THE HOLY SPIRIT GOES TO COLLEGE: THE ROLE OF A SPIRIT-FILLED LIFE IN THE SPIRITUAL VITALITY OF CHRISTIAN UNIVERSITY STUDENTS

Practical Theology Interest Group

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Within contemporary Christian higher education, the process of discipleship or spiritual formation is a central focus. This paper presents the results of a six-year longitudinal study of student spiritual formation at a small, Pentecostal university (the University) in the United States. The University's mission extends beyond simply *educating* students; it encompasses *equipping* students for Christian service, empowered by the Holy Spirit. Catalyzing *student spiritual vitality* is one of the University's key measures of success in fulfilling its mission.

The University in this study is not alone. The Council for Christian Colleges and Universities, which represents 115 comprehensive liberal arts institutions in North America, affirms, "The intentional mission of Christ-centered institutions to encourage the spiritual formation of students is one of the distinguishing characteristics of our member institutions" (Council for Christian Colleges & Universities, 2011, p. 42). The Association for Biblical Higher Education, representing more than 200 institutions across North America, declares its intention to support "credible institutions of postsecondary education, serious about both education and *ministry formation*" (Association for Biblical Higher Education, 2015, emphasis added). Certainly, Christian colleges and universities have academic, social, and professional development objectives; however, discipleship or spiritual formation goals contribute to a

holistic perspective on student development not commonly found outside Christian institutions. Furthermore, Pentecostal institutions have a particular interest in the role and impact of the Holy Spirit on student spiritual formation.

The purpose of this paper is to report the results of an ongoing, longitudinal study of student spiritual vitality at a small, Pentecostal university. The data reported here provide (a) a compelling model of student spiritual vitality, (b) key insights into the role of the University in catalyzing student spiritual vitality, (c) information about how spiritual practices and relationships contribute to student spiritual vitality, (d) perspective on how a Spirit-filled life impacts student spiritual vitality, and (e) an understanding of demographic factors that influence student spiritual vitality. This paper reports findings from 965 students across multiple time points between 2011 and 2016.

Background

Interest in assessing spiritual vitality among Christian college and university students has increased in recent years for several reasons. First, campus ministers have a keen interest in understanding the students they serve, so they can design and implement ministry programs that are effective at helping students grow spiritually. Second, education accrediting agencies have begun asking member institutions to demonstrate their competence at fulfilling their distinctive objectives related to spiritual formation. Third, scholarly literature on emerging adulthood has highlighted the unique needs of young adults between 18 and 30 years old, especially those who have not yet married and begun to raise children. Finally, widespread interest in spiritual formation has sparked assessment innovations that have helped scholars and practitioners understand and operationalize spiritual vitality with validity and reliability.

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Campus Ministry Performance Evaluation

Campus ministers at both Christian and non-Christian universities are regularly asked to quantify the impact of their work with students. Higher education – particularly at small, private institutions – faces a difficult economic environment, which was exacerbated by the U. S. economic crisis of 2008. Though campus ministers work closely with students on a daily basis, they often have difficulty quantifying the results of their work. Consequently, the spiritual formation function of the co-curriculum may be poorly understood by the broader campus community and by university stakeholders. The lack of quantitative data on the impact of campus ministries places campus ministers at a disadvantage when appealing for resources either to continue current ministries or to fund new initiatives.

Beyond the need for data in order to appeal for resources, campus ministers have an intrinsic desire to effectively disciple students. Setran and Kiesling (2013) note that there are abundant resources available to describe emerging adults from demographic, sociological, and psychological perspectives. Relatively few works, however, bring theoretical perspectives or descriptive data to bear on the practical work of Christian discipleship among university students (Setran & Kiesling, 2013, p. 7).

Campus ministers frequently complain that they are awash in "soft" or anecdotal data, provided by their interactions with students; however, they lack a mechanism for validly and reliably evaluating the impact of their programs and interventions. Ministers may form judgments about the efficacy of their programs without ever thoroughly articulating their mental model of spiritual formation, testing their program outcomes, or determining what kinds of students are most likely to either thrive or struggle as a result of their work.

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Accreditation Pressures

While campus ministers seek information on the effectiveness of their programs, academic accrediting agencies are increasingly demanding proof that Christian higher education institutions are demonstrably keeping their promise to catalyze student spiritual formation. Many Christian institutions assert that one of their distinctive objectives is to help students develop in Christian discipleship or spiritual formation. It is often this objective that most clearly sets Christian universities apart from non-faith-based private schools (Balzer & Reed, 2012).

In 2008, the University was participating in the Higher Learning Commission's Academic Quality Improvement Program (AQIP), an accreditation pathway based on the principles of continuous quality improvement. In response to the University's Systems Portfolio, reviewers labeled the following issue an "Outstanding Opportunity" (OO) for improvement: "[The University] offers numerous *opportunities* for spiritual growth on campus, but the portfolio offers limited *results* about spiritual development of students beyond student participation in out-of-class activities and how these results will be used" (University Director of Institutional Research & Effectiveness, personal communication, January 13, 2007, emphasis added).¹

In response to their accreditation review, the University chartered an action project and researched how to measure students' spiritual development. Unfortunately, after a year of study, they were unable to find any available research instruments that met three criteria: (a) provided a valid, reliable, and meaningful dependent variable to measure student spiritual formation; (b)

¹ For the purpose of anonymizing the University, the name of the Director of Institutional Research & Effectiveness has been withheld from this paper. Copies of all referenced documents have been retained by the author and may be requested from him. Requests must be accompanied by an explanation of the need for the documents and must be approved by the University prior to their release.

addressed spiritual formation from a Christian perspective; and (c) examined the impact of the University and its ministries on student spiritual formation.

In 2010, the University reached out to the Willow Creek Association (WCA) to see if they would be willing to adapt their REVEAL survey instrument to address the needs of Christian higher education. The research partnership between the University and the WCA ultimately produced the *University Spiritual Life Survey (University SLS)* to respond to the needs of both campus ministers and accreditation professionals.

The University Spiritual Life Survey

In their report on the College Students Beliefs and Values (CSBV) Survey, Astin, Astin & Lindholm (2010) present the results of a seven-year study on the spiritual lives of college students. Their data show that the college years can be a time of significant spiritual quest and growth. However, their definition of spirituality encompasses broadly existential issues and lacks the fidelity needed to detect the kind of spiritual formation issues that are important to many Christian campus ministers. While Astin, Astin & Lindholm explore what *kind of person* college students seek to become, Christian ministers want to understand the *ways in which* their students are *becoming like Christ*.

Other available instruments provide broadly useful information on the respondents' spirituality (Augustyn, Hall, Wang, & Hill, 2016; Piedmont, Kennedy, Sherman, Sherman, & Williams, 2008), religious engagement (Smith & Denton, 2005; Smith & Snell, 2009), or even their Christian discipleship (Mostert & Sutton, 2015). None, however, were designed to assess the impact of Christian campus ministries on the spiritual vitality of students, using a longitudinal design.

The *University SLS* was designed to fill this gap in the assessments available today. The University and four partner Christian higher education institutions worked with the WCA from

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2010 through 2013 to adapt a highly-regarded, church-based, spiritual formation assessment to the Christian higher education setting. At the end of the development and pilot testing process, the *University SLS* produced psychometrically sound measures of Student Spiritual Vitality (StV), School Spiritual Vitality (SeV), parental involvement in students' religious/spiritual lives (Parent Class), and a two-dimensional measure of self-described closeness to Christ and closeness to others (Scammacca Lewis, 2011, 2013). The *University SLS* was built on a database of over 425,000 surveys from churchgoing adults in approximately 2,000 churches across North America (Hawkins & Parkinson, 2008, 2011; Hawkins, Parkinson, & Arnson, 2007). The key measures used in this study, including the StV and the ScV, have exhibited very good to excellent internal consistency reliability in all university surveys.² The *University SLS* allows researchers to track change in the spiritual vitality of individual students over time and to quantify the influence of the university, key campus ministries programs, religious activities and experiences, and demographic characteristics on students' spiritual lives.³

Emerging Adulthood

Investigating the spiritual lives of Christian university students requires some understanding of the developmental stage that most traditional undergraduate students occupy. Young adults in the 21st century, more than ever before, are pursuing tertiary and graduate education, delaying marriage and childbearing, and entering into long-term employment at older ages. Arnett argues that this period of extended young adulthood "is a new and historically

² Qualitative descriptors of coefficient alpha vary in the literature. In this report, I follow DeVellis, who states, "My personal comfort ranges for research scales are as follows: below .60, *unacceptable*; between .60 and .65, *undesirable*; between .65 and .70, *minimally acceptable*; between .70 and .80, *respectable*; between .80 and .90, *very good*" (2012, p. 109, emphasis added). When Coefficient alpha exceeds .90, I use the term *excellent*.

³ Additional information on the *University SLS*, including a sample report, are available from http://www.missioninsights.com/products/university-spiritual-life-survey/.

unprecedented stage of the life course, so it requires a new term and a new way of thinking. I have proposed that we call it *emerging adulthood*" (2014, p. 2).

Research to date indicates that emerging adults are not in a time of rapid spiritual growth (Barry, 2014; Hall, Edwards, & Wang, 2015; Powell & Clark, 2011). Instead, they are in a time of transition, when the faith of their family is being transformed into their own experience. Tanner (2006) describes this developmental stage as being characterized by *recentering*: "Recentering constitutes a shift in power, agency, responsibility, and dependence between emerging adults and their social contexts – primarily experienced by emerging adults as a period during which parent regulation is replaced with self-regulation" (p. 27).⁴ Reese (2012) observes that students in this period of recentering are "seeking mentors and conversations to decipher their beliefs" (p. 160).

