who had not served missions fell between the low and high ranges.

For the public university, the interaction of serving a mission by gender was statistically significant ($F_{integration} = 7.678, df = 1, 177, p = .042$), and there were statistically significant main effects for both serving a mission and gender ($F_{mission} = 25.968, df = 1, 177, p = .000$; $F_{gender} = 19.835, df = 1, 177, p = .000$). For the private

university, there were no statistically significant findings for either interaction or main effects for the private university (Appendix P).

Psychological wellbeing. Table 10 shows that there were statistically significant findings for both main effects of mission service ($F_{mission} = 8.999, df = 1, 369, p = .003$) and gender ($F_{gender} = 3.859, df = 1, 369, p = .050$). For the public university there was a statistically significant main effect for mission ($F_{mission} = 4.991, df = 1, 177, p = .027$) (Appendix P).

Differences due to gender based on how long the student has been back from his or her mission. For looking at the differences based on how long the student had been back from his or her mission, there were 10 pairings per scale, driven by 5 levels for time back from the mission and 2 levels for gender. The levels for time back from mission were: less than 6 months, 6 to 12 months, 13 to 24 months, 25 to 36 months, and greater than 36 months. The results for the combined data set are in Table 12 and results for the public and private universities are found in Appendix R.

A comparison of the means for the scales was made to identify which of these scales fell within the Astin et al. (2011b) high or low range based on whether students served missions and gender. The results for the combined data set are in Table 13 and results for the public and private universities are found in Appendix S.

Table 12

Main and Interaction Effects Based on Time Back From Mission and Gender

Combined	df	F	Sig	Partial Eta Squared	Observed Power
- Equanimity					
-- Main Effect - Time Since Mission	4	0.914	0.457	0.022	0.286
-- Main Effect - Gender	1	0.101	0.751	0.001	0.062
-- Interaction - Time Since Mission, Gender	4	0.647	0.630	0.015	0.208
- Ecumenical Worldview					
-- Main Effect - Time Since Mission	4	1.130	0.344	0.026	0.350
-- Main Effect - Gender	1	0.100	0.752	0.001	0.061
-- Interaction - Time Since Mission, Gender	4	1.379	0.248	0.032	0.423
- Religious Engagement					
-- Main Effect - Time Since Mission	4	3.087	0.018	0.072	0.802
-- Main Effect - Gender	1	0.739	0.391	0.005	0.137
-- Interaction - Time Since Mission, Gender	4	2.083	0.085	0.050	0.610
- Religious Struggle					
-- Main Effect - Time Since Mission	4	2.952	0.022	0.068	0.782
-- Main Effect - Gender	1	4.506	0.035	0.027	0.560
-- Interaction - Time Since Mission, Gender	4	1.958	0.103	0.046	0.580
- Spiritual Quest					
-- Main Effect - Time Since Mission	4	0.534	0.711	0.013	0.177
-- Main Effect - Gender	1	1.141	0.287	0.007	0.186
-- Interaction - Time Since Mission, Gender	4	0.374	0.827	0.009	0.134
- Psychological Wellbeing					
-- Main Effect - Time Since Mission	4	0.286	0.887	0.007	0.112
-- Main Effect - Gender	1	8.616	0.004	0.049	0.831
-- Interaction - Time Since Mission, Gender	4	0.150	0.963	0.004	0.081

Table 13

Mean and Confidence Ranges Based on Time Back From Mission and Gender

Combined	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity - Males							
-- Less than 6 month	19	13.632	0.347	12.947	14.317		
-- 6-12 months	13	13.077	0.419	12.249	13.905		
-- 13-24 months	26	13.654	0.297	13.068	14.239		
-- 25-36 months	21	13.762	0.330	12.110	14.414		
-- More than 36 months	34	13.353	0.259	12.842	13.865		
- Equanimity - Females						5-9	14-15
-- Less than 6 month	5	14.400	0.676	13.065	15.735		
-- 6-12 months	14	13.500	0.404	12.702	14.298		
-- 13-24 months	26	13.269	0.297	12.684	13.855		
-- 25-36 months	8	13.625	0.535	12.569	14.681		
-- More than 36 months	9	13.111	0.504	12.116	14.106		
- Ecumenical Worldview - Males						12-29	38-45
-- Less than 6 month	19	38.368	0.644	37.097	39.639		
-- 6-12 months	13	36.769	0.778	35.233	38.306		
-- 13-24 months	26	37.692	0.550	36.606	38.779		
-- 25-36 months	21	38.810	0.612	37.601	40.019		
-- More than 36 months	37	38.081	0.461	37.170	38.992		
- Ecumenical Worldview - Males						12-29	38-45
-- Less than 6 month	5	37.400	1.255	34.922	39.878		
-- 6-12 months	14	38.786	0.750	37.305	40.266		
-- 13-24 months	27	37.074	0.540	36.008	38.140		
-- 25-36 months	8	38.250	0.992	36.291	40.209		
-- More than 36 months	9	39.000	0.936	37.153	40.847		
- Religious Engagement - Males						9-13	29-44
-- Less than 6 month	18	35.440	0.708	34.046	36.843		
-- 6-12 months	13	35.615	0.833	33.969	37.261		
-- 13-24 months	24	34.042	0.613	32.830	35.253		
-- 25-36 months	20	34.600	0.672	33.273	35.927		
-- More than 36 months	34	34.441	0.515	33.423	35.459		
- Religious Engagement - Females						9-13	29-44
-- Less than 6 month	5	37.600	1.344	34.946	40.254		
-- 6-12 months	13	35.692	0.833	34.046	37.338		
-- 13-24 months	25	35.440	0.601	34.253	36.627		
-- 25-36 months	8	32.125	1.062	30.027	34.223		
-- More than 36 months	8	35.625	1.062	33.527	37.723		

(continued)

Table 13 Means and Confidence Ranges (continued)

- Religious Struggle - Males						7-10	16-21
-- Less than 6 month	19	8.895	0.442	8.021	9.768		
-- 6-12 months	13	9.615	0.535	8.560	10.671		
-- 13-24 months	25	9.320	0.386	8.559	10.081		
-- 25-36 months	20	8.550	0.431	7.699	9.401		
-- More than 36 months	35	9.800	0.326	9.157	10.443		
- Religious Struggle - Females						7-10	16-21
-- Less than 6 month	5	8.000	0.862	7.098	10.502		
-- 6-12 months	13	10.154	0.535	9.098	11.210		
-- 13-24 months	26	9.039	0.378	8.292	9.785		
-- 25-36 months	8	10.625	0.682	9.279	11.971		
-- More than 36 months	9	11.222	0.643	9.953	12.491		
- Spiritual Quest - Males						9-19	26-34
-- Less than 6 month	19	27.737	0.679	26.396	29.077		
-- 6-12 months	13	27.615	0.821	25.995	29.236		
-- 13-24 months	26	28.000	0.580	26.854	29.146		
-- 25-36 months	21	28.476	0.646	27.201	29.751		
-- More than 36 months	35	28.571	0.500	27.584	29.559		
- Spiritual Quest - Females						9-19	26-34
-- Less than 6 month	5	29.200	1.324	26.587	31.813		
-- 6-12 months	14	28.429	0.791	26.867	29.990		
-- 13-24 months	27	28.259	0.570	27.135	29.384		
-- 25-36 months	8	27.875	1.046	25.809	29.941		
-- More than 36 months	9	29.444	0.987	27.497	31.392		
- Psychological Wellbeing - Males						N/A	N/A
-- Less than 6 month	19	10.263	0.596	9.284	11.242		
-- 6-12 months	13	9.923	0.599	8.740	11.106		
-- 13-24 months	26	10.231	0.424	9.394	11.067		
-- 25-36 months	21	10.000	0.472	9.069	10.931		
-- More than 36 months	37	9.730	0.355	9.028	10.431		
- Psychological Wellbeing - Females						N/A	N/A
-- Less than 6 month	5	9.400	0.966	7.492	11.308		
-- 6-12 months	14	8.929	0.578	7.788	10.069		
-- 13-24 months	25	8.926	0.416	8.105	9.747		
-- 25-36 months	8	8.375	0.764	6.864	9.883		
-- More than 36 months	9	8.886	0.720	7.467	10.311		

Equanimity. Table 12 shows that for the combined data, the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant. It also shows that there were no statistically significant interactions or main effects for either the public or private institutions (Appendix R).

Astin et al. (2011b) identified equanimity scores of 5-9 for low and 14-15 for high. In Table 13, the mean score for all groups within the combined data set was right at

or near the high range at between 13.11 and 14.40. The ranges for the public (12.88-14.17) and private (12.33-15.00) schools showed slightly wider range spreads (Appendix S).

Ecumenical worldview. Table 12 shows that the interaction of time back from mission by gender and the main effects for both time back and gender were not statistically significant. It also shows that there were no statistically significant interactions or main effects for either the public or private institution. According to Levene's test, the homogeneity of variance assumption was not satisfied for the public university [$F(9, 86) = 2.535, p = .012$] (Appendix R).

Astin et al. (2011b) identified ecumenical worldview scores of 12-29 for low and 38-45 for high. In Table 13, the mean score for all groups was close to or right at the high range, between 36.78 and 39.00 on the combined data. The ranges for the public (36.10-39.40) and private (35.00-38.78) institutions showed slightly wider range spreads (Appendix S).

Religious engagement. Table 12 shows that the interaction of time back from mission by gender was not statistically significant and there was not a statistically significant main effect for gender. However, there was a statistically significant main effect for time back from mission ($F_{mission} = 3.087, df = 4, 158, p = .018$). There were no statistically significant interactions or main effects for either the public or private type of institutions (Appendix R).

Astin et al. (2011b) identified religious engagement scores of 9-13 for low and 29-44 for high. In Table 13, the mean score for all groups was in the high range, between

32.12 and 37.60 on the combined data set. The ranges for the public (31.57-35.80) and private (34.50-39.00) schools showed slightly wider range spreads (Appendix S).

Religious struggle. Table 12 shows there were statistically significant main effects for both time back from mission and gender ($F_{tb} = 2.952$, $df = 4, 163$, $p = .022$; $F_{gender} = 4.506$, $df = 1, 163$, $p = .035$). Appendix R shows that for the public university, there was a statistically significant finding for the interaction of time back from mission and gender ($F_{interaction} = 10.576$, $df = 4, 86$, $p = .044$). For the private university, there was a statistically significant main effect for time back from mission ($F_{tb} = 2.745$, $df = 4, 68$, $p = .035$).

Astin et al. (2011b) identified religious struggle scores of 7-10 for low and 16-21 for high. In Table 13, the mean score for all groups was within or slightly above the low range, between 8.00 and 11.23 on the combined data. Appendix S shows that the ranges for the public (8.08-11.15) and private (8.85-12.34) schools showed slightly wider range spreads. For the private school, there was one cell with just one response for females who had been back from their mission between 25-36 months that scored at 7.00.

Spiritual quest. Table 12 shows that the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant. Appendix R shows that there were also no statistically significant interactions or main effects for either type of institution.

Astin et al. (2011b) identified spiritual quest scores of 9-19 for low and 26-34 for high. In Table 13, the mean score for all groups was in the high range, between 27.61

and 29.45 on the combined data. The ranges for the public (27.40-30.50) and private (27.33-29.67) schools showed slightly wider range spreads (Appendix S).

Psychological wellbeing. Table 12 shows that there was a statistically significant main effect for gender ($F_{gender} = 8.616, df = 1, 369, p = .004$). There was a statistically significant main effect for gender for the public university ($F_{gender} = 5.844, df = 1, 90, p = .018$) (Appendix R).

In summary, the impact of gender and missionary service is statistically significant across all the measurement scales. However, when looking at time back from mission and gender, gender was statistically significant for only religious struggle and psychological wellbeing. Time back from mission was only statistically significant for religious engagement and religious struggle.

Chapter Five: Discussion

With the data presented in the previous chapters, this chapter will analyze and interpret what it means. It will answer the research questions directly across each of the six measures of spiritual development and psychological wellbeing. Ramifications of these findings will be examined in connection with the LDS college student within the LDS culture. Connections will be drawn between the findings and spiritual development theories and models previously presented. Ultimately, observations on how these findings may benefit future Mormon missionaries in terms of self-awareness and providing additional insight into how missionary service influences LDS student development will be discussed. This will include the ramifications of gender and the role it plays in serving as an LDS missionary.

Impact of Serving a Mormon Mission on College Students

What is the impact of serving a Mormon mission on the spiritual development and psychological wellbeing of college students, compared to Mormon students who have not served missions? For Mormon college students who served LDS missions, spiritual development was positively impacted for all of the spiritual development and psychological wellbeing scales. This was the same regardless if the students attended the large public university or the small private one. Each scale is addressed separately in the following paragraphs. For each scale a general description and key findings will be

presented. Significant statistical findings and correlations will be provided, as well as relative findings compared to those of Astin et al. (2011b).

Astin et al. (2011b) developed what they considered to be acceptable high and low ranges for each of their measurement scales. Understanding how they defined these high and low ranges is important in understanding not only their model, but interpreting survey results. Their study explains their thought process and how they defined the high and low ranges for each of the spiritual development scales. Their process was not based on statistical measures, but on how they thought students would respond to the specific items. Thus, without providing the total explanation, a scale may be very sensitive to student perceptions.

Equanimity. Astin et al. (2011b) describes equanimity as the extent to which people feel at peace and centered, are able to find meaning in times of hardship, and feel good about the direction of their life. They found a positive association between equanimity and other aspects of college life. Higher equanimity scores were related to better grades, higher levels of psychological wellbeing, and more satisfaction with college overall. There is also a close relationship between equanimity and specific items from other spiritual development measurement scales. For example, both survey items from the ecumenical worldview scale “improve the human condition” and “reduce pain and suffering in the world,” were related to equanimity. “Becoming a more loving person” from the spiritual quest scale was also related to equanimity (Astin et al., 2011b).

From this study, a critical finding with equanimity was how it fits in with the rest of the spiritual development scales and psychological wellbeing. Examining the

combined data set, equanimity was the only scale with a statistically significant correlation (0.01) with all the other measurement scales. In other words, a greater sense of equanimity—directly tied to students’ sense of feeling centered and at peace, how they face challenges, and how they feel about the direction of their life—may be the most constant aspect of overall spiritual development for the LDS college student.

As reported in Chapter 4, equanimity changed significantly between those who served missions and those who had not. There was a huge gap between the 95% confidence level upper bound (12.443) for those who had not served missions, and the 95% confidence level lower bound (13.138) for those who had served, meaning there is less than a 0.1% chance the mean of these two populations is the same. In other words, students’ level of equanimity grows significantly from serving a mission.

This growth makes sense in terms of the Mormon culture, experiences, and expectations. Referring back to Welch and Koth’s (2013) theory, spirituality is closely tied to personal wellbeing, which includes connecting with and serving others. College-age students are encouraged to serve missions (Monson, 2012) as part of the Mormon culture. Thus, it should not be surprising that successful completion of a mission would have a positive impact on the students’ sense of the direction their life is headed.

In relation to the defined high, low ranges, an interesting finding with equanimity is that although all LDS students had a mean of 13.1, and those who served missions scored higher with a mean of 13.5, Astin et al. (2011b) defined their high range as 14 to 15. This is a relatively small range compared to most of the other scales. For most of the scales Astin et al. (2011b) identified religious groups that scored in the high or low

ranges. However, equanimity was one measurement scale where they did not cite any particular religious groups who scored high or low. Reviewing the combined data set for this study, although many students scored in the high range as individuals, doing so for a whole religious group would be difficult due to the narrow range. This may explain why specific religious groups were not identified as either high or low for equanimity.

Ecumenical worldview. Of the six scales being measured, ecumenical worldview had 12 survey items, the most of any scale. Astin et al. (2011b) argued it is the most robust scale as it attempts to measure a spiritual level for all individuals regardless of religious backgrounds or beliefs. Eight of the items directly focus on how individuals view the interconnections between themselves, other beings, and the world. Three items address the individuals' commitment to behave and act with a larger worldview. The last item is a self-rating on how well the individual understands others.

Astin et al. (2011b) identified three groups who tended to score in the high range of ecumenical worldview as incoming freshman: Unitarian, Quaker, and Hindu. These groups would continue to score high as juniors and were joined at that point by Buddhists. Given that LDS missionaries serve worldwide, it begs the question of why they would not have been high scorers as well. This study provided some additional insight. A high score for ecumenical worldview is defined as being 38 and above. For LDS students overall, ecumenical worldview had a mean of 37.47. In other words, LDS students still score well in this area of spiritual development. However, for those who had served LDS missions, the mean average is 38.01, compared to 35.78 for those who had not served missions.

Scoring in the high range is not as important as understanding what the scores mean in terms of either serving or not serving a mission. As discussed previously, Bryant (2011) found that exposure to religion, spirituality, and diversity leads to a greater ecumenical worldview. At the same time, these experiences can lead to religious and spiritual struggles. Yet these struggles during the college years may also help in the students' overall development. The exposure to and challenge of facing issues regarding world diversity provokes crises for the students, which may lead to greater acceptance of others. Understanding the interrelationships of these ideas provides insight into how the students who served as missionaries may have a more accepting worldview of other faiths and at the same time have less struggle with their own faith.

Astin et al. (2011) pointed out from their studies a strong connection between ecumenical worldview and spiritual quest. They found that high scorers in both tend to be more open to others' faiths and beliefs, while also feeling comfortable with their own religious beliefs, and are more inclined to pray and meditate. This study shows the strongest positive correlation among scales is between ecumenical worldview and spiritual quest (.476) for Mormon students who served missions. This was even stronger at the public university (.537) where students are more likely to be exposed to diverse worldviews compared to those attending the smaller private university.

The overall finding for ecumenical worldview is that as a group, LDS students who have served missions do score in the high range of the scale. This indicates that those who serve missions likely have a greater appreciation of other faiths, cultures, and belief systems. They believe in the goodness of others and are accepting of others for

who they are. They also have a desire to understand other cultures while seeing everyone as a spiritual being.

Religious engagement. The religious engagement scale measures specific actions one takes in regard to living out their religious faith. It is an external measure representing the behavioral counterpart of the religious commitment measure. It includes such items as how often one attends religious service, reads sacred texts, and prays. Religious commitment contains items such as “I find religion to be personally helpful” and “my spiritual/religious beliefs have helped me develop my identity.” The religious engagement measure was one of the five measures Astin et al. (2011b) chose to capture the relationship between spiritual development and psychological wellbeing, one of the traditional college outcomes they identified.

The distinction between religious engagement and religious commitment is important to this study and its findings. Although Astin et al. (2011b) identified religious engagement as being tied more directly to psychological wellbeing, the findings of this study hint that maybe religious commitment would have been a better indicator on where LDS students stand from a religious perspective. When measuring actual behavior, all four groups of LDS students—males and females, and those who served and did not serve missions—scored in the high range for religious engagement. This may be attributed partly to the LDS culture, where expectations and habits of those who identify as LDS indicate they will continue to actively participate in these activities, even if their inner commitment may not be as strong as the measure would tend to indicate.

Anecdotally, religious engagement is the one measurement scale where a survey participant sent a comment concerning his response. His E-mail stated that he only attended church on Sundays as a compromise to his spouse, but would never attend church again by his own choice (J. Smith (a pseudonym), personal communication, October 16, 2016). In other words, his actions may have been more heavily influenced by his religious culture, more than by his own personal commitment to the faith. He was religiously engaged, but would not have necessarily been religiously committed, and thus may have scored differently had the religious commitment scale been used instead of the religious engagement scale.

Another observation was that the original combined data set was of 450 participants. Because the focus of this study was on LDS students, those who identified as another faith were pulled from the analysis, leaving 373 who identified as LDS. Of the other 77 participants, 54 of those identified as either none, agnostic, or atheist. From this group, 4 said they had served a mission of 13 to 24 months. As this timeframe is a strong indicator of the mission actually being missionary service for the Mormon Church, these students may represent those of the LDS faith who had fallen away from the church. However, since they did not identify as LDS these individuals would not have been part of the analysis using either religious engagement or commitment, which may introduce a slight bias in the data. Thus, the difference between religious engagement and religious commitment may be subtle, but is noted to better understand the context of the data and what it means.

The religious engagement scores show that the difference in means between those who served missions (34.8) and those who have not (31.6) is still statistically significant. The confidence levels are tight, with the upper bound of those who did not serve (32.5) still being well below the lower bound for those who had served missions (34.2). Still, compared to Astin et al. (2011b), all of these scores are still within the high range (29-44) of the religious engagement measurement scale.

A key finding in the Astin study was that religious engagement declines for college students. This conclusion is mainly driven by huge decreases in religious service attendance, with small decreases in most of the other aspects of religious engagement. In contrast, there was no such decrease overall for LDS students at either the public or private universities, with both still scoring in the high range. That also held for those who had not served missions, a lower level of religious engagement compared to other groups, but still in the high range with no significant change over time.

Spiritual quest. According to Astin et al. (2011b) the nine-item spiritual quest scale emphasizes meaning-making and individual purpose, and could be argued as the core of spiritual development. They found that high scorers in this scale are more likely to feel secure in their religious beliefs, and pray or meditate more than low scorers. But they also found that it is one of the most dynamic scales in how students view their own spiritual quest over time, with some students becoming more involved in spiritual quest and others becoming less so. For example, they found that just 52% of the students obtain the same score (low, medium, high) when measured at two different points over time. However, those who increased in spiritual quest over time are twice as common as

those whose scores decreased. College is a time where many students seriously start to think about meaning and personal identity, which leads to increases in spiritual quest.

