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ABSTRACT

RELATIONSHIP BETWEEN INVOLVEMENT IN INSTITUTIONAL ACTIVITIES AND CHRISTIAN LIFE COMMITMENT AMONG UNDERGRADUATE STUDENTS OF A CHRISTIAN UNIVERSITY IN MEXICO

by

Esteban Quiyono

Chair: Jane Thayer

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

Title: RELATIONSHIP BETWEEN INVOLVEMENT IN INSTITUTIONAL ACTIVITIES AND CHRISTIAN LIFE COMMITMENT AMONG UNDERGRADUATE STUDENTS OF A CHRISTIAN UNIVERSITY IN MEXICO

Name of researcher: Esteban Quiyono

Name and degree of faculty chair: Jane Thayer, Ph.D.

Date completed: April 2014

Problem

A considerable gap in knowledge exists regarding religious commitment among young people in Mexican Christian colleges, where many institutional resources are invested to foster such commitment. This study attempted to identify the extent to which Christian commitments of undergraduate students in a Mexican Christian university are related to their involvement in institutional activities, influential agents, and selected demographic variables (gender, grade level, place of residence, and field of study).

Method

A descriptive cross-sectional and correlational design was conducted using survey research methodology with a stratified sample of 332 undergraduate students enrolled during the fall term of the 2002-2003 college year at Montemorelos University, a conservative Christian university sponsored by the Seventh-day Adventist Church and located in Northeastern Mexico. The survey instrument, the Christian Life Commitment, was divided by principal component analysis into two factors named: Christian Commitment Related to Personal Spirituality Scale and Christian Commitment Related to Church Mission Scale.

Results

Nearly 80% of the undergraduate students see themselves as making a great effort, even to the point of sacrifice, to keep their Christian commitments. While 87% of students reported being committed to Christian personal spirituality, 64% of them reported being committed to church mission. Both commitment to personal spirituality and commitment to church mission were moderately and positively associated with student involvement in institutional activities. Involvement in two activities, religious and evangelistic activities, was much more associated with commitment to church mission than to personal spirituality. All three sets of influential agents—institutional, instructional, and relational—had a moderate positive association with commitment both to personal spirituality and to church mission. Demographic variables indicated that students enrolled in arts and humanities are more likely to have higher Christian commitments than students in engineering, technology, management, and accounting. Students living in off-campus residences were more likely to have a higher commitment

to church mission than were students living in residence halls. No differences in Christian commitment were found for gender or grade level.

Conclusions

Students enrolled in a conservative Mexican Christian university are likely to report high Christian commitment. Throughout the college years, the Christian commitment of these students can be expected to keep stable and to be without significant differences between males and females. Students are likely to be positively influenced in their Christian commitments by parents and friends and by caring relationships with instructional agents. The findings of this study suggest that Christian colleges in Mexico could strengthen the Christian commitment of their students by encouraging their involvement in religious or evangelistic activities and by investigating and responding to why students in some fields of study have lower commitment than others and why students living off campus are more committed to church mission than are students living on campus.

Andrews University

School of Education

RELATIONSHIP BETWEEN INVOLVEMENT IN INSTITUTIONAL ACTIVITIES AND CHRISTIAN LIFE COMMITMENT AMONG UNDERGRADUATE STUDENTS OF A CHRISTIAN UNIVERSITY IN MEXICO

A Dissertation

Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Esteban Quiyono

April 2014

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APPROVAL BY THE COMMITTEE:

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Chair: O. Jane Thayer	Dean, School of Education James Jeffery
_____	
Member: Jimmy Kijai	
_____	
Member: John Matthews	
_____	_____
External: Roger L. Dudley	Date approved

To my dear wife, Elena, and my daughter, Eli, for their unconditional support and whom I love.

To my mother, who gave me the life.

To all of them, thank you for believing in me.

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CHAPTER 1

INTRODUCTION

Because of their educational philosophy, all Seventh-day Adventist (Adventist) colleges or universities need to encourage their students to make commitments to the Christian life. Because there is little research-based knowledge on this theme in Mexico, the Christian commitments of students on an Adventist campus have been investigated in this research project.

Background to the Study

In recent years there has been an increased interest, especially in the United States of America, in empirical research on the topics of spirituality, character development, spiritual maturity, maturation of faith, religious commitment, and other similar constructs (Astin, Astin, & Lindholm, 2011; Benson, Donahue, & Erickson, 1993; Cassie, Barlow, Jordan, & Hendrix, 2003; Courtenay, Sharan, & Reeves, 1999; Donahue & Kijai, 1993; Dudley, 1994; Dykstra, 1984; Erickson, 1992; Fowler, 1984; Genia, 2001; Hill & Hood, 1999; Love, 2001; Small & Bowman, 2011; Smith & Snell, 2009; J. D. Thayer, 1993). In order to determine and clarify the impact of attending college on students' values and beliefs, many empirical and theoretical studies, both qualitative and quantitative, have been conducted by researchers from private and

public, secular and religious universities (Kuh & Gonyea, 2005; Love, 2001; Mayrl & Oeur, 2009; Parks, 2000; Sommerville, 2006).

Churches, such as the Adventist Church, have a deep-seated interest in learning about spirituality among their young people as evidenced by the Valuegenesis studies 1, 2, and 3, which surveyed more than 50,000 young people attending Adventist high schools in North America from 1990 to 2010, taking into account three important institutions: family, school, and church (Gillespie, 1990, 2008, 2012; North American Division [NAD], 1990). In spite of the controversial discussions about its Faith Maturity Scale (J. D. Thayer, 1993), Valuegenesis has shown a meaningful achievement in gaining knowledge about North American Adventist youth. The results of the study have brought about some changes in the strategic plans developed by the administration of the church and educational leaders (Benson & Donahue, 1990; Dudley, 1992; Gillespie, 1990, 2012; Hernandez, 2001; NAD, 1990). The Valuegenesis study was replicated in Europe and Australia. A Spanish version of Valuegenesis was also conducted to assess Adventist Latino youth in North America, and the Spanish Avance PR version was used in Puerto Rico.

Nevertheless, in Mexico there is a deficiency of objective, research-generated material relating to practices and religious commitment among Adventist youth. Besides some institutional studies (Montemorelos University [MU], 1999b, 1999c, 2002), there are a few master´s and doctoral theses on Christian practices at Montemorelos University (MU) (e.g., Ruiloba, 1997). Some Inter-American Division (IAD) studies are related to the religious practices of Adventist families (García-Marenko, 1996) and Christian practices among Adventist young people (Grajales, 2002).

Recently, some doctoral dissertations have been written on religiosity in Mexico (Camacho, 2010; González, 2002; Krumm, 2007). Though they do not directly address Christian commitment among college students, they refer to the spiritual and moral life of young people in Mexico. In addition, Grajales and León (2011) reported the findings of a longitudinal study on the development of the spiritual profile of undergraduate students at MU from 2005 to 2010.

Many Christian authors (Akers, 1993/1994; Garber, 1996, Geraty, 1994; Holmes, 1987, 2001; Knight, 2001a, 2001b; Pazmiño, 1997; Rasi, 2001; Roof, 1978; Stokes & Regnerus, 2009; White, 1903) recognize the relevance of Christian commitment in school in order to form a Christian worldview and to shape a Christian character; nevertheless, a gap in knowledge remains regarding religious commitment among young people in Mexico.

Statement of the Problem

The role of a Christian college in the spiritual development of students is the responsibility of administrators, religious leaders, and faculty in a religious educational system. To accomplish this task, many and diverse institutional activities—curricular, co-curricular, and extracurricular—are programmed during each school year. Many administrators, faculty, and other employees take part in organizing, planning, and implementating such activities not only to train students professionally or vocationally, but also to shape the students´ Christian character and affirm their Christian commitments. Failure to accomplish such religious purposes is disappointing for the entire church. Therefore, there is a clear need for research that will assess the

relationship between students´ Christian commitment and influential college agents and college activities.

Purpose of the Study

The purpose of this study was to examine the level of commitment to the Christian life among undergraduate students at Montemorelos University. In addition, this study examined the extent to which commitment to Christian life is related to (a) involvement in institutional activities, (b) influential agents, and (c) selected demographic variables.

Research Questions

In order to fulfill the purpose of the study, four research questions were formulated. They are the following:

1. To what extent are undergraduate students at Montemorelos University committed to Christian life?

2. To what extent is commitment to Christian life related to involvement in religious, service, social, evangelistic, cultural, and physical activities?

3. To what extent is commitment to Christian life related to institutional, relational, and instructional agents?

4. To what extent is commitment to Christian life related to selected demographic variables (gender, major field, grade level, place of residence)?

Significance of the Study

This study is relevant for the following reasons:

First, this study may benefit the religious educators involved with MU students, such as faculty, mentors, chaplains, and church pastors. Through it, they may obtain useful information for identifying the factors that foster growth in the Christian life of youth and young adults.

Second, the information may help the church and school leaders at all levels in Mexico in designing strategic plans to improve the participation of youth and young adults in the practices of Christian life.

Third, this study may help youth and young adults, directly or indirectly, to clarify for themselves significant concerns and characteristics relating to their own spiritual commitment and development.

Fourth, there are few empirical research studies dealing with the Christian life among Mexican evangelical groups, including Adventists. Therefore, this study would be a relevant contribution to understanding the religious practices of Latin American young adults. The research findings will be of importance to a number of interested and concerned parties, such as counselors, researchers, and chaplains.