Astin et al. (2010) argue that spiritual struggle or *quest* is characteristic of this developmental period. They also contend that evangelical Christian campuses make a greater impact on their students' moral and religious lives than non-Christian campuses do. Glanzer, Hill, & Ream (2014) note the value of engaging in ongoing spiritual practices, such as prayer, worship, and Bible study, while Schwadel (2011) observes that evangelical Christians appear to maintain their religious beliefs in part because they remain engaged in a community of religious practice during the college years. Augustyn et al. (2016) note that students who engage in Christian spiritual practices within a community of faith have stronger spiritual and

⁴ Tanner (2006) is also cited in T. W. Hall, E. Edwards, & D. C. Wang. (2015). The spiritual development of emerging adults over the college years: A 4-year longitudinal investigation. *Psychology of Religion and Spirituality*.

psychological outcomes than those who are not embedded in a community of faith and practice (p. 9).

Christian colleges and universities are uniquely positioned to provide contexts in which their students may examine their faith commitments and learn to put their faith into action. Building such a university environment, however, is not automatic. It requires commitment to spiritual formation as a distinctive objective for the entire university (Balzer & Reed, 2012). It also requires work to understand the needs of emerging adults and to rigorously investigate whether the university's spiritual formation programs are actually catalyzing student spiritual vitality. This study tells the story of one university that is actively seeking to understand and serve its students by catalyzing spiritual vitality that will prepare them for the challenges that await beyond graduation.

Method

A longitudinal study of student spiritual vitality at the University is ongoing. During the period from 2011 through 2016, researchers used the following methods to better understand the characteristics and spiritual growth patterns of the participants.

Participants

Overall, 4,376 surveys were completed by traditional, undergraduate students across six years. This study focuses on the 2,152 surveys, completed by 965 students across multiple time points. Students who participated in only one survey wave are not included in this study. All participants (n = 965) completed the survey at least twice. Over 22 percent (n = 215) completed the survey at least three times, while 0.3% of participants (n = 7) completed the survey four times (see Table 1).

Participants were reflective of the University's undergraduate student population in all respects except gender. Women were significantly more likely to participate in the study than

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their male classmates. Participants' gender, which was obtained from enrollment records, was reported as 63.5% female and 36.5% male. In the student population, approximately 51% are female, and 49% are male ($\chi^2_{(1)} = 5.956$, p = 0.008). The mean grade point average of respondents was 3.38 (SD = 0.55), which matches campus average GPA (M = 3.38). Participants' age was typical of traditional undergraduate students (M = 19.85, SD = 2.31). While the University includes adult studies (degree completion), graduate, and seminary students, this study reports data exclusively from traditional undergraduate students.

Race and ethnicity data were obtained from enrollment records and were compared to the University's population. While there were no significant differences in survey response by race or ethnicity, respondents were 80.2% white, reflecting the dominant ethnicity of the University population, which is 80.8% white. Finally, 14.2% of participants reported being intercollegiate athletes during at least one year of the study. In 2016, the University's population contained 14.2% intercollegiate athletes.

Measures

The present study includes 20 variables, selected for their ability to detect the influence of the University and its spiritual life programs on the spiritual vitality of its students over time. Measures include (a) core components of the *University SLS*, (b) spiritual practices, (c) spiritual relationships, (d) life in the Spirit, and (e) demographic variables. Each covariate, exogenous latent and endogenous manifest variable was considered in a cohort-sequential longitudinal design.

Time

The study presented several options regarding the analysis of time (Little, 2013, pp. 37-52). Student age and college level (class) were obvious choices; however, I was primarily concerned with being able to measure the impact of the University on each student's spiritual

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development. Since students begin their university experience at various chronological ages, age seemed an inappropriate choice. Also, a significant segment of students enter college as transfer or dual-enrollment students, bringing some college credits with them. Thus, class rank might not measure the influence of the studied university with sufficient fidelity. Instead, data provided by the University allowed researchers to compute *academic time* at the University, independent of either age or class rank. Surveys completed by students with fewer than 26 academic credits earned at the University were coded as St1, indicating that the student was in his or her first academic year *at the school* (see Table 2). This cohort-sequential design allowed for relatively consistent measurement of the University's influence on each student's spiritual life during their post-secondary academic experience (Little, 2013, p. 42).

When students completed the survey twice in the same *academic year*, data were manually screened to ensure that (a) the student had made full-time academic progress between survey waves, and (b) the surveys were not completed in the same *calendar year*. When both criteria were met, the academic time variable was manually recoded to preserve the participant's data. In seven cases, participants were determined not to have been enrolled full time between waves, and their surveys were eliminated from the data set.

University Spiritual Life Survey Measures

The *University SLS* is comprised of 46 questions, which produce 176 variables. Five composite measures in the present study are central to the *University SLS*: Student Spiritual Vitality (StV), School Spiritual Vitality (ScV), Closeness to Christ (CTC), Two-Dimensional Segment (TDS), and Parent Class (PAR).

Student spiritual vitality.

The creators of the *University SLS* developed the Student Spiritual Vitality Gauge (StV) to provide a comprehensive measure of students' spiritual growth, and it serves as the dependent

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variable in the present study. Drawing from a pool of 30 items across the domains of (a) Spiritual Beliefs, (b) Spiritual Practices, and (c) Faith in Action, the StV is comprised of nine items found to be most discriminating between students in different stages of spiritual maturity, based on a discriminant function analysis (Plake, 2013; Scammacca Lewis, 2013). The StV has demonstrated very good to excellent internal consistency at all institutions using the *University SLS*. For all surveys included in the present study (n = 965), the StV displayed very good reliability ($\alpha = .880$). Scores obtained during a student's first academic year at the University were coded St1. Codes of St2, St3, and St4 were used to indicate scores obtained in subsequent years at the University. The StV is scaled from zero to 100 (M = 85.12, SD = 12.40).

School spiritual vitality.

In addition to the StV, the *University SLS* contains a measure of students' satisfaction with their university's support of student spiritual formation. This School Spiritual Vitality Gauge (ScV) is also a nine-item scale, focusing on students' appraisal of their university's work in three areas: (a) Supporting Spiritual Growth, (b) Developing Spiritual Practices, and (c) Making Faith Active. The items included in the ScV scale were those found to be most discriminating between students in different stages of spiritual maturity, based on a discriminant function analysis (Scammacca Lewis, 2013). Since student satisfaction could only be meaningfully measured among returning students, the ScV questions were not presented to students in their first academic year at the University. The ScV is also scaled from zero to 100. Based on returning student surveys (n = 1,567), the ScV displayed excellent reliability ($\alpha = .915$, M = 73.56, SD = 15.07). Each participant's ScV scores were averaged across all time points in which the student completed a survey. The resulting ScV Average was included in the study as a covariate.

Closeness to Christ and others.

Though a student's relationship with Christ cannot be directly observed, the REVEAL surveys demonstrated that survey respondents are capable of describing their Closeness to Christ in ways that are valid and reliable (Hawkins et al., 2007). In the present study, participants were asked to rate their Closeness to Christ (CTC), using a list of phrases arranged from most distant (e.g., 0 = "I am not a Christian and I am currently not interested in exploring what it means to be a Christian.") to closest (e.g., 7 = "Christ is the most important relationship in my life."). These responses were averaged over each wave of survey response and were included in the dataset as a covariate. Scores on CTC ranged from two to seven (M = 5.60, SD = 1.08).

Another possible way to describe a student's spiritual development without duplicating components of the StV is to examine two-dimensional closeness to *Christ* and *others*. Using both the CTC and 11 items related to the participant's relationships with others (McKnight, 2008), the *University SLS* categorizes respondents into five segments (Non-Believer, Beginner, Believer, Follower, and Disciple) through discriminant analysis. Each segment represents both self-proclaimed closeness to Christ (CTC) and self-described relationship with others (Unity Class). This Two-Dimensional Segment (TDS) variable is scaled from zero to four. Scores on the TDS variable (M = 2.65, SD = 0.686) were averaged across all waves of data collection and included as a covariate.

Parent class.

Christian university students are often raised in religiously engaged families. For these students, the college years can be a time of transition between the faith of their parents or extended families and a faith that sustains them beyond graduation. Petts (2015), examining the

National Study of Youth and Religion,⁵ notes the key role that parents play in transmitting religious practices and traditions to children. Additionally, church-based research has demonstrated the importance of key religious parenting activities for healthy spiritual development of students (Scammacca Lewis, 2011).

The University SLS contains a measure of parental involvement in the religious/spiritual life of each survey respondent. Participants are asked to reflect on the frequency of their parents' involvement in their religious/spiritual lives through nine behaviors, addressing the domains of Spiritual Practices and Faith in Action. Using a discriminant function, parents are classified according to their level of religious/spiritual involvement with their children (Scammacca Lewis, 2011, 2013). This Parent Class was calculated during each wave of data collection. Students' assessments of their parents' religious/spiritual involvement in their lives are averaged across all waves. The Parent Class average (PAR) is included in the present study as a covariate. The PAR variable has a negative valence, ranging from "Helpful" (0) to "Passive" (2) (M = 0.628, SD = .535).