This study found that those who had not served missions had a mean score of 26.1 and those who had served missions had a mean score of 28.2, both within the high range of 26 to 34. These findings were similar for both the public and private universities with just those who did not serve missions from the public university slightly below the range at 25.2. This is consistent with the Astin et al. (2011b) study that found that as freshmen, Mormons were the most likely to be high scorers in spiritual quest at 54%, just ahead of Hindus at 53%, and well ahead of the 30% observed by the next group of high scoring faiths.

Astin et al. (2011b) noted several personal practices and experiences that contributed to improving spiritual quest. The one they most discussed was self-reflection. Through self-reflection, the student gains greater self-awareness, which in turn helps them to resolve disconnects between their own values and their experiences. Other practices include exploring religious and spiritual matters, readings sacred texts, discussing religion with others, helping friends with personal problems, donating money to charity, and service learning. It is common for LDS college students to be involved in most of these activities. The LDS culture encourages daily scripture study, providing assistance to friends and neighbors, tithing 10% of their income, and providing service to their communities and others. Thus, it should not be a surprise that Mormon students as a group will rate higher in spiritual quest than most other students. Additionally, if they

serve missions for 18 to 24 months, although not directly part of their college studies, they are involved in service learning as described by Welch and Koth (2013).

Consistent with Astin et al. (2011b), spiritual quest is significantly correlated with three of the other measurement scales for spiritual development: equanimity, ecumenical worldview, and religious engagement. This was true for both the combined data set and the public university. Spiritual quest was also positively correlated with these three scales for the private university, although it was only statistically significant with ecumenical worldview.

Religious struggle. Astin et al. (2011b) discussed how the nine-item measure for religious struggle is a unique, stand-alone measure of spiritual development as it has minimal correlations with any of their other measures. The percentage of high scores in religious struggle tended to increase between students' freshman and junior years. This was also observed across all institutional types, noting that the greatest percent increase was among students who attended Evangelical colleges. They suggest that this may be associated with Evangelical college students, for the first time, being really challenged to question assumptions, discuss different ideas, and think critically. When this happens with their theological ideas, it can be unsettling for these students. This is an interesting contrast when compared to the LDS student where religious struggle appears to actually decline.

Astin et al. (2011b) noted several ways where spiritual struggle was negatively impacted during college. Two ways were tied to peer groups. First, on campuses where spiritual struggle is already high for freshmen, peer groups appear to amplify the

situation. Second, at colleges where students tend to be more involved in religious activities, students already struggling with their religious beliefs may actually experience more disequilibrium with those beliefs. Religious struggle also tends to increase when students are involved in activities that encourage thinking more globally and seeing the interconnections of diverse people and cultures. This includes activities such as study abroad programs, and interdisciplinary courses (Astin et al., 2011b).

These observations set the stage on how Mormon college students rate in religious struggle. Astin et al. (2011b) noted that Mormon college students were among three faiths that scored the lowest in religious struggle and were in distinct contrast to other college students. Yet they could not identify any common thread that separated these faiths from others. This study gives some insight into why these students may score in the low range, tied to a combination of Mormon beliefs, culture, and expectations.

The mean score for Mormon students who served missions (9.5) was within the low range. The mean score for students who had not served missions (10.4) was close to the low range. Even though the difference between the two groups appears small, due to small standard errors, the difference is statistically significant. At the same time, consistent with Astin et al.'s (2011b) findings, there is a very strong negative correlation of religious struggle with religious engagement (-.468) and equanimity (-.443).

This is a key finding given the observations of Astin et al. (2011b) on the impact of peer groups and exposure to diverse people and cultures on religious struggle. Many of those who served missions did so in different countries worldwide. They were often subject to criticism from those they met, exposed to a wide range of ideas and cultures,

and challenged on their faith and beliefs. Yet their religious struggle is lower than those who have not served missions. Where Astin et al. (2011b) cites study abroad programs and other types of diversity as creating greater religious struggle, the Mormon student is spending much more time in these types of diverse situations of 18 to 24 months, yet religious struggle drops rather than rises.

There are several possible reasons for this dichotomy in how these students develop in this aspect of spiritual development. First, Mormon beliefs encourage members to serve others and accept others for who they are. This creates a perspective where they are prepared to accept being challenged in their beliefs. Second, even though they are exposed to diverse ideas, they are also expected to read, study, and pray daily, which reinforces their beliefs. Third, they are always with a companion where the missionaries are able to support one another during challenging situations from both external entities and personal struggles. Fourth, they have a strong support system with the church, including other missionaries and an assigned mission president and wife who are often viewed as pseudo father and mother figures.

Psychological wellbeing. In the Astin et al. (2011b) study, spiritual development was primarily a combination of two components, spirituality and religiousness, thus approaching them as their own unique college outcomes. However, they also wanted to examine them from the perspective of other traditional student outcomes. They defined three general groupings of traditional outcomes: intellectual and academic outcomes, attitudinal outcomes, and personal and emotional outcomes. The grouping of personal and emotional outcomes was broken down further into three specific outcomes of

psychological wellbeing, leadership abilities and skills, and satisfaction with college.

This current research focused on the measure of psychological wellbeing and its relationship to the five measurement scales of spiritual development used in this study.

The measure for psychological wellbeing consists of just four self-reported items: level of depression, feeling overwhelmed, level of stress and anxiety, and self-assessment of emotional health. In examining the relationship between spiritual development and psychological wellbeing, Astin et al. (2011b) focused on 4 of their 10 spiritual development scales to compare to: equanimity, religious engagement, religious struggle, and spiritual quest. They also developed a 5th scale to use for comparison titled global citizenship, which combined 6 items from the ecumenical worldview and ethic of caring measurement scales. This was purposely done to facilitate presentation of their results, and because preliminary findings indicated the two scales rated separately were very similar (Astin et al., 2011b). For the purpose of this current study, and to have cleaner comparisons with the results from the primary scales, the full 12-item ecumenical worldview scale was used.

Astin et al. (2011b) found that students' level of psychological wellbeing declined between the freshman and junior year. This should be of no surprise given the stresses naturally put on students as part of the increased demands and limited time placed upon them during these years. However, compared to the spiritual development scales, they did not provide low or high ranges for the other college outcome measures. Thus, in addressing the meaning of the psychological wellbeing score results, this study relies

more on the comparison between the study groups themselves and the correlations with the spiritual development scales.

This study showed a statistically significant relationship between psychological development and missionary service (.003) (Table 3). It also showed a significant difference in the mean values of those who served missions (9.4) compared to those who had not served missions (8.6). The lower bound for those who served missions (9.1) was slightly higher than the upper bound of those who had not served missions (9.0) (Table 4). The public university was almost the same, except with a slight overlapping of the lower and upper bounds due to a slightly larger standard error. However, for the private university, the mean scores were both higher than the public university and virtually the same between those who served missions (10.0) and those who had not served missions (9.8) (Appendix H).

This study found a statistically significant negative correlation between psychological wellbeing and religious struggle (-.359) (Table 1). This negative relationship is consistent with Astin et al.'s (2011) findings, and supports the argument that those who struggle with their faith or religious background may see a negative impact on their emotional and psychological behavior.

Astin et al. (2011b) found a negative correlation between psychological wellbeing and spiritual quest. Although they could not address the reason for this precisely, they speculated that perhaps while students work to develop this aspect of their lives, they are finding the search frustrating and emotionally unsettling. Spiritual quest reflects a student's effort to find inner harmony and become a more loving person. Thus, a key

finding was that for the Mormon students, regardless of having served a mission or not, there was no significant correlation with spiritual quest (.049) (Table 1). This may indicate that Mormon students are making a distinction between finding inner harmony as a deeper internal attribute, and feeling stress and anxiety due to college demands. This may also be a reflection of LDS culture and teachings, where stressful situations are viewed as challenges and a part of life that do not necessarily define who you are or your psychological health.

Consistent with the Astin et al. (2011b) there was significant positive correlation with equanimity (.492) (Table 1). However, inconsistent with the Astin et al. (2011b) study, which found no significant relationship between psychological wellbeing and the two scales of religious engagement and ecumenical worldview, this study did find a significant relationship. In other words, LDS students' emotional wellbeing is positively impacted by being actively engaged in religious activities (.214), while at the same time being accepting of other's beliefs (.148) (Table 1).

Continued Student Development After Returning From a Mission

Is the level of spiritual development and psychological wellbeing different for Mormon students who have gone on a mission after certain time intervals? After a student returns from a mission there is a normal transition from their more strict life as a missionary back to being a college student. It might be expected that student spiritual development would continue to grow, but at a slower rate. However, this study shows that in most measures, the rate of growth in spiritual development either stabilizes, or gradually decreases. There appears to be two main reasons for this. First, as supported

by Astin et al. (2011b), some of the decreases are observed in most college students as they struggle to balance demands on their time. Second, in some cases, the students' spiritual development was at a higher level than most other college students, where there may not be much room or opportunity for additional growth. Research Question 2 addresses what happens to college students in their spiritual development and psychological wellbeing once they return to school following their mission, and what happens over time to that development. This study considers five levels for measuring time back from a mission: less than 6 months, 6 to 12 months, 12 to 24 months, 25 to 36 months, and greater than 36 months. These levels were chosen primarily to see how much change there is at 1-year intervals, except for the first 2 levels, which breaks out the first year into 2 segments. This was done to see if there was a higher rate of growth immediately after the mission and throughout the first year compared to subsequent years. Quicker growth in the first few months may indicate a gradually declining growth rate during the first few months while the individual is still in transition from missionary to college student.

Equanimity. Although students' level of equanimity increases significantly from serving a mission, the rate of growth in equanimity does not continue as it did during the missionary service. In fact, the growth in equanimity stabilized immediately. The average mean score of 13.5 ranging from 13.3 to 13.8 throughout all five levels indicates very little variation. This is supported by a significance level much greater than .05 at .457 (Table 6). These findings indicate that there is relatively no change in equanimity over time, neither increasing nor decreasing, once the student returns from his or her

mission. This is in contrast to the Astin et al. (2011b) study that reports that students show significant growth in equanimity through their college years. Their report shows that 19% of freshman score in the high range, which increases to 23% by the time they are juniors. In comparison, this study showed that for students who had served LDS missions, 55% scored in the high range for equanimity. Even for the entire data set ($N = 374$), 47% scored in the high range. This means LDS students as a whole scored higher in equanimity than most college students.

Astin et al. (2011) found that equanimity grows significantly during the college years; although this is consistent with the findings for LDS students, it appears to play out a little differently than would be expected with other college students. LDS students tend to start attending school with a high level of equanimity, which then continues to significantly grow from serving a mission. But, there is no further significant growth in equanimity after they return. Additionally, there was no correlation between the growth rates for equanimity with either the age of the student ($-.001$) or their year in school ($-.057$) (Table 8).

This may indicate that when groups attain higher levels of equanimity earlier in their college careers due to an intervention such as serving a mission, it becomes more difficult to continue that growth. In other words, the percentage of students scoring in the high range jumping from 19% to 23% as reported by Astin et al. (2011b) may just be part of a natural maturing among college students as a whole. Jumping from an already relatively high 47% to 55% from serving an LDS mission may require much more effort

on the part of the students. Achieving beyond that level would thus require an even more concerted effort beyond the scope of this study.

Ecumenical worldview. As discussed in Chapter 2, Fowler's theory of faith development has six stages. Fowler's theory suggests the typical college student will be in either Stage 3 or 4. Stage 3, synthetic-conventional, suggests the individual finds their faith meaningful, but has not considered it critically. Stage 4, individuative-reflective faith, suggests the individual's belief system and values are coherent and meaningful to the individual. Those in this stage take personal responsibility for their beliefs and feelings. Stage 5, conjunctive faith, is described as where the individual recognizes the complexity of the world, is more readily accepting of others' faith perspectives, but maintains a deep commitment to his or her own faith. This study suggests that many of those who have served Mormon missions may likely be in Stage 4, potentially demonstrating a higher level of spiritual development than most other college students. Some may even be on a path toward Stage 5.

Similar to equanimity, Astin et al. (2011) found that ecumenical worldview shows significant growth during the college years. Thus, a change in ecumenical worldview should be examined with this in mind. Students grow significantly in terms of ecumenical worldview due to serving a mission. However, once they have served, similar to what was observed with equanimity, the rate of growth on the ecumenical worldview scale stabilizes. Across all five levels of time back from mission, the mean only fluctuates between 37.4 and 38.5 with an overall mean of 38.0—still right at the lower end of the high score range, but not moving significantly one way or the other.

There was no significant difference between the public school (38.1) and the private school (37.8). There was also no growth in ecumenical worldview associated with either the age of the student or their year in school.

Religious engagement. Astin et al. (2011b) discussed that a main reason for a drop in student engagement is due to other demands on students' time. In this study, when looking at the time students had been back from their missions, there was a statistically significant difference in religious engagement. Over time, those who had returned from serving a mission gradually became less engaged the longer they were back. Yet their overall religious engagement was still in the high range. This was the same regardless of type of school or gender. At the same time it was observed that although religious engagement was statistically different compared to how much time passed since they returned from their mission, it was not statistically significant when compared to either the students' age or their year in school.

This observation may be reflecting the excitement students who return from their missions have toward the faith, and may be stretching themselves to stay highly engaged. With the realities of returning back to school, and the demands of college studies as they advance through their programs, they may realize they cannot be as engaged as they were during their missions without hindering their studies. Although the decrease was statistically significant, it still only represents a steady drop in the mean score for those who have been back less than 6 months (35.5) to those who have been back between 2 to 3 years (33.4), then climbs back for those who have been back over 3 years (35.0). Although registered as statistically significant, they are all still considered in the high

range. This agrees with Astin et al. (2011b) that LDS students score the highest of all denominations on religious engagement (59%), compared to the next highest denominations for Seventh Day Adventist (50%), other Christians (40%), and Baptists (39%).

Spiritual quest. Astin et al. (2011b) discuss that as students go from their freshman to junior year, spiritual quest grows. However, in this study, for those who served missions, the relationship between spiritual quest and time back from their mission was not statistically significant (.711). This is also consistent when examining the means across all five levels scored between 28 and 29, still within the high range.

That there is little connection between spiritual quest and the amount of time students have been back from their missions is also consistent when looking at the correlations of spiritual quest with any of the three independent variables used to distinguish passage of time: time back from mission (.030), age (-.019), and year in school (-.035). However, when comparing the correlations of actually serving a mission (.120) with age (-.004) and year in school (-.061), it is again clear that the main driver in spiritual quest is not time itself, but the actual serving of the mission. Serving the mission is an intervention tied to a passage of time for this one major event and thus creates a statistically significant change.

Religious struggle. For LDS students who served missions, religious struggle increased over time from a mean of 8.8 for those who had been back from their missions less than 6 months, to 10.5 for those who had been back more than 36 months. This increase in religious struggle over time back from serving a mission was statistically

significant (.022), although it was still within or near the desired low range (< 10) for the scale. This is consistent with Astin's et al.'s (2011) findings that college students grow in religious struggle over time.

There were also positive correlations across the three independent variables used to distinguish passage of time: time back from mission (.136), age (.159), and year in school (.186), with age and year in school being statistically significant. Time back from mission not being statistically significant is related to the type of school. This is driven by the public school. The public university was statistically significant across all three variables of time back from mission (.202), age (.212) and year in school (.214). This is in comparison to the private school, which showed time back from mission (.040), age (.079), and year in school (.155). This may be due to the diverse culture more prevalent to the larger public university, compared to the much smaller private university, which strongly espouses the LDS culture.

Psychological wellbeing. Astin et al. (2011b) reported that students' psychological wellbeing went down as they progressed through school. But in contrast, in this current study there were no statistically significant findings for this in either the time the student had been back from their mission, age, or year in school (Appendix N).

For LDS students who served missions, the mean for psychological wellbeing across the five levels of time back from mission fluctuated from 9.2 to 9.8. Lower and upper bounds across all five levels overlapped within a range from 8.3 to 10.9, indicating very little change over time (Table 7). There were also no significant correlations across the three independent variables used to distinguish passage of time: time back from

mission (-.044), age (.031), and year in school (-.031) (Table 9). This was also true for both the public and private universities where there were no significant correlations between psychological wellbeing and the three passage of time measures.

As previously noted there was a statistically significant difference in psychological wellbeing between those who served missions and those who had not served missions. This is strengthened when correlating the event of serving a mission with passage of time measures of age and year in school. This analysis showed significant correlations between psychological wellbeing and serving a mission for both the combined data set and the public university. However, there was still no significant correlation with respect to age and year in school (Table 8).

In other words, psychological wellbeing is highly influenced by the LDS students serving LDS missions. However, upon their return to school, psychological wellbeing does not necessarily increase or decrease over time. Still, compared to the decrease in psychological wellbeing over time observed in the Astin et al. (2011b) study, this may actually be considered a positive outcome.

Differences Due to Gender

What is the difference in spiritual development and wellbeing between males and females who participated in a Mormon mission? When looking at how serving an LDS mission affects male and female spiritual development and psychological wellbeing, there are two general observations across most of the measurement scales. First, females who had not served missions have a tendency to be significantly higher scorers compared to males who had not served missions. However, even if the scores of females who had

served missions goes up because of it, they are not statistically different from those who had not served. Second, males who had not served missions scored significantly lower than those who had served missions, indicating males grow relatively more in their spiritual development from serving missions relative to the females. However, once they serve their missions, both males and females are still just on par with each other.

Gilligan's (1982) theory on women's moral development, based on the idea that women's moral compass is geared more toward caring and responsibility, may explain this pattern. This indicates women may already be at a different level of moral development than their male counterparts, which could translate into higher levels of spiritual development.

Equanimity. There was a statistically significant difference on equanimity for both serving a mission (.000) and gender (.000) (Table 10). This study also found other significant differences between males and females for equanimity. While serving a mission has a positive impact on equanimity regardless of gender, the impact is greater for males where the mean jumps by 2.2 points from 11.2 to 13.4, compared to females that climb only 0.4 points from 13.0 to 13.4 (Table 11). Thus, although males grow more from serving missions in equanimity, it stills just puts them on par with their female counterparts.

The difference in males who have served and not served missions is significant (Figure 1). The upper bound for the male not serving a mission (11.8) is still well below the lower bound for the male who has served a mission (13.1). For the females, there is actually an overlap between the upper bound of those not serving missions (13.3) and the

lower bound of those who have served (13.0). This indicates that female LDS college students have a higher level of equanimity regardless of whether they serve missions.

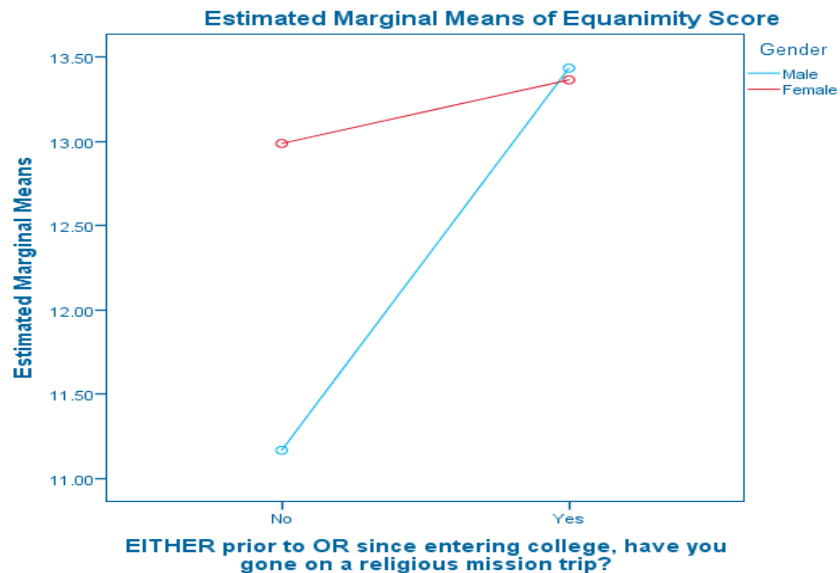


Figure 1. Impact of missionary service on equanimity.

The key aspects of equanimity—feeling at peace and centered, finding meaning in times of hardship, and feeling good about the direction one’s life is heading—along with the proposition that equanimity may be a constant component in spiritual development, support Gilligan’s argument that women have a moral compass different from their male counterparts. Gilligan’s ideas become even more in focus when considering equanimity’s association with the ecumenical worldview and spiritual quest items of wanting to “improve the human condition,” reducing “pain and suffering in the world,” and “becoming a more loving person.”

For those who served missions, the relationship was not statistically significant between equanimity and either time back from their mission (.457) or gender (.751) (Table 12). This is also shown in the small range associated with both time back from mission and gender, for a total of 10 levels with a range of means from 13.1 to 14.4. These values are right at the low end of the Astin et al. (2011b) high range (Table 13). This means that students who served missions, regardless of gender, tend to feel at peace and centered, and find meaning in times of hardship.

Ecumenical worldview. There was a statistically significant difference on ecumenical worldview for both serving a mission (.000) and gender (.000) (Table 10). Gender also played a significant role in how students scored on ecumenical worldview, particularly for those who have not served missions (Figure 2). Males who had not served missions have a mean score of 34.3, compared to the other three groups that ranged between 37.3 and 38.1. Even with a high standard error (.610) compared to a standard error range of .229 to .369 for the other groups, the upper bound of those who had not served missions (35.5) was still less than the lowest of the lower bounds for the other three groups (36.8) (Table 11).