Fifth, this study is particularly important because involvement in religious activities has often been identified as an indicator of faith (Schubmehl, Cubbellotti, & Ornum, 2009; Uecker, Regnerus, & Vaaler, 2007). Thus, a better understanding of the relationship between religious commitment and involvement in religious activities could be used by college administrators, deans, faculty, pastors of university churches, and chaplains in Christian universities. As Love (2001) says, “We also need to recognize that religious activity and other spiritually related activities may be manifestations of students´ search for meaning and faith” (p. 14). An empirical study conducted by Wink

and Dillon (2002) found that spiritual growth demands not only a development of awareness and a search for spiritual meaning, purpose, and identity, but also an enrichment and deepening of the commitment to engage in spiritual practices.

Sixth, findings of the research could be used by church administrators, youth department coordinators, pastors, chaplains, local church elders, and lay members of the church to improve planning and to develop data-driven strategies for strengthening commitment to the Christian faith by young people before and during their university years.

Seventh, MU has become a model and center of influence among Adventists in all of Latin America. Its influence extends beyond the borders of Mexico to other colleges of Central and South America. Therefore, it is important to consider the impact that MU makes on the transmission of Christian commitment. A number of stakeholders may benefit from the data generated by this research, and the potential benefits that will result from this study make it a relevant and significant project. The important phenomenon of the influence of campus agents on students, the significance of student involvement, and the relationship of these factors in undergraduate MU students' commitment to Christian life are, therefore, a worthwhile research focus.

Finally, from a broader philosophical perspective, this research may influence the development of Christian educational models and practices in institutions of higher education in the IAD (Castillo & Korniejczuk, 2001).

Theoretical Framework of Christian Commitment

In this section, the concept of Christian commitment as it relates to this empirical study is clarified and analyzed from different points of view: from

sociological and biblical perspectives, as well as from the philosophical and theological perspectives of the Adventist Church and selected Christian authors.

The Concept

Apparently “religious commitments are not theoretically distinguishable from other group commitments” (Hoge, 1974, p. 18). The same principles that govern the commitment in the organization and life of other groups are also applicable to religious groups (see also Dudley & Hernandez, 1992) and other topics besides religion such as dating, marriage, family, occupations, and careers. This same way of considering religious commitment is generally supported by social scientists (Kuh & Gonyea, 2006; Lindsey, 2011; Swatos, Kivisto, Denison, & McClenon, 1998; Wimberley, 1978). Therefore, the concept of commitment will first be defined, and then Christian commitment´s meaning and its components will be explained.

Merriam-Webster’s Online Dictionary ("Commitment," 2002) defines commitment in two ways: first, it is “an act of committing to a charge or trust,” which is a legislative act; second, it is “an agreement or pledge to do something in the future” or “the state or an instance of being obligated or emotionally impelled (a commitment to a cause).” The second definition is used in this study. Wimberley (1998) argues that commitment is a process in which one chooses between alternatives of which one is aware, or between alternatives selected and imposed by others. After an alternative is chosen, the commitment is pursued with a certain degree of intensity through different situations, until that commitment decreases and is replaced by another option. The individual making the commitment pledges to act according to certain agreed-upon standards, for example, requirements, beliefs, and values. And the committed individual

feels some degree of emotional or moral obligation to fulfill the established agreement. In this process, commitment is first latent, then active, then passive, and finally alternates between the active and passive for as long as the commitment continues (Wimberley, 1978). Weak commitment strength predicts the loss of that commitment over time, while strong commitment strength predicts a greater likelihood of maintaining the commitment over time (Abrahamsson, 2002; Wimberley, 1978). Smith and Stewart (2011) studied the religious process of interaction-commitment as part of the conversion mechanism. This process of seven stages includes (a) some contextual factors in which the religious phenomenon is set, such as the relationship between college and government or family and friends; (b) an internal or external crisis that encourages a person to seek change; (c) an active seeking of change; (d) an encounter between a converter agent and a potential convert; (e) interaction with the new belief system; (f) a public commitment of renovation; and finally, (g) new values or behaviors emerge as a consequence of the conversion (pp. 810, 811).

Worthington et al. (2003) define religious commitment “as the degree to which a person adheres to his or her religious values, beliefs, and practices and uses them in daily living” (p. 85). Liu (1989) defines religious commitment as “stable determination to continue harmonizing one's life with one's perception of divine will by focused investment of one's identity and resources” (p. xi). For Liu, commitment implies a sort of acculturation process with a progressive degree of measure. Thus an educational program of integration and social support particularly for entering members could be vital for them to become strongly committed. For Calhoun (2009) commitment is “a species of intention” (p. 615). Religious commitment includes the idea of promise,

contract, resolution, vow, attitudinal commitment, and lifelong commitment. Calhoun conceives of commitment as involving a high level of resistance to change under whatever circumstances. Wimberley (1998) in *Encyclopedia of Religion and Society* says:

> The more one invests in another, the more one becomes obligated to that person due to the closing of other interpersonal alternatives. Therefore, we make investmest in others, we become committed to others. According to social scientific theory, the rewards received from personal relationships with others are extremely important to us. (para. 6)

A biblical theological perspective on Christian commitment clearly calls for an acceptance of the reconciliation God offers by grace through faith in Jesus (2 Cor 5:19-22; Eph 2:1-10). A positive response to such an invitation would yield commitment to God and all that He represents, including the covenant to be faithful to His commandments. This human response to God becomes the confirmation of living faith demonstrated through a commitment, which changes the individual's lifestyle to be peculiar, lovely, and faithful (Akers, 1989; White, 1903, 1990).

Christian commitment should become the essence of Christian faith. Thiessen (1993) argues: "A better word for faith today might be commitment. Christian nurture clearly operates from the stance of commitment and seeks the development of commitment" (p. 27). In addition, the example of Christ marks the start of the Christian behavior to be performed in Christ's name and for His glory (Col 3:17) with good fruits (Jas 3:17), fruits of righteousness (Phil 1:11), and works of love (Heb 6:10). The Christian's works were created in Christ (Eph 2:10, 2 Tim 3:17; Titus 3:8, 14) and are evident to everyone through the church (Eph 3:20, 21).

Dykstra (1984) comments that faith development is possible through an active participation within a community of faith. He says: “Growing in faith involves the deepening and widening of our participation in the church and in its form of life” (p. 196). Just as the muscles are developed by exercise, faith must be exercised in the Christian life in order to live up to spiritual commitments, both vertical, toward God, and horizontal, toward other human beings. As members of a religious community, believers shape their identity, ideas, norms, and actions according to group expectations. The resultant differentiation of ideologies and activities creates a subculture distinctive from what might be expected from the broader culture or population in general. The concept of Christian commitment refers to a way of living in congruence with the perception of what God expects of all people. Discovering God’s expectations for them is a continuing responsibility of those who choose to obey God.

According to the Judeo-Christian tradition, God communicates His plans and requirements primarily through the canon of the Bible. The Ten Commandments are generally accepted within the Christian church as the standard of conduct revealed by God (Kuntz, 2004). Additionally, Christians consider that God’s supreme revelation of Himself in Jesus Christ is the only valid means to interpret God´s commandments (Akers, 1989). Moral and theological expectations of the Christian community for its individual adherents are therefore based on ideological and behavioral norms established by God´s Word (Kuntz, 2004; White, 1903, 1990). The Christian subculture is identified by its distinctiveness made apparent through the adherence of its followers to these norms and lifestyle.

Christian commitment is made for the purpose of living the Christian life. The components of a Christian life essentially require belief in God (Col 1:10; 3:10; 2 Thess 2:13; John 17:3), belief in the Bible as God's word (Matt 22:29), and acceptance of Christ as a personal Savior (Acts 4:12; 13:23; 2 Tim 1:10). The Christian life is also evidenced by practices, such as reading the Bible (John 5:39), attending church (1 Cor 11:18), giving tithes and offerings (Mal 3:10, 11), testifying of Christ (Matt 28:19, 20), praying regularly (Jas 5:14-16; Eph 5:14-16), caring for one's physical health (3 John 1:2, 3; 1 Cor 6:19), belonging to and being involved in a church (Acts 12:5; 14:23; 20:28; 1 Cor 12:28; 1 Cor 14:12; Phil 4:15). Finally, Christian life requires maintaining proper moral standards, such as living the biblical principles of sexual morality (Phil 4:8; 2 Tim 2:22) and applying Christian values to life in order to glorify God (1 Cor 10:31; 2 Col 4:6). All of these concepts are contained in the scale of Christian life commitments used in this study.

The Christian life is a complex concept, difficult to define in merely a few sentences (Dykstra, 1984), and therefore difficult to measure. Nevertheless, it requires that one be active and voluntarily participative in elements externally indicative of commitment that are measurable through empirical methodology.

Components of Religious Commitment

Many researchers agree that religiosity is a multidimensional phenomenon (Cornwall, Albrecht, Cunningham, & Pitcher, 1986; Hill & Hood, 1999; Kusukcan, 2000; Neff, 2006; Stark & Glock, 1968; Fetzer Institute, 1999). Nevertheless, there are many discrepancies on the content and number of components reported, apparently as a product of the numerous approaches and methodologies defining and structuring the

religious dimensions on different populations (Cornwall et al., 1986; Hill & Hood, 1999; D. R. Williams, 1999). Cornwall et al. (1986) reported that religiosity is formed by two modes of religious engagement: private and corporate. Social scientists have also identified these two modes under different labels, for instance: spirituality and religiosity, meaning and belonging, religious group involvement and religious orientations, individualism-collectivism, vertical-horizontal (see Cukur & Guzman, 2004; Holdcroft, 2006). Cornwall et al. (1986) propose three general components of religiosity: belief, behavior, and commitment. Crossing those three components within two modes, Cornwall et al. found a classification of six dimensions of religiosity: Traditional and particularistic orthodoxy (cognitive), spiritual and church commitment (affective), and religious behavior and participation (behavioral) (p. 228).