Spiritual Practices

In addition to the unique scales developed for the *University SLS* (CTC, PAR, ScV, and TDS), certain spiritual practices were considered as potential predictors of StV at the University. In the church-based REVEAL research, increased levels of Reflecting on Scripture (ROS) were found to be catalytic in the spiritual development of churchgoing adults (Hawkins & Parkinson, 2008, pp. 114–118). Additionally, while the Buddhist-inspired practice of *mindfulness* has been widely studied and incorporated into certain forms of cognitive behavioral therapy, the Christian practice of *listening prayer* or *receptive prayer* has received increased attention in recent studies

⁵ See http://youthandreligion.nd.edu/

that seek to understand the differences between meditation and certain modes of Christian prayer (Monroe & Jankowski, 2016; Poloma & Lee, 2011). In light of these findings, measures of the following spiritual practices were included in the dataset as covariates.

Listening to God.

In each wave of data collection, participants were asked how frequently they set aside quiet time to listen to God in prayer. Responses ranged from "Never" to "Daily" (coded 4–0, respectively), and data from each wave of data collection were averaged to form a single, continuous variable (M = 1.51, SD = 0.78). The negative scale for this item requires caution when interpreting the results. Listens to God (LIS) was included in data analysis as a covariate.

Reflecting on Scripture.

As with LIS, in each wave of data collection, participants were asked how frequently they reflect on the meaning of scripture in their lives. Responses ranged from "Never" to "Daily" (coded 4–0, respectively), which also produces a negative valence in which lower scores indicate higher frequency of reflection on scripture. Scores from each wave of data collection were averaged to form a single, continuous variable (M = 1.18, SD = 0.80). Reflects on Scripture (ROS) was included in data analysis as a covariate.

Spiritual Relationships

In addition to spiritual practices, spiritual relationships were seen as potential predictors of student spiritual formation. Many colleges and universities tout the role of their faculty or staff as spiritual mentors, and attachment to parents as mentors is loosening during the emerging adult years. Cross-sectional data from the *University SLS* suggests that university students are often seeking adult spiritual mentors; however, their most influential spiritual relationships are typically with peers or "myself." To investigate the role of spiritual relationships with adults and friends, this study included single-item measures of each as covariates.

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Spiritual relationship with an adult.

In each wave of data collection, the *University SLS* asked students to describe how frequently they meet with an "adult spiritual mentor or confidant." Responses were recorded on a five-point scale, ranging from "Never/Does Not Apply" to "Once a Week" (coded 4–0, respectively). Scores from each wave of data collection were averaged to form the SRA variable (M = 1.70, SD = 1.18). The SRA variable was included in the analysis as a covariate.

Spiritual relationship with a friend.

Similarly, students were asked to describe how frequently they "meet with or talk to a close friend who helps me grow spiritually." Responses were recorded on a five-point scale, ranging from "Never/Does Not Apply" to "Once a Week" (coded 4–0, respectively). Scores from each wave of data collection were averaged to form the SRF variable (M = 0.97, SD = 1.03). The SRF variable was included in the analysis as a covariate.

Life in the Spirit Variables

Each university that participates in the *University SLS* may append up to 10 campusspecific or parochial questions to the survey. Since the University is from a Pentecostal tradition, they chose to include three questions about how their students experienced Life in the Spirit.

Holy Spirit baptism.

To better understand students' experience with the baptism in the Holy Spirit, participants were asked: "How strongly do you agree or disagree with the statement 'I believe I have been baptized in the Holy Spirit, following my commitment to Christ.'?" Five-point Likert scale responses ranged from "Strongly Agree" to "Strongly Disagree" (coded 0–4, respectively). Overall, participants expressed strong agreement with this statement (M = 0.586, SD = 0.769). The average of each participant's responses across all waves of data collection was recorded as HSB and was included in the present study as a covariate.

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Holy Spirit empowerment.

Separate from the notion of having experienced a baptism in the Holy Spirit, the University was interested in students' experience of the Holy Spirit's work through supernatural empowerment. The issue of Holy Spirit empowerment was addressed by the following item: "How strongly do you agree or disagree with the statement 'In my experience, God has enabled me to serve him by empowering me with supernatural gift(s) of the Holy Spirit.'?" Once again, responses were scored on a five-point Likert scale with response options ranging from "Strongly Agree" to "Strongly Disagree" (coded 0–4, respectively). Participants generally expressed agreement with the notion of Holy Spirit empowerment (M = 1.072, SD = 0.825), though not as strongly or as univocally as they agreed with Holy Spirit baptism. The average of each participant's responses across all waves of data collection was recorded as HSP and was included in the present study as a covariate.

Holy Spirit reliance.

Besides baptizing and empowering, the Holy Spirit is described in the Bible as the Paraclete – one who comes alongside the believer to give guidance and support.⁶ The University wanted to know more about their students' reliance on the Holy Spirit, so they asked participants: "How strongly do you agree or disagree with the statement 'I rely on the Holy Spirit for guidance in my personal life.'?" Responses were recorded on a five-point Likert scale with response options ranging from "Strongly Agree" to "Strongly Disagree" (coded 0–4,

⁶ See J. F. Plake. (2016). The Holy Spirit's role in sending. In *Missionary expatriate effectiveness: How personality, calling, and learned competencies influence the expatriate transitions of Pentecostal missionaries* (Vol. 20, pp. 56-59). Leiden: Brill.

respectively). The average of each participant's responses across all waves of data collection was recorded as HSR and was included in the present study as a covariate.

Demographic Variables

Based on analysis of cross-sectional data from the University's participation in the *University SLS* between 2010 and 2016, five demographic variables were selected for inclusion in the present longitudinal analysis: age (AGE), intercollegiate athletics (ATH), gender (FEM), cumulative grade point average (GPA), and residence status (RES).

Age.

Evidence from recent studies of emerging adulthood suggests that age can play a key role in students' spiritual vitality, particularly through their changing notions of religious/spiritual identity (Arnett, 2014; Barry, 2014; Setran & Kiesling, 2013; Smith & Snell, 2009). Consequently, age was computed from enrollment data for all students at the time their surveys were submitted. When conducting the longitudinal analysis, available age data for each completed wave of the survey were averaged, yielding an average age (AGE) of the participant across multiple time points.

Athletics.

Participation in intercollegiate athletics places unique demands on student athletes. Athletes often face pressure to practice and perform in order to receive or become eligible for scholarship funds. Additionally, qualifying to become an intercollegiate athlete typically requires dedication to both high school and club sports prior to the college years. Christian athletes often talk about missing out on church youth group meetings and other spiritual formation activities because they were expected to be engaged in practice or competition. Because of the demands of competitive athletics, data on participation in intercollegiate athletics was collected for each participant when surveys were submitted. In the longitudinal analysis, participation was averaged

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across all time points. Consequently, a student who participated in intercollegiate athletics each year of survey participation would score ATH = 1. A student who participated in intercollegiate athletics only half of the years the student completed the survey would score ATH = 0.5. One who did not participate in intercollegiate athletics at all would score ATH = 0.

Gender.

Since women tend to engage in religious/spiritual activities at a higher rate than men (Winseman, 2002), gender was included in the study as a covariate. Using enrollment data, students were coded for gender, as FEM (1 = Female, 0 = Male).

Grade point average.

The University scores students' academic achievement on a numeric grading scale ranging from 4.000 to 0.000. At the time of survey collection, researchers obtained each student's cumulative grade point average (GPA) from official university records. New freshmen, who had not earned any college credits, were coded as missing data (-99). Each participant's average GPA across all waves was calculated as an arithmetic mean.

Residence status.

Students who live on campus tend to participate in university-sponsored spiritual life activities at a higher rate than their commuter classmates. Commuters, however, may have more significant spiritual relationships with spouses, parents, and others, who are not part of the campus community. Data on emerging adults indicates that university students may have difficulty developing spiritually formative relationships (Barry & Christofferson, 2014; Nelson, 2014; Setran & Kiesling, 2013, pp. 205-230). Consequently, I included a measure of on-campus residence status (coded RES) in the present study as a covariate. Students were coded RES = 1, if they lived on campus. Commuter students were coded RES = 0. At each wave of data collection, University enrollment data provided information on the participant's residence status. Across

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multiple waves, these binary data fields were averaged to form a more continuous variable, using the same technique described for intercollegiate athletes. Overall, 79.5% (n = 769) of participants in the longitudinal study lived on campus during all waves in which they participated. Conversely, 21.5% lived off-campus during at least one wave of data collection. These percentages are not significantly different from the University's 2016 student population.

Overall, the present study contains 20 variables, four of which (St1–St4) serve as indicators of latent intercept and slope. A complete table of correlations, means, and standard deviations is shown in Table 3. Screening for univariate normality revealed significant Kolmogorov–Smirnov and Shapiro-Wilk tests on all variables, even when visual examination of Q-Q plots revealed approximately normal distributions. Evidence of univariate non-normality accompanied by missing data required the use of a robust estimator. Consequently, I elected to use the MLR estimator in Mplus (Byrne, 2012a, pp. 98–101; B. O. Muthén & Muthén, 1998–2015, p. 603).

Procedures

Beginning in the fall of 2011, all students enrolled at the University were invited to participate in the *University SLS* by completing an in-depth, online questionnaire, using the Qualtrics survey software (Qualtrics, 2016). Participation was voluntary, and students were assured that their individual responses would not be disclosed, except to the researchers. The University provided various incentives across the years of the study, including gift card drawings and, most frequently, credit for attending one or two chapel services.