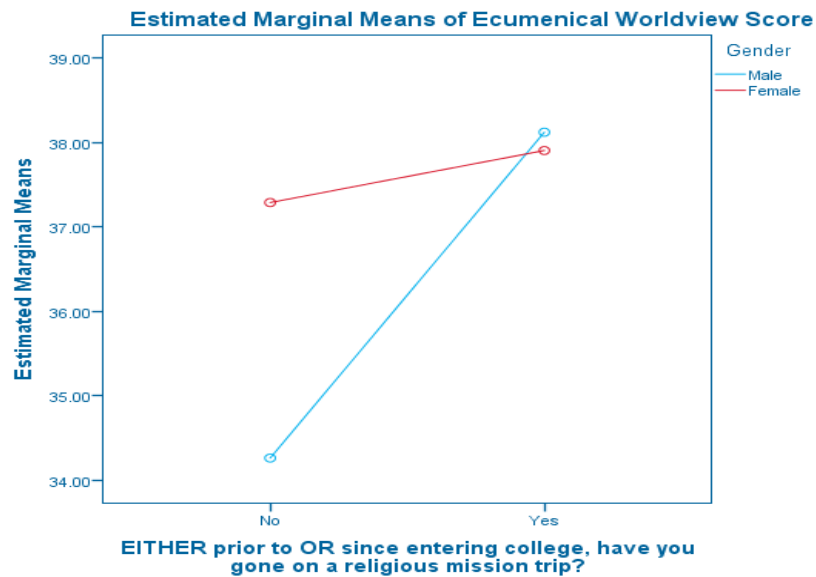


Figure 2. Impact of missionary service on ecumenical worldview.

For the females, there was an overlap between the upper bound of those who had not served missions (13.3) and the lower bound of those who had served (13.0). This indicates that female LDS college students had an ecumenical worldview naturally higher than males. Although the sample mean for males who served missions (38.1) was higher than females who served missions (37.9), it was not statistically significant (Table 11).

For those who served missions, the relationship was not statistically significant between ecumenical worldview and either time back from their mission (.344) or gender (.752) (Table 12). This is also shown in the small range associated with both time back from mission and gender, for a total of 10 levels with a range of means from 36.8 to 39.0. These values are right at the low end of the Astin et al. (2011b) high range (Table 13). This means that students who served missions, regardless of gender, are relatively positive in their view of others and the world, and how they fit into it.

Religious engagement. There was a statistically significant difference on religious engagement for both serving a mission (.000) and gender (.000) (Table 10). This study also found other significant differences between males and females for religious engagement. While serving a mission has a positive impact on equanimity regardless of gender, the impact is greater for males where the mean jumps from 29.4 to 34.6, compared to females that climb from 33.0 to 34.9. This is even more noticeable when looking at the overlap in the ranges (34.0 to 35.3) for those who served missions compared to those who had not served missions where there is no overlap (Table 11). Thus, although males grow more from serving missions in religious engagement, they are still just about the same with their female counterparts.

This difference is also pronounced when comparing the significance of the males who have served and not served missions (Figure 3). The upper bound for the males not serving a mission (31.1) is still well below the lower bound for the males who have served a mission (33.9). For the females, there is an overlap between the upper bound of those not serving missions (34.4) and the lower bound of those who have served (34.0). This indicates that female LDS college students have a naturally higher level of religious engagement regardless of whether they serve missions.

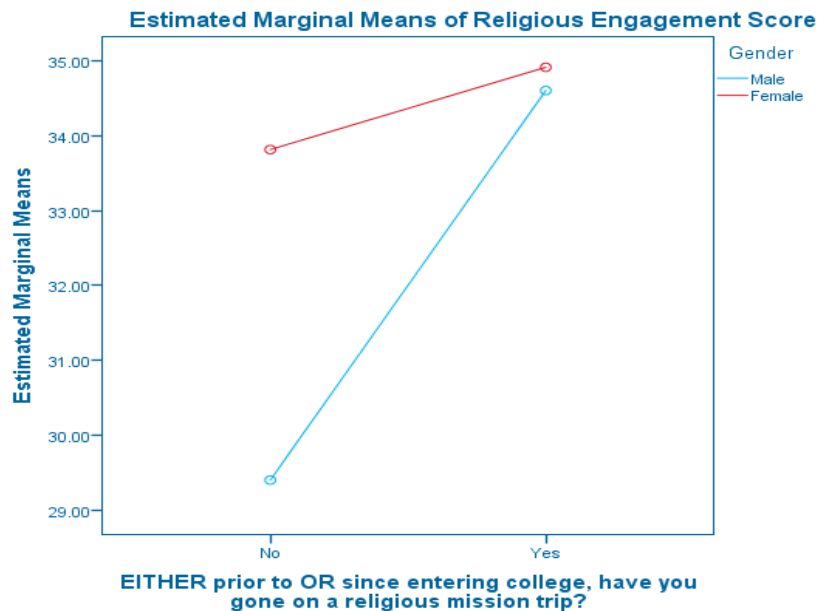


Figure 3. Impact of missionary service on religious engagement.

For those who served missions, the relationship between religious engagement and time back from their mission was statistically significant (.018). However, gender was not statistically significant when measured as part of the students' time back (.391) (Table 12). This means that all students who served missions changed in their religious commitment regardless of gender. Although there was some lowering in religious engagement, it was still in Astin's et al. (2011) high range for all five levels (Table 13).

Religious struggle. There was a statistically significant difference on religious struggle for both serving a mission (.002) and gender (.026) (Table 10). This study also found significant differences between males and females for religious struggle. As mentioned previously, the desired score for this scale would be lower rather than higher as in the other scales. Serving a mission has a positive impact on lowering the religious

struggle score for males where the mean drops from 11.2 to 9.4 (Table 11). This difference in religious struggle is significant for males who have served and not served missions (Figure 4). The lower bound for the males not serving a mission (10.3) is still well above the upper bound for the males who have served a mission (9.8). Thus males who serve missions not only improve in the area of religious struggle, they even surpass their female counterparts who served missions.

A key observation is that for religious struggle there is actually no difference for females who serve a mission and those who do not, with both at 9.7. Also, the range is wider and the standard error larger for those who served missions. This may be due to two ideas. The range may be tighter and the standard error smaller for those who did not serve missions due to the larger sample size (170) compared to those who served missions (63). At the same time, part of it may be due to more questioning by those who had served missions about their ongoing roles in the faith where male roles may appear to be more prominent. Yet it should be noted that although there appears to be a slight discrepancy, their scores are still within the Astin et al. (2011b) low range (Table 11).

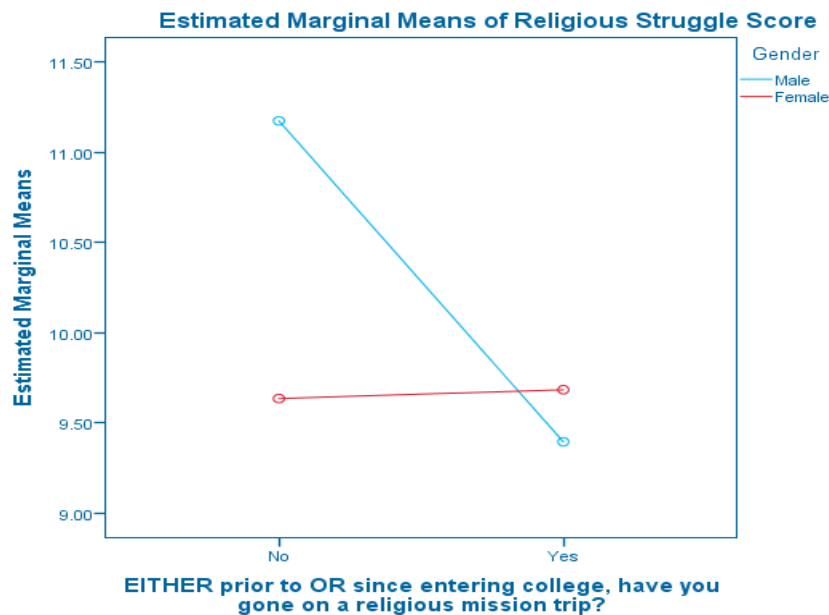


Figure 4. Impact of missionary service on religious struggle.

Another significant finding is that after females who served missions returned, their religious struggle scores continued to increase over time. As discussed previously, changes due to time back from mission were statistically significant in the two scales of religious engagement and religious struggle. But it appears that for religious struggle, the main driver was the females who served missions rather than the males who served missions. Female mean scores for religious struggle grow from 8.0 for those who had returned from their missions less than 6 months before to 11.2 after being back more than 3 years, a change of more than 3 points. In fact, their scores after 2 years back are actually outside the desired low range. In contrast, males stay within the high range, growing from 8.9 to 9.8, less than a 1 point increase (Table 13).

Spiritual quest. There was a statistically significant difference on spiritual quest for both serving a mission (.000) and gender (.000) (Table 10). Other significant differences were also found between males and females for spiritual quest. While serving a mission has a positive impact on spiritual quest regardless of gender, the impact again is greater for males where the mean jumps from 24.4 to 28.0, compared to females whose mean climbs from 27.8 to 28.5. This is even more noticeable when looking at the overlap in the ranges (27.7 to 28.3) for those who served missions compared to those who had not served missions where there is no overlap (Table 11). Thus, although males grow more from serving missions in spiritual quest, they are still just about the same or slightly less than their female counterparts. The means of spiritual quest from serving a mission for both males and females fall within the Astin et al. (2011b) high range.

This difference is also pronounced when comparing the significance of males who have served and not served missions (Figure 5). The upper bound for the males not serving a mission (25.7) is still well below the lower bound for the males who have served a mission (27.3). For the females, there is an overlap between the upper bound of those not serving missions (28.3) and the lower bound of those who have served (27.7). Although the overlap is not as large as on other scales, it still appears that female LDS college students have a naturally higher level of spiritual quest regardless of whether they serve missions.

As discussed previously, for those who served missions, the relationship between spiritual quest and time back from their mission was not statistically significant (.711). Although gender was statistically significant when measured as part of serving a mission

(.000) (Table 10), it was not significant when measured as part of the students' time back from college (.287) (Table 13). This means the spiritual quest for students who served missions remained stable, and stayed within the Astin et al. (2011b) high range.

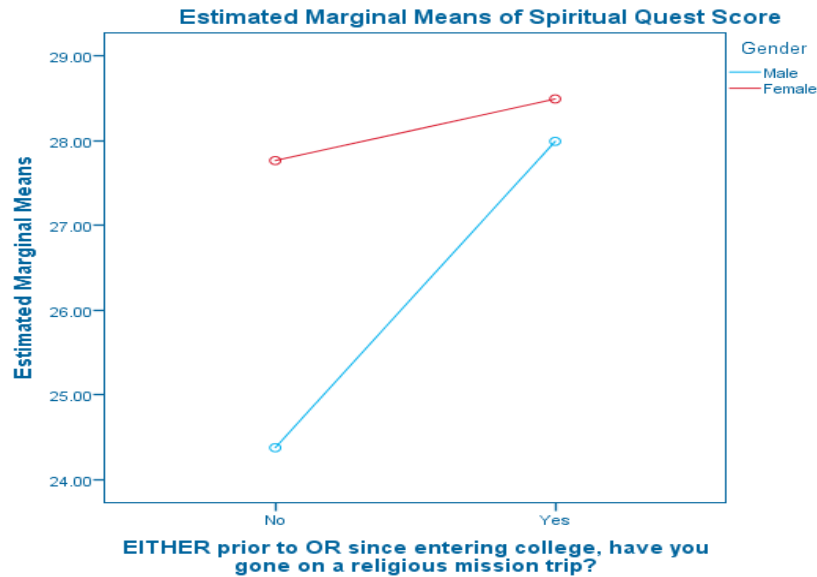


Figure 5. Impact of missionary service on spiritual quest.

Psychological wellbeing. There was a statistically significant difference on psychological wellbeing for both serving a mission (.003) and gender (.050) (Table 10). However, when examining the differences among the four groups, there were only small differences found (Figure 6). Females who had not served missions scored slightly higher than males who had not served missions by .42 points. Females who served missions scored slightly higher than males who served missions by .23 points. However,

ranges were wider and standard errors were larger for the two groups: males who had not served missions and females who had served missions (Table 13).

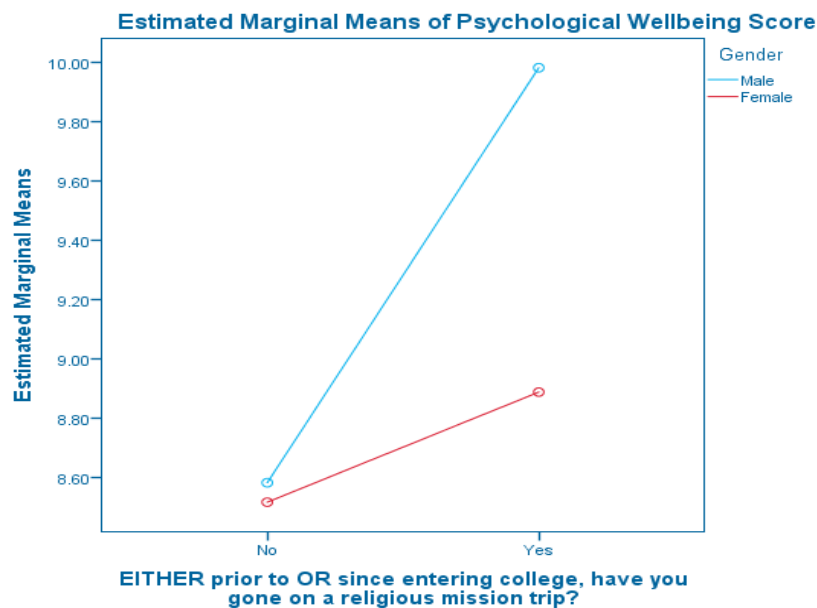


Figure 6. Impact of missionary service on psychological wellbeing.

When looking at the relationship of psychological wellbeing with how long the student had been back from his or her mission and gender, there is a different story. There was still a statistically significant difference with gender (.009) but not with the amount of time back from the mission (.175) (Table 12). The means for men fluctuated across the five levels with a range from 8.1 to 8.6. The means for females fluctuated between 7.4 and 8.0 (Table 13). The range was just 0.6 points for both genders, although the scores do not even overlap between the two genders. Given that there is a strong negative correlation between psychological wellbeing and religious struggle (-.359), this

may be another indication of the issue discussed with religious struggle. They may be wondering that now that they have served their missions, what about their ongoing and future roles within the Mormon culture.

Limitations on the Research Findings

There were a few limitations identified throughout this study. Although they do not invalidate the findings, two key limitations deserve to be addressed. The first limitation was the amount of time used to conduct the research. A longitudinal survey where the same student sample could have been surveyed as beginning freshmen, and then repeated at intervals over enough years to cover their total college experience, as well as the time used to serve a mission if the student chose to, would have been ideal. This would be expected to provide more accurate results, but the lengthy timeframe involved, as well as logistical issues with keeping contact with these students, would have been very difficult.

The second limitation was the sample size. Although the overall sample size was sufficient for each of the university types, some cells within the ANOVA had small sample sizes which may have contributed to findings that were not statistically significant. Contributing to this limitation was the nature of collecting and categorizing the data, as neither university collected information on religious affiliation or if the students had served missions, so that data was not available. Any impacts on the research related to the sample size were addressed within the statistical findings and conclusions.

Implications for Mormon Leaders, and College Educators and Administrators

It is evident from this study that Mormon college students as a group are strong in their level of spiritual development for all five of these scales compared to most college students. Even in those scales where some groups may not be within what Astin et al. (2011b) define as their high range (or low range for religious struggle), they are not far from it. Much of this is likely due to a combination of Mormon culture, beliefs and values, and expectations. Students who are active in the faith become part of a strong support system that helps reinforce these values. At the same time, they are encouraged to study other diverse cultures and be open minded to others' perspectives. With all this in mind, there are some practical implications and recommendations Mormon leaders and those in higher education who work with Mormon college students may want to consider. This is not to say that these ideas are new or that they are not being implemented in various degrees already. But, given the results of the study, these ideas should be considered by those who have not done so before, and may encourage those who have worked to implement them already.

Supporting those who do not serve missions. Those who do not serve missions typically are not as far along in their spiritual development as those who have served missions. There were 373 students who completed the survey, 179 who had served missions. That means 194 students or 52% had not served missions. Of that 24 were males, 170 were females. One follow-up question in the survey for those who had not served a mission was how likely they would probably serve a mission in the future. There were 123 students, 14 males and 109 females, indicating they were “unlikely to” or

“definitely would not” serve missions. The lower number of males who would not serve is likely due to the greater expectations within the Mormon culture for males to serve.

This raises the question of how to help these students, especially the males, to develop spiritually. This study showed that even females who do not serve missions appear to still be at a level of spiritual development not much different than those who had served. At the same time, serving missions is not as much of an expectation for them as it is for the males. As such, males who do not serve missions may feel they failed to meet the cultural expectations placed upon them, or disappointed family members and loved ones. Regardless of whether this perception is true or not in a particular situation, it could still be a major roadblock in the individual’s spiritual development.

The Mormon culture may excuse those who choose not to serve missions because of mental or physical handicaps, choosing military service, or having unusually greater family responsibilities. But males who simply choose not to serve out of personal preference may be viewed as selfish or not doing their duty. These are the ones for whom additional support may be needed.

It would be worthwhile for leaders and educators, whether for the particular university or the church, to look for ways to assist these students in finding their own sense of spirituality. As already presented, Astin et al. (2011b) noted at schools where students tend to be more involved in religious activities, students already struggling with their religious beliefs may have an even harder time with their beliefs. Thus, leaders and educators should look at ways to help these students feel comfortable and able to accept

where they are in their own personal spiritual development without judgment. This could include allowing students more opportunities to study and research other faiths.

This would be a challenge for any culture. How can individuals within a culture be supported to develop themselves spiritually, if there is a high risk that such growth may lead them in a different direction away from their cultural religious faith? But even if their faith leads them to having a strong conviction in their own faith, yet still deciding that missionary service is not for them, how can they be supported in their own spiritual development without being stigmatized by their culture?

These are questions church leaders and college educators should closely examine and there are two parts of the issue that should be addressed. First, they should look at ways to support those who do decide not to serve mission, and make them feel that they are not only welcomed, but are an integral part of the larger community. The second part is looking at ways to encourage change within the culture itself, making it clear that those who choose not to serve missions are still a valuable part of the culture itself, that the culture cares for them unconditionally. In this way, spiritual development may still continue for the student as an individual, regardless of the choices he or she makes.

Encouraging development after returning from missions. Students who have recently returned from their missions are likely to be highly motivated in continuing their own spiritual development. But over time, after they have returned to school, the realities of the demands placed upon them may distract them from being as focused on their continued spiritual development as they were during their missions. This is highlighted in the Astin et al. (2011b) study and is typical of students going through college. The

Mormon faith is perhaps one of the strongest groups to encourage ongoing growth of those who served missions, as evident by this study showing that where other students nationwide see a decline in aspects of their spiritual development, the Mormon student who served a mission will decline much less or not at all. But there is little evidence it will grow any further during their college years.

Thus, there may not seem to be much action that could be taken to improve growth in spiritual development in the postmission period. Most of these students are still at a high level of spiritual development relative to their age group, or what Fowler's faith development would describe as Level 4, individuative-reflective faith (Fowler, 1981). Level 5, conjunctive faith, refers to the idea of the individual realizing life's complexities, being accepting of other faiths, while maintaining a deep commitment to their own. Fowler (1981) saw this as typically happening in later adulthood, 35 years or more, which begs the question of whether students who already are at a relatively high level of development should be overly concerned about developing to this level. College students who served missions may be more likely to be called to more responsible positions within their congregations than those who had not served missions. They typically have more knowledge of the scriptures and of their church doctrine. They will likely feel more confident in discussing religious and spiritual ideas. But as young adults they may also become comfortable with where they are. The church continually encourages its members, including students, to continue studying scriptures daily, have daily prayers, and serve others. This may well be a key part of what helps stabilize the decline in spiritual development among Mormon students.

But if leaders and educators would like to encourage students in their ongoing spiritual development they may consider two ideas. First, they could let students know to be more patient with themselves and their spiritual development. They probably are not going to have the same type of experiences they had during their missions. But by being conscientiously aware of the day-to-day things they have been asked to do, they will continue to develop spiritually.

Second, for those students who have the time and desire to grow more during their college years, leaders could encourage them to stretch beyond what they are accustomed to now. This may include encouraging them to look more internally and be willing to expand their boundaries, particularly in the area of spiritual quest. Although these students still score well in the area of spiritual quest, they may be able to expand more in this area by challenging themselves in their own development by studying other ideas more closely. Where they may be accepting of others' perspectives, they could now try to gain a deeper understanding into why those perspectives are valued by others. By seeking this level of understanding they may even be strengthened in their own faith by seeing the interconnections between them.

Being sensitive to the continued development female students. Female Mormon college students, whether they served missions or not, are still among the strongest in terms of spiritual development. Although it was not statistically significant, this study hinted that there might be a gradual decline in the spiritual development of these students. Further study in this area would be worthwhile. This decline may be nothing more than how this particular sample responded. However, given worldwide

trends in females looking for ways to better define their roles and needs in society, it may be a good time to consider what may potentially underline these declines.

Over the past few years there has been more attention given to LDS women advocating for a greater role in the church. The church defines itself as a strong advocate for families. This has often taken the image of a traditional family structure where the male is viewed as the head of the home, and the wife is viewed as the nurturer within the family. Whether this is driven more by actual gospel doctrine, or from a Mormon culture that evolved out of necessity to keep families united during the early Mormon migration to the West early in its history, has led to much discussion within the church. Regardless, given these changes in the world around them, it is understandable that even those females who are strongly converted to the faith may still wonder what their role in the faith should be now and in the future within the faith. That could have a direct impact on their religious struggle and thus their ongoing spiritual development.