From a sociological approach, Stark and Glock (1968) consider religious commitment operating through several main components: ideology, intellect, ritual, experience, and consequence. Ideology contains individual religious beliefs (e.g., concepts about the Deity, salvation). The intellectual dimension reproduces personal religious knowledge (e.g., knowledge regarding apostles, prophets, books of the Bible). Ritualistic behavior represents religious practices (e.g., Bible reading, church attendance). Religious experience reflects private feelings and emotions received from religious involvement (e.g., meaning of life, well-being, purpose of existence). Religious consequence includes religiosity in base decision-making (e.g., observance of the Sabbath, attitudes toward sex, politics).

Using a psychological perspective, Allport and Ross (1967) designed the Religious Orientation Scale, which contains the extrinsic and intrinsic dimensions of

religiosity: 11 items for extrinsic orientation measuring the extent to which people use religion for their own ends, and nine items for intrinsic orientation measuring the extent to which people live their religion. Later Batson and Ventis (1982) added a third component named quest. It measures the level to which people are involved in a dynamic dialogue with religion. Some studies have used religious orientation as a measure of Christian commitment, particularly its intrinsic dimension scale (Gillespie, 2008; Gorsuch, 1994).

Christian Sacrifice

According to Christian belief, God asks for a covenant through sacrifice by love. God says, "Gather to me this consecrated people, who made a covenant with me by sacrifice" (Ps 50:5). In some instances response to the godly covenant comes through words, oaths, obedient acts, or simple rites (Gen 21:31; 31:46, 50), and in others, it is sacrificing one's own life in order to follow Jesus and fulfill His great commission (Acts 1:8; Matt 28:19). The calling of the Christian life is a call to deny oneself in order to follow Christ (see Matt 9:9; 10:38; 16:24; 19: 21). The process points to becoming a disciple of Christ and maturing to become a teacher cooperating with Christ.

According to the Bible, the sacrifice of love is the highest evidence of loyalty, dedication, and belonging to God, especially the sacrifice of oneself (Phil 2). It is indicative of humility, devotion, and worship. Many biblical texts give evidence of the importance of the sacrifice of love as associated with a higher level of commitment to God. For example, God has shown His love to the world by a sacrifice of Himself and asks us to love as He loves (Matt 16:24; Rom 3:25; 12:1; Eph 5:2; Phil 2:17; Heb 9:26; 10:12; 13:15).

On the other hand, sacrifice is not necessarily an evidence of love, as Paul mentions in 1 Cor 13:3, “If I give all I possess to the poor and give over my body to hardship that I may boast, but do not have love, I gain nothing.” Nevertheless, Paul follows by saying: “Love is patient” (13:4), which means tolerant in the face of opposition. Another biblical example is illustrated by the parable of the four soils (Matt 13:1-23). Here Jesus teaches about Christian commitment. For the first three types of soils, Jesus says that lack of perseverance in cultivating the Word in the heart causes broken commitments. For the last type of soil, perseverance produces fruit. Jesus interprets the lack of commitment by explaining three ways people fail to persevere: (a) "when anyone hears the message about the kingdom and does not understand it, the evil one comes and snatches away what was sown in their heart"; (b) “When trouble or persecution comes because of the word, he quickly falls away”; (c) “the man who hears the word, but the worries of this life and the deceitfulness of wealth choke the word, making it unfruitful” (Matt 13:19-22). But of the one who perseveres with a strong commitment to the Word, he says, "This is the one who produces a crop, yielding a hundred, sixty or thirty times what was sown” (Matt 13:23).

Theoretical Framework of Student Involvement

To consider the formal and informal involvement of students in both curricular and extracurricular activities is to discover the conceptual key to effective education. Some authors (Astin, 1985, 1993; Kuh, 2006; LaNasa, Olson, & Alleman, 2007; Pascarella & Terenzini, 1991, 2005) consider student involvement important for fulfilling educational purposes. It consists, simply, in students learning by becoming involved. Of course, this involvement is the concern of all agents related to the college,

including president, vice-presidents, staff leaders, faculty, and students who constitute the living environment of the college (Kuh, 2006; Lovik, 2011).

Astin (1985) refers to student involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 134). A highly involved student is one who, for instance, devotes substantial energy to study, spends a lot of time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students. On the other hand, the student with little or no involvement may neglect studies, spend little time on campus, avoid extracurricular activities, and have little contact with faculty members or other students. Astin defines involvement in terms of time and energy. From this perspective, he places the construct of student involvement in the framework of an objective measurement. Astin (1985, pp. 135, 136) assumes that student involvement is an investment of physical and psychological energy that occurs along a continuum with the possibility of being measured using both quantitative and qualitative techniques. The effectiveness of any policy or educational practice, including also the amount of student-learning, may be evaluated through the degree of student involvement. Several studies confirm the assertion that student involvement is the key to impacting students’ lives, including their spiritual development (Astin, 1993; Kuh, 2003, 2006; Pazcarella & Terenzini, 2005; Wink & Dillon, 2002). Therefore, this study analyzed the relationship between commitment to Christian life and student involvement in institutional activities.

Theoretical Framework of Agents of Influence at College

According to *Webster's New World Dictionary of the American Language* ("Influence," 1966), the concept of influence is “the power of persons or things to affect

others, seen only in its effects," and "this power of a person or group to produce effects [is wielded] without the exertion of physical force or authority, based on wealth, social position, ability, etc" (p. 749).

In other words, influence is a power or authority that may be transmitted directly or indirectly, through both verbal and non-verbal language, and it has the ability to change behaviors, values, and beliefs. Influence is related to interaction and involvement. The interaction of students with people at school is in reality a branch of student involvement. Astin (1985) considers that the greater the positive interaction, the greater the satisfaction, and the greater the impact of the school. Indeed, research highlights the importance of student-faculty interactions. Formal or informal, the mentoring community in college is a powerful influence that shapes the student's social concerns (Astin, 1993; Feldman & Newcomb, 1969; Lamport, 1993; Pascarella & Terenzini, 1991, 2005) and even affects the religious dimension (Akers, 1993/1994; Amertil, 1999; Cannister, 1999; Clydesdale, 2007; De Vaus & Hurley, 1985; Endo & Harpel, 1981; Garber, 1996; Hoge, 1974; Lee, 2000, 2002; Love, 2001; Lovik, 2011; Parks, 2000; Ruiloba, 1997; Small & Bowman, 2011; White, 1923).

Interestingly, according to Jacob (1957), formal teaching has little effect on value and belief outcomes for most students; rather, it is the informal interactions of the teacher and student that most affect those outcomes. Recent large studies on faculty and students confirm Jacob´s findings (Lindholm & Astin, 2006; Ma, 2003). Students tend to adapt their identity in the directions of their peers and their faculty (Astin, 1993). Faculty influence on values and beliefs is deeper at colleges where interactions between student and faculty are common and frequent (Churukian, 1982; Endo & Harpel, 1981;

Gane, 2005; Henderson, 2003; Jari-Erik, 2004; Lindholm & Astin, 2006). Especially in the framework of this study, influence was considered as a factor that can be perceived by a person in such a way that it could be reported.

Definition of Terms

Some concepts that frequently appear in this study deserve to be operationally defined. They should be understood as follows:

Agents at the college: People who formally or informally have an influence on the values, beliefs, knowledge, or behaviors of undergraduate students, for example, peers, friends, faculty, staff, administrators, and work supervisors.

Campus residents: Undergraduate students living in campus residence halls.

Community residents: Undergraduate students living off campus.

Christian commitment: Degree of loyalty, adherence, or determination to harmonize the life in terms of belief, values, and practices of the Christian life.

General Conference: The administrative body of the Seventh-day Adventist Church that coodinates all operations and ministries worldwide through 13 Divisions. Its headquarters is in Silver Spring, Maryland, United States of America.

Influence on students: Degree to which undergraduate students report to have received positive influence on their Christian life from agents at the college.

Institutional activities: Religious, service, social, evangelistic, cultural, and physical co-curricular or extracurricular activities organized at MU.

Institutional agents: People who work in administrative functions or in supporting departments on the MU campus. Specifically, they are: president, vice

presidents, director of the counseling department, director of extracurricular activities, work supervisors, dormitory deans, and church pastors.

Instructional agents: People who work at the school level. Specifically, they are: faculty, chaplains/Bible teachers, and mentors/advisors.

Inter-American Division of Seventh-day Adventists: A section of the General Conference of the Seventh-day Adventist Church. Its headquarters is in Miami, Florida. It is sub-divided into eight conferences and seven missions that extend from Mexico to Venezuela. Most Caribbean islands also belong to this division.

North American Division of Seventh-day Adventists: A section of the General Conference of the Seventh-day Adventist Church, with administrative responsibility for North America, Canada, some islands of the Caribbean, and others of the Pacific Ocean. Its headquarters is in Silver Spring, Maryland.

Psycho-social crisis: A time of confusion where old values, beliefs, or commitments are being reexamined and new alternatives are explored.

Relational agents: People who influence at the level of friendship and relationship in an informal setting. They are parents, best friends, peers, and boy/girl friends.