From 2011-2014, new students took the survey in University computer labs during a session of new student orientation. In 2015, new students completed the survey as part of their online registration process, prior to arriving on campus. In 2016, new students were invited to complete the survey during new student orientation, but they were not provided a dedicated time

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in their schedule for survey completion. Across all six years, returning students were invited to complete the survey early in the fall semester. Care was taken to ensure that data collection did not overlap with Spiritual Emphasis Week or other important Spiritual Life events on campus. Survey methodology closely followed the recommendations of Dillman, Smyth, and Christian (2009).

Data collected from six survey waves (2011-2016) were combined in SPSS Statistics 24, yielding a single database with 4,184 surveys completed by traditional, undergraduate students. Using the Identify Duplicate Cases utility, the database was sorted, and the survey records were screened to ensure that students had completed each wave of the survey in a different academic year of their undergraduate experience at the University. Finally, 2,152 surveys were retained, representing students who had completed the *University SLS* multiple times (n = 965). The SPSS CASESTOVARS syntax command was used to combine cases and form the variables of interest (St1–St4) for the present study. These four StV variables served as indicators of students' spiritual vitality across their time at the University. Sixteen variables were included as potential predictors of StV's intercept (I1) or slope (S1).

Once data were prepared in SPSS, they were transferred to Mplus for analysis, using latent growth curve modeling (LGM) (Byrne, 2012b; B. O. Muthén & Muthén, 1998–2015; L. K. Muthén & Muthén, 2012). Missing data were handled by the MLR estimator, which is robust to non-normality and to missingness. Covariance coverages for both the level one and level two models exceeded the minimum of 0.10 (see Table 4).

Missing Data Procedures

In longitudinal studies, missing data are common; however, identifying potential causes of missingness is essential to understanding the limitations and implications of the study (Preacher, 2010, pp. 193-194). In this study, key variables were compared for students who

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completed the survey only one time (n = 2,032) and those who participated in multiple time points (n = 965, surveys = 2,152). Analysis of variance indicated no significant mean differences between these groups for StV ($F_{(1)} = 0.052$, p = .820) or ScV ($F_{(1)} = 2.015$, p = .156). These findings suggest that students did not systematically drop out of the study because they had lower spiritual vitality (StV) than their classmates or because they were dissatisfied with the University's support of their spiritual lives (ScV).

Three demographic variables did show significant differences between students who participated one time and those who persisted across multiple survey waves. First, students who participated only one time were older (M = 20.55, SD = 5.007), on average, than those who participated multiple times (M = 19.85, SD = 2.455). This difference is statistically significant ($F_{(1)} = 33.485$, p < .001); however, if students were seniors when they participated in their first wave of data collection, they would naturally not have another opportunity to participate, due to graduation. After filtering out students who were seniors and only participated in a single time point (n = 382), the age difference between groups disappeared, and the mean difference test became non-significant ($F_{(1)} = 0.057$, p = .811).

Second, cumulative grade point average (GPA) differed between students who participated one time and those who persisted across multiple survey waves. Students who participated only one time had a lower GPA (M = 3.272, SD = 0.562) than those who participated multiple times (M = 3.413, SD = 0.538). Again, this is a significant difference ($F_{(1)} = 49.473$, p< .001), but it is not particularly large. The University's mean GPA is 3.38, which is between these two groups. While it is possible that the results of this study are more representative of students with slightly higher than average GPAs, effect size of that difference would be quite small.

Third, gender (FEM) differed between students who participated only one time and those who persisted across multiple waves. Women were more likely than men to participate in the *University SLS*, and women persisted in the study across multiple time points more often than their male classmates. The gender difference between those who participated in a single survey (Men = 42.1%, Women = 57.9%) and those who participated in multiple survey waves (Men = 36.5%, Women = 63.5%) was significant ($F_{(1)} = 14.741$, p < .001). However, a chi-squared comparison of the multiple survey participants with the 2016 university population (Men = 44.5%, Women = 55.5%) was not statistically significant ($\chi^2_{(1)} = 2.5914$, p = .0678). Certainly, women persisted through the study at a higher rate than men. Thus, it may be that the results of this study are more applicable to female than to male students.

Often, missingness in this study was caused by the University leaders' attempts to limit survey fatigue through various sample frame strategies. In 2011, the first year of the study, only returning students were surveyed. In 2013, only new students were surveyed, and in 2015, students in the junior class were not invited to participate. As data analysis revealed the impact that these strategies were having on covariance coverage (see Table 4), however, the University moved toward offering the *University SLS* to all students each academic year. As the study continues, researchers hope that this strategy will result in more complete data. Despite the noted limitations, however, the data are adequate for LGM when analyzed with a Full Information Maximum Likelihood (FIML) estimator, such as the MLR estimator in Mplus (Byrne, 2012a; L. K. Muthén & Muthén, 2012; Preacher, 2010).

Hypotheses

Using LGM to better understand how StV changes over time at the University, allowed researchers to measure two models simultaneously. The level one model examines intraindividual change, yielding data on latent means and variances of intercept and slope. The

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level two model provides insight into predictors of both StV intercept (I1) and slope (S1) by

regressing these latent variables on hypothesized covariates (Byrne, 2012b). Prior to data

analysis, 31 hypotheses were made about the level one and level two models in response to

available literature and to analysis of the University's cross-sectional reports of the University

SLS from 2011 through 2016.

Hypotheses for the level one model of intraindividual change.

The following a priori hypotheses were made about the level one model:

- 1. The variance of the (a) intercept and (b) slope of StV will be significantly different from zero.
- 2. The latent (a) intercept and (b) slope of StV will be negatively correlated.

Hypotheses for the level two model of interindividual change.

A priori hypotheses were made about the level two model in three areas: (a) University

SLS factors, (b) Spiritual Practices, (c) Spiritual Relationships, (d) Life in the Spirit, and (e)

demographics.

University Spiritual Life Survey variables.

- 3. School Spiritual Vitality (ScV) will be a positive predictor of StV slope.
- 4. Closeness to Christ and Others, as measured by either CTC or TDS⁷ will be a positive predictor of (a) intercept and (b) slope.
- 5. Parent Class will be a positive predictor of StV (a) intercept and (b) slope.

Spiritual practices variables.

- 6. Listens to God (LIS) will be a positive predictor of (a) intercept and (b) slope.
- 7. Reflects on Scripture (ROS) will be a positive predictor of (a) intercept and (b) slope.

⁷ Due to domain overlap between CTC and TDS, my hypothesis was that either one or the other measure would predict the intercept and slope of StV. I determined a priori that it would be inappropriate to have both potential covariates in the same model.

Spiritual relationships variables.

- 8. Spiritual Relationship with an Adult (SRA) will be a positive predictor of (a) intercept and (b) slope.
- 9. Spiritual Relationship with a Friend (SRF) will be a positive predictor of (a) intercept and (b) slope.

Life in the Spirit variables.

- 10. Holy Spirit Baptism will be a positive predictor of StV (a) intercept and (b) slope.
- 11. Holy Spirit Empowerment will be a positive predictor of StV (a) intercept and (b) slope.
- 12. Holy Spirit Reliance will be a positive predictor of StV (a) intercept and (b) slope.

Demographic variables.

- 13. Age (AGE) will be a positive predictor of StV (a) intercept and (b) slope.
- 14. Gender (FEM) will be a positive predictor of StV (a) intercept and (b) slope.
- 15. Grade Point Average (GPA) will be a positive predictor of StV slope.
- 16. Intercollegiate Athletics (ATH) participation will be a negative predictor of StV (a) intercept and (b) slope.
- 17. Living on campus (RES) will be a positive predictor of StV slope.

Results

The study data were analyzed in two phases. First, the level one model of intraindividual change was specified and analyzed, using Mplus. Second, the level two model of interindividual change was fitted, including covariates.

Level One Model Results

The level one model was labeled Model 1 (see Figure 1). Global model fit was very good, and no modification indices were present over the default threshold of 10.0 (See Table 5).

The latent mean intercept value for StV was 86.597 (p < .001), and the latent mean slope for StV was -1.344 (p < .001). These values indicate that participants on average have relatively

high scores for student spiritual vitality, obtaining 86.6 points on a 100-point scale. Participants also experience a small decrease (-1.6%) in spiritual vitality on average, during their tenure at the University. These findings are similar to the results of Hall, Edwards & Wang's (2015) research at an evangelical Christian university in the Pacific Southwest.

The variance of the latent intercept for StV was large and statistically significant (83.007, p < .001), supporting the hypothesis (1a) that the variance of II would be significantly different from zero. The variance of the latent slope was much smaller but still statistically significant (8.798, p = .039), supporting hypothesis 1b, which asserted that the latent slope of StV would be significantly different from zero. Finally, the covariance between the latent intercept and latent slope for StV is small (-4.046, p = .560) and is not statistically significant. Hypothesis 2 is not supported by these findings. These data do not support the idea that students with higher StV on arrival at the University might experience less growth, on average, than students who come to the University with lower StV scores.

Since the level one model contains significant variance in both the latent intercept (I1) and the latent slope (S1) of StV, it is appropriate to move on to a level two model. The purpose of the level two model is to regress the intercept (I1) and slope (S1) terms on covariates, which may account for some of the unexplained variance in the level one model.