Thus, leaders and educators should look to better understand the feelings and thoughts of the female college students. As more women take greater roles outside the home, leaders within the church should continue, as they have been, to be sensitive to their needs and find ways to better utilize the skills and expertise of these individuals.

Focusing on wellbeing. As a scale separate from the spiritual development measures, psychological wellbeing is unique. With a very strong correlation with all the spiritual development scales except spiritual quest, this study indicates that when Mormon college students improve in terms of their spirituality, they are also improving in their psychological and emotional wellbeing. Thus, as psychological wellbeing has been

considered a desirable college outcome, as students are provided opportunities to grow in their spiritual development there should also be growth in their wellbeing. Thus, leaders, faculty, and administrators interested in supporting students' emotional wellbeing could look for opportunities for students to develop spiritually.

Four of the five spiritual development scales examined in this study are strongly correlated to the desired college outcome of psychological wellbeing (Table 1). Looking closer at these four scales, the connections are not surprising. It would be expected that students who feel centered and can find meaning in hard times (equanimity), who learn to appreciate both their own faith and that of others (ecumenical worldview), and are actively engaged and well-grounded in their religious faith (religious engagement) would also be more likely to have a strong sense of emotional wellbeing. Also, those who can resolve their own personal struggles with the religious beliefs of their family, or their own feelings of uncertainty about their own beliefs, should also see an improvement in their religious psychological and emotional wellbeing. This does not mean they must have the same beliefs as their family, but they come to accept and appreciate their family's own belief in them, and come to some resolution of their own personal beliefs.

Implications for Higher Education Professionals and College Students Beyond the LDS Faith

Although this study focused on Mormon college students, most of the findings may also be applicable to college students of other faith and belief systems. The need for individuals to grow spiritually and emotionally is universal. Thus, the main focus of this

study on spiritual development and psychological wellbeing can be of value to the larger U.S. college student body.

Astin et al. (2011b) looked at thousands of students across the U.S. They developed the scales that were used in this study, along with the survey items, analysis, and findings for college students at large. It is recommended that practitioners, educators, leaders, and administrators in higher education refer to that work for further details and implications of its overall significance to their students.

What this study does provide for higher education professionals outside of the Mormon faith is an in-depth analysis of the benefits students may receive through extended opportunities of service outside of the campus setting. This goes beyond service-learning opportunities a school may provide, which may be tied to schools' requirements. It also goes beyond study abroad programs where the focus is on learning more in-depth about a particular culture. The experiences and growth development of students who serve Mormon missions is probably more comparable to students leaving to provide direct service in charitable groups such as the Peace Corps, the American Red Cross, the National Guard, or another religious faith.

These findings may assist educators in understanding the value of encouraging the spiritual development of their students through extended service opportunities away from the campus. It may provide further insight into differences between those who serve in these types of positions and other students. It may even stimulate thoughts and ideas on how higher education can incorporate similar types of opportunities and programs—

which in turn could help students advance in their own spiritual development and wellbeing.

Implications for Future Research

Student spiritual development has gained more attention over the past several years (Astin et al., 2011b). Still, the research that has been done is small compared to other areas of study within higher education. Spiritual wellbeing is influenced by religious affiliation and cultural background (Small & Bowman, 2012). These factors play an even larger role in a student's spiritual development and wellbeing where family and community activities revolve around a strong religious culture (Dalton, 2001; Rogers, 2009). This is evident from the results of this study. But it also provides opportunities for further research.

The scope of this study was on the five measurement scales from Astin et al. (2011b) which were considered the ones most related to psychological wellbeing. However, there are five other scales that could be surveyed as well to get a more rounded picture of the impact Mormon missions have on the spiritual development of Mormon students. These scales are charitable involvement, ethic of caring, religious commitment, religious skepticism, and religious/social conservatism (Astin et al., 2011b).

A more precise measure could be done through a long-term, longitudinal study starting with students who have not served a mission, then retaking the survey every couple of years over an extended period. This would likely need to be an even larger period of time than what was done in the original Astin et al. (2011b) study to account for

the time Mormon students who do serve missions are away from college. Tighter controls would also be required to maintain contact with the same sample group.

Studies could be done of Mormon young adults who do not meet the idea of the traditional college student. This may include those who do not attend college, attend part-time, attend vocational training, and take their classes online.

The survey could be expanded to Mormon young adults from other countries, both in and out of college. This would give a better idea of how other students outside the U.S. develop spiritually.

The study could be expanded to other college student populations outside the Mormon Church. This could include groups who serve missions for other religions, or leave college for extended periods of time to serve in other ways throughout the world. This may include those who participate in the National Guard, the Peace Corps, the Red Cross, or other charitable organizations.

Qualitative studies based upon the findings of this research could look deeper into both the positive areas and areas of concern. For example, one study could examine how much of a difference exists between the outward measure of religious engagement where students may be engaged because of cultural and family expectations, and the internal measure of religious commitment. Another might explore deeper the perceptions and differences of female students who have served missions on what they feel their future roles should or could be, and what direction do they see the church going in that regard.

Value formation is another area that could be examined in several ways based on the findings of this study. Although this study showed that serving a mission improves

the spiritual development and psychological wellbeing of Mormon college students, it would be insightful to see how this impacts the values of those who serve missions. A future study could examine those who have not served missions, focusing on comparing the values of those who plan to serve but just have not done so yet to those who do not plan to serve. Looking at the gender differences in value formation and the decision process each gender goes through in deciding to serve missions would also be interesting. For example, there is greater expectation and subtle pressure for males to serve missions that does not exist for females. In light of Gilligan's theory (1982) on moral development, there may be some fascinating insights into how the two genders view their roles, purpose, and what they value when deciding whether to serve a mission or not.

Summary

This chapter pulled together the most significant findings of the study across all six measurements of spiritual development and psychological wellbeing. It put practical meaning behind the statistical numbers, allowing for a clearer understanding and a greater appreciation for the need to encourage students in their spiritual development. Within the context of the Mormon college student, it showed how many of these students start at a higher level of spiritual development than most college students due in part to the Mormon culture and beliefs. But for those who serve missions, there is a significant jump in the level of spiritual development, especially for male students. It discussed how females have a higher starting point in their spiritual development, which still grows due to serving the mission. It discussed how, upon returning from a mission, students most likely will stabilize in their level of spiritual development due to the different demands

placed on them. The chapter made recommendations for helping students to grow spiritually and emotionally regardless of whether they served a mission or how long they had been back from their mission. It also discussed the implications of mission service for female students who may struggle with their current or future roles within the church. It found that among Mormon college students, serving a mission for the church has a significant impact on their spiritual development. This in turn leads to an improved sense of psychological wellbeing.

Referring back to Jackie who was introduced at the very beginning of this report, in her mind, being a female missionary for the LDS church was both a blessing and a challenge. She understood what her role was as a missionary, and gladly accepted it because she had faith in a larger purpose beyond the temporal roles she might have.

After her mission, Jackie returned to her college studies. After graduating from college she married within the faith. She is currently working on her doctorate in physical therapy. Part of the reason for choosing this field of study she attributes directly to having been a missionary. There she saw the physical challenges others had to go through, as well as struggled with some health issues of her own. She saw firsthand how serving within a medical field could help others. She developed her own self-confidence through the challenges she faced to know she could achieve greater goals for herself personally and professionally. She also continues to have a strong faith and sees her role continuing to expand within her family, her community, and within her church.

Appendix A: College Spiritual and Belief Values (CSBV) Survey Questions

1. *Spiritual Quest (9 items)*
 - Engaged in: Searching for meaning/purpose in life
 - Engaged in: Having discussions about the meaning of life with my friends
 - Close friends: Are searching for meaning/purpose in life
 - Personal goal: Finding answers to the mysteries of life
 - Personal goal: Attaining inner harmony
 - Personal goal: Attaining wisdom
 - Personal goal: Seeking beauty in my life
 - Personal goal: Developing a meaningful philosophy of life
 - Personal goal: Becoming a more loving person
2. *Equanimity (5 items)*
 - Experience: Been able to find meaning in times of hardship
 - Experience: Felt at peace/centered
 - Self-description: Feeling good about the direction in which my life is headed
 - Self-description: Being thankful for all that has happened to me
 - Self-description: Seeing each day, good or bad, as a gift
3. *Religious Struggle (7 items)*
 - Self-description: Feeling unsettled about spiritual and religious matters
 - Self-description: Feeling disillusioned with my religious upbringing
 - Experience: Struggled to understand evil, suffering, and death
 - Experience: Felt angry with God
 - Experience: Questioned your religious/spiritual beliefs
 - Experience: Felt distant from God
 - Experience: Disagreed with your family about religious matters
4. *Religious Engagement (9 items)*
 - Experience: Attended a religious service
 - Experience: Attended a class, workshop, or retreat on matters related to religion/spirituality
 - Activity: Reading sacred texts
 - Activity: Religious singing/chanting
 - Activity: Other reading on religion/spirituality
 - Activity: Prayer
 - Do you pray?
 - Hours per week: Prayer/meditation

- Close friends: Go to church/temple/other house of worship
5. *Ecumenical Worldview (12 items)*
- Self-description: Having an interest in different religious traditions
 - Self-description: Believing in the goodness of all people
 - Self-description: Feeling a strong connection to all humanity
 - Self-rating: Understanding of others
 - Engaged in: Accepting others as they are
 - Personal goal: Improving my understanding of other countries and cultures
 - Personal goal: Improving the human condition
 - Belief: All life is interconnected
 - Belief: Love is at the root of all the great religions
 - Belief: Non-religious people can lead lives that are just as moral as those of religious believers
 - Belief: We are all spiritual beings
 - Belief: Most people can grow spiritually without being religious
6. *Psychological wellbeing (4 items)*
- Felt depressed
 - Felt overwhelmed by all I had to do
 - Felt that your life is filled with stress and anxiety
 - Emotional Health

Appendix B: Survey for Measuring Spiritual Development and Psychological Wellbeing

Q1 Spiritual Development and Wellbeing Assessment of College Students. INFORMED CONSENT FORM RESEARCH PROCEDURES: This research is being conducted to assess the level of students' own perceived level of spiritual development and wellbeing. It is being conducted as a survey taken via student E-mail. If you agree to participate, you will complete a survey where you will assess your own spiritual development and wellbeing. The time to complete the survey will take about 8-10 minutes. RISKS There are no foreseeable risks for participating in this research. BENEFITS: There are no benefits to you as a participant other than to furthering the research on student spiritual development and wellbeing in a university environment. CONFIDENTIALITY: The data in this study will be confidential. Surveys will be anonymous. Data will be requested concerning gender, age, religious faith, and time in college but there will no way to link data to individual respondent's identity. PARTICIPATION: Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party. CONTACT: This research is being conducted Brian Melton, Doctoral Student in the Higher Education Program at George Mason University. He may be reached at 703-xxx-xxxx. The faculty advisor is Dr. Nance Lucas who may be reached at 703-xxx-xxxx. You may contact the George Mason University Office of Research Subject Protections at 703-xxx-xxxx if you have questions or comments regarding your rights as a participant in the research. This research has been reviewed according to your university and George Mason University (GMU) procedures governing your participation in this research. CONSENT I have read this form and agree to participate in this study and by clicking "I agree" I will begin the assessment. If you would like a copy of the consent form, please print a copy from your browser, or you can email Brian Melton at bmelton2@masonlive.gmu.edu and he will send you an electronic copy.

- ☐ I agree (1)
- ☐ I do NOT agree (2)

Q2 Age (Years)

- ☐ Under 18 (1)
- ☐ 18-20 (2)
- ☐ 21-23 (3)
- ☐ 24-26 (4)
- ☐ 26 or older (5)

Q3 Current Religious Preference: (Mark One)

- ☐ Baptist (1)
- ☐ Buddhist (2)
- ☐ Church of Christ (3)
- ☐ Eastern Orthodox (4)
- ☐ Episcopalian (5)
- ☐ Hindu (6)
- ☐ Islamic (7)
- ☐ LDS (Mormon) (8)
- ☐ Lutheran (9)
- ☐ Methodist (10)
- ☐ Presbyterian (11)
- ☐ Quaker (12)
- ☐ Roman Catholic (13)
- ☐ Seventh Day Adventist (14)
- ☐ Unitarian/Universalist (15)
- ☐ UCC/Congregational (16)
- ☐ Other Christian (17)
- ☐ Other Religion (18)
- ☐ None (19)
- ☐ Agnostic (20)
- ☐ Atheist (21)

Q4 Gender

- ☐ Male (1)
- ☐ Female (2)
- ☐ Other (3)

Q5 Which of the following BEST describes your college completion status?

- ☐ None (1)
- ☐ Less than 1 year (2)
- ☐ 1-2 years (3)
- ☐ 2-3 years (4)
- ☐ 3-4 years (5)
- ☐ More than 4 years (6)
- ☐ Undergraduate degree completed (7)

Q6 Do you pray?

- ☐ Yes (1)
- ☐ No (2)

Q7 During the past year, how much time did you spend during a typical week in prayer/meditation?

- ☐ None (1)
- ☐ < 1 Hour (2)
- ☐ 1-2 Hours (3)
- ☐ 3-5 Hours (4)
- ☐ 6-10 Hours (5)
- ☐ 11-15 Hours (6)
- ☐ 16-20 Hours (7)
- ☐ Over 20 Hours (8)

Q8 For the activities listed below, please indicate how often you engage in each since entering college.

	Frequently (1)	Occasionally (2)	Not at all (3)
Attended a religious service (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt depressed (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt overwhelmed by all I had to do (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 Please indicate your agreement with each of the following statements:

	Agree Strongly (1)	Agree Somewhat (2)	Disagree Somewhat (3)	Disagree Strongly (4)
Love is the root of all great religions (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All life is interconnected (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are all spiritual beings (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most people can grow spiritually without being religious (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-religious people can lead lives that are just as moral as those of religious believers (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 How often do you engage in the following activities?

	Daily (1)	Several Times/Week (2)	Once/Week (3)	Monthly (4)	Less than Monthly (5)	Not at all (6)
Prayer (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading sacred texts (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religious singing/chanting (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other reading on religious/spirituality (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 Please indicate the extent to which each of the following describes you:

	To a great extent (1)	To some extent (2)	Not at all (3)
Feeling unsettled about spiritual and religious matters (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling good about the direction in which my life is headed (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling a strong connection to all humanity (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling disillusioned with my religious upbringing (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having an interest in different religious traditions (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Believing in the goodness of all people (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being thankful for all that has happened to me (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeing each day, good or bad, as a gift (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 Please indicate the importance to you personally of each of the following:

	Essential (1)	Very Important (2)	Somewhat Important (3)	Not Important (4)
Developing a meaningful philosophy of life (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving my understanding of other countries and cultures (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attaining inner harmony (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attaining wisdom (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeking beauty in my life (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding answers to the mysteries of life (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming a more loving person (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving the human condition (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 Since you entered college, please indicate how often you have:

	Frequently (1)	Occasionally (2)	Not at all (3)
Felt distant from God (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Struggled to understand evil, suffering, and death (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Questioned your religious/spiritual beliefs (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disagreed with your family about religious matters (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt angry with God (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that your life is filled with stress and anxiety (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been able to find meaning in times of hardships (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt at peace/centered (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attended a class, workshop, or retreat on matters related to religion/spirituality (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14 How many of your close friends:

	All (1)	Most (2)	Some (3)	None (4)
Are searching for meaning/purpose in life (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Go to church/temple/other house of worship (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 Please indicate the extent to which you engage in the following activities:

	To a great extent (1)	To some extent (2)	Not at all (3)
Searching for meaning/purpose in life (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accepting others as they are (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having discussions about the meaning of life with my friends (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q16 Rate yourself on each of the following traits as compared with the average person your age.

	Highest 10% (1)	Above Average (2)	Average (3)	Below Average (4)	Lowest 10% (5)
Emotional Health (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding of others (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q17 EITHER prior to OR since entering college, have you gone on a religious mission trip?

- ☐ Yes (1)
☐ No (3)

If No Is Selected, Then Skip To How likely will you go on a religious...

Q18 In regards to your religious mission trip...

	Less than 6 months (1)	6 - 12 months (2)	13 - 24 months (3)	25 - 36 months (8)	More than 36 months (9)
How long was your mission trip? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How long ago did you return from your mission trip? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 How likely will you go on a religious mission trip within the next five years?

- ☐ Definitely (1)
- ☐ Likely (2)
- ☐ Unlikely (3)
- ☐ Definitely NOT (4)

**Appendix C: Higher Education Research Institute Approval for Use of CSBV
Survey**

From: Kevin Eagan <xxxxxx@gmail.com>
Sent: Tuesday, March 22, 2016 6:27 AM
To: bmelton2
Cc: Dominique Harrison
Subject: Re: Re: Request to Use CSBV Survey Items

Hi Brian -

Thank you for your interest in using HERI's CSBV items in your dissertation research. You are approved to use the items identified in your proposal for your one-time administration during the fall of 2016. Please let me know if you need any additional information from us.

Best,
Kevin

Appendix D: APA Write-Ups for All Mormon Student Participants

Combined Public and Private Universities. Is there a mean difference in student scores on the six measurement scales based on whether the students served missions for the Mormon Church and gender?

1) Equanimity. A factorial ANOVA was conducted to determine if mean score for equanimity for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.504) and kurtosis (-.613) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 360) = 2.102, p = .100$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 10 shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 17.086, df = 1, 360, p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} =$

33.453, $df = 1, 360, p = .000$; $F_{gender} = 14.440, df = 1, 360, p = .000$). Effect sizes were small for both mission and gender ($\eta_p^2 = .085$; $\eta_p^2 = .039$), and observed power was 1.000 for mission and .968 for gender.

2) Ecumenical Worldview. A factorial ANOVA was conducted to determine if mean score for ecumenical worldview for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.229) and kurtosis (-.389) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 360) = 2.524, p = .057$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 10 shows that the interaction of serving a mission by gender was statistically significant ($F_{interaction} = 16.556, df = 1, 360, p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{mission} = 31.528, df = 1, 360, p = .000$; $F_{gender} = 12.243, df = 1, 360, p = .000$). Effect sizes were small for both mission and gender ($\eta_p^2 = .081$; $\eta_p^2 = .033$), and observed power was 1.000 for mission and .940 for gender.

3) Religious Engagement. A factorial ANOVA was conducted to determine if mean score for religious engagement for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.445) and kurtosis (.139) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(3, 348) = 4.500, p = .004$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 10 shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 14.079, df = 1, 348, p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 33.214, df = 1, 348, p = .000$; $F_{\text{gender}} = 18.666, df = 1, 348, p = .000$). Effect sizes were small for both mission and gender ($\eta_p^2 = .087$; $\eta_p^2 = .051$), and observed power was 1.000 for mission and .991 for gender.

4) Religious Struggle. A factorial ANOVA was conducted to determine if mean score for religious struggle for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.599) and kurtosis (-.268) statistics

suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 349) = .658, p = .597$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 10 shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 10.678, df = 1, 349, p = .030$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 9.570, df = 1, 349, p = .002$; $F_{\text{gender}} = 4.999, df = 1, 349, p = .025$). Effect sizes were small for both mission and gender ($\eta_p^2 = .027$; $\eta_p^2 = .014$), and observed power was .870 for mission and .606 for gender.

5) Spiritual Quest. A factorial ANOVA was conducted to determine if mean score for spiritual quest for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.378) and kurtosis (-.082) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with five outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 369) = 1.302, p = .272$].

Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence met.

Table 10 shows that the interaction of serving a mission by gender was statistically significant ($F_{interaction} = 10.600, df = 1, 369, p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{mission} = 23.963, df = 1, 369, p = .000$; $F_{gender} = 19.222, df = 1, 369, p = .000$). Effect sizes were small for both mission and gender ($\eta_p^2 = .061$; $\eta_p^2 = .050$), and observed power was .998 for mission and .992 for gender.

6) Psychological Well-being. A factorial ANOVA was conducted to determine if mean score for psychological well-being for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.260) and kurtosis (-.559) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 369) = 1.576, p = .195$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 10 shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 3.034$, $df = 1, 369$, $p = .082$), the main effects for mission was statistically significant ($F_{\text{mission}} = 8.999$, $df = 1, 369$, $p = .003$), and the main effects for gender was statistically significant ($F_{\text{gender}} = 3.859$, $df = 1, 369$, $p = .050$). Effect sizes were small for both mission and gender ($\eta_p^2 = .024$; $\eta_p^2 = .010$), and observed power was .849 for mission and .500 for gender.

Public University. Is there a mean difference in student scores on the six measurement scales based on whether the students served missions for the Mormon Church and gender?

7) Equanimity. A factorial ANOVA was conducted to determine if mean score for equanimity for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.654) and kurtosis (-.083) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 176) = 1.269$, $p = .287$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 8.866, df = 1, 176, p = .003$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 29.257, df = 1, 176, p = .000$; $F_{\text{gender}} = 8.071, df = 1, 176, p = .005$). Effect size was medium for mission ($\eta_p^2 = .143$) and small for gender ($\eta_p^2 = .044$), and observed power was 1.000 for mission and .807 for gender.

8) Ecumenical Worldview. A factorial ANOVA was conducted to determine if mean score for ecumenical worldview for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.174) and kurtosis (-.232) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 174) = 1.684, p = .172$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was not statistically significant ($F_{\text{interaction}} = 15.295, df = 1, 176, p = .000$), the main effects for mission was not statistically significant ($F_{\text{mission}} = 32.881, df = 1, 176, p = .000$), although the main effects for gender was statistically significant ($F_{\text{gender}} = 17.236, df = 1, 176, p =$

.000). Effect size was medium for mission ($\eta_p^2 = .159$) and small for gender ($\eta_p^2 = .090$), and observed power was 1.000 for mission and .985 for gender.