Religiosity: The inclination to be involved in group activities, beliefs, practices, and values of a denomination.

School: Academic entity of the university that coordinates majors in similar disciplines. At MU there are five schools. For example: Health Science, with majors in medicine, nutrition, chemistry-clinic-biology, and nursing; or Education, with majors in

teaching of social sciences, mathematics, chemistry-biology, literature, and educational psychology.

Seventh-day Adventist Church: Christian denomination founded in 1863 by Ellen G. White, James White, and Joseph Bates. Its members observe the seventh day as the Sabbath and believe the second coming of Jesus Christ is imminent.

Spirituality: Inner attitude involving a subjective awareness or consciousness seeking personal authenticity, congruence, and wholeness, in relationship to God, the world, and each other.

Student involvement: Mean of the student's engagement in religious, service, evangelistic, social, cultural, and physical activities at MU as self-reported by students.

Project Scope

This study attempted, insofar as it was possible, to include as the target population the entire undergraduate population enrolled at MU, located in the state of Nuevo Leon, Mexico, during the school year 2002-2003. It is a correlational and cross-sectional study of student involvement and the influence of agents on students´ commitment to Christian life.

Limitations

There are several limitations in the use of survey methods in conducting research, primarily because cause-effect relationships cannot be inferred (Alreck & Settle, 1995). This method is descriptive and does not offer the richness of individual and personal open-ended questions. This study analyzed student involvement in institutional activities, influence of agents, and some demographic variables among

other variables that the literature has identified as impacting college students. The original survey assessed the attendance at institutional activities, interactions of students with faculty, social climate, and attitudes toward institutional activities; nevertheless, these variables were not included in the analyis process because they were outside the inquiry of the project.

Further, the study investigated only the population of one Christian university in Nuevo Leon, Mexico, during the first semester 2002-2003. Though a number of years have passed since this research began, the results of the study remain relevant since the new 2010-2020 MU Curricular Plan indicates that most of the co-curricular or extracurricular institutional activities available in 2002 continue to be available on the campus today. It is possible to generalize the study to similar educational institutions, but these generalizations will not be validated by population-specific research.

This study has limited its focus to student involvement only in institutional activities that are mostly extracurricular and co-curricular. This research attempted to study just a few elements of the college environment. The institutional activities listed in the questionnaire are limited to six sections: religious activities, service activities, social activities, evangelistic activities, cultural activities, and physical activities. This limitation means that not all possible activities in which students may actually be involved were taken into account. This limitation can be seen by comparing "The Inventory of College Activities" prepared by Astin (1968) and an inventory of MU institutional activities prepared by Castillo and Korniejzuck (2001).

Summary and Overview

Chapter 1 includes an introduction, a statement of the problem, the purpose of the research, research questions, a rationale of constructs used in the study, definitions of terms, project scope, and limitations.

Chapter 2 analyzes precedent literature regarding the main variables in the study. It includes the commitment to Christian life addressed especially in the campus context; the relationship between Christian commitment and student involvement; the Christian influence of relational, instructional, and authoritative institutional agents on the college campus; selected demographic variables (gender, field major, academic level, and residence place); and the religious life at MU.

Chapter 3 describes the research methodology, the population, sampling strategies, collection of data, and validity and reliability of measures used in the survey.

Chapter 4 describes the process for collecting data results and analysis of the data. Here the research questions are answered.

Chapter 5 presents the summary of the study with discussion, conclusions, and recommendations.

CHAPTER 2

LITERATURE REVIEW

This chapter explores the literature relating to the variables used in this study. It begins by examining the overall spiritual impact of college, in general, and the Christian college, in particular. This chapter also considers the purpose, goals, and aims of the Adventist higher educational system, which in 2010 was composed of 111 tertiary institutions around the world, with 11,289 teachers and 131,516 enrolled students (General Conference [GC], 2010). It also looks at the Christian commitment phenomenon in young adults, student involvement in extracurricular activities, and the influence of agents in faith-based colleges. In addition, this chapter identifies particular demographic variables in relation to Christian commitment among undergraduate students and reviews religious studies at Montemorelos University (MU) where the target population is located.

Considering how the college environment influences the Christian commitment of undergraduate students is a complex and challenging task, especially in Mexico where there is neither a culture of research nor policies that require the collection of statistical data. Nevertheless, many studies have been conducted in the United States regarding this topic.

College Impact on Spiritual and Religious Commitments

Evidence suggests that the phenomenon of college impact is complex, considering multivariable interactions which mold values, beliefs, attitudes, knowledge, and life itself during the college years (Chickering, 1993). The process of college influence is shaped by informal and formal settings, by socializing agents' interactions, social and academic normative polices, exposure to new ideologies and academic content in classes, residence on or off campus, peer relationships, and involvement in student organizations and extracurricular activities. Many of these impacting experiences are intentionally written into institutional bulletins and catalogs. Others occur informally, even imperceptibly, among parents, peer groups, and faculty (Pascarella & Terenzini, 1991). However, the college environment must deliberately involve students in order to impact them positively (Astin, 1993).

Moreover, college students must deal with living away from home; face intellectual and spiritual interactions with roommates; confront cognitive, spiritual, and moral conflicts in courses; and cope with the high expectations and conversations of upper classmen in formal and informal settings (Pascarelli & Terenzini, 1991, 2005). The impact of college is not made up of isolated situations, but rather, consists of accumulated experiences and relationships in a social network of mutually supported changes during the 4-year period (Astin, 1993; Braskamp, 2007; Chickering, 1993; Fowler, 1984; Hoge, 1974). Pascarella and Terenzini (1991) suggest that to impact the moral and cognitive development of college students, an integrated curriculum that promotes the ability to make moral decisions and to formulate values may be more efficient than a traditional liberal arts program. Other studies confirm the importance of

making decisions and formulating values, especially when students' moral development is associated with spiritual growth (Benson & Donahue, 1990; Gillespie, 1990).

Developmental Spiritual Needs of College Students

Since the central focus of education is the ability to produce an impact on students, it is first necessary to study the nature of college students themselves, including their psychological, moral, and spiritual characteristics throughout their college years.

With the transition from high school to college, adolescent students begin to reduce their dependence on authority figures and start thinking more for themselves. Many of them are the children of media and technology, indifferent to traditional authority figures, and with tendencies towards postmodernism and relativism (Thomas, 1992). Some groups of teenagers are cynical, lonely, and working just to survive. Others expect an easy life and are technologically isolated, morally ambivalent, and tolerant. Many of them come from unstable family backgrounds. Some also exhibit an increasing emotional fragmentation and relational dysfunction, with the consequence that these young people cannot easily be evangelized and mentored by people in a Christian college setting (Ford, 1995; Long, 2004). Brown (1980) lists relevant characteristics of young adults in the United States. Some of these characteristics include the importance of relationships, confusion between love and sexual intimacy, the need for a private life, the need for self-sufficiency, lack of trust, skepticism of institutions, lack of commitment, negativity about the future, ability to live with and embrace change, and a growing need for a spiritual experience.

Despite their greater independence even in matters of faith, youth and young adults strongly feel the need for companionship and intimacy with peers and mentors

(De Jong, 1990; Garber, 1996; Parks, 2000). According to some developmental theorists (e.g., Erikson, 1968), the need for intimacy creates a developmental crisis that young adults must meet. According to Erikson, each ascendant crisis, in addition to development, also holds the potential for weakness of character, which could eventually lead to deviation from a healthy, mature character development. For instance, students involved in casual sexual relationships may confuse emotional intimacy with physical intimacy instead of searching for their true identity and intimacy.

According to Fowler (1984), youth attain the synthetic-conventional stage of faith when they gather all disparate elements of their inner beings into an integrated unit. During adolescence, young people have a variety of conflicting concepts about themselves. In every significant face-to-face interaction or close relationship, the adolescent constructs his or her own identity. Beliefs and values are molded in such a relational environment. Christian mentoring and modeling in friendly and authentic personal relationships become tremendously important to mold the young person's character and Christian faith. According to Fowler (1984, 1987), young adults attain the individuative-reflective stage with maturation. By this stage, they will have learned to be objective examiners and critics, capable of freely choosing their own identity, values, and faith for themselves.

From another perspective, Marcia (2002; see also Bilsker & Marcia, 1991), following the line of thought from Erikson's seven stages of psychosocial development, established four statuses of his own. These statuses are alternatives of development, but not intrinsically required in exact order. In his study of college students, he considers that most students who arrive at college are either in the diffusion or foreclosure stage.

This means that students come to college with either a lack of personal commitment, probably because they have not experienced a meaningful psychosocial or identity crisis, or they arrive committed to a certain set of beliefs and are closed to examining or questioning their present convictions. Marcia describes diffusion as the starting status in which young adults have not made a commitment and have done little exploration. A second status, called foreclosed, describes young adults who have made a commitment without significant exploration. During the educational process, experiences in life, or maturation, however, students may pass through a third status—moratorium (exploring without commitment) —to reach the identity-achievement status—the fourth status (committed after exploring due to a psycho-social crisis). For healthy maturity, young adults must carefully examine various life options and finally make a deliberate choice. In the identity-achieved status, their commitment has become stable because, by then, their values and faith have been internalized (Bilsker & Marcia, 1991).