Level Two Model Results

The level two model (Model 2) is an adaptation of Model 1 in which the StV latent intercept (I1) and the StV latent slope (S1) are regressed on all hypothesized covariates simultaneously.⁸ Model 2.1 included regressions of I1 on the following 14 variables:

⁸ Due to the large number of hypotheses under examination and the exploratory nature of this study, caution should be used when interpreting significance. Though the alpha level for statistical significance in this study is .05, regressions with a probability of < .05 and > .01 should be interpreted as less definitive than those with

- 1. Age in years (AGE)
- 2. Intercollegiate Athlete (ATH)
- 3. Self-described Closeness to Christ (CTC)
- 4. Gender (FEM)
- 5. Holy Spirit Baptism (HSB)
- 6. Holy Spirit Empowerment (HSP)
- 7. Holy Spirit Reliance (HSR)
- 8. Listens to God (LIS)
- 9. Parental Involvement in the student's religious/spiritual life (PAR)
- 10. Reflects on Scripture (ROS)
- 11. School Spiritual Vitality Gauge (ScV)
- 12. Spiritual Relationship with Adult (SRA)
- 13. Spiritual Relationship with Friend (SRF)
- 14. Two-Dimensional Closeness to Christ and Others (TDS)

Model 2.1 also specified regressions of S1 on the following 16 variables:

- 1. Age in years (AGE)
- 2. Intercollegiate Athlete (ATH)
- 3. Self-described Closeness to Christ (CTC)
- 4. Gender (FEM)
- 5. Cumulative Grade Point Average (GPA)
- 6. Holy Spirit Baptism (HSB)
- 7. Holy Spirit Empowerment (HSP)
- 8. Holy Spirit Reliance (HSR)

p < .01. Replications of this study in other settings will provide critical data as researchers refine the structural model.

- 9. Listens to God (LIS)
- 10. Parental Involvement in the student's religious/spiritual life (PAR)
- 11. Reflects on Scripture (ROS)
- 12. Residential Housing Status (RES)
- 13. School Spiritual Vitality Gauge (ScV)
- 14. Spiritual Relationship with Adult (SRA)
- 15. Spiritual Relationship with Friend (SRF)
- 16. Two-Dimensional Closeness to Christ and Others (TDS)

Additionally, since the hypothesized correlation between I1 and S1 proved non-significant in Model 1, their covariance was constrained to zero in Model 2.

Initial fit for Model 2.1 was very good, exhibiting improved global fit indices compared to Model 1, which functions as the measurement model in LGM (see Table 5). To further improve the model fit and parsimony of the level two model, covariates with non-significant relationships to the latent variables were iteratively trimmed. In this procedure, the least significant covariate was trimmed, and the model was estimated again. On the sixteenth iteration, Model 2.16 produced the best fit to the data without overfitting the model (see Figure 2). Global fit indices were excellent, and the fitted model produced a 91.1% reduction in residual variance for I1 and a 66.5% reduction in residual variance for S1, compared to Model 1. Explained variance in the latent variables is significant for both I1 ($R^2 = .905$, p < .001) and S1 ($R^2 = .396$, p= .022), representing a large effect size for both variables (Gravetter & Wallnau, 2012, p. 264). Table 5 presents a comparison of the model fit statistics for Models 1.0, 2.1, 2.16, 2.20 and 3.12.

Results of Hypothesis Testing for Model 2.16

In the process of fitting Model 2.16, several regression paths were trimmed. In order of elimination, the following paths were eliminated, due to non-significance:

- 1. S1 on ATH. Involvement in intercollegiate athletics was not a significant predictor of slope; thus, Hypothesis 16b was not supported by the data.
- 2. S1 on TDS. Self-described Closeness to Christ and Others was not a significant predictor of slope; thus, Hypothesis 4b was not supported by TDS.
- 3. S1 on HSB. Holy Spirit Baptism was not a significant predictor of slope; thus, Hypothesis 10b was not supported by the data.
- 4. S1 on HSP. Holy Spirit Empowerment was not a significant predictor of slope; thus, Hypothesis 11b was not supported by the data.
- 5. S1 on SRA. Spiritual Relationship with an Adult was not a significant predictor of slope; thus, Hypothesis 8b was not supported by the data.
- 6. Il on SRA. Spiritual Relationship with an Adult was not a significant predictor of intercept; thus, Hypothesis 8a was not supported by the data. SRA was trimmed from the model.
- 7. Il on PAR. Parental engagement in religious practices with their student was not a significant predictor of intercept; thus, Hypothesis 5a was not supported by the data.
- 8. Il on ATH. Involvement in intercollegiate athletics was not a significant predictor of intercept; thus, Hypothesis 16a was not supported by the data. For the sake of parsimony, ATH was trimmed from the model.
- 9. S1 on CTC. Self-described Closeness to Christ was not a significant predictor of slope; thus, Hypothesis 4b was not supported by the data.
- 10. I1 on AGE. Age was not a significant predictor of intercept; thus, Hypothesis 3a was not supported by the data.
- 11. S1 on RES. Living on campus was not a significant predictor of slope; thus, Hypothesis 17b was not supported by the data. RES was trimmed from the model.
- 12. S1 on PAR. Parental engagement in religious practices with their student was not a significant predictor of slope; thus, Hypothesis 5b was not supported by the data. PAR was removed from the model.
- 13. S1 on SRF. Spiritual relationship with a friend was not a significant predictor of slope; thus, Hypothesis 9b was not supported by the data.
- 14. Il on CTC. Self-described closeness to Christ was not a significant predictor of intercept; thus, CTC was removed from the model. Since TDS remained in the model, no determination was made as to the disposition of Hypothesis 4a.
- 15. S1 on FEM. Gender was not a significant predictor of slope; thus, Hypothesis 14b was not supported by the data.

16. I1 on FEM. Gender was not a significant predictor of intercept; thus, Hypothesis 14a was not supported by the data. FEM was removed from the model.

Once these sixteen regression paths were trimmed from the model, three additional non-

significant paths remained. Attempts to trim these paths from the model decreased global model

fit, giving indications of overfitting. Though the hypotheses related to these covariates do not

find support beyond the standard alpha level of .05, they remain in the model:

- 1. If on AGE. Age was not a significant predictor of intercept ($\beta = -.056$, p = .099). Hypothesis 13a was not supported by the data.
- 2. S1 on GPA. Cumulative grade point average was not a significant predictor of slope ($\beta = .144, p = .056$). Hypothesis 15 was not supported by the data.
- 3. S1 on HSR. Reliance on the Holy Spirit was not a significant predictor of slope $(\beta = .256, p = .071)$. Hypothesis 12b was not supported by the data.

In its final form, Model 2.16 provided support for the following ten hypotheses, which

were specified a priori:

- 1. S1 on ScV. School Spiritual Vitality, which is a measure of students' satisfaction with the University's support of their spiritual lives, was a significant, positive predictor of slope ($\beta = .582$, p < .001). Hypothesis 3 was supported by the data.
- 2. Il on TDS. Two-dimensional closeness to Christ and others was a significant, positive predictor of intercept. ($\beta = .343$, p < .001). Hypothesis 4a was supported by the data.
- 3. If on LIS. Frequency of listening to God in prayer was a significant, positive predictor of intercept ($\beta = -.150$, p = .001). Hypothesis 6a was supported by the data.⁹
- 4. Il on ROS. Frequency of reflecting on scripture was a significant, positive predictor of intercept ($\beta = ..104$, p = .001). Hypothesis 7a was supported by the data.¹⁰
- 5. S1 on ROS. Frequency of reflecting on scripture was a significant, positive predictor of slope ($\beta = -.328$, p = .008). Hypothesis 7b was supported by the data.

⁹ Note that the valence of the LIS item is reversed, so a *negative* regression coefficient means that those who set aside quiet time to listen to God more frequently demonstrate higher StV when they arrive on campus at the University.

¹⁰ The valence of the ROS item is reversed, as with LIS. See note 10.

- 6. Il on SRF. Spiritual relationship with a friend was a significant, positive predictor of intercept ($\beta = -.127, p < .001$). Hypothesis 8a was supported by the data.¹¹
- 7. II on HSB. Holy Spirit Baptism was a significant positive predictor of intercept ($\beta = -.103, p = .001$). Hypothesis 10a was supported by the data.¹²
- 8. II on HSP. Holy Spirit Empowerment was a significant positive predictor of intercept ($\beta = -.070$, p = .024). Hypothesis 11a was supported by the data.¹³
- 9. II on HSR. Holy Spirit Reliance was a significant positive predictor of intercept ($\beta = -.348, p < .001$). Hypothesis 12a is supported by the data.¹⁴
- 10. S1 on AGE. Age was a significant, positive predictor of slope ($\beta = .140, p = .035$). Hypothesis 13b was supported by the data.¹⁵

In addition to these 10 hypothesized covariance effects, Model 2.16 also produced two

significant, unanticipated findings.

- 1. S1 on LIS. Frequency of listening to God in prayer was a significant, *negative* predictor of intercept ($\beta = .322$, p = .010). Hypothesis 6b, which predicted a positive relationship between S1 and LIS, was not supported by the data.¹⁶
- 2. If on ScV. Satisfaction with the University's support of student spiritual vitality was unexpectedly related to StV at intercept ($\beta = .095$, p = .003).

While Hypothesis 3 was supported in its prediction that ScV would be a positive predictor of

change in StV over time (slope), the relationship between I1 and ScV was not hypothesized a

priori. This unanticipated relationship should be interpreted together with the stronger

relationship between S1 and ScV. These findings suggest that students who arrived at the

¹¹ The valence of the SRF item is reversed. See note 10.

¹² The valence of the HSB item is reversed. See note 10.

¹³ The valence of the HSP item is reversed. See note 10. Readers should interpret the significance of this regression coefficient with caution. See note 8.

¹⁴ The valence of the HSR item is reversed. See note 10.