9) Religious Engagement. A factorial ANOVA was conducted to determine if mean score for religious engagement for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.353) and kurtosis (-.177) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(3, 164) = 8.877, p = .000$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was statistically significant ($F_{interaction} = 19.880, df = 1, 164, p = .000$), and there were statistically significant main effects for both serving a mission and gender ($F_{mission} = 26.363, df = 1, 164, p = .000$; $F_{gender} = 21.983, df = 1, 164, p = .000$). Effect size was medium for mission ($\eta_p^2 = .138$) and small for gender ($\eta_p^2 = .118$), and observed power was .999 for mission and .997 for gender.

10) Religious Struggle. A factorial ANOVA was conducted to determine if mean score for religious struggle for students differed based on whether the student had served

a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.779) and kurtosis (-.024) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(3, 169) = 3.362, p = .020$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 5.533, df = 1, 169, p = .020$), and there was a statistically significant main effect for serving a mission ($F_{\text{mission}} = 6.094, df = 1, 169, p = .015$). There was no statistically significant main effect for gender ($F_{\text{gender}} = .407, df = 1, 169, p = .524$). Effect sizes were small for both mission and gender ($\eta_p^2 = .035$; $\eta_p^2 = .002$); observed power was .690 for mission and .648 for gender.

11) Spiritual Quest. A factorial ANOVA was conducted to determine if mean score for spiritual quest for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.465) and kurtosis (-.096) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with three outliers) of the residuals. The Q-Q plot

and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 177) = .290, p = .833$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 7.678, df = 1, 177, p = .042$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 25.968, df = 1, 177, p = .000$; $F_{\text{gender}} = 19.835, df = 1, 177, p = .000$). Effect size was medium for mission ($\eta_p^2 = .128$) and small for gender ($\eta_p^2 = .101$), and observed power was .999 for mission and .993 for gender.

12) Psychological Well-being. A factorial ANOVA was conducted to determine if mean score for psychological well-being for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.172) and kurtosis (-.743) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 177) = 1.838, p = .142$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the

levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was not statistically significant ($F_{\text{interaction}} = 2.018$, $df = 1, 177$, $p = .157$), the main effects for mission was statistically significant ($F_{\text{mission}} = 4.991$, $df = 1, 177$, $p = .027$), although the main effects for gender was not statistically significant ($F_{\text{gender}} = 2.634$, $df = 1, 177$, $p = .157$). Effect sizes were small for both mission and gender ($\eta_p^2 = .027$; $\eta_p^2 = .015$), and observed power was .603 for mission and .365 for gender.

Private University. Is there a mean difference in student scores on the six measurement scales based on whether the students served missions for the Mormon Church and gender?

13) Equanimity. A factorial ANOVA was conducted to determine if mean score for equanimity for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.557) and kurtosis (-.505) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 184) = 1.793$, $p = .150$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the

independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 4.233$, $df = 1, 184$, $p = .041$), and there was a statistically significant main effect for serving a mission ($F_{\text{mission}} = 7.298$, $df = 1, 184$, $p = .008$). There was not a statistically significant main effect for gender ($F_{\text{gender}} = 3.485$, $df = 1, 184$, $p = .064$). Effect sizes were small for both mission and gender ($\eta_p^2 = .038$; $\eta_p^2 = .064$), and observed power was .766 for mission and .459 for gender.

14) Ecumenical Worldview. A factorial ANOVA was conducted to determine if mean score for ecumenical worldview for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.242) and kurtosis (-.263) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with one outlier) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 183) = 1.264$, $p = .288$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was not statistically significant ($F_{\text{interaction}} = 2.661$, $df = 1, 183$, $p = .105$). There was a statistically

significant main effect on serving a mission ($F_{mission} = 4.605, df = 1, 183, p = .033$), but there was not a statistically significant main effect for gender ($F_{gender} = .276, df = 1, 183, p = .600$). Effect sizes were small for both mission and gender ($\eta_p^2 = .025; \eta_p^2 = .002$). Observed power was .569 for mission and .082 for gender.

15) Religious Engagement. A factorial ANOVA was conducted to determine if mean score for religious engagement for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.327) and kurtosis (1.347) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with two outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(3, 180) = 4.778, p = .003$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was not statistically significant ($F_{interaction} = 3.746, df = 1, 180, p = .054$). There were statistically significant main effects for both serving a mission and gender ($F_{mission} = 22.007, df = 1, 180, p = .000; F_{gender} = 9.015, df = 1, 180, p = .003$). Effect sizes were small for both mission and gender ($\eta_p^2 = .109; \eta_p^2 = .048$), and observed power was .997 for mission and .848 for gender.

16) Religious Struggle. A factorial ANOVA was conducted to determine if mean score for religious struggle for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.950) suggests that normality may be a reasonable assumption, although kurtosis (2.111) suggests some higher than normal peaking in the distribution. This was also supported when examining the histogram. The boxplot suggested a relatively normal distributional shape (with two outliers) of the residuals. The Q-Q plot suggests normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 183) = 1.494, p = .218$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was statistically significant ($F_{\text{interaction}} = 6.697, df = 1, 183, p = .010$), and there were statistically significant main effects for both serving a mission and gender ($F_{\text{mission}} = 8.049, df = 1, 183, p = .005$; $F_{\text{gender}} = 4.054, df = 1, 183, p = .046$). Effect sizes were small for both mission and gender ($\eta_p^2 = .042$; $\eta_p^2 = .022$), and observed power was .806 for mission and .517 for gender.

17) Spiritual Quest. A factorial ANOVA was conducted to determine if mean score for spiritual quest for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and

met via the examination of the residuals. Skewness (-.145) and kurtosis (-.425) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 186) = .807, p = .492$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was not statistically significant ($F_{\text{interaction}} = .889, df = 1, 186, p = .347$), and there were no statistically significant main effects for either serving a mission or gender ($F_{\text{mission}} = .685, df = 1, 186, p = .409$; $F_{\text{gender}} = .450, df = 1, 186, p = .503$). Effect sizes were small for both mission and gender ($\eta_p^2 = .004$; $\eta_p^2 = .002$), and observed power .131 for mission and .102 for gender.

18) Psychological Well-being. A factorial ANOVA was conducted to determine if mean score for psychological well-being for students differed based on whether the student had served a religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.326) and kurtosis (.375) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with one outlier) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According

to Levene's test, the homogeneity of variance assumption was satisfied [$F(3, 188) = 1.224, p = .302$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix P shows that the interaction of serving a mission by gender was not statistically significant ($F_{\text{interaction}} = .002, df = 1, 188, p = .965$), the main effects were not statistically significant for either mission or gender ($F_{\text{mission}} = .956, df = 1, 188, p = .330$), and the main effects for gender was not statistically significant ($F_{\text{gender}} = 2.901, df = 1, 188, p = .054$). Effect sizes were small for both mission and gender ($\eta_p^2 = .005$; $\eta_p^2 = .020$), and observed power was .168 for mission and .487 for gender.

Appendix E: APA Write-Ups for Mormon Students Who Completed Missions

Combined Public and Private University. Is there a mean difference in student scores on the six measurement scales for students who have served Mormon missions based on how long they have been back from their missions and gender?

1) Equanimity. A factorial ANOVA was conducted to determine if the mean score for equanimity for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.529) and kurtosis (-.796) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 165) = 1.872, p = .059$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 12 shows that the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant ($F_{integration} =$

.647, $df = 1, 165$, $p = .630$; $F_{tb} = .914$, $df = 1, 165$, $p = .457$; $F_{gender} = .101$, $df = 1, 165$, $p = .751$). Effect sizes were small for both time back and gender ($\eta_p^2 = .022$; $\eta_p^2 = .001$), and observed power was .286 for time back and .062 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

2) Ecumenical Worldview. A factorial ANOVA was conducted to determine if the mean score for ecumenical worldview for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.229) and kurtosis (-.389) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with one outlier) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 169) = 1.911$, $p = .053$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 12 shows that the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant ($F_{integration} =$

1.379, $df = 4, 169$, $p = .243$; $F_{tb} = 1.130$, $df = 4, 169$, $p = .344$; $F_{gender} = .100$, $df = 1, 169$, $p = .243$). Effect sizes were small for both time back and gender ($\eta_p^2 = .026$; $\eta_p^2 = .001$), and observed power was .350 for time back and .061 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

3) Religious Engagement. A factorial ANOVA was conducted to determine if the mean score for religious engagement for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.152) and kurtosis (.398) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 158) = 1.229$, $p = .281$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 12 shows that the interaction of time back from mission by gender was not statistically significant ($F_{interaction} = 2.083$, $df = 4, 158$, $p = .085$), and there was not a

statistically significant main effect for gender ($F_{gender} = .739, df = 1, 158, p = .391$).

There was a statistically significant main effect for time back from mission ($F_{mission} = 3.087, df = 4, 158, p = .018$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .072; \eta_p^2 = .005$). Observed power was .802 for time back from mission and .137 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

4) Religious Struggle. A factorial ANOVA was conducted to determine if the mean score for religious struggle for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.444) and kurtosis (-.096) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(9, 163) = 2.953, p = .003$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 12 shows that the interaction of time back from mission by gender was not statistically significant ($F_{\text{interaction}} = 1.958, df = 4, 163, p = .103$). There were not statistically significant main effects for both time back from mission and gender ($F_{\text{tb}} = 2.952, df = 4, 163, p = .022$; $F_{\text{gender}} = 4.506, df = 1, 163, p = .035$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .068$; $\eta_p^2 = .027$). Observed power was .782 for time back from mission and .560 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

5) Spiritual Quest. A factorial ANOVA was conducted to determine if the mean score for spiritual quest for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.152) and kurtosis (.398) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 167) = 1.490, p = .155$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random

display of points around zero provided further evidence that the assumption of independence was met.

Table 12 shows that the interaction of time back from mission by gender was not statistically significant ($F_{\text{interaction}} = .374, df = 4, 167, p = .827$). There were no statistically significant main effects for either time back from mission or gender ($F_{\text{mission}} = .534, df = 4, 167, p = .711$; $F_{\text{gender}} = 1.141, df = 1, 167, p = .287$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .013$; $\eta_p^2 = .007$). Observed power was .177 for time back from mission and .186 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

6) Psychological Well-being. A factorial ANOVA was conducted to determine if the mean score for psychological well-being for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.372) and kurtosis (-.409) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 169) = 1.662, p = .104$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met.

Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Table 12 shows that the interaction of time back from mission by gender was not statistically significant ($F_{interaction} = .150, df = 4, 169, p = .963$), and there was not a statistically significant main effect for time back from mission ($F_{tb} = .286, df = 4, 169, p = .887$). There was a statistically significant main effect for gender ($F_{gender} = 8.616, df = 1, 169, p = .004$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .007$; $\eta_p^2 = .049$). Observed power was .112 for time back from mission and .831 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

Public University. Is there a mean difference in student scores on the six measurement scales for students who have served Mormon missions based on how long they have been back from their missions and gender?

7) Equanimity. A factorial ANOVA was conducted to determine if the mean score for equanimity for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.842) and kurtosis (.154) statistics suggested that normality was a reasonable

assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(9, 89) = 2.086, p = .039$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant ($F_{\text{interaction}} = 1.675, df = 4, 89, p = .163$; $F_{\text{tb}} = .340, df = 4, 89, p = .850$; $F_{\text{gender}} = .267, df = 1, 89, p = .163$). Effect sizes were small for both time back and gender ($\eta_p^2 = .015$; $\eta_p^2 = .003$), and observed power was .124 for time back and .080 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

8) Ecumenical Worldview. A factorial ANOVA was conducted to determine if the mean score for ecumenical worldview for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.155) and kurtosis (-.641) statistics suggested that normality

was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 88) = 2.069, p = .041$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant ($F_{integration} = 1.440, df = 4, 88, p = .227$; $F_{tb} = 2.221, df = 4, 88, p = .073$; $F_{gender} = .139, df = 1, 88, p = .711$). Effect sizes were small for both time back and gender ($\eta_p^2 = .096$; $\eta_p^2 = .002$), and observed power was .630 for time back and .066 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed that the 13-24 month time back had a significantly lower ecumenical worldview score than the over 36 month time back. There were no statistically significant differences in any of the other levels of time back ($p < .05$). More specifically, Group 3 (13-24 months; $M = 37.185, SD = 2.8828$) and Group 5 (more than 36 months; $M = 39.304, SD = 2.6013$) were found to be significantly different ($p < .05$). In other words, students who had been back from their missions

between 13 to 24 months, scored lower in ecumenical worldview than students who had been back more than 36 months.

9) Religious Engagement. A factorial ANOVA was conducted to determine if the mean score for religious engagement for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.101) and kurtosis (.252) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with two outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 84) = 1.440, p = .184$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant ($F_{integration} = 1.915, df = 4, 84, p = .115$; $F_{tb} = 1.331, df = 4, 84, p = .265$; $F_{gender} = .147, df = 1, 84, p = .703$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .060$; $\eta_p^2 = .002$). Observed power was .388 for time back from mission and .067 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect

of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

10) Religious Struggle. A factorial ANOVA was conducted to determine if the mean score for religious struggle for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.669) and kurtosis (.017) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(9, 86) = 2.535, p = .012$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender was statistically significant ($F_{interaction} = 10.576, df = 4, 86, p = .044$). There were not statistically significant main effects for either time back from mission or gender ($F_{tb} = .399, df = 4, 86, p = .809$; $F_{gender} = .559, df = 1, 86, p = .457$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .018$; $\eta_p^2 = .006$). Observed power was .138 for time back from mission and .115 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

11) Spiritual Quest. A factorial ANOVA was conducted to determine if the mean score for spiritual quest for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.630) and kurtosis (.542) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with two outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 90) = 1.797, p = .080$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender was not statistically significant ($F_{\text{interaction}} = .852, df = 4, 90, p = .496$). There were no statistically significant main effects for either time back from mission or gender ($F_{\text{mission}} = .288, df = 4, 90, p = .885; F_{\text{gender}} = 2.059, df = 1, 90, p = .155$). Effect sizes were small

for both time back from mission and gender ($\eta_p^2 = .013$; $\eta_p^2 = .022$). Observed power was .111 for time back from mission and .295 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

12) Psychological Well-being. A factorial ANOVA was conducted to determine if the mean score for psychological well-being for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.169) and kurtosis (-.350) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 90) = .749, p = .064$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender was not statistically significant ($F_{interaction} = .999, df = 4, 90, p = .412$), and there was not a statistically significant main effect for time back from mission ($F_{tb} = .627, df = 4, 90, p =$

.644). There was a statistically significant main effect for gender ($F_{gender} = 5.844$, $df = 1$, 90 , $p = .018$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .027$; $\eta_p^2 = .061$). Observed power was .199 for time back from mission and .667 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

Private University. Is there a mean difference in student scores on the six measurement scales for students who have served Mormon missions based on how long they have been back from their missions and gender?

13) Equanimity. A factorial ANOVA was conducted to determine if the mean score for equanimity for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.233) and kurtosis (-.765) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 69) = 1.460$, $p = .181$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random

display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant ($F_{integration} = .716, df = 4, 69, p = .584$; $F_{tb} = 1.593, df = 4, 69, p = .186$; $F_{gender} = .174, df = 4, 69, p = .678$). Effect sizes were small for both time back and gender ($\eta_p^2 = .085$; $\eta_p^2 = .003$), and observed power for time back was .467 and .070 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

14) Ecumenical Worldview. A factorial ANOVA was conducted to determine if the mean score for ecumenical worldview for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.117) and kurtosis (-.394) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outlier) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 69) = 1.004, p = .446$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random

display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender and the main effect for both time back and gender were not statistically significant ($F_{integration} = .575, df = 4, 69, p = .682$; $F_{tb} = .305, df = 4, 69, p = .874$; $F_{gender} = 1.192, df = 1, 69, p = .279$). Effect sizes were small for both time back and gender ($\eta_p^2 = .017$; $\eta_p^2 = .017$), and observed power was .114 for time back and .190 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

15) Religious Engagement. A factorial ANOVA was conducted to determine if the mean score for religious engagement for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.073) and kurtosis (-.049) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was satisfied [$F(9, 66) = 1.416, p = .201$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were

reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender was not statistically significant ($F_{\text{interaction}} = .848$, $df = 4, 66$, $p = .500$), and there was not a statistically significant main effect for time back from mission or gender ($F_{\text{mission}} = .353$, $df = 4, 66$, $p = .841$; $F_{\text{gender}} = .981$, $df = 1, 66$, $p = .326$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .021$; $\eta_p^2 = .015$). Observed power was .125 for time back from mission and .164 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

16) Religious Struggle. A factorial ANOVA was conducted to determine if the mean score for religious struggle for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.556) and kurtosis (-.229) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(9, 68) = 2.343$, $p = .023$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of

residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender was not statistically significant ($F_{\text{interaction}} = 1.868, df = 4, 68, p = .126$). There was a statistically significant main effect for time back from mission ($F_{\text{tb}} = 2.745, df = 4, 68, p = .035$), although not a statistically significant main effect for gender ($F_{\text{gender}} = .006, df = 1, 68, p = .938$). Effect size was medium for time back from mission ($\eta_p^2 = .139$) and small gender ($\eta_p^2 = .000$). Observed power was .728 for time back from mission and .051 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

17) Spiritual Quest. A factorial ANOVA was conducted to determine if the mean score for spiritual quest for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (.086) and kurtosis (-.637) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was

satisfied [$F(9, 69) = 1.140, p = .348$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender was not statistically significant ($F_{\text{interaction}} = .189, df = 4, 69, p = .943$). There were no statistically significant main effects for either time back from mission or gender ($F_{\text{mission}} = .344, df = 4, 69, p = .847$; $F_{\text{gender}} = .002, df = 1, 69, p = .966$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .020$; $\eta_p^2 = .000$). Observed power was .123 for time back from mission and .050 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

18) Psychological Well-being. A factorial ANOVA was conducted to determine if the mean score for psychological well-being for students who had served missions differed based on how long since the student had returned from their religious mission and the student's gender. The assumption of normality was tested and met via the examination of the residuals. Skewness (-.318) and kurtosis (-.458) statistics suggested that normality was a reasonable assumption. The boxplot suggested a relatively normal distributional shape (with no outliers) of the residuals. The Q-Q plot and histogram

suggested normality was reasonable. According to Levene's test, the homogeneity of variance assumption was not satisfied [$F(9, 69) = 3.584, p = .001$]. Random assignment of individuals to groups helped ensure that the assumption of independence was met. Additionally, scatterplots of residuals against the levels of the independent variables were reviewed. A random display of points around zero provided further evidence that the assumption of independence was met.

Appendix R shows that the interaction of time back from mission by gender was not statistically significant ($F_{\text{integration}} = .472, df = 4, 69, p = .756$), and there was not a statistically significant main effect for either time back from mission or gender ($F_{\text{tb}} = .532, df = 4, 69, p = .713$; $F_{\text{gender}} = .653, df = 1, 69, p = .422$). Effect sizes were small for both time back from mission and gender ($\eta_p^2 = .030$; $\eta_p^2 = .009$). Observed power was .171 for time back from mission and .125 for gender.

Post hoc analyses were conducted on the levels of time back from mission. Tukey HSD tests were conducted on all possible pairwise contrasts. For the main effect of time back, Tukey HSD post hoc comparisons revealed there were no statistically significant differences in any of the levels of time back ($p < .05$).