From the sociological perspective, religious commitment, as any other commitment, fluctuates through time and may strengthen or disappear, depending on pertinent circumstances and options (Swatos et al., 1998). Some authors think that the early semesters in college are crucial because they are the beginning of a student's experience of autonomy and experimentation in beliefs, values, pleasures, and opportunities to make free decisions outside of the home influence (Stoppa & Lefkowitz, 2010). At this time, students usually also experience an initial exposure to different worldviews (Pascarella & Terenzini, 2005). Students make intentional personal choices about their own beliefs and values. This kind of exploration may bring out a

confirmation or change defining their personal religious identity and commitment (Stoppa & Lefkowitz, 2010).

Impact of College on Spirituality and Religiosity

Recent discussions in regard to spirituality and religiosity have been defined both as different but overlapping constructs, in such a way that many times the terms are considered to be synonymous because both religion and spirituality can be expressed in both private or public settings. In a narrow sense, sometimes spirituality is linked to private spiritual beliefs or experiences. Religiosity, then, is linked to public and formal expressions of faith and worship (Hill et al., 2000). Researchers referring to spirituality use constructs associated with personal transcendence, supra-conscious sensitivity, and meaningfulness. With religiosity they associate formal or institutional religious practices (Hill et al., 2000). The problem of inconsistent definition of terms among researchers causes difficulty and mixed interpretations of findings (Hill et al., 2000).

The personal characteristics of the entering student, maturational changes in the student, and social changes in college affect the Christian commitment of students. The college experience has a positive effect on developing a meaningful philosophy of life. This is reflected in the student's ability to make commitments (Calhoun, 2009). These changes in college students are nearly imperceptible because, according to Terenzini and Pazcarella (1994), they are slow rather than immediate. Real college impact does not come from specific policies or programs, but rather, is the result of a number of smaller, interrelated academic, spiritual, and social factors. These are varied, cumulative, and well coordinated, and their effect builds continually, transforming values, attitudes, and

behaviors. In other words, the ways in which college changes students require time and an integrated and consistent approach, based on a defined philosophy and goals.

Although a big part of maturing occurs coincidentally with college attendance (Erikson, 1968; Kohlberg, 1984; Perry, 1970), evidence suggests that college has a positive influence on students' values, beliefs, and religious practices due not only to student maturation, but also because of their acquisition of humanizing values and attitudes in college (Hernandez, 2001; Pascarella & Terenzini, 1991).

Most educational studies in the past (Astin, 1993; Feldman & Newcomb, 1969; Kuh, 1995, Pascarella & Terenzini, 1991) reported that college had a liberalizing or a secularizing influence on student religious attitudes and beliefs, that college students' beliefs were more individual and less dogmatic, and that students usually experienced a marked decline in their public religious involvement, resulting in a decline in moral and religious values. There are excellent studies that show the process of secularization in American Christian colleges and depict the philosophical, sociological, and theological forces that urge even church-related colleges to secularize their teaching and environment (Benne, 2001; Burtchaell, 1998; Dovre, 2002; Marsden, 1996).

Scholars have historically supported the assumption that commitment to religious participation in church life and work declines during college years. Some studies on religious participation during college years show a clear declining tendency in praying, participating in religious groups and religious discussions, and attending church (Bryant, Choi, & Yasuno, 2003; Pascarella & Terenzini, 2005). In a survey of 3,680 students from 50 colleges, Bryant et al. (2003) found that at the end of the freshman year, only 27% reported attending religious service "frequently" and 30% reported

attending “occasionally.” Clydesdale (2007) cautions that “decline in participation must not be confused with decline in commitment” (p. 597).

On the other hand, other researchers found that overall there is no massive religious decline. To the contrary, most entering students keep their Christian commitments and practices similarly and consistently, high, moderate or low, during the transition years to adulthood (Bryant et al., 2003; Clydesdale, 2007; Lee, 2002; Smith & Snell, 2009; Uecker et al., 2007).

Adding to the confusing findings, other studies have found evidence of more recent student interest and involvement in religious beliefs and practices (Bryant et al., 2003; Hartley, 2004; Higher Education Research Institute [HERI], 2004; Lee, 2002; Pascarella & Terenzini, 2005). An optimistic report on the religious life on four different campuses concluded that “young people in American culture have never been more enthusiastically engaged in religious practice or with religious ideas” (Cherry, DeBerg, & Porterfield, 2001, pp. 294, 295). The Higher Education Research Institute’s (2004) massive study of spiritual development found that among 112,232 freshmen surveyed in the fall of 2004, four out of five reported an interest in spirituality and 47% were seeking opportunities to grow spiritually. The on-going longitudinal National Study of Youth and Religion study conducted in the United States revealed, however, that students generally reported being overall both highly spiritual and highly religious, though this does not mean that they are committed to a particular religious denomination. The students did not report losing their religion in great numbers, as had been previously supposed (Smith & Snell, 2009).

A reanalysis of collected data indicates that the direction of change depends on students' personal characteristics, maturational changes, and the philosophic culture steering the curriculum and environment of college (Barnard, 2012; Calhoun, Aronczyk, Mayrl, & VanAntwerpen, 2007; Gonyea & Kuh, 2006; Kneipp, Kelly, & Dubois, 2011; Rhea, 2011; Woodfin, 2012). Religious commitment in college students either increases or decreases because students reexamine, refine, and integrate their religious values and beliefs with other beliefs and philosophical currents (Bryant et al., 2003; Lee, 2002; Pascarella & Terenzini, 2005). A homogenous religious environment in church-related universities with conservative Christian philosophy and with a majority of Christian faculty and students promotes a uniform characteristic of personal Christian beliefs and practices. It is more likely that such Christian institutions can impact students more religiously and help them maintain strong beliefs, commitments, values, and practices than nonreligious institutions with many pluralistic worldviews (Kneipp et al., 2011).

Without spirituality in public and non-religious private institutions, scholars argue that student development would remain incomplete (Braskamp, Trautvetter, & Ward, 2006; Chickering, Dalton, & Stamm, 2005; Parks, 2000). Therefore, some philosophers, sociologists, and educators have started to encourage spirituality in young adults on "post-secular" campuses (Jacobsen & Jacobsen, 2008; Sommerville, 2006).

Philosophy and Purposes of Christian Colleges and Universities

In order to fulfill the primary purpose of Christian higher education, it is important to clarify the philosophy and purposes of Christian education in order to implement congruent actions.

Pazmiño (2003, p. 43; 1997, pp. 86-88) and Holmes (1987, pp. 59, 60, 84, 85) argue that the purposes of a Christian education are to help students internalize a Christian worldview and to develop a harmonious Christian character. Knight (2001b, p. 190), based on White´s (1903) arguments, summarizes the primary purposes of Christian education as the students´ salvation, and the ultimate purpose as making them Christ´s disciples who serve society with love, forming a character like Christ´s (Knight, 1998, p. 200; 2001b, p. 190; White, 1903, pp. 13, 14, 16).

White (1903, pp. 13, 14), who initiated the philosophical base of the Adventist educational system to which Montemorelos University belongs, goes further than a simple development of human faculties into the physical, mental, and spiritual dimensions. She begins with a supernatural transformation of the human nature which she understands to be redemption itself. Christian character begins with the "born again" experience and then continues as one learns throughout life to enjoy serving God and humanity in intimacy with Him. Christian character development is a lifelong experience, not limited to a formal educational setting (White, 1903, pp. 16, 18). When young people enroll in a Christian school, it is assumed that the educational institution will continue the lifelong educational process of redemption and discipleship in the students. Therefore, Knight (2001a) emphasizes, "There is no more important educational issue than aims, purpose, and goals" (p. 179). White's (1943) position was similar: When there is confusion in goals and the true nature of education, there is a "fatal error" (p. 49). This is understandable because these philosophical foundations constitute the guide and framework of all educational systems, including that of the Adventist system.

The basis and goals of Christian education must be analyzed from the perspective of the great conflict between good and evil, of human nature, and of God's purpose in creating the human race as it is found in the Bible (Knight, 2001a, 2001b; Snorrason, 2005; White, 1923, 1903). Adventist educational philosophy takes as a given the power of mankind cooperating with the power of Christ in order to restore the *imago Dei* (see Gen 1:27; 9:6; 1 Cor 11:7; Jer 3:9). Ellen G. White (1903), co-founder of the Seventh-day Adventist Church, clarified what the main purpose of Christian education is:

> To restore in man the image of his Maker, to bring him back to the perfection in which he was created, to promote the development of body, mind, and soul, that the divine purpose in his creation might be realized—this was to be the work of redemption. This is the object of education, the great object of life. (pp. 15, 16)

In short, the purpose of Christian education, more than to impart information, is to foster a personal relationship with Jesus in such a way that salvation and harmonious development of a character like Jesus can motivate service to God and others (Knight, 2001b). Gillespie (1992) also describes Adventist schools as being centered on God with the purpose of serving the world and of extending the faith community.

In order to give philosophical congruence to a complete educational system, the Seventh-day Adventist Church established the Adventist Philosophy of Education Statement Committee (Rasi, 2001). The committee produced a statement of the philosophy of Seventh-day Adventist education that affirms the aim and mission of Adventist education in the following words: "Adventist education prepares students for a useful and joy-filled life, fostering friendship with God, whole-person development, Bible-based values, and selfless service in accordance with the Seventh-day Adventist mission to the world" (GC, 2003, p. 221). On this basis, the General Conference of

Seventh-day Adventists clearly defines the spiritual outcomes for its colleges and universities. For example:

> [To] have had the opportunity to commit themselves to God and therefore live a principled life in accordance with His will, with a desire to experience and support the message and mission of the Seventh-day Adventist Church [and to] answer God's call in the selection and pursuit of their chosen careers, in selfless service to the mission of the Church, and in building a free, just, and productive society and world community. (p. 225)

To promote and elevate a deep and true Christian commitment among students, all activities, programs, or policies—curricular, co-curricular, or extracurricular—should harmonize with the aims and philosophic basis of a Christian education (Akers, 1989; Knight, 2001b; White, 1943, 1991).