¹⁵ Readers should interpret the significance of this regression coefficient with caution. See note 8.

¹⁶ While LIS was an unexpectedly *negative* predictor of variance in slope, it was a significant *positive* predictor of variance in intercept. Given that the variance of StV at intercept is 9.43 times larger than the variance of its slope, it is likely that these contradictory influences point to a ceiling effect. Students who listen to God in prayer with the greatest frequency tend to arrive at the University with very high StV scores. Consequently, they do not experience tremendous positive change in StV (slope) during their college years because there is very little room for growth in spiritual vitality as operationalized by the StV.

University with higher spiritual vitality (StV at intercept) tended to view the University's support of their spiritual lives (ScV) more positively than did their classmates with lower StV at intercept. Even controlling for this relationship, however, ScV was the strongest predictor of slope in the model ($\beta = .582$, p < .001).

Trimming for Parsimony

While Model 2.16 was the best fitting model, it included three non-significant covariate regressions: I1 on AGE, S1 on GPA, and S1 on HSR. In an effort to produce the most parsimonious model possible, I iteratively removed non-significant covariance regressions from the model. When I1 on AGE was removed, S1 on AGE also became non-significant, reinforcing the idea that an alpha level of .01 may be preferable in an exploratory model of this size. Ultimately, I removed I1 on AGE, S1 on AGE, S1 on HSR, and S1 on GPA from the model. Trimming these relationships also removed both AGE and GPA from the analysis, since these covariates no longer demonstrated a significant relationship with either intercept or slope.

The resulting Model 2.20 is the most parsimonious LGM of StV at the University, and its model fit statistics are presented in italics in Table 5. Change in MLR χ^2 is small, despite a decrease of four degrees of freedom, resulting from the removal of AGE and GPA from the model. Change in CFI is less than .01 (Cheung & Rensvold, 2002; Little, 2013, pp. 154–156); however, the RMSEA rises in Model 2.20, and its 95% CI increases to above zero (see Table 5). Additionally, Model 2.20 shows a decrease in model explained variance for S1 ($R^2 = .322$, p = .031) compared to Model 2.16 ($R^2 = .396$, p = .022). Replication of this study at other institutions will be necessary to determine whether Model 2.16 or Model 2.20 is preferable.

Alternative Model Testing

Since one purpose of the present study was to evaluate the impact of Life in the Spirit on students at a small, Pentecostal university, an alternative model was tested without including the

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three Life in the Spirit variables: (a) Holy Spirit Baptism, (b) Holy Spirit Empowerment, and (c) Holy Spirit Reliance. This alternative model (Model 3) was tested using the same procedures as were described for Model 2. Beginning with Model 1, and constraining the covariance between I1 and S1 to zero, both I1 and S1 were regressed on all hypothesized covariates except the Life in the Spirit variables. Non-significant regression paths were trimmed iteratively, as with Model 2. After 12 iterations, Model 3.12 produced the best global model fit without overfitting (see Table 5 and Figure 3).

In the absence of the Life in the Spirit variables, global model was fit marginally weaker than in Model 2.16, with SRMR showing the largest change in global fit (Δ SRMR = .016). The most notable difference between the two models, however, is the fact that in Model 3.12, modelexplained variance for the latent intercept variable is reduced. Model 3.12 explains 82.1% of the variance in I1 compared to 90.5% R^2 in Model 2.16. Conversely, Model 3.12 provides an estimated R^2 for S1 of 41.1% (p = 0.041), while Model 2.16 explains only 39.6% of the variance in S1 (p = 0.022). Since Model 2.16 shows the influence of HSB, HSP, and HSR predominantly at intercept, the 9.3% difference in model explained variance at intercept is likely due to the absence of the Life in the Spirit variables in model 3.12.

Apart from model-explained variance, and slightly decreased global model fit, this non-Pentecostal model also provides evidence of the importance of spiritual practices, such as listening to God and reflecting on scripture; spiritual relationships with friends; and satisfaction with school support of student spiritual formation (see Figure 3). Inclusion of Life in the Spirit variables brings increased fidelity to a model of student spiritual vitality at this Pentecostal university. Replication of this study at other Pentecostal and non-Pentecostal colleges and universities will help researchers better understand the relationships, religious experiences,

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spiritual practices, and campus ministries that catalyze spiritual formation in Christian university students.

Discussion

This study has examined changes in spiritual vitality during the time that participants were enrolled at a small, Pentecostal university. The present study contributes to the growing body of scholarly literature on the spiritual lives of emerging adults by (a) providing a highfidelity picture of the spiritual vitality and spiritual growth trajectory of students at the University, (b) developing a means to quantify the impact of the University's spiritual formation program, (c) examining evidence of the Holy Spirit's impact on student spiritual formation, and (d) discussing key spiritual practices that influence student spiritual vitality. These findings provide guidance for future research into the spiritual lives of emerging adults and have implications for best practice in Christian campus ministry.

Measuring Change in Student Spiritual Vitality

First, use of a cohort-sequential longitudinal design with latent growth curve modeling provides critical advantages in the analysis of student spiritual vitality (Byrne, 2012a; Little, 2013). The use of LGM improves researchers' ability to isolate true score variance from error variance, which is common in studies of unobservable phenomena, such as spiritual vitality, intelligence, or personality. In the current study, modeling change in StV (slope) presented the twin challenges of a relatively small mean change and similarly small variance in the level one model. Modeling latent variables (rather than merely observed variables) improves the fidelity of the overall model and the precision of the model's findings.

Students at the University tend to endorse very high levels of spiritual vitality (M = 86.60, SD = 9.11). However, their change in spiritual vitality (slope) during the college years is negligible (M = -1.34, SD = 2.97). Certainly, some students at the University experience growth

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in their spiritual vitality, but on average they do not. Some students arrive on campus with such high StV scores that dramatic, positive change is simply not possible. For these students, especially those who frequently engage in the spiritual practice of listening to God, there is evidence of a ceiling effect in the data. Overall, these findings are in keeping with the recent study by Hall et al. (2015) at an evangelical Christian university, where student spirituality was found to decline somewhat during the college years. Regardless of this negative growth trajectory among Christian university students, Augustyn et al. (2016) suggest that students who are most engaged in spiritual practices are least likely to experience poor spiritual or psychological outcomes as they work through the process of making their faith their own. Furthermore, data from other universities that have participated in the *University SLS* (n = 17,976 at 14 institutions) indicate that students with lower levels of spiritual vitality (StV) tend to be concerned with intrinsic spiritual growth and working through barriers to faith, while students with higher StV are focused on developing sustaining spiritual practices, building Christ-centered relationships, and putting their faith into action though service.

The Christian University's Impact on Student Spiritual Vitality

This picture of student spiritual vitality is nuanced, requiring Christian universities to carefully assess and develop programs to meet the needs of all their students. The data indicate the importance of the School Spiritual Vitality (ScV) as an indicator of student satisfaction, which appears to catalyze student spiritual formation. Student satisfaction with the University's support of their spiritual journey (ScV) was a strong, positive predictor of change in StV (β = .582, p < .001). It was also significantly related to StV at intercept (I1). Thus, students with the highest levels of spiritual vitality on arrival at the University tend to be most satisfied with the University's support of their spiritual lives. It is possible that these high StV students are simply more capable of meeting their own spiritual needs than their classmates with lower StV. It may

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also be that the spiritual life programs at the University are most suited to students in the higher range of StV. Regardless of the explanation for the relationship between ScV and I1, the stronger relationship with S1 (slope) tells an important story. Students at the University who are satisfied with the school support they are receiving for their spiritual journey (high ScV) are likely to grow in spiritual vitality, even controlling for every other predictor in the model.

Christian colleges and universities often develop campus ministry programs that aim for the middle of their student population – the average student. However, the amount of variability in student spiritual vitality requires a varied approach from campus ministry professionals. Students at the low end of the StV scale may need assistance working through faith barriers and even dealing with religious/spiritual attachment issues (Augustyn et al., 2016). Those on the high end of the StV scale tend to be concerned with putting their faith into action and with finding adult spiritual mentors who can challenge them and point them to next steps (Setran & Kiesling, 2013). Careful assessment and planning can maximize the impact of Christian higher education on student spiritual vitality.

The Holy Spirit in the Spiritual Formation of Emerging Adults

Beyond understanding students' spiritual lives and the role that the University plays in catalyzing spiritual growth among their students, this study provides important evidence about the role of the Holy Spirit in the spiritual formation of Pentecostal university students. Prior to the study, I hypothesized that Holy Spirit baptism, empowerment, and reliance would be significant predictors of change in StV (slope); however, that was not the case. I was surprised to learn that every positive impact of Life in the Spirit applied to intercept instead of slope. Still, the Life in the Spirit variables, considered together, were powerful predictors of StV in the model.

The impacts of Holy Spirit baptism, empowerment, and reliance are seen most clearly in their relationship to students' spiritual vitality when they arrive on campus at the University. In

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retrospect, this makes sense. Based on both enrollment records and on self-report survey questions, over two-thirds of study participants attend Charismatic or Pentecostal churches when they are not at school. In a small, longitudinal study of high school youth from Assemblies of God (AG) churches, Pulis (2014) found that 61.1% of participants often or sometimes "speak in tongues." Within classical Pentecostal doctrine, the practice of speaking in tongues is seen as the initial, physical evidence of Holy Spirit baptism. In this study, 75.4% of students who come from Charismatic or Pentecostal church backgrounds claim to have spoken in tongues at the time of Holy Spirit Baptism, and 65.5% of these students claim that they regularly speak in tongues during private prayer and/or worship. Only 15.9% of students who participated in this study disagree or are uncertain that they have been baptized in the Holy Spirit.