Appendix F: Summary of Major Assumptions for Research Question 1 on Public and Private Universities

	N	Independence Scatter Graph Residual	Homogeneity of Variances Levene's Test (p-value)	Skewness	Normality Kurtosis	Outliers
Public School						
- Equanimity	180	Y	0.287	-0.654	-0.083	0
- Ecumenical Worldview	178	Y	0.172	-0.174	-0.232	0
- Religious Engagement	168	Y	0.000	-0.353	-0.177	0
- Religious Struggle	173	Y	0.020	0.779	-0.024	0
- Spiritual Quest	181	Y	0.833	-0.465	0.096	3
- Psychological Wellbeing	181	Y	0.142	-0.172	-0.743	0
Private School						
- Equanimity	188	Y	0.150	-0.557	-0.505	0
- Ecumenical Worldview	187	Y	0.288	-0.242	-0.263	1
- Religious Engagement	184	Y	0.003	-0.327	1.347	2
- Religious Struggle	187	Y	0.218	0.950	2.111	2
- Spiritual Quest	190	Y	0.492	-0.145	-0.425	0
- Psychological Wellbeing	191	Y	0.302	0.326	0.375	0

Appendix G: Main Effects for Research Question 1 Public and Private Universities

Public School	df	F	Sig	Partial Eta Squared	Observed Power
Main Effect - Mission Service					
- Equanimity	1	29.257	0.000	0.143	1.000
- Ecumenical Worldview	1	32.881	0.000	0.159	1.000
- Religious Engagement	1	26.363	0.000	0.138	0.999
- Religious Struggle	1	6.094	0.015	0.035	0.690
- Spiritual Quest	1	25.968	0.000	0.128	0.999
- Psychological Wellbeing	1	4.991	0.027	0.027	0.603
Private School	df	F	Sig	Partial Eta Squared	Observed Power
Main Effect - Mission Service					
- Equanimity	1	7.298	0.008	0.038	0.766
- Ecumenical Worldview	1	4.605	0.033	0.025	0.569
- Religious Engagement	1	22.007	0.000	0.109	0.997
- Religious Struggle	1	8.049	0.005	0.042	0.806
- Spiritual Quest	1	0.685	0.409	0.004	0.131
- Psychological Wellbeing	1	0.956	0.330	0.005	0.163

Appendix H: Means, Standard Error, Bounds and Astin Ranges for Research Question 1 Public and Private University

Public School	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range	Astin's High-Range
Equanimity							
- No Missionary Service	81	11.738	0.272	11.201	12.275	5-9	14-15
- Missionary Service	99	13.538	0.192	13.160	13.916	5-9	14-15
Ecumenical Worldview							
- No Missionary Service	79	34.866	0.468	33.942	35.791	12-29	38-45
- Missionary Service	99	38.114	0.318	37.485	38.742	12-29	38-45
Religious Engagement							
- No Missionary Service	71	29.848	0.645	28.575	31.122	9-13	29-44
- Missionary Service	97	33.909	0.458	33.005	34.813	9-13	29-44
Religious Struggle							
- No Missionary Service	76	10.911	0.385	10.150	11.672	7-10	16-21
- Missionary Service	97	9.748	0.271	9.212	10.293	7-10	16-21
Spiritual Quest							
- No Missionary Service	81	25.151	0.522	24.121	26.181	9-19	26-34
- Missionary Service	100	28.403	0.367	27.679	29.126	9-19	26-34
Psychological Wellbeing							
- No Missionary Service	81	8.497	0.334	7.838	9.156	N/A	N/A
- Missionary Service	100	9.409	0.235	8.946	9.872	N/A	N/A
Private School	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range	Astin's High-Range
Equanimity							
- No Missionary Service	109	12.308	0.277	11.762	12.854	5-9	14-15
- Missionary Service	79	13.233	0.202	12.835	13.630	5-9	14-15
Ecumenical Worldview							
- No Missionary Service	108	36.700	0.457	35.799	37.601	12-29	38-45
- Missionary Service	79	37.912	0.333	37.256	38.569	12-29	38-45
Religious Engagement							
- No Missionary Service	108	32.559	0.566	31.442	33.675	9-13	29-44
- Missionary Service	76	35.865	0.420	35.036	36.694	9-13	29-44
Religious Struggle							
- No Missionary Service	110	10.616	0.325	9.976	11.257	7-10	16-21
- Missionary Service	77	9.470	0.240	8.996	9.944	7-10	16-21
Spiritual Quest							
- No Missionary Service	111	27.585	0.492	26.614	28.556	9-19	26-34
- Missionary Service	79	28.082	0.344	27.403	28.761	9-19	26-34
Psychological Wellbeing							
- No Missionary Service	113	9.758	0.181	9.400	10.116	N/A	N/A
- Missionary Service	79	9.978	0.132	9.716	10.239	N/A	N/A

Appendix I: Summary of Major Assumptions for Research Question 2 on Public and Private Universities

	N	Independence Scatter Graph Residual	Homogeneity of Variances Levene's Test (p-value)	Skewness	Normality Kurtosis	Outliers
Public School						
- Equanimity	99	Y	0.039	-0.842	0.154	0
- Ecumenical Worldview	98	Y	0.041	-0.155	-0.641	0
- Religious Engagement	94	Y	0.187	-0.101	0.252	2
- Religious Struggle	96	Y	0.012	0.669	0.017	0
- Spiritual Quest	100	Y	0.080	-0.630	0.542	2
- Psychological Wellbeing	100	Y	0.664	-0.169	-0.350	0
Private School						
- Equanimity	79	Y	0.181	-0.233	-0.765	0
- Ecumenical Worldview	79	Y	0.446	-0.117	-0.394	0
- Religious Engagement	76	Y	0.201	0.078	-0.049	0
- Religious Struggle	78	Y	0.023	0.556	-0.229	0
- Spiritual Quest	79	Y	0.348	0.086	-0.637	0
- Psychological Wellbeing	79	Y	0.001	-0.318	-0.458	0

Appendix J: Main Effects for Research Question 2 for Public and Private Universities

Public School	df	F	Sig	Partial Eta Squared	Observed Power
Main Effect - Time Since Mission					
- Equanimity	4	0.340	0.850	0.015	0.124
- Ecumenical Worldview	4	2.221	0.073	0.092	0.630
- Religious Engagement	4	1.331	0.265	0.060	0.399
- Religious Struggle	4	0.399	0.809	0.018	0.138
- Spiritual Quest	4	0.288	0.885	0.013	0.111
- Psychological Wellbeing	4	0.627	0.644	0.027	0.199
Private School	df	F	Sig	Partial Eta Squared	Observed Power
Main Effect - Time Since Mission					
- Equanimity	4	1.593	0.186	0.085	0.467
- Ecumenical Worldview	4	0.305	0.874	0.017	0.114
- Religious Engagement	4	0.353	0.841	0.021	0.125
- Religious Struggle	4	2.745	0.035	0.139	0.728
- Spiritual Quest	4	0.344	0.847	0.020	0.123
- Psychological Wellbeing	4	0.532	0.713	0.030	0.171

Appendix K: Means, Standard Errors, Bounds and Ranges for Research Question 2 Public and Private Universities

Public School	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity							
-- Less than 6 month	15	13.769	0.622	12.533	15.006		
-- 6-12 months	14	13.844	0.457	12.936	14.752		
-- 13-24 months	27	13.357	0.316	12.730	13.984		
-- 25-36 months	19	13.798	0.390	13.023	14.572		
-- More than 36 months	24	13.444	0.386	12.677	14.212		
- Ecumenical Worldview						12-29	38-45
-- Less than 6 month	15	37.481	0.995	35.504	39.458		
-- 6-12 months	14	37.756	0.731	36.304	39.207		
-- 13-24 months	27	37.184	0.504	36.182	38.187		
-- 25-36 months	19	38.774	0.623	37.536	40.012		
-- More than 36 months	23	39.314	0.622	38.078	40.550		
- Religious Engagement						9-13	29-44
-- Less than 6 month	14	35.500	1.203	33.108	37.892		
-- 6-12 months	14	35.400	0.879	33.653	37.147		
-- 13-24 months	24	33.902	0.645	32.619	35.185		
-- 25-36 months	19	33.119	0.749	31.629	34.609		
-- More than 36 months	23	34.128	0.796	32.544	35.711		
- Religious Struggle						7-10	16-21
-- Less than 6 month	15	8.673	0.772	7.138	10.208		
-- 6-12 months	14	9.678	0.567	8.551	10.805		
-- 13-24 months	26	9.589	0.400	8.794	10.384		
-- 25-36 months	19	9.613	0.483	8.652	10.574		
-- More than 36 months	22	9.800	0.517	8.772	10.828		
- Spiritual Quest						9-19	26-34
-- Less than 6 month	15	27.981	1.308	25.383	30.579		
-- 6-12 months	14	28.933	0.960	27.026	30.841		
-- 13-24 months	27	28.192	0.663	26.875	29.510		
-- 25-36 months	19	28.262	0.819	26.635	29.889		
-- More than 36 months	25	29.066	0.806	27.464	30.668		
- Psychological Wellbeing						N/A	N/A
-- Less than 6 month	15	9.154	0.816	7.534	10.774		
-- 6-12 months	14	9.989	0.599	8.799	11.179		
-- 13-24 months	27	9.703	0.414	8.882	10.525		
-- 25-36 months	19	8.917	0.511	7.902	9.931		
-- More than 36 months	25	9.289	0.503	8.291	10.288		

Private School	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity							
-- Less than 6 month	9	14.250	0.545	13.162	15.338		
-- 6-12 months	13	13.139	0.463	12.215	14.063		
-- 13-24 months	26	13.399	0.303	12.794	14.004		
-- 25-36 months	10	14.111	0.813	12.490	15.732		
-- More than 36 months	21	12.583	0.481	11.624	13.542		
- Ecumenical Worldview						12-29	38-45
-- Less than 6 month	9	38.083	0.941	36.205	39.961		
-- 6-12 months	13	38.347	0.800	36.751	39.943		
-- 13-24 months	26	37.625	0.524	36.580	38.670		
-- 25-36 months	10	36.889	1.403	34.089	39.689		
-- More than 36 months	21	38.139	0.830	36.483	39.795		
- Religious Engagement						9-13	29-44
-- Less than 6 month	9	37.167	1.086	34.998	39.335		
-- 6-12 months	12	36.313	0.940	34.435	38.190		
-- 13-24 months	26	35.958	0.604	34.752	37.165		
-- 25-36 months	9	35.25	1.629	31.998	38.502		
-- More than 36 months	20	35.843	0.962	33.923	37.763		
- Religious Struggle						7-10	16-21
-- Less than 6 month	9	9.000	0.666	7.672	10.328		
-- 6-12 months	12	10.063	0.577	8.912	11.213		
-- 13-24 months	26	8.970	0.370	8.231	9.709		
-- 25-36 months	10	8.444	0.992	6.464	10.425		
-- More than 36 months	21	10.972	0.587	9.801	12.144		
- Spiritual Quest						9-19	26-34
-- Less than 6 month	9	29.000	1.019	26.967	31.033		
-- 6-12 months	13	27.472	0.866	25.745	29.200		
-- 13-24 months	26	28.071	0.567	26.940	29.202		
-- 25-36 months	10	28.111	1.519	25.081	31.141		
-- More than 36 months	21	27.833	0.899	26.041	29.626		
- Psychological Wellbeing						N/A	N/A
-- Less than 6 month	9	10.250	0.780	8.693	11.807		
-- 6-12 months	13	9.236	0.663	7.913	10.559		
-- 13-24 months	24	9.405	0.434	8.539	10.271		
-- 25-36 months	10	10.611	1.163	8.290	12.932		
-- More than 36 months	21	9.278	0.688	7.905	10.651		

Appendix L: Comparison of Mission Service, Age, and Year in School

Combined Data Set	Levene's (p-value)	df	F	Sig	Partial Eta Squared	Observed Power
- Equanimity	0.001					
-- Main Effect - Mission Service		1	6.633	0.010	0.020	0.728
-- Main Effect - Age		3	0.412	0.744	0.004	0.132
-- Main Effect - School Year		6	1.013	0.417	0.018	0.400
-- Interaction - Mission Service, Age		3	0.695	0.556	0.006	0.197
-- Interaction - Mission Service, School Year		5	0.468	0.800	0.007	0.176
-- Interaction - Age, School Year		14	1.639	0.067	0.065	0.885
-- Interaction - Mission Service, Age, School Year		10	1.515	0.133	0.044	0.751
- Ecumenical Worldview	0.000					
-- Main Effect - Mission Service		1	4.710	0.031	0.014	0.581
-- Main Effect - Age		3	1.351	0.258	0.012	0.359
-- Main Effect - School Year		6	1.261	0.275	0.022	0.495
-- Interaction - Mission Service, Age		3	0.017	0.997	0.000	0.053
-- Interaction - Mission Service, School Year		5	0.523	0.759	0.008	0.194
-- Interaction - Age, School Year		14	1.461	0.124	0.058	0.836
-- Interaction - Mission Service, Age, School Year		10	1.397	0.180	0.041	0.708
- Religious Engagement	0.071					
-- Main Effect - Mission Service		1	5.227	0.023	0.016	0.625
-- Main Effect - Age		3	0.913	0.435	0.008	0.250
-- Main Effect - School Year		6	0.727	0.628	0.013	0.288
-- Interaction - Mission Service, Age		3	0.831	0.477	0.007	0.230
-- Interaction - Mission Service, School Year		5	0.743	0.592	0.011	0.267
-- Interaction - Age, School Year		14	1.373	0.164	0.055	0.806
-- Interaction - Mission Service, Age, School Year		10	0.741	0.685	0.022	0.395
- Religious Struggle	0.071					
-- Main Effect - Mission Service		1	1.188	0.276	0.004	0.192
-- Main Effect - Age		3	0.908	0.437	0.008	0.249
-- Main Effect - School Year		6	1.851	0.089	0.033	0.688
-- Interaction - Mission Service, Age		3	0.869	0.457	0.008	0.239
-- Interaction - Mission Service, School Year		5	1.847	0.103	0.027	0.628
-- Interaction - Age, School Year		14	0.767	0.705	0.032	0.491
-- Interaction - Mission Service, Age, School Year		10	0.756	0.671	0.022	0.399
- Spiritual Quest	0.005					
-- Main Effect - Mission Service		1	0.901	0.343	0.003	0.157
-- Main Effect - Age		3	0.236	0.872	0.002	0.094
-- Main Effect - School Year		6	1.015	0.416	0.018	0.401
-- Interaction - Mission Service, Age		3	0.335	0.800	0.003	0.115
-- Interaction - Mission Service, School Year		5	1.175	0.321	0.017	0.417
-- Interaction - Age, School Year		14	1.154	0.310	0.047	0.714
-- Interaction - Mission Service, Age, School Year		10	0.645	0.775	0.019	0.338
- Psychological Wellbeing	0.158					
-- Main Effect - Mission Service		1	20.439	0.000	0.058	0.995
-- Main Effect - Age		3	2.052	0.106	0.018	0.524
-- Main Effect - School Year		6	1.356	0.232	0.024	0.530
-- Interaction - Mission Service, Age		3	0.892	0.446	0.008	0.245
-- Interaction - Mission Service, School Year		5	0.810	0.543	0.012	0.291
-- Interaction - Age, School Year		14	0.648	0.823	0.027	0.412
-- Interaction - Mission Service, Age, School Year		10	1.031	0.416	0.030	0.544

Appendix M: Mission, Age Year in School Correlations for Public and Private Universities

Public University - All Mormon Students	N	Served Mission	Age	Year in School
- Equanimity	181	0.280**	0.022	-0.018
- Ecumenical Worldview	181	0.227**	0.072	0.022
- Religious Engagement	181	0.254**	-0.077	-0.040
- Religious Struggle	181	-0.200**	0.135	0.110
- Spiritual Quest	181	0.203**	-0.201	-0.083
- Psychological Wellbeing	181	0.249**	0.004	-0.077

Private University - All Mormon Students	N	Served Mission	Age	Year in School
- Equanimity	192	0.154**	-0.040	-0.101
- Ecumenical Worldview	192	0.139	0.101	-0.063
- Religious Engagement	192	0.194**	-0.032	-0.066
- Religious Struggle	192	-0.086	-0.065	-0.129
- Spiritual Quest	192	0.048	0.049	-0.029
- Psychological Wellbeing	192	-0.002	0.010	0.120

* Correlations significant at 0.05 level (2-tailed)

** Correlations significant at 0.01 level (2-tailed)

Appendix N: Comparison of Time Back from Mission, Age, and Year in School

Combined	Levene's (p-value)	df	F	Sig	Partial Eta Squared	Observed Power
- Equanimity	0.000					
-- Main Effect - Mission Return		4	1.591	0.180	0.045	0.481
-- Main Effect - Age		3	2.196	0.091	0.046	0.548
-- Main Effect - School Year		5	1.854	0.106	0.064	0.618
-- Interaction - MissionReturn, Age		5	0.836	0.526	0.03	0.293
-- Interaction - Mission Return, School Year		11	0.831	0.610	0.063	0.445
-- Interaction - Age, School Year		9	0.831	0.589	0.052	0.399
-- Interaction - Mission Return, Age, School Year		4	0.478	0.752	0.014	0.161
- Ecumenical Worldview	0.077					
-- Main Effect - Mission Return		4	3.069	0.019	0.083	0.797
-- Main Effect - Age		3	0.688	0.561	0.015	0.193
-- Main Effect - School Year		5	1.896	0.099	0.065	0.629
-- Interaction - MissionReturn, Age		5	0.803	0.550	0.029	0.282
-- Interaction - Mission Return, School Year		11	0.604	0.823	0.047	0.319
-- Interaction - Age, School Year		9	0.666	0.738	0.042	0.318
-- Interaction - Mission Return, Age, School Year		4	1.811	0.130	0.051	0.540
- Religious Engagement	0.193					
-- Main Effect - Mission Return		4	0.176	0.950	0.005	0.087
-- Main Effect - Age		3	0.308	0.820	0.007	0.108
-- Main Effect - School Year		5	0.692	0.630	0.025	0.245
-- Interaction - MissionReturn, Age		5	0.261	0.934	0.010	0.113
-- Interaction - Mission Return, School Year		11	1.065	0.394	0.079	0.569
-- Interaction - Age, School Year		9	0.572	0.818	0.037	0.273
-- Interaction - Mission Return, Age, School Year		4	1.220	0.305	0.035	0.375
- Religious Struggle	0.007					
-- Main Effect - Mission Return		4	0.976	0.423	0.028	0.303
-- Main Effect - Age		3	0.201	0.896	0.004	0.087
-- Main Effect - School Year		5	0.981	0.432	0.035	0.342
-- Interaction - MissionReturn, Age		5	1.603	0.163	0.056	0.546
-- Interaction - Mission Return, School Year		11	0.836	0.604	0.063	0.448
-- Interaction - Age, School Year		9	0.754	0.659	0.048	0.361
-- Interaction - Mission Return, Age, School Year		4	1.178	0.323	0.033	0.362
- Spiritual Quest	0.067					
-- Main Effect - Mission Return		4	0.484	0.747	0.014	0.162
-- Main Effect - Age		3	0.673	0.570	0.015	0.189
-- Main Effect - School Year		5	2.169	0.061	0.074	0.698
-- Interaction - MissionReturn, Age		5	0.817	0.540	0.029	0.286
-- Interaction - Mission Return, School Year		11	0.922	0.521	0.069	0.495
-- Interaction - Age, School Year		9	0.622	0.777	0.040	0.296
-- Interaction - Mission Return, Age, School Year		4	0.345	0.847	0.010	0.126
- Psychological Wellbeing	0.077					
-- Main Effect - Mission Return		4	0.699	0.594	0.020	0.222
-- Main Effect - Age		3	0.628	0.598	0.014	0.179
-- Main Effect - School Year		5	1.994	0.083	0.068	0.655
-- Interaction - MissionReturn, Age		5	0.464	0.802	0.017	0.172
-- Interaction - Mission Return, School Year		11	1.192	0.299	0.088	0.629
-- Interaction - Age, School Year		9	0.464	0.896	0.030	0.222
-- Interaction - Mission Return, Age, School Year		4	2.255	0.066	0.062	0.647

Appendix O: Mission, Age, and Year in School Correlations for Public and Private Universities

Public University - Missionary Students	N	Time Back from Mission	Age	Year in School
- Equanimity	100	0.061	-0.039	-0.071
- Ecumenical Worldview	100	0.107	0.042	0.079
- Religious Engagement	100	-0.210*	-0.074	-0.187
- Religious Struggle	100	0.202*	0.212*	0.214*
- Spiritual Quest	100	0.047	-0.014	-0.028
- Psychological Wellbeing	100	-0.112	-0.066	-0.102

Private University - Missionary Students	N	Time Back from Mission	Age	Year in School
- Equanimity	79	-0.195	-0.120	-0.216
- Ecumenical Worldview	79	-0.010	0.082	-0.009
- Religious Engagement	79	-0.153	-0.212	-0.177
- Religious Struggle	79	0.040	0.079	0.155
- Spiritual Quest	79	0.003	-0.031	-0.040
- Psychological Wellbeing	79	0.047	0.163	0.081

* Correlations significant at 0.05 level (2-tailed)

Appendix P: Main and Interaction Effects Based on Mission Service and Gender for Public and Private Universities

Public School	df	F	Sig	Partial Eta Squared	Observed Power
- Equanimity					
-- Main Effect - Mission Service	1	29.257	0.000	0.143	1.000
-- Main Effect - Gender	1	8.071	0.005	0.044	0.807
-- Interaction - Mission Service, Gender	1	8.866	0.003	0.048	0.842
- Ecumenical Worldview					
-- Main Effect - Mission Service	1	32.881	0.000	0.159	1.000
-- Main Effect - Gender	1	17.236	0.000	0.090	0.985
-- Interaction - Mission Service, Gender	1	15.295	0.000	0.081	0.973
- Religious Engagement					
-- Main Effect - Mission Service	1	26.363	0.000	0.138	0.999
-- Main Effect - Gender	1	21.983	0.000	0.118	0.997
-- Interaction - Mission Service, Gender	1	19.880	0.000	0.108	0.993
- Religious Struggle					
-- Main Effect - Mission Service	1	6.094	0.015	0.035	0.690
-- Main Effect - Gender	1	0.407	0.524	0.002	0.097
-- Interaction - Mission Service, Gender	1	5.533	0.020	0.032	0.648
- Spiritual Quest					
-- Main Effect - Mission Service	1	25.968	0.000	0.128	0.999
-- Main Effect - Gender	1	19.835	0.000	0.101	0.993
-- Interaction - Mission Service, Gender	1	7.678	0.006	0.042	0.787
- Psychological Wellbeing					
-- Main Effect - Mission Service	1	4.991	0.027	0.027	0.603
-- Main Effect - Gender	1	2.634	0.106	0.015	0.365
-- Interaction - Mission Service, Gender	1	2.018	0.157	0.011	0.293
Private School	df	F	Sig	Partial Eta Squared	Observed Power
- Equanimity					
-- Main Effect - Mission Service	1	7.298	0.008	0.038	0.766
-- Main Effect - Gender	1	3.485	0.064	0.019	0.459
-- Interaction - Mission Service, Gender	1	4.233	0.041	0.022	0.535
- Ecumenical Worldview					
-- Main Effect - Mission Service	1	4.605	0.033	0.025	0.569
-- Main Effect - Gender	1	0.276	0.600	0.002	0.082
-- Interaction - Mission Service, Gender	1	2.661	0.105	0.014	0.368
- Religious Engagement					
-- Main Effect - Mission Service	1	22.007	0.000	0.109	0.997
-- Main Effect - Gender	1	9.015	0.003	0.048	0.848
-- Interaction - Mission Service, Gender	1	3.746	0.054	0.020	0.486
- Religious Struggle					
-- Main Effect - Mission Service	1	8.049	0.005	0.042	0.806
-- Main Effect - Gender	1	4.054	0.046	0.022	0.517
-- Interaction - Mission Service, Gender	1	6.697	0.010	0.035	0.730
- Spiritual Quest					
-- Main Effect - Mission Service	1	0.685	0.409	0.004	0.131
-- Main Effect - Gender	1	0.450	0.503	0.002	0.102
-- Interaction - Mission Service, Gender	1	0.889	0.347	0.005	0.155
- Psychological Wellbeing					
-- Main Effect - Mission Service	1	0.956	0.330	0.005	0.163
-- Main Effect - Gender	1	3.753	0.054	0.020	0.487
-- Interaction - Mission Service, Gender	1	0.002	0.965	0.000	0.050