Spiritual Impact of Christian Colleges

When there is solid coherence among the philosophy and practices of a Christian college, the mission of the institution is assured, resulting in spiritual and religious impact among students.

Many researchers (Astin, 1985, 1993; Chickering, 1993; Dudley, 1992; Feldman & Newcomb, 1969; Gillespie, 1990; Hernandez, 2001; Himmelfarb, 1977; Hoge, 1974; Jacob, 1957, 1968; Pascarella & Terenzini, 1991) agree that the type of college a student chooses to attend will influence the content, strength, and orientation of that student´s values, attitudes, and beliefs. Obviously, a Christian education will attempt to impact the faith of students, and given that the “college years are among the most formative” (Holmes, 1991, p. 72), the Christian college has a unique opportunity and responsibility to create an enriched and relevant college environment that makes possible a

strengthening of students' Christian commitment (Garber, 1996; Ma, 2003; Parks, 2000).

There are many studies evidencing the positive effects of a Christian college on the faith and commitment of students. For example, Railsback (2006) found that students attending evangelical colleges reported strengthening and/or maintaining their evangelical religious commitment more than students at seven other types of educational institutions. Paredes-Collins and Collins (2011) agree that American Christian colleges are more likely to retain and improve religiosity among undergraduate students than are public colleges. They describe the typical Christian college as including many programs integrating faith into curricular and co-curricular activities and requiring, for example, chapel programs, Bible studies, informal small groups, spiritual advisers, ministry courses, service learning, and prayer groups.

There is evidence that a Christian college especially influences students' involvement in church activities during their college years (Bowman & Small, 2010; Smith & Snell, 2009). Alumni are also more strongly associated with their churches than those who did not attend a Christian institution (Dudley, 1994). Rice (1990) carried out a longitudinal study of 377 Adventist students in high school. He found significant differences between students enrolled in an Adventist school and those enrolled elsewhere. Students who had participated in Adventist schools maintained their commitment to the Adventist church years after leaving high school. In his study, Rice used six variables to measure this commitment to the Adventist church: Tithe returns, attendance at worship services, witnessing of our faith to others, reading Adventist literature, taking ecclesiastic responsibilities, and having family worship.

Students who come to college with only extrinsic commitment are particularly vulnerable to changes; students who struggle to find meaning seek support and stability without finding it many times (Gorsuch, 1994; Love, 2001). Evidence suggests that colleges associated with a church denomination better effect an increase in spirituality throughout students' college careers than do non-affiliated institutions. The socio-cultural environment significantly impacts the spiritual journey of students (Braskamp, 2007; Braskamp & Remich, 2003; Braskamp, Trautvetter, & Ward, 2005). In a Mexican context, Tinoco-Amador (2006) also analyzed undergraduate students from 43 private and 15 public universities in Mexico City and found that college students enrolled in Christian universities are more likely to be religious than are students enrolled in public and secular institutions.

Relationship of Christian Commitment and Student Involvement

In a formal setting, students spend their time according to policies, programs, and practices of the educational institution—for example, class schedules, regulations regarding class attendance, and requirements for grading. Whatever institutional effort is made in buildings, pedagogic resources, teaching techniques, laboratories, or library, for instance, will be relevant if it encourages student involvement and interaction in college (Astin, 1985; Shore, 1992). Several findings associate student involvement in college institutional activities outside of the classroom with many positive outcomes besides academic success. For instance, students who join social groups or participate in extracurricular activities of almost any type have better satisfaction in college and are less likely to drop out (Astin, 1993; Shore, 1992; Terenzini & Pascarella, 1994).

Student involvement in institutional religious activities is associated positively with academic motivation, good academic rank, time spent studying, greater emotional well-being, important coping skills, and less behavioral, health, or moral risk (e.g., drug or alcohol consumption, sexual interrelationships, etc.) (Calhoun et al., 2007). Students who get involved in religious activities are also more likely to engage in other college institutional activities (e.g., community service, cultural events) and to have higher success in learning activities (Kuh & Gonyea, 2005). Astin et al. (2011) found that the religious involvement of entering freshmen predicts later college behavior such as integrating into campus religious organizations, taking a religious studies course, and going on a religious mission trip. Whatever resources and activities the college promotes to raise student participation, including religious activities, should primarily facilitate students' finding their place in the institution's social environment so that college will be a positive experience for them (Kuh & Gonyea, 2006).

Christian colleges have a special interest in seeking positive outcomes of student involvement relative to the commitments of Christian life. Many researchers have found that student involvement in religious, evangelistic, and service activities is strongly linked to various aspects of spiritual development and religious commitment (Braskamp & Remich, 2003; Kuh & Gonyea, 2005, 2006; Pascarella & Terenzini, 1991; Stoppa & Lefkowitz, 2010; Uecker et al., 2007). Lee (2002, p. 379) found that attending religious services "predicts changes in religious convictions" more so than other measures. Railsback (1994), Lee (2000), and Henderson (2003) also found that attending religious services was a good predictor of religious commitment. Gane (2005), analyzing Adventist young people aged 10 to 19, reported that higher involvement in youth

ministries in Adventist schools equates to higher religious commitment to Adventist beliefs and values.

However, findings reveal that student involvement in college activities is mediated by institutional factors. Kuh and Gonyea (2005) reported, among other findings, that "the nature of the campus environment matters much more than the type of institutional involvement in effective educational practices and desired college outcomes" (p. 7). They conclude, "A faith-based mission and a supportive campus culture appear to be major factors influencing student participation in religious activities and creation of a deeper sense of spirituality" (p. 10). Therefore, there are activities in the campus environment that are more likely either to inhibit or encourage students' spiritual practices (Kuh & Umbach, 2004) and, in consequence, affect their Christian commitment.

As has been previously established, student involvement in institutional programs and activities outside of class is associated with spiritual impact (Ma, 2003); however, the particular aim of a Christian college should always go further—not only mere involvement in behavioral religious practices, but also toward development of "students who understand and internalize their commitment and convictions" (Braskamp & Remich, 2003, p. 8). These authors propose that the circle of development may be completed through reflection and analysis. For example, students with strong commitment become involved in activities that reflect and express their commitment and, then, these activities become an opportunity to talk and reflect on identity, faith, beliefs, values, vocation, spirituality, and religion. It is in this way that the students'

lives are fostered integrally and their spiritual commitments are confirmed (Braskamp & Remich, 2003).

Though an important number of findings report positive results of the Christian college on students´ values, beliefs, and religiosity, one must exercise caution in the implementation of religious regulations and programs. According to the Valuegenesis 1 study, there was a negative correlation between religious commitment and the pressure at school to persuade students to act according to Adventist rules (Dudley, 1992; Gillespie, 1990, 1992). Adventist youth and young adults apparently tend to reject the formative intentions of school agents who especially pressure them, but students respond better when they perceive a friendly, supportive, and challenging social environment. Other studies have identified similar issues in the nature of the campus culture of American Christian colleges. For instance, Woodfin (2012, p. 99) said, "I have been wrong in the past to conclude that a Christian environment on campus was always conducive to Christian growth." Woodfin (2012) argues students dislike being overly exposed to Christians and Christian thoughts. She advises that faculty must challenge students to think more profoundly, even on sensitive faith issues or moral dilemmas.

Adding to this same concern, Barnard (2012, p. 103) advised, "Many of the components of Christian culture on our campuses—chapel, mission, and service trips, Bible studies and other student ministry opportunities—may have an adverse effect on the spiritual nurture and development of some students." He also saw the need to challenge students with divergent points of view and to compel them to think critically about important and profound questions of life. Mentioning the 'bubble' produced by

some protective Christian environments, he went on to argue, “This osmotic understanding of culture-making is not only mistaken; it is dangerous. For too long Christian higher education has depended on rules, policies, and church-like practices to promote a ´form of godliness but denying its power´” (p. 104). He proposed deep changes of beliefs and ways of thinking in order to change behaviors effectively.

Regarding Adventist educational institutions, O. J. Thayer (2008, p. 4) advised that “we must not only teach the faith, but like the early Christian catechumenal schools, we must teach our students to maintain it once they are outside of its protective environment.”

Christian Influence of Agents at College

School is not only buildings and curricula. More significantly, it is made up of relationships between students and agents living at the school such as peers, faculty, staff, advisors, coordinators, deans, and supervisors. The human influence is perhaps the most important element in fulfilling educational purposes. Chickering (1993) argues that the three critical factors in the educational environment are institutional environment, quality of the student’s effort, and interactions with agents of socialization. Erwin (1991) explains how these influences work:

> The *social* environment of a campus is its system of interpersonal influences among staff, faculty, administrators, and the students themselves. These influences may be formal, such as the influence of a fraternity or sorority, or informal, such as casual interactions outside class between a faculty member and a student. If these contacts are systematic and recurring, such as adviser-student relationships, these social sub environments have the potential for affecting students’ developmental and learning levels. (pp. 49, 50)

When young people leave home to attend college, faculty, staff, and administrators take on or complement their parents´ influence. This close relationship in

a systematic and intentional interaction is called mentoring (Schwartz, Bukowski, & Aoki, 2006). Bowman and Small (2010), citing Parks (2000), suggest that a mentoring community provides a natural network to nurture and promote spiritual growth. As young adults distance themselves from their family, faculty and peers step in to assist with maturation. Christian students become confident in their own growth through crises while practicing personal spiritual discipline and experiencing praise, worship, and Bible classes during their stay at the Christian college (Bowman & Small, 2010; Ma, 2003). Therefore, spiritual mentoring is crucial for students entering college in order to maintain their religious commitment during their college years. Mentoring can be performed by anyone in and out of college and contributes to maintaining a great spiritual environment on campus (Garber, 1996; Parks, 2000).