Charismatic and Pentecostal churches encourage middle and high school students to seek Holy Spirit baptism, supernatural empowerment for service, and to develop an awareness of and reliance on the Holy Spirit in daily life. Thus, it is understandable that most students arrive at this university with a pre-existing understanding of and engagement in Life in the Spirit. Any impact that these experiences might have would logically load on StV at intercept (I1), instead of on the change term (S1).

In this Pentecostal campus environment, Life in the Spirit variables are key to understanding student spiritual vitality. When Life in the Spirit is considered, the amount of model-explained variance in StV at intercept (I1) increases from 81.2% to 90.5%. Also, when Life in the Spirit is considered, the significance of model explained variance in StV slope increases noticeably.

It is worth noting that students who endorse higher Holy Spirit Reliance (HSR) may also experience downward pressure on their spiritual vitality during their time at the University.

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While HSR exerts positive and strong influence on StV intercept (I1), it may also depress StV slope (S1), though not significantly. Considered together, these data suggest the possibility of a ceiling effect for students with very high Holy Spirit Reliance. Having developed a strong Life in the Spirit prior to coming to the University, these students also tend to have very high spiritual vitality at intercept. Consequently, there is not much room for them to grow spiritually, during the college years. Indeed, of the 776 students who participated in the *University SLS* during their first academic year at the University, 48.6% scored 90 or higher on StV. The evidence suggests that these extremely high StV scores are strongly influenced by the Pentecostal tradition from which these students are drawn.

It is possible that these results would not generalize well to non-Pentecostal settings. Still, the strongest predictor of the three Life in the Spirit variables is Holy Spirit Reliance, which cannot truly be considered the exclusive province of the Charismatic/Pentecostal tradition. Longitudinal studies using the *University SLS* are currently underway at Adventist, Baptist, Pentecostal, and United Brethren in Christ institutions. These and other studies will be helpful in identifying key predictors and catalysts of student spiritual vitality.

Spiritual Practices Impact Student Spiritual Vitality

While the influence of the Holy Spirit was evident at intercept and the supportive environment of the Christian university (ScV) proved to be the strongest predictor of change in student spiritual vitality, spiritual practices influenced both StV intercept and StV slope. Most noticeably, students who set aside time to frequently reflect on scripture demonstrated significantly higher spiritual vitality than their classmates. These findings are consistent with data from the REVEAL research among churchgoing adults (Hawkins & Parkinson, 2011). At intercept, the influence of reflecting on scripture is relatively small ($\beta = -0.104$, p = .011) compared to its influence on slope ($\beta = -0.328$, p = .008).¹⁷

Listening to God in prayer also exhibits a meaningful, positive influence on student spiritual vitality at intercept ($\beta = -0.150$, p = .001), but it exhibits a negative influence on change in spiritual vitality over time ($\beta = 0.322$, p = .010). The relative magnitude of these influences must be considered in light of the large variance in StV intercept ($s^2_{(11)} = 83.007$, p < .001) and the much smaller variance in StV change over time ($s^2_{(S1)} = 8.798$, p = .039). Interestingly, a comparison of means between ROS (M = 1.18, SD = .80) and LIS (M = 1.51, SD = .78) reveals that students at the University are more likely to reflect on scripture than to devote time to listening to God. These statistics suggest a ceiling effect in which students who most frequently listen to God in prayer may enter the University with the highest StV (I1) scores, leaving little room for positive change in StV over time (S1). Replications of this study in other settings will help to clarify the role of LIS in catalyzing student spiritual vitality.

In practice, these data support the idea that campus ministers should help their students develop robust spiritual practices, including time for reflection on scripture and listening to God in prayer. For students who have not yet developed these disciplines, evidence suggests that listening to the voice of God through scripture and prayer may catalyze spiritual vitality. Those who already engage in these practices regularly should understand the impact that these disciplines likely have on their overall spiritual health.

¹⁷ Though these regression coefficients are negative, they indicate a positive influence on StV because the ROS item is negatively scaled.

Demographic Variables Do Not Predict Spiritual Vitality

Finally, this study highlights the fact that demographic variables such as gender, age, involvement in intercollegiate athletics, grade point average, and even parental involvement in students' spiritual/religious lives are not predictive of a student's spiritual vitality. When considered in isolation, involvement in intercollegiate athletics places downward pressure on StV at intercept. Having parents who are engaged in a student's religious/spiritual life tends to strengthen StV at intercept. Additionally, slope tends to be positively influenced by age and female gender.¹⁸

While students have little (or no) influence over these demographic variables, they can choose to enroll at a college or university that supports their spiritual life, engage in spiritual practices, seek out spiritually supportive friendships, and even pursue a closer relationship with God through the Holy Spirit. When modeled together, these important variables overwhelm the influence of demographics and provide a sense of agency for students who desire a life marked by spiritual vitality.

Limitations

Several limitations to this study are worthy of note. First, this research focused on developing valid, reliable methods to measure the impact of Christian colleges and universities on the spiritual vitality of their students. To that end, our study was located in a small, Pentecostal university with an established campus ministries program and with a tradition of attracting students from Charismatic and Pentecostal backgrounds. It is not clear to what degree

¹⁸ Though I do not report the full model in this paper, it is possible to obtain a well-fitting LGM of StV using only these four demographic variables as covariates. While the model fits adequately, model-explained variance for the latent variables (I1 and S1) is small and, in the case of slope, non-significant.

these findings may be generalizable to colleges and universities affiliated with different Christian traditions or to Christian students attending secular universities.

Second, due to the demographics of the student population at the University, minorities were not well represented in this research. Participation rates accurately reflected the campus community, but were not reflective of all Charismatic and Pentecostal churches in the United States. Given the history of ethnic division within the Pentecostal tradition, care should be taken when generalizing these findings to Christian students of color, and every effort should be made to replicate this study in a more ethnically diverse setting.

Finally, the *University SLS* was introduced as an assessment for Christian colleges and universities in 2013. Though it is a promising and useful instrument, it has not previously appeared in scholarly literature. Future use of the instrument and publication of its findings will help scholars better understand the *University SLS* and help its developers improve the instrument.

Implications for Research and Practice

The results of this study have several implications for future research and for the practice of campus ministry. First, the setting of this study in a Pentecostal university provides important information on the role of the Holy Spirit in the lives of Charismatic and Pentecostal students; however, other Christian traditions are deeply involved in higher education and are working to develop the spiritual vitality of their students. In the future, researchers should attempt to employ the methods of the *University SLS* at evangelical, mainline, Catholic, and Orthodox institutions in the United States and Canada. Such research would not only benefit the participating colleges and universities, but it would also help researchers and theologians better understand the common themes that unite Christian denominations, particularly in North America.

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Second, the very high StV scores at intercept (I1) obtained in this study raise questions about how youth and emerging adults mature spiritually. Future research should endeavor to follow a large sample of Christian high school students through their high school and college years. Such measurement may produce important data on the faith development trajectory of youth and emerging adults. It would also help campus ministers from both Christian and secular universities better understand how to catalyze spiritual formation for students in a variety of higher education settings.

Third, future research should examine the lasting effects of Christian higher education by conducting similar research on spiritual vitality among alumni. While scholars contend that emerging adulthood ends with marriage and parenthood, it is unclear how the influence of Christian higher education may prepare students for the onset of adulthood with its attendant responsibilities and changes.

Finally, this study suggests the importance of student satisfaction with the University's support for their spiritual life (ScV). Clearly, however, no single program or ministry can meet the needs of every kind of student. Those with very high StV have different needs and concern than those with very low StV. Student athletes are different from non-athletes. Future qualitative research could help to develop a better understanding of the kinds of spiritual, religious, relational, and service-oriented ministries that would benefit students in these special categories.

Conclusion

Most Christian student development professionals would affirm the need for excellent campus ministries programs that meet the needs of students across all demographics. This study provides them with evidence that ScV is extremely important to the ongoing spiritual development of Christian university students. Second, this research highlights the role that students play in their own spiritual formation through purposeful engagement in key spiritual

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practices and by building spiritually supportive friendships. Christian university students are not the *objects* of student development efforts; rather, they are active *agents* in their own spiritual formation. Thus, campus ministers should encourage their students to transition from being *receivers* of their family's religious/spiritual traditions to being *participants* in both worship and service through Christ.

Finally, this study presents evidence of the measurable and unique influence of a Life in the Spirit on these students. Apart from demographic characteristics, a school's influence, or engagement in other spiritual practices, students whose spiritual life was marked by awareness of and engagement with the Holy Spirit demonstrated higher levels of spiritual vitality than their peers. There is no doubt that spiritual formation is more than Charismatic experience; however, these experiences do catalyze spiritual formation in ways that cannot be accounted for by other measures.

These findings are particularly good news for students who may believe that their religious/spiritual heritage, their gender, their academic ability, or their commitment to an athletic team somehow makes it impossible for them to develop spiritual vitality. Just as Paul explained to Timothy, there is more to it than that. When students seek a relationship with God through a supportive environment, personal spiritual practices, and reliance on the Holy Spirit, they develop spiritual vitality that can sustain them.