Appendix Q: Means, Standard Error, Bounds, and Astin Ranges for Mission Service and Gender for Public and Private Universities

Public School	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity							
-- No Mission Service - Males	13	10.769	0.499	9.875	11.753		
-- No Mission Service - Females	68	12.706	0.218	12.276	13.136		
-- Mission Service - Males	66	13.561	0.212	13.124	13.997		
-- Mission Service - Females	33	13.515	0.313	12.897	14.133		
- Ecumenical Worldview						12-29	38-45
-- No Mission Service - Males	12	32.583	0.862	30.881	34.286		
-- No Mission Service - Females	67	37.149	0.365	36.429	37.870		
-- Mission Service - Males	66	38.045	0.368	37.320	38.771		
-- Mission Service - Females	33	38.182	0.520	37.155	39.208		
- Religious Engagement						9-13	29-44
-- No Mission Service - Males	13	26.231	1.166	23.928	28.533		
-- No Mission Service - Females	58	33.466	0.552	32.376	34.556		
-- Mission Service - Males	66	33.818	0.517	32.796	34.840		
-- Mission Service - Females	31	34.000	0.755	32.509	35.491		
- Religious Struggle						7-10	16-21
-- No Mission Service - Males	13	11.615	0.702	10.230	13.001		
-- No Mission Service - Females	63	10.206	0.319	9.577	10.836		
-- Mission Service - Males	64	9.344	0.316	8.719	9.968		
-- Mission Service - Females	33	10.152	0.440	9.282	11.021		
- Spiritual Quest						9-19	26-34
-- No Mission Service - Males	13	22.846	0.957	20.958	24.734		
-- No Mission Service - Females	68	27.456	0.418	26.630	28.281		
-- Mission Service - Males	67	27.866	0.421	27.034	28.697		
-- Mission Service - Females	33	28.939	0.600	27.754	30.124		
- Psychological Wellbeing						N/A	N/A
-- No Mission Service - Males	13	8.538	0.612	7.331	9.746		
-- No Mission Service - Females	68	8.456	0.268	7.929	8.984		
-- Mission Service - Males	67	10.030	0.270	9.498	10.562		
-- Mission Service - Females	33	8.788	0.384	8.030	9.546		
Private School	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity							
-- No Mission Service - Males	11	11.636	0.525	10.602	12.671		
-- No Mission Service - Females	98	12.980	0.176	12.633	13.326		
-- Mission Service - Males	49	13.265	0.249	12.775	13.756		
-- Mission Service - Females	30	13.200	0.318	12.573	13.827		
- Ecumenical Worldview						12-29	38-45
-- No Mission Service - Males	11	36.091	0.865	34.382	37.798		
-- No Mission Service - Females	97	37.309	0.291	36.734	37.884		
-- Mission Service - Males	49	38.224	0.410	37.416	39.033		
-- Mission Service - Females	30	37.600	0.524	36.566	38.634		
- Religious Engagement						9-13	29-44
-- No Mission Service - Males	11	30.818	1.073	28.701	32.935		
-- No Mission Service - Females	97	34.299	0.361	33.586	35.012		
-- Mission Service - Males	47	35.489	0.519	34.465	36.514		
-- Mission Service - Females	29	36.241	0.661	34.938	37.545		
- Religious Struggle						7-10	16-21
-- No Mission Service - Males	11	11.545	0.616	10.330	12.761		
-- No Mission Service - Females	99	9.687	0.205	9.282	10.092		
-- Mission Service - Males	48	9.354	0.295	8.772	9.936		
-- Mission Service - Females	29	9.586	0.379	8.838	10.335		
- Spiritual Quest						9-19	26-34
-- No Mission Service - Males	10	27.100	0.939	25.247	28.953		
-- No Mission Service - Females	101	28.069	0.295	27.486	28.652		
-- Mission Service - Males	49	28.163	0.424	27.326	29.000		
-- Mission Service - Females	30	28.000	0.542	26.930	29.070		
- Psychological Wellbeing						N/A	N/A
-- No Mission Service - Males	11	9.545	0.345	8.866	10.225		
-- No Mission Service - Females	102	9.971	0.113	9.747	10.194		
-- Mission Service - Males	49	9.755	0.163	9.433	10.077		
-- Mission Service - Females	30	10.200	0.209	9.788	10.612		

Appendix R: Main and Interaction Effects Based on Time Back from Mission and Gender for Public and Private Universities

Public School	df	F	Sig	Partial Eta Squared	Observed Power
- Equanimity					
-- Main Effect - Time Since Mission	4	0.340	0.850	0.015	0.124
-- Main Effect - Gender	1	0.267	0.607	0.003	0.080
-- Interaction - Time Since Mission, Gender	4	1.675	0.163	0.070	0.496
- Ecumenical Worldview					
-- Main Effect - Time Since Mission	4	2.221	0.073	0.092	0.630
-- Main Effect - Gender	1	0.138	0.711	0.002	0.066
-- Interaction - Time Since Mission, Gender	4	1.440	0.227	0.061	0.431
- Religious Engagement					
-- Main Effect - Time Since Mission	4	1.331	0.265	0.060	0.399
-- Main Effect - Gender	1	0.147	0.703	0.002	0.067
-- Interaction - Time Since Mission, Gender	4	1.915	0.115	0.084	0.556
- Religious Struggle					
-- Main Effect - Time Since Mission	4	0.399	0.809	0.018	0.138
-- Main Effect - Gender	1	0.559	0.457	0.006	0.115
-- Interaction - Time Since Mission, Gender	4	2.559	0.044	0.106	0.700
- Spiritual Quest					
-- Main Effect - Time Since Mission	4	0.288	0.885	0.013	0.111
-- Main Effect - Gender	1	2.059	0.155	0.022	0.295
-- Interaction - Time Since Mission, Gender	4	0.852	0.496	0.036	0.262
- Psychological Wellbeing					
-- Main Effect - Time Since Mission	4	0.627	0.644	0.027	0.199
-- Main Effect - Gender	1	5.844	0.018	0.061	0.667
-- Interaction - Time Since Mission, Gender	4	0.999	0.412	0.043	0.304
Private School	df	F	Sig	Partial Eta Squared	Observed Power
- Equanimity					
-- Main Effect - Time Since Mission	4	1.593	0.186	0.085	0.467
-- Main Effect - Gender	1	0.174	0.678	0.003	0.070
-- Interaction - Time Since Mission, Gender	4	0.716	0.584	0.040	0.220
- Ecumenical Worldview					
-- Main Effect - Time Since Mission	4	0.305	0.874	0.017	0.114
-- Main Effect - Gender	1	1.192	0.279	0.017	0.190
-- Interaction - Time Since Mission, Gender	4	0.572	0.682	0.032	0.182
- Religious Engagement					
-- Main Effect - Time Since Mission	4	0.353	0.841	0.021	0.125
-- Main Effect - Gender	1	0.981	0.326	0.015	0.164
-- Interaction - Time Since Mission, Gender	4	0.848	0.500	0.049	0.256
- Religious Struggle					
-- Main Effect - Time Since Mission	4	2.745	0.035	0.139	0.728
-- Main Effect - Gender	1	0.006	0.938	0.000	0.051
-- Interaction - Time Since Mission, Gender	4	1.868	0.126	0.099	0.538
- Spiritual Quest					
-- Main Effect - Time Since Mission	4	0.344	0.847	0.020	0.123
-- Main Effect - Gender	1	0.002	0.966	0.000	0.050
-- Interaction - Time Since Mission, Gender	4	0.189	0.943	0.011	0.088
- Psychological Wellbeing					
-- Main Effect - Time Since Mission	4	0.532	0.713	0.030	0.171
-- Main Effect - Gender	1	0.653	0.422	0.009	0.125
-- Interaction - Time Since Mission, Gender	4	0.472	0.756	0.027	0.155

Appendix S: Means, Standard Error, Bounds, and Astin Ranges for Time Back From Mission and Gender for Public and Private Universities

Public School	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity - Males							
-- Less than 6 month	13	13.538	0.454	12.636	14.441		
-- 6-12 months	9	12.889	0.549	11.804	13.974		
-- 13-24 months	14	13.714	0.438	12.844	14.584		
-- 25-36 months	12	14.167	0.473	13.227	15.106		
-- More than 36 months	18	13.389	0.386	12.622	14.156		
- Equanimity - Females						5-9	14-15
-- Less than 6 month	2	14.000	1.159	11.698	16.302		
-- 6-12 months	5	14.800	0.733	13.344	16.256		
-- 13-24 months	13	13.000	0.454	12.097	13.903		
-- 25-36 months	7	13.429	0.619	12.198	14.659		
-- More than 36 months	6	13.500	0.669	12.171	14.829		
- Ecumenical Worldview - Males						12-29	38-45
-- Less than 6 month	13	38.462	0.727	37.018	39.905		
-- 6-12 months	9	36.111	0.873	34.376	37.846		
-- 13-24 months	14	37.214	0.700	35.823	38.606		
-- 25-36 months	12	38.833	0.756	37.330	40.336		
-- More than 36 months	17	39.294	0.635	38.032	40.557		
- Ecumenical Worldview - Females						12-29	38-45
-- Less than 6 month	2	36.500	1.852	32.819	40.181		
-- 6-12 months	5	39.400	1.171	37.072	41.728		
-- 13-24 months	13	37.154	0.727	35.710	38.598		
-- 25-36 months	7	38.714	0.990	36.747	40.682		
-- More than 36 months	6	39.333	1.069	37.208	41.459		
- Religious Engagement - Males						9-13	29-44
-- Less than 6 month	12	35.500	0.909	33.692	37.308		
-- 6-12 months	9	35.000	1.050	32.912	37.088		
-- 13-24 months	13	33.077	0.874	31.340	34.814		
-- 25-36 months	12	34.667	0.909	32.858	36.475		
-- More than 36 months	18	33.056	0.742	31.579	34.532		
- Religious Engagement - Females						9-13	29-44
-- Less than 6 month	2	35.500	2.227	31.070	39.930		
-- 6-12 months	5	35.800	1.409	32.999	38.601		
-- 13-24 months	11	34.727	0.950	32.839	36.616		
-- 25-36 months	7	31.571	1.191	29.204	33.939		
-- More than 36 months	5	35.200	1.409	32.399	38.001		

- Religious Struggle - Males						7-10	16-21
-- Less than 6 month	13	8.846	0.564	7.725	9.967		
-- 6-12 months	9	9.556	0.678	8.209	10.903		
-- 13-24 months	14	9.929	0.543	8.849	11.009		
-- 25-36 months	12	8.083	0.587	6.917	9.250		
-- More than 36 months	17	10.000	0.493	9.020	10.980		
- Religious Struggle - Females						7-10	16-21
-- Less than 6 month	2	8.500	1.437	5.643	11.357		
-- 6-12 months	5	9.800	0.909	7.993	11.607		
-- 13-24 months	12	9.250	0.587	8.083	10.417		
-- 25-36 months	7	11.143	0.768	9.615	12.670		
-- More than 36 months	5	9.600	0.909	7.793	11.407		
- Spiritual Quest - Males						9-19	26-34
-- Less than 6 month	13	27.462	0.955	25.564	29.359		
-- 6-12 months	9	27.667	1.148	25.386	29.947		
-- 13-24 months	14	28.000	0.920	26.172	29.828		
-- 25-36 months	12	28.667	0.994	26.692	30.641		
-- More than 36 months	19	27.632	0.790	26.062	29.201		
- Spiritual Quest - Females						9-19	26-34
-- Less than 6 month	2	28.500	2.435	23.663	33.337		
-- 6-12 months	5	30.200	1.540	27.141	33.259		
-- 13-24 months	13	28.385	0.955	26.487	30.282		
-- 25-36 months	7	27.857	1.301	25.272	30.443		
-- More than 36 months	6	30.500	1.406	27.707	33.293		
- Psychological Wellbeing - Males						N/A	N/A
-- Less than 6 month	13	10.308	0.596	9.124	11.491		
-- 6-12 months	9	9.778	0.716	8.356	11.200		
-- 13-24 months	14	10.714	0.574	9.574	11.855		
-- 25-36 months	12	9.833	0.620	8.602	11.065		
-- More than 36 months	19	9.579	0.493	8.600	10.558		
- Psychological Wellbeing - Females						N/A	N/A
-- Less than 6 month	2	8.000	1.518	4.983	11.017		
-- 6-12 months	5	10.200	0.960	8.292	12.108		
-- 13-24 months	13	8.692	0.596	7.501	9.876		
-- 25-36 months	7	8.000	0.812	6.387	9.613		
-- More than 36 months	6	9.000	0.877	7.259	10.742		

Private School	N	Mean	Std Error	Lower Bound	Upper Bound	Astin's Low-Range 5-9	Astin's High-Range 14-15
- Equanimity - Males							
-- Less than 6 month	6	13.833	0.629	12.578	15.089		
-- 6-12 months	4	13.500	0.771	11.962	15.038		
-- 13-24 months	12	13.583	0.445	12.695	14.471		
-- 25-36 months	9	13.222	0.514	12.197	14.248		
-- More than 36 months	18	12.833	0.363	12.108	13.558		
- Equanimity - Females						5-9	14-15
-- Less than 6 month	3	14.667	0.890	12.891	16.443		
-- 6-12 months	9	12.778	0.514	11.752	13.803		
-- 13-24 months	14	13.214	0.412	12.392	14.036		
-- 25-36 months	1	15.000	1.542	11.924	18.076		
-- More than 36 months	3	12.333	0.890	10.557	14.109		
- Ecumenical Worldview - Males						12-29	38-45
-- Less than 6 month	6	38.167	1.087	35.998	40.335		
-- 6-12 months	4	38.250	1.331	35.594	40.906		
-- 13-24 months	12	38.250	0.769	36.717	39.783		
-- 25-36 months	9	38.778	0.888	37.007	40.548		
-- More than 36 months	18	37.944	0.628	36.692	39.196		
- Ecumenical Worldview - Males						12-29	38-45
-- Less than 6 month	3	38.000	1.537	34.933	41.067		
-- 6-12 months	9	38.444	0.888	36.674	40.215		
-- 13-24 months	14	37.000	0.712	35.580	38.420		
-- 25-36 months	1	35.000	2.663	29.688	40.312		
-- More than 36 months	3	38.333	1.537	35.266	41.400		
- Religious Engagement - Males						9-13	29-44
-- Less than 6 month	6	35.333	1.254	32.830	37.837		
-- 6-12 months	4	37.000	1.536	33.934	40.066		
-- 13-24 months	12	35.917	0.887	34.146	37.687		
-- 25-36 months	8	34.500	1.086	32.332	36.668		
-- More than 36 months	17	35.353	0.745	33.866	36.840		
- Religious Engagement - Females						9-13	29-44
-- Less than 6 month	3	39.000	1.773	35.459	42.541		
-- 6-12 months	8	35.625	1.086	33.457	37.793		
-- 13-24 months	14	36.000	0.821	34.361	37.639		
-- 25-36 months	1	36.000	3.072	29.867	42.133		
-- More than 36 months	3	36.333	1.773	32.793	39.874		

- Religious Struggle - Males						7-10	16-21
-- Less than 6 month	6	9.000	0.769	7.466	10.534		
-- 6-12 months	4	9.750	0.941	7.871	11.629		
-- 13-24 months	12	9.083	0.544	7.999	10.168		
-- 25-36 months	9	9.889	0.628	8.636	11.141		
-- More than 36 months	18	9.611	0.444	8.725	10.597		
- Religious Struggle - Females						7-10	16-21
-- Less than 6 month	3	9.000	1.087	6.832	11.169		
-- 6-12 months	8	10.375	0.666	9.047	11.703		
-- 13-24 months	14	8.857	0.503	7.853	9.861		
-- 25-36 months	1	7.000	1.883	3.343	10.757		
-- More than 36 months	3	12.333	1.087	10.164	14.503		
- Spiritual Quest - Males						9-19	26-34
-- Less than 6 month	6	28.333	1.177	25.986	30.681		
-- 6-12 months	4	27.500	1.441	24.625	30.375		
-- 13-24 months	12	28.000	0.832	26.340	29.660		
-- 25-36 months	9	28.222	0.961	26.306	30.139		
-- More than 36 months	18	28.333	0.679	26.978	29.689		
- Spiritual Quest - Females						9-19	26-34
-- Less than 6 month	3	29.667	1.664	26.347	32.986		
-- 6-12 months	9	27.444	0.961	25.528	29.361		
-- 13-24 months	14	28.143	0.770	26.606	29.680		
-- 25-36 months	1	28.000	2.882	22.250	33.750		
-- More than 36 months	3	27.333	1.664	24.014	30.653		
- Psychological Wellbeing - Males						N/A	N/A
-- Less than 6 month	6	10.167	0.901	8.369	11.964		
-- 6-12 months	4	10.250	1.104	8.048	12.452		
-- 13-24 months	12	9.667	0.637	8.395	10.938		
-- 25-36 months	9	10.222	0.736	8.754	11.690		
-- More than 36 months	18	9.889	0.520	8.851	10.927		
- Psychological Wellbeing - Females						N/A	N/A
-- Less than 6 month	3	10.333	1.274	7.791	12.876		
-- 6-12 months	9	8.222	0.736	6.754	9.690		
-- 13-24 months	12	9.143	0.590	7.966	10.320		
-- 25-36 months	1	11.000	2.207	6.597	15.403		
-- More than 36 months	3	8.667	1.274	6.124	11.209		

List of References

- Adams, T. B., Bezner, J. R., Drabbs, M. E., Zambarano, R. J., & Steinhardt, M. A. (2010). Conceptualization and measurement of the spiritual and psychological dimensions of wellness in a college population. *Journal of American College Health, 48*(4), 165-173.
- Ahrens, C. E., Abeling, S., Ahmad S., & Hinman, J. (2009). Spirituality and wellbeing: The relationship between religious coping and recovery from sexual assault. *Journal of Interpersonal Violence, 25*(7), 1242-1263.
doi:10.1177/0886260509340533
- Anand, C., Jones, J., & Gill, P. S. (2013). The relationship between spirituality, health and life satisfaction of undergraduate students in the UK: An online questionnaire study. *Journal of Religious Health, 54*, 160-171.
- Anye, E. T., Gallien, T. L., Bian, H., & Moulton, M. (2013). The relationship between spiritual wellbeing and health-related quality of life in college students. *Journal of American College Health, 61*(7), 414-421.
- Astin, A. W., Astin, H. S., & Lindholm, J. A. (2010). *Spirituality in higher education: Students' search for meaning and purpose*. Retrieved from <http://spirituality.ucla.edu>.
- Astin, A. W., Astin, H. S., & Lindholm, J. A. (2011b). *Cultivating the spirit: How college can enhance student's inner lives*. San Francisco, CA: Jossey-Bass.
- Astin, A. W., Astin, H. S., & Lindholm, J. A. (2011a). Assessing students' spiritual and religious qualities. *Journal of College Student Development, 2011*(Jan/Feb), 36-61.
- Bailey, K. G. D. (2012). Faith-learning integration, critical thinking skills, and student development in Christian education. *Journal of Research on Christian Education, 21*, 153-173.
- Barry, C., & Nelson, L. (2005). The role of religion in the transition to adulthood for young emerging adults. *Journal of Youth and Adolescence, 34*(3), 245-255.

- Bartz, J. D., Richards, P. S., Smith, T. B., & Fischer, L. (2008). A 17-year longitudinal study of religion and mental health in a Mormon sample. *Mental Health, Religion and Culture*, 13(7-8), 683-695.
- Berry, D. M., Bass, C. P., Forawi, W., Neuman, M., & Abdallah, N. (2011). Measuring religiosity/spirituality in diverse religious groups: A consideration of methods. *Journal of Religious Health*, 50, 841-851.
- Bobilya, A., Akey, L., & Mitchell, D. (2011). Outcomes of a spiritually focused wilderness orientation program. *Journal of Experiential Education*, 33, 301-322. doi:10.5193/JEE33.4.301
- Bowman, J., & Wessel, R. (2002). Big questions, worthy dreams: Mentoring young adults in their search for meaning, purpose, and faith. [Review of the book *Big questions, worthy dreams: Mentoring young adults in their search for meaning, purpose, and faith*, by S. D. Parks]. *Journal of College Student Development*, 43(3).
- Bowman, N. A., & Small, J. L. (2010). Do college students who identify with a privileged religion experience greater spiritual development? Exploring individual and institutional dynamics. *Research in Higher Education*, 51, 595-614.
- Braskamp, L., Trautvetter, L. C., & Ward K. (2008). Putting students first: Promoting lives of purpose and meaning. *About Campus*, March-April, 26-32.
- Brigham Young University. (2016). *Religions represented at BYU, 2002-2014*. Retrieved from <http://yfacts.byu.edu/Article?id=97>.
- Brown, D. R., Carney, J. S., Parrish, M. S., & Klem, J. L. (2013). Assessing spirituality: The relationship between spirituality and mental health. *Journal of Spirituality in Mental Health*, 15, 107-122.
- Bryant, A. (2007). Gender differences in spiritual development during the college years. *Sex Roles*, 56(11), 835-846.
- Bryant, A. N. (2011). The impact of campus context, college encounters, and religious/spiritual struggle on ecumenical worldview development. *Research in Higher Education*, 52, 441-459.
- Bryant, A. N., & Astin, H. S. (2008). The correlates of spiritual struggle during the college years. *Journal of Higher Education*, 79(1), 1-27.
- Byron, K., & Miller-Perrin, C. (2009). The value of life purpose: Purpose as a mediator of faith and wellbeing. *Journal of Positive Psychology*, 4(1), 64-70.