College students are inclined to be influenced powerfully by peer and faculty relationships because they are open to questioning their own faith and that of others (Dalton, Eberhardt, Bracken, & Echols, 2006; Small & Bowman, 2011). Cherry et al. (2001, p. 597) found that many students in American colleges are "spiritual seekers" and desire to explore their denominational borders. Newman and Newman (1978) argued that, besides faculty, other administrative personnel including counselors, residence hall advisors, and deans of students are also influential agents in this multi-factorial formula for formation of students' values. In such interactions, educational leaders demonstrate and transmit their influence through modeling, communicating, mentoring, and indirectly through plans, procedures, policies, and programs. Such interactions are often systematic while others are casual, but together, they slowly tend to transform beliefs, values, and, finally, the student's character.

The following section will briefly explore the most important agents of influence that act in the educational environment. This information is more prescriptive than based on empirical research.

Influence of Relational Agents

As adolescents move toward adulthood, they must deal with certain challenges of economic competency and sexual responsibility. Because college students must soon enter society as economically responsible members, they need professional training in college. Since they are sexually mature, they also need to behave responsibly in their intimate relationships (Lerner & Steinberg, 2004). During this period of life, young adults enter a stage of exploration and establishment of commitment by using a personal system of values and beliefs regarding career, relationships, and religiosity. Students form a social network of close friends, peers, and favorite teachers or faculty members. Their choice of social network will greatly influence their values, religious faith, and practices (McNamara, Nelson, Davarya, & Urry, 2010).

Parents

Much evidence points to parents as being among the strongest influences on the religiosity of students, even at the college level (Benson, Donahue, & Erickson, 1989; Sherkat & Darnell, 1999; Smith & Snell, 2009). Through parenting, modeling, and mentoring, young people learn religion, beliefs, values, and spiritual practices at home (Boyatzis, Dollahite, & Marks, 2006; McNamara, Madsen, Nelson, Carroll, & Badger, 2009; McNamara et al., 2010; Rice & Gillespie, 1992). Positive and close family relationships, parents' religiosity, and attractiveness of religious practices are related

positively to the religiosity of young adults (Smith & Snell, 2009). For example, college students who come from families with a balance of authority, care, and encouragement are more likely to affirm their parents' beliefs upon reaching college. On the other hand, students lacking closeness in family, may transfer their emotional needs in the best of cases to religious involvement, particularly when a peer is also religiously involved with them. Another way of transferring these emotional needs is through interaction with faculty, friends, or in some romantic relationship (Jari-Erik, 2004). Studies have found that children who have a good relationship with parents who attend church are more likely to attend church and participate in religious activities during their adolescence and into adulthood (Gunnoe & Moore, 2002; McNamara et al., 2010; Nelson, 2009; Stoppa & Lefkowitz, 2010). Ozorak (1989) argued that, while peer support is important in precollege years, parental influence is more impacting for religious orientation during the college years.

Many parents are able to exert a strong religious influence over their children even during their college years due, among other factors, to the constant/recurrent use of electronic devices and internet tools such as Messenger, Skype, Facebook, and Twitter, to monitor and maintain supervision (McNamara et al., 2009). This, in turn, produces a closer relationship between students and parents, even when they do not actually live together. Another possible explanation for the strong prevalence of religious influence of parents on young adults is that many students depend economically on parents and, therefore, avoid all conflict with them, even on religious issues (Gunnoe & Moore, 2002). This strong and close religious influence of parents whose children live at home

while attending college limits the possibility of changes in the religious commitment of young adults (Lee, 2000).

The mother's influence in particular is reported to be more relevant than the father´s. For example, Gunnoe and Moore (2002) carried out a longitudinal study of students from 17 to 22 years of age and found that the best predictors of the practice of religiosity among young people were maternal religiosity, especially among students whose mothers were very supportive and attended church during their childhood. Studies in Christian denominations, such as Catholic and Lutheran, have identified similar maternal factors related to Christian commitment among young people (Roehlkepartain & Patel, 2006).

Friends, Peers, and Girl/Boyfriends

The evidence on religious influence of parents and peers on college students is mixed. Although some findings report parents as the most important contributor of religiosity among college students as discussed in the previous subsection, other studies report that the closeness of friends and peers tends to emerge as a stronger predictor of religiosity among young adults than that of parents. For instance, Gunnoe and Moore (2002) found that the primary influence of parents quickly switches to peers or friends, particularly when college students live far from home. Often, students do not really want to break ties with parents, but, at the same time, they want to establish a mature relationship of autonomy and interdependency (Henderson, 2003). However, according to Gunnoe and Moore (2002) and Ma (2003), peer relationships in American colleges were rated among the most significant factors related to the spiritual growth of students.

A possible explanation about emerging ties of peers and friends instead of parents in college students is described by Serow (1989). He argued that this influence of friends could be the result of a poor or weak relationship between parents and children. This situation makes it more likely that peers may change or affirm the values, beliefs, and practices of college students. On the other hand, college students who come from warm, supportive Christian families are more likely to choose Christian peers and friends for themselves, thus contributing to their religious commitment environment (Gunnoe & Moore, 2002). These two influential groups—parents and peers or friends—will apparently tend to impact different areas of the college students' lives. Peer group relationships will have a greater impact on the institutional religiosity of the campus than on personal religiosity, and religious family socialization will have a greater influence on personal religiosity than on institutional religiosity (Cornwall, 1988). However, the more students become committed to their peer or friend group, the more the norms of that group will reinforce or undermine their religious commitment and, consequently, will influence the behavioral practices of students. Astin (1993, p. 398) agreed that the peer group is "the single most potent source of influence on growth and development during the undergraduate years." The peer group will tend to change the students' values, beliefs and even their academic plans in the direction of their peer group interests (Henderson, 2003; Lee, 2000). Schwartz et al. (2006), citing Carbery and Buhrmester (1998), reported that peers, friends, and romantic partners who engage in high levels of common emotional intimacy during the transitional years of college become the primary agents of influence, rather than parents or faculty members. These results are expected, since young people spend a considerable amount of time together,

particularly with romantic partners. Friendships tend to fulfill social integration needs and contribute to feelings of self-worth, self-concept, self-esteem, and self-identity and provide some level of intimacy. Romantic relationships primarily satisfy the need for emotional support. Of course, these needs and commitments may change, depending on whom students choose as close friends (McNamara et al., 2009).

The powerful spiritual or religious influence of peers, friends, and romantic relationships in college, based on intimacy in close relationships, is associated with a greater sense of security in interactions with others during the development of an adult´s personality and personal beliefs. According to Tanner and Arnett (2009), the primary psychosocial task of emerging adulthood is to achieve a re-centering in life, which includes interdependence. Three stages are needed to achieve re-centering. In the first stage, the young adult is dependent on guidance, support, and resources. College students struggle to be interdependent in their relationships. Peers share mutual power and responsibility to obtain gains and care. In the second stage, the young adult commits to roles and relationships in a temporary way. College students explore commitments in order to be informed, particularly on love and work. In the third and final stage, the young adult makes firm commitments to roles and others in a responsible and enduring way.

While college students struggle in defining their purpose, identity, autonomy, and commitments, the religious influence of a friend or romantic friend could be crucial in affecting commitments of Christian faith (Bartkowski, Xu, & Fondren, 2011; Conger, Ming, Bryant, & Elder, 2000). However, the parents´ influence is still important to college students. All of these relational agents in non-formal settings help to instill

values, beliefs, and commitments in college students (Pascarella & Terenzini, 2005; Smith & Snell, 2009).

Influence of Instructional Agents

Faculty

Some studies reveal that as spiritual mentors, faculty members become the next strongest religious influence of college students after friends (Braskamp, 2007). When young people arrive at college, they find adults like faculty, staff, and administrators who supply guidance as agents of socialization on campus (Astin, 1993; McNamara et al., 2009). Astin (1985) agrees that the degree of influence in college is positively related to the frequency, content, and quality of interaction between students and agents of socialization, especially peers and faculty. These interactions create some degree of emotional and spiritual closeness that is important to transmit or inspire commitments and beliefs. Therefore, positive interactions, with some frequency between students and faculty about spiritual or moral content, are influential. Caring and encouraging interactions could be the basis not only of the teaching-learning process in a formal setting, but for Christian faculty to confirm ideals, commitments, and values to their students outside the class setting (White, 1923, 1943). Indeed, Lee (2000), studying 4,000 students attending 76 four-year public institutions, found higher student-faculty interactions and support for religious student organizations and activities to be influential ways of strengthening students' religious beliefs. Cannister (1999) reports that first-year college students who were assigned randomly to a professor in a formal mentoring program designed to nurture spiritual development self-reported greater levels of spiritual growth than those in a control group without a mentor.