Author Note

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Tables

Table 1

Time Point of First Participation and Number of Participants Completing Each Time Point

	First Participation			Participated in Wave			
Wave	п	% of sample	n	% of sample			
Fall 2011*	128	13.30%	12	8 13.3%			
Fall 2012	208	21.6%	32	9 34.1%			
Fall 2013**	262	27.2%	26	6 27.6%			
Fall 2014	182	18.9%	53	2 55.1%			
Fall 2015***	185	19.2%	47	8 49.5%			
Fall 2016****	0	0.0%	41	9 43.4%			

Note. N = 965. *Returning students only. **New students only. ***Juniors were not invited to participate. ****No first-time participants included.

Table 2

Coding Student Spiritual Vitality Gauge Scores for
Academic Time at Current University

		2
Variable	Academic	Credit Hours
	Year	Earned
St1	1	00.0 - 25.5
St2	2	26.0 - 55.5
St3	3	56.0 - 87.5
St4	4	$88.0-\infty$

Note. Only credit hours earned at the university in the current study counted toward computation of academic time.

Table 3

Zero-Or	der Corr	elations,	Means,	and Stan	dard Dev	viations f	or Study	Variable	5	
Variable	AGE	ATH	CTC	FEM	GPA	HSB	HSP	HSR	LIS	PAR
AGE	_									
ATH	015	_								
CTC	.088**	167**	_							
FEM	017	233**	.128**	_						
GPA	049	122**	.157**	.228**	_					
HSB	014	.035	279**	090**	.041	—				
HSP	080*	.058	430**	039	.034	.487**	—			
HSR	093**	.050	571**	157**	095**	.364**	.529**	—		
LIS	074*	.121**	554**	123**	056	.274**	.372**	.427**	_	
PAR	.017	.025	084**	.042	.030	.010	.012	.106**	.135**	—
RES	389**	030	.000	.006	.048	049	054	040	024	020
ROS	087**	.127**	504**	049	101**	.217**	.320**	.423**	.615**	.106**
ScV	054	.068*	.211**	.044	029	161**	259**	285**	253**	014
SRA	024	.023	337**	038	.038	.186**	.345**	.320**	.407**	.144**
SRF	046	.072*	393**	139**	011	.190**	.331**	.379**	.449**	.108**
St1	.010	105**	.608**	.031	.006	341**	450**	594**	507**	100**
St2	.041	078*	.552**	.171**	.095*	328**	445**	577**	500**	103**
St3	.056	.008	.510**	.046	.070	322**	395**	474**	430**	123**
St4	.073	106	.525**	.074	.132*	282**	407**	469**	424**	055
TDS	.083*	109**	.905**	.068*	.100**	264**	417**	534**	543**	118**
M	19.846	0.093	5.599	0.635	3.375	0.587	1.071	0.581	1.507	0.628
SD	2.305	0.243	1.075	0.482	0.549	0.771	0.827	0.590	0.779	0.535
Ν	965	965	965	965	965	965	965	965	965	965

Note. Table continues on following page. **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed). AGE = Age; ATH = Intercollegiate Athlete; CTC = Closeness to Christ; FEM = Female; GPA = Cumulative Grade Point Average; HSB = Holy Spirit Baptism; HSP = Holy Spirit Empowerment; HSR = Holy Spirit Reliance; LIS = Listens to God; PAR = Parent Class; RES = Residence on Campus; ROS = Reflects on Scripture; ScV = School Spiritual Vitality Gauge; SRA = Spiritual Relationship with Adult; SCF = Spiritual Relationship with Friend; St1 = Student Spiritual Vitality Gauge in Academic Year One; St2 = Student Spiritual Vitality Gauge in Academic Year Two; St3 = Student Spiritual Vitality Gauge in Academic Year Three; St4 = Student Spiritual Vitality Gauge in Academic Year Four; TDS = Two-Dimensional Segment.

Table 3, Continued

Lero-Order Correlations, Means, and Standard Deviations for Study Variables											
Variable	RES	ROS	ScV	SRA	SRF	St1	St2	St3	St4	TDS	
RES	_										
ROS	024	_									
ScV	.062	194**	_								
SRA	022	.328**	226**	_							
SRF	054	.386**	249**	.578**	_						
St1	.069	439**	.263**	356**	395**	_					
St2	.036	523**	.435**	350**	451**	.554**	_				
St3	.025	450**	.492**	332**	408**	.504**	.641**	_			
St4	046	471**	.420**	287**	338**	.385**	.519**	.562**	_		
TDS	019	490**	.263**	336**	370**	.598**	.564**	.555**	.548**	_	
М	0.868	1.178	73.515	1.704	0.966	86.883	84.680	83.842	83.396	2.651	
SD	0.291	0.800	13.582	1.176	1.027	11.555	12.558	13.015	12.735	0.686	
N	961	965	963	965	965	768	652	437	295	965	

Note. Table continued from preceding page. **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed). AGE = Age; ATH = Intercollegiate Athlete; CTC = Closeness to Christ; FEM = Female; GPA = Cumulative Grade Point Average; HSB = Holy Spirit Baptism; HSP = Holy Spirit Empowerment; HSR = Holy Spirit Reliance; LIS = Listens to God; PAR = Parent Class; RES = Residence on Campus; ROS = Reflects on Scripture; ScV = School Spiritual Vitality Gauge; SRA = Spiritual Relationship with Adult; SCF = Spiritual Relationship with Friend; St1 = Student Spiritual Vitality Gauge in Academic Year One; St2 = Student Spiritual Vitality Gauge in Academic Year Two; St3 = Student Spiritual Vitality Gauge in Academic Year Three; St4 = Student Spiritual Vitality Gauge in Academic Year Four; TDS = Two-Dimensional Segment.

Orden Convolutions Manual and Standard Deviations for Study Variability

Table 4

covariance e	20veruge joi	<i>i model</i> 1.1	inin annai via	inai Change
Variable	St1	St2	St3	St4
St1	0.796			
St2	0.530	0.676		
St3	0.290	0.220	0.453	
St4	0.203	0.103	0.122	0.306

Covariance Coverage for Model 1: Intraindividual Change

Note. Minimum covariance coverage limit = 0.10

Table 5

Fit Statistics for Alternative Models

Model	п	df	χ^2	р	MLR	CFI	TLI	RMSEA	95% CI	SRMR
1.0	965	5	11.058	0.0502	1.2059	.972	.966	.035	[0.00, .064]	.116
2.1	959	40	61.797	0.0150	1.1334	.983	.970	.024	[0.11, .035]	.031
2.16	963	31	40.965	0.1087	1.1248	.992	.988	.018	[0.00, .032]	.041
2.20	963	27	40.453	0.0464	1.1575	.989	.984	.023	[0.03, .036]	.051
3.12	963	25	41.423	0.0207	1.1205	.986	.978	.026	[0.10, .040]	.051

Note. **Bold** = Best fitting model. *Italic* = Most parsimonious model. df = degrees of freedom; χ^2 = Chi-square Test of Model Fit; p = Probability of Chi-square test statistic; MLR = Scaling Correction Factor for Non-Normality; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; 95% CI = 95% CI for RMSEA; SRMR = Standardized Root Mean Residual.



Figures

Model 1

Figure 1. Level One Latent Growth Curve Model of Student Spiritual Vitality. Latent constructs are shown in circles, and observed variables are shown in squares. $\chi^2_{(5, N=965)} = 11.058$, p = 0.0502; comparative fit index = .972; Tucker-Lewis index = .966; root mean square error of approximation = .035 [95% CI = 0.00, .064]; standardized root mean square residual = .116. * p < .05. ** p < .01. *** p < .001. StV = Student Spiritual Vitality. St1 = StV in Academic Year One; St2 = StV in Academic Year Two; St3 = StV in Academic Year 3; St4 = StV in Academic Year 4.

Model 2.16



Figure 2. Level Two Latent Growth Curve Model of Student Spiritual Vitality. Latent constructs are shown in circles, and observed variables are shown in squares. $\chi^2_{(31, n = 963)} = 40.965$, p = 0.1087; comparative fit index = .992; Tucker-Lewis index = .988; root mean square error of approximation = .018 [95% CI = 0.00, .032]; standardized root mean square residual = .041. * p < .05. ** p < .01. *** p < .001. StV = Student Spiritual Vitality Gauge; St1 = StV in Academic Year One; St2 = StV in Academic Year Two; St3 = StV in Academic Year Three; St4 = StV in Academic Year Four; AGE = Age in Years; GPA = Grade Point Average; HSB = Holy Spirit Baptism; HSP = Holy Spirit Empowerment; HSR = Holy Spirit Reliance; LIS = Listens to God; ROS = Reflects on Scripture; ScV = School Spiritual Vitality Gauge; SRF = Spiritual Relationship with Friend; TDS = Two-Dimensional Segment.

Model 3.12



Figure 3. Alternative Level Two Latent Growth Curve Model of Student Spiritual Vitality. Latent constructs are shown in circles, and observed variables are shown in squares. $\chi^2_{(23, n = 963)} = 41.423$, p = 0.0572; comparative fit index = .990; Tucker-Lewis index = .985; root mean square error of approximation = .023 [95% CI = .000, .038]; standardized root mean square residual = .057. * p < .05. ** p < .01. *** p < .001. StV = Student Spiritual Vitality; St1 = StV in Academic Year One; St2 = StV in Academic Year Two; St3 = StV in Academic Year Three; St4 = StV in Academic Year Four; AGE = Age in Years; GPA = Grade Point Average; LIS = Listens to God; ROS = Reflects on Scripture; ScV = School Spiritual Vitality Gauge; SRF = Spiritual Relationship with Friend; TDS = Two-Dimensional Segment.