- Cannister, M. W. (1999). Mentoring and the spiritual wellbeing of late adolescents. *Adolescence*, 34, 769-779.
- Cartwright, K. B. (2001). Cognitive development theory and spiritual development. *Journal of Adult Development*, 8(4), 213-220.
- Casas, F., Gonzalez, M., Figuer, C., & Malo, S. (2009). Satisfaction with spirituality, satisfaction with religion and personal wellbeing among Spanish adolescents and young university students. *The Official Journal of the International Society for Quality-of-Life Studies*.
- Chan, C. H. Y., Chan, T. H. Y., Leung, P. P. Y., Brenner, M. J., Wong, V. P. Y., Leung, E. K. T., . . . Chan, C. L. W. (2014). Rethinking wellbeing in terms of affliction and equanimity: Development of a holistic wellbeing scale. *Journal of Ethnic and Cultural Diversity in Social Work*, 23(3), 289-308.
- Church of Jesus Christ of Latter-Day Saints, the. (2010). *Handbook 2: Administering the church (2010): Families and the church in God's plan*. Salt Lake City, UT: The Church of Jesus Christ of Latter-Day Saints.
- Clark, R. T. (2001). The law and spirituality: How the law supports and limits expression of spirituality on the college campus. *New Directions for Student Services*, 95, 37-46.
- Coomes, M. D. (2004). Understanding the historical and cultural influences that shape generations. *New Directions for Student Services*, 106, 17-31.
- Dalton, J. C. (2001). Career and calling: Finding a place for the spirit in work and community. *New Directions for Student Services*, 95, 17-25.
- Dalton, J. C., Eberhardt, D., & Crosby, P. C. (2006a). Creating and assessing student spirituality and initiatives in higher education. *Journal of College and Character*, 7(6), 1-4.
- Dalton, J. C., Eberhardt, D., & Crosby, P. C. (2006b). Integrating service and spirituality in college. *Journal of College and Character*, 8(1), 1-2.
- Desai, K. M., & Pargament, K. I. (2015). Predictors of growth and decline following spiritual struggles. *International Journal for the Psychology of Religion*, 25(1), 42-56.
- Diener, E., Fujita, F., Tay, L., & Biswas-Diener, R. (2012). Purpose, mood, and pleasure in predicting satisfaction judgments. *Social Indicators Research*, 105(3), 333-341.

- Droege, J. R., & Ferrari, J. R. (2012). Toward a new measure for faith and civic engagement: Exploring the structure of the FACE scale. *Christian Higher Education, 11*(3), 146-157.
- Eagan, K., Stolzenberg, E. B., Bates, A. K., Aragon, M. C., Suchard, M. R., & Rios-Aguilar, C. (2015). *The American freshman: National norms fall 2015*. Los Angeles, CA: Higher Education Research Institute, UCLA.
- Estanek, S. M. (2006). Redefining spirituality: A new discourse. *College Student Journal, 40*(2), 270-281.
- Evans, N. J., Forney, D. S., Guido, F. M., Patton, L. D., & Renn, K. A. (2010). *Student development in college: Theory, research and practice*. San Francisco, CA: Jossey-Bass.
- Fabricatore, A. N., Handal, P. J., & Fenzel, L. M. (2000). Personal spirituality as a moderator of the relationship between stressors and subjective wellbeing. *Journal of Psychology and Theology, 28*(3), 221-229.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175-191.
- Ferssizidis, P., Adams, L. M., Kashdan, T. B., Plummer, C., Mishra, A., & Ciarrochi, J. (2010). Motivation for the commitment to social values: The roles of age and gender. *Motivation and Emotion, 34*, 354-362.
- Fife, J., Adegoke, A., McCoy, J., & Brewer, T. (2011). Religious commitment, social support and life satisfaction among college students. *College Student Journal, 45*(2), 393-400.
- Fisher, J. W. (2007). It's time to wake up and stem the decline in spiritual wellbeing in Victorian school. *International Journal of Children's Spirituality, 12*(2), 165-177. doi:10.1080/13644360701467469
- Fisher, J. W. (2009). Investigating Australian education students' views about spiritual wellbeing, as compared with teachers in schools. *International Journal of Children's Spirituality, 14*(2), 151-167. doi:10.1080/13644360902830358
- Fowler, J. W. (1981). *Stages of faith: The psychology of human development and the quest for meaning*. New York, NY: HarperCollins.
- Fowler, J. W. (2000). *Becoming adult, becoming Christian: Adult development and Christian faith*. San Francisco, CA: Jossey-Bass.

- Gathman, A. C., & Nessian, C. L. (1997). Fowler's stages of faith development in an honors science-and-religion seminar. *Zygon*, 32(3), 407-414.
- Gear, M. R., Krumrei, E. J., & Pargament, K. I. (2009). Development of a spiritually sensitive intervention for college students experiencing spiritual struggles: Winding road. *Journal of College and Character*, 10(4), 1-5.
- Genia, V. (1996). I, E, quest, and fundamentalism as predictors of psychological and spiritual wellbeing. *Journal for the Scientific Study of Religion*, 35(1), 56-64.
- Genia, V. (2001). Evaluation of the spiritual wellbeing scale in a sample of college students. *International Journal for the Psychology of Religion*, 11(1), 25-33.
- Gilley, D. V. (2005). Whose spirituality? Cautionary notes about the role of spirituality in higher education. *New Directions for Teaching and Learning*, 104, 93-99.
- Gehrke, S. (2008). Leadership through meaning-making: An empirical exploration of spirituality and leadership in college students. *Journal of College Student Development*, 49(4), 351-359.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Gnanaprakash, C. (2013). Spirituality and resilience among post-graduate university students. *Journal of Health Management*, 15(3), 383-396.
doi:10.1177/0972063413492046
- Grabovac, A., Clark, N., & McKenna, M. (2008). Pilot study and evaluation of postgraduate course on "The interface between spirituality, religion, and psychiatry." *Academic Psychiatry*, 32(4), 332-337.
- Greenfield, E. A., Vaillant, G. E., & Marks, N. F. (2009). Do formal religious participation and spiritual perceptions have independent linkages with diverse dimensions or psychological wellbeing? *Journal of Health and Social Behavior*, 50(2), 196-212.
- Hales, B. P. (2012). Statistical report. *Ensign*, 42(4), 30.
- Hales, B. P. (2015). Statistical report. *Ensign*, 45(4), 30.
- Hammermeister J., & Peterson, M. (2001). Does spirituality make a difference? Psychosocial and health-related characteristics of spiritual wellbeing. *American Journal of Health Education*, 32(5), 293-297.
doi:10.1080/19325037.2001.10603485

- Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*, 58(1), 64-74.
- Hilton, J., III, & Plummer, K. (2013). Examining student spiritual outcomes as a result of a general education religion course. *Christian Higher Education*, 12(5), 331-348. doi:10.1080/15363759.2013.824352
- Hindman, D. M. (2002). From splintered lives to whole persons: Facilitating spiritual development in college students. *Religious Education*, 97(2), 165-182.
- Hodge, D. R. (2001). Spiritual assessment: A review of major qualitative methods and a new framework for assessing spirituality. *Social Work*, 46(3), 203-214.
- Howard, E. (2009). Spiritual formation and the meaning of life. *Common Ground Journal*, 7(1), 14- 25.
- Huber, J. T., & MacDonald, D. A. (2012). An investigation of the relations between altruism, empathy, and spirituality. *Journal of Humanistic Psychology*, 52(2), 206-221.
- Hui-Tzu, G. C. (2013). Mormon missionary experiences and subsequent religiosity among returned missionaries in Utah. *Social Sciences and Missions*, 26(2), 199-225.
- Johnson, T. J., Sheets, V. L., & Kristeller, J. L. (2008). Empirical identification of dimensions of religiousness and spirituality. *Mental Health, Religions and Culture*, 11(8), 745-767.
- Johnstone, B., Yoon, D., Cohen, D., Schopp, L., McCormack, G., Campbell, J., & Smith, M. (2012). Relationships among spirituality, religious practices, personality factors, and health for five different faith traditions. *Journal of Religion and Health*, 51(4), 1017-1051.
- Kassab, V., & MacDonald, D. (2011). Examination of the psychometric properties of the spiritual fitness assessment. *Journal of Religion and Health*, 50(4), 975-985.
- Klaassen, D. W., & McDonald, M. J. (2002). Quest and identity development: Re-examining pathways for existential search. *The International Journal for the Psychology of Religion*, 12(3), 189-200.
- Kneipp, L. B., Kelly, K. E., & Cyphers B. (2009). Feeling at peace with college: Religiosity, spiritual wellbeing, and college adjustment. *Individual Differences Research*, 7(3), 188-196.

- Kohlberg, L. (1984). *Essays on moral development. Vol. 2: The psychology of moral development*. San Francisco, CA: Harper and Row.
- Koth, K. (2003). Deepening the commitment to serve: Spiritual reflection in service learning. *About Campus*, January-February, 2-7.
- Kuh, G. D., & Gonyea, R. M. (2006). Spirituality, liberal learning, and college student engagement. *Liberal Education*, 92(1).
- Lerner, R. M. (2008). Spirituality, positive purpose, wisdom, and positive development in adolescence: Comments on Oman, Flinder, and Thoresen's ideas about "integrating spiritual modeling into education." *The International Journal for the Psychology of Religion*, 18, 108-118.
- Lindholm, J. A., & Astin, H. S. (2008). Spirituality and pedagogy: Faculty's spirituality and use of student-centered approaches to undergraduate teaching. *The Review of Higher Education*, 31(2), 185-207.
- Lomax, R. G., & Hahs-Vaughn, D. L. (2012). *An introduction to statistical concepts* (3rd ed.). New York, NY: Taylor & Francis Group, LLC.
- Love, P. G. (2001). Spirituality and student development: Theoretical connections. *New Directions for Student Services*, 95(7), 7-16.
- Love, P. G. (2002). Comparing spiritual development and cognitive development. *Journal of College Student Development*, 43(3), 357-373.
- Love, P. G., & Talbot, D. (2009). Defining spiritual development: A missing consideration for student affairs. *NASPA Journal*, 46(4), 614-628.
- Mayhew, M. J. (2004). Exploring the essence of spirituality: A phenomenological study of eight students with different worldviews. *NASPA Journal*, 41(4), 647-674.
- Mayhew, M. J. (2012). A multi-level examination of college and its influence on ecumenical worldview development. *Research in Higher Education*, 53, 282-310.
- McGee, M., Nagel, L., & Moore, M. K. (2003). A study of university classroom strategies aimed at increasing spiritual health. *College Student Journal*, 37(4). Retrieved from <http://www.projectinnovation.biz/csj>
- Merrill, R. M., Steffen, P., & Hunter, B. D. (2012). A comparison of religious orientation and health between Whites and Hispanics. *Journal of Religious Health*, 51, 1261-1277.
- Monson, T. S. (2012). Welcome to conference. *Ensign*, 42(10), 4-5.

- Muñoz-Garcia, A., & Aviles-Herrera, M. J. (2014). Effects of academic dishonesty on dimensions of spiritual wellbeing and satisfaction: A comparative study of secondary school and university students. *Assessment and Evaluation in Higher Education*, 39(3), 349-363. doi:10.1080/02602938.2013.832729
- Oman, D., Flinders, T., & Thoresen, C. E. (2008). Integrating spiritual modeling into education: A college course for stress management and spiritual growth. *The International Journal for the Psychology of Religion*, 18, 79-107.
- Owen, T. R. (1999) The relationship between self-direction and wellness among graduate students. *The Journal of Continuing Higher Education*, 47(1), 31-39. doi:10.1080/07377366.1999.10400363
- Paredes-Collins, K., & Collins, C. S. (2011). The intersection of race and spirituality: Underrepresented students' spiritual development at predominantly White evangelical colleges. *Journal of Research on Christian Education*, 20, 73-100.
- Parks, S. D. (2000). *Big questions, worthy dreams*. San Francisco, CA: Jossey-Bass.
- Pew Research Center. (2016). *Religious landscape study*. Retrieved from <http://www.pewforum.org/religious-landscape-study/>
- Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the Five-Factor model. *Journal of Personality*, 67(6), 985-1013.
- Pope, D. G. (2006). Benefits of bilingualism: Evidence from Mormon missionaries. *Economics of Education Review*, 27, 234-242.
- Raftopoulos, M., & Bates, G. (2011). "It's that knowing you are not alone": The role of spirituality in adolescent resilience. *International Journal of Children's Spirituality*, 16(2), 151-167. doi:10.1080/1364436X.2011.580729
- Rehm, M. L., & Allison, B. N. (2009). Exploring spirituality of FCS students: A resource for resilience. *Journal of Family and Consumer Science*, 101(4), 12-17.
- Rennick, L. A., Smedley, C. T., Fisher, D., Wallace, E., & Kim, Y. K. (2013). The effects of spiritual/religious engagement on college students' affective outcomes: Differences by gender and race. *Journal of Research on Christian Education*, 22(3), 301-322.
- Rican, P., & Janosova, P. (2010). Spirituality as a basic aspect of personality: A cross-cultural verification of Piedmont's model. *The International Journal for the Psychology of Religion*, 20, 2-13.

- Richards, P. S., Smith, T. B., Schowalter, M., Richard, M., Berrett, M. E., & Hardman, R. K. (2004). Development and validation of the theistic spiritual outcome survey. *Psychotherapy Research, 15*(4), 457-469.
- Robertson, L. A. (2010). The spiritual competency scale. *Counseling and Values, 55*(1), 6-24.
- Rogers, T. F. (2009). "A climate far and fair": Ecumenism and abiding faith. *Dialogue: A Journal of Mormon Thought, 42*(3), 56-73.
- Rowold, J. (2011). Effects of spiritual wellbeing on subsequent happiness, psychological wellbeing, and stress. *Journal of Religion and Health, 50*(4), 950-963.
- Ryff, C. D., & Heidrich, S. M. (1997). Experience and wellbeing: Explorations on domains of life and how they matter. *International Journal of Behavioral Development, 20*(2), 193-206.
- Sandvik, E., Diener, E., & Seidlitz, L. (1993). Subjective wellbeing: the convergence and stability of self-report and non-self-report measures. *Journal of Personality, 61*(3), 317-342.
- Schein, E. H. (2010). *Organization culture and leadership*. San Francisco, CA: Jossey-Bass.
- Schulkin, J. (2007). An instinct for spiritual quests: Quiet religion. *Journal of Speculative Philosophy, 21*(4), 307-320.
- Small, J. L. (2007). "Do you buy into the whole idea of 'God the Father'?" How college students talk about spiritual transformation. *Religion and Education, 34*(1), 1-27.
- Small, J. L., & Bowman, N. A. (2012). Religious affiliation and college student development: A literature review and synthesis. *Religion and Education, 39*(1), 64-75.
- Soet, J., & Martin, H. (2007). Women and spirituality: An experiential group for female graduate students. *Journal of College Counseling, 10*(1), 90-96.
- Speck, B. W. (2005). What is spirituality? *New Directions for Teaching and Learning, 104*, 3-13.
- Spofford, J. L., Nevels, R. M., Gontkovsky, S. T., & Bell, T. P. (2014). Meditative practices predict spirituality but mindfulness does not predict alcohol use in African-American college students. *Mental Health, Religion and Culture, 17*(4), 379-389.

- Stamm, L. (2006). The dynamics of spirituality and the religious experience. *Religion and Experience*, 33(2), 91-118.
- Steffen, P. R. (2012). Approaching religiosity/spirituality and health from the eudaimonic perspective. *Social and Personality Psychology Compass*, 6(1), 70-82.
- Steffen, P. R. (2014). Perfectionism and life aspirations in intrinsically and extrinsically religious individuals. *Journal of Religious Health*, 53, 945-958.
- Steffen, P. R., & Fearing, M. (2007). Does defensiveness account for the relationship between religiosity and psychosocial adjustment? *The International Journal for the Psychology of Religion*, 17(3), 233-244.
- Steffen, P. R., & Merrill, R. (2011). The association between religions and acculturation in Utah Mexican immigrants. *Mental Health, Religion and Culture*, 14(6), 561-573.
- Steger, M. F., & Kashdan, T. B. (2013). The unbearable lightness of meaning: Wellbeing and unstable meaning in life. *Journal of Positive Psychology*, 8(2), 103-115.
- Steger, M. F., Kashdan, T. B., & Oishi, S., (2008). Being good by doing good: Daily eudaimonic activity and wellbeing. *Journal of Research in Personality*, 42(1), 22-42.
- Stoyles, G., Chadwick, A., & Caputi, P. (2015). Purpose in life and wellbeing: The relationship between purpose in life, hope, coping, and inward sensitivity among first-year university students. *Journal of Spirituality in Mental Health*, 17(2), 119-134.
- Sweat, A. R. (2014). Spiritually speaking: Student oral participation and perceived spiritual experiences in Latter-Day Saint seminary. *Journal of Research on Christian Education*, 23, 210-234.
- Taliaferro, L. A., Rienzo, B. A., Pigg, R. M., Miller, M. D., & Dodd, V. J. (2009). Spiritual wellbeing and suicidal ideation among college students. *Journal of American College Health*, 58(1), 83-90. doi:10.3200/JACH.58.1.83-90
- Temkin, L., & Evans, N. J. (1998). Religion on campus: Suggestions for cooperation between student affairs and campus-based religious organizations. *NASPA Journal*, 36(1), 61-69.
- Tisdell, E. J. (2003). *Exploring spirituality and culture in adult and higher education*. San Francisco, CA: Jossey-Bass.

- Tix, A., Dix, B., Johnson, M., & Steger, M. (2013). Religious commitment and subjective wellbeing across Christian traditions. *Journal of Psychology and Christianity*, 32(1), 20-29.
- Turner-Musa, J. O., & Wilson, S. A. (2006). Religious orientation and social support on health-promoting behaviors of African American college students. *Journal of Community Psychology*, 34(1), 105-115.
- VonDras, D. D., Schmitt, R. R., & Marx, D. (2007). Associations between aspects of spiritual wellbeing, alcohol use, and related social-cognitions in female college students. *Journal of Religion and Health*, 46(4), 500-515.
- Walvoord, B. E. (2008). Students' spirituality and "Big Questions" in introductory religion courses. *Teaching Theology and Religion*, 11(1), 3-13.
- Warner, R. M. (2013). *Applied statistics from bivariate through multivariate techniques* (2nd ed.). Thousand Oaks, CA: SAGE Publications, Inc.
- Watt, S. K. (2003). Come to the river: Using spirituality to cope, resist and develop identity. *New Directions for Student Services*, 104, 29-40.
- Weber, L. J., & Cummings, A. L. (2003). Relationships among spirituality, social support, and childhood maltreatment in university students. *Counseling and Values*, 47, 82-95.
- Weddle-West, K., Hagan, W. J., & Norwood, K. M. (2013). Impact of college environments on the spiritual development of African American students. *Journal of College Student Development*, 54(3), 299-314.
- Wehmer, M. A., Quinn Griffin, M. T., White, A. H., & Fitzpatrick, J. J. (2010). An exploratory study of spiritual dimensions among nursing students. *International Journal of Nursing Education Scholarship*, 7(1), 1-9. doi:10.2202/1548-923X.1915
- Welch, M., & Koth, K. (2013). A metatheory of spiritual formation through service learning in higher education. *Journal of College Student Development*, 54(6), 612-627.
- Wnuk, M., & Marcinkowski, J. (2014). Do existential variables mediate between religious-spiritual facets of functionality and psychological wellbeing? *Journal of Religion and Health*, 53(1), 56-67.
- Zhang, K. C. (2013). What I look like: College woman, body image, and spirituality. *Journal of Religious Health*, 52, 1240-1252.

Zhang, K. C., & Yu, E. D. (2012). Quest for a good life: Spiritual values, life goals, and college students. *Asian-Pacific Psychiatry*, 6, 91-98.

Biography

Brian S. Melton graduated from Beech Grove High School in Beech Grove, IN in 1976. He attended Brigham Young University in Provo, UT where he earned his Bachelor of Arts in International Relations in 1981. During his studies, he served a two-year mission for his church in Spain. He went on to receive his Master of Business Administration from Indiana University in 1984 with a double major in Finance and Marketing. He later received a Master of Science in Logistics Management at Wright State University in 1988. He was commissioned in the United States Air Force in 1985 where he served in numerous leadership positions over a 21-year career, eventually retiring as a Lieutenant Colonel in 2006. During his Air Force career he served twice as an Assistant Professor of Aerospace Studies at Kent State University and The Ohio State University. He currently works as a Professor of Financial Management for the Defense Acquisition University at Fort Belvoir, VA.