According to Garber (1996) young adults who successfully have kept their Christian commitments after their college years have in common three essential characteristics: (a) They have formed a consistent Christian worldview in spite of any other current line of thought; (b) They had in college a caring mentor who modeled such a worldview; and (c) They associate with close friends who hold in common the same values, beliefs, commitments, and ideals in congruence with a Christian worldview.

Indeed, Knight (1998, pp. 194, 200, 203), an Adventist historian and educational philosopher, holds that in order to transmit values and beliefs, the Christian relationship of teachers with their students is more important than curriculum content and teaching strategies. The first purpose of Christian teachers is redemptive, to guide their students toward Jesus and His salvation (White, 1903, pp. 13, 14). Certain levels of closeness and accessibility are needed in the transmission of Christian commitments and beliefs. Faculty members may be closer to students than any other adult after parents (White, 1991); therefore, "the teacher's greatest gift to his [or her] students is his [or her] companionship" (Knight, 1985, p. 191).

Accessibility is also important for interaction. Walsh, Larsen, and Parry (2009) stated, "Students in their first year of study were more likely to seek academic advice from academic tutors when compared to students in their second year" (p. 414). Why were academic tutors the preferred support for students? The students gave the following reasons: accessibility, lack of student awareness relating to specialist services, familiarity with a tutor, and "support specialism" (p. 416). Indeed, faculty members are the favorite mentors of students. According to Amertil (1999), Christian teachers are mediators and nurturers who integrate curriculum and faith through kindness in their

relationships. Faculty members at religious colleges provide social support for students and develop both professional and personal relationships with students, creating a sense of Christian community (Braskamp, 2007).

This accessibility and friendly closeness are mostly met in informal faculty-student interaction. Indeed, informal interactions outside the classroom seem strongly related to a wide range of different outcomes involving social attitudes, values, religiosity, and general maturity, depending on content, as well as frequency (Churukian, 1982; Endo & Harpel, 1981; Pascarella & Terenzini, 1991). Researchers comment that permissiveness, flexibility, accessibility, empathy, genuineness, respect, and honesty are reported as having a higher educational impact than age, academic rank, and level of involvement in professional organizations, publication of articles or books, or gender of the faculty member (Chickering, 1993; Pascarella & Terenzini, 1991). Glasser (1993) argues that, according to the Total Quality Theory, the depth of student-faculty friendship is even an indicator of the quality of school function (see also Chickering, 1993; Chickering et al., 2005). Indeed, faculty members with deeper informal interactions with students provoke a greater impact than in the formal setting of the classroom (Feldman & Newcomb, 1969; Lamport, 1993; Pascarella & Terenzini, 1991).

From a psychological perspective, the impact of informal interactions outside the classroom is understandable because young people tend to be sensitive and receptive to assistance in trusted, informal settings. The students are more open to external influences and to change, particularly when the defense mechanisms are weak. A minimal effort to help them at a moment of crisis, for example, can produce results that

are more significant because the person is emotionally accessible (Clinebell, 1984; Fowler, 1987). Fowler (1984) argues that crises are only positive when life is grounded in faith and in a community of faith that can offer support through spiritual and loving communication. Therefore, it is very important to offer youth and young adults help at opportune times through small groups and mentoring, not only during moments of crisis, but also as emotional support during the transitional years toward adulthood (Cannister, 1999; Dudley, 1994; Fowler, 1987; Parks, 2000). The students will probably adopt inadequate roles as mature adults if they do not receive support and mentoring through the maturation process of young adulthood, and if they do not receive help during the difficult times of their college experience.

In general, faculty members tend to be more secular than their students and also tend to compartmentalize spirituality to private issues (see Jaschik, 2006; Paredes-Collins & Collins, 2011). A study conducted by the HERI (2006) surveyed over 40,000 faculty members from universities and colleges around the United States, and found that faculty members apparently believe that spirituality and religiosity are private and personal and not to be discussed and even less so in a public, educational setting. While more than 80% of the faculty consider themselves spiritual persons, slightly less than one third of professors believed that “colleges should be concerned with developing students´ spiritual development” (p. 9). At the same time, more than half of the faculty disagree with the statement that there is no room to discuss spirituality in the educational setting.

Another concern that faculty have, particularly those working in a Christian college, is related to academic and Christian roles. Although one of the most important

roles is to serve as an example of moral integrity for students, according to academic culture, the ideal faculty member is a scholar, scientist, and professional whose most important role is academic, not moral. As a result, Christian professors struggle in their roles of academician versus Christian. Because many faculty members have limited ability to be involved in students´ lives due to time constraints, course loads, and committee demands, the balance of religious impact is shifted more to peers and friends and away from professors. Therefore, faculty members are often unavailable to offer faith-integrated education to students (Woodfin, 2012). Nevertheless, studies have shown that Christian faculty members teaching in some religious universities have reached academic excellence and high spiritual commitment at the same time (Braskamp & Remich, 2003; Lyon, Beaty, & Nixon, 2002).

Certain characteristics of institutional structure and faculty serve as mediators associated with spiritual influence (Kuh & Gonyea, 2005). For example, Lyon et al. (2002) found a positive relationship between the institution's organizational structure (such as mission statement, religious curriculum, institutional extracurricular religious practices, and required church attendance) and faculty attitudes toward religious faith. They found, finally, that the professor's attitude toward religious involvement depended on three significant variables: the religious affiliation of the professor, whether or not the faculty member held a degree from the college where he or she was teaching, and the faculty member's not being from the arts and sciences (these are negatively correlated). Apparently, faculty members from these disciplines of study are less likely to live and share their spiritual faith.

Though campus ministers, chaplains, deans of religious life, and Bible teachers are specialists in the transmission of Christian faith and fostering spirituality, particularly in Christian colleges, social research recommends more active spiritual participation from faculty members in general, to educate college students holistically (Lee, 2000; Lindholm & Astin, 2006; Schaefer, 2003). In conservative Christian colleges and universities it is expected that faculty will be involved in the development of students´ religiosity, spirituality, and faith in and out of the classroom (Lindholm & Astin, 2006).

Chaplains

Studies on campus chaplaincy tend to be more prescriptive than descriptive. They focus on advice and the description of ideal profiles or statements of functions. For instance, Mushota (1974) mentions some characteristics of chaplains in colleges: They know the trends and emerging problems of young adults, agree with the Christian philosophy of the university, and are likely to participate in the social life of students. Mermann (1989) confirms that chaplains foster spirituality in colleges and universities that attempt to promote harmonious development of the mind, body, and spirit. Moody (2010) explains that chaplains should be able to interpret the spiritual concerns in particular fields of study, integrating Christian faith in learning in order for students to be prepared upon leaving college to understand the spiritual needs of their students and provide professional service with Christian compassion. Some other authors (Robinson & Baker, 2005; Schachter, 2008) suggest that chaplains should use the internet and all other possible resources to make contact and affirm the faith of students, faculty, and parents. Chaplains should be prepared to minister to a mobile community while walking

through corridors of the school and to face the big questions among students. Moody (2009) mentions five main functions of a campus chaplain in dealing with ill or distressed students: offering companionship and attentive listening, providing a sacred place where students can retire to pray and reflect, ensuring hospitality in the chaplaincy center, and offering authentic and real hope within the campus environment. Concurring with Moody about a "sacred place," Robinson and Baker (2005) note a main function of the chaplain is to create a safe space on campus where, formally or informally, different groups may develop trust; opportunities for reflection, prayer, and socialization; and dialogue on issues of particular concern, such as student stress and sexuality. Robinson and Baker (2005) and Clatworthy (2005) propose that campus chaplaincy mediate between the church and the college. Chaplaincy is called to develop and keep a covenant based on unconditional love within the community of faith and learning. This relationship should be free (expecting nothing in return), promissory (guaranteeing availability), open (not predetermined), and community-based (relating to other communities).

In addition to Moody (2009), Robinson and Baker (2005) propose five functions for the campus chaplain: the development and maintenance of community, the presence of worship, unconditional care for all, prophetic vision, and mission and outreach (pp. 27, 28). Schatchter (2008) suggests that the campus chaplain creates a network of spiritual mentoring. Clatworthy (2005) believes that the campus chaplain should be trained and resourced to offer good quality Christian teaching in different contexts. The campus chaplain must be considered a specialized minister who demonstrates a strong

Christian identity and assists students and staff in spiritual growth while guiding them to caring actions toward the community (see also Mermann, 1989).

The importance of chaplains to promote Christian commitments is clear, but the effectiveness of various strategies has not been demonstrated empirically. Strategies toward a closeness of relationships in the college campus are presented as a base for dialogue, comprehension, affirmation, and spiritual guidance of students.

Bible Teacher

Ma (2003, p. 330) found that among “the most influential academic factors reported as helpful to student spirituality were theology classes" and "professor´s impact in class." The process of Bible teaching requires time to yield spiritual outcomes in students. For example, Benson et al. (1989) found that to effect a long-term Christian commitment, students must be involved in at least 1,000 hours of classroom instruction in religion. To be effective in their work, Kerbs (2006) found that Bible teachers need more practical ideas, resources, and relationships among other Bible teachers in order for them to share their experiences and to feel united. Akers (1993/1994) maintains that Christian teachers in general, and Bible teachers in particular, are pastors who preach-teach in the classroom-sanctuary and have students as their parishioners. In the classroom, before the teacher delivers the academic (verbal) content, God's presence should be acknowledged through prayer. Amertil (1999) affirmed,

> Offering genuine prayer on behalf of our students before the class begins cultivates and prepares their spiritual and intellectual terrain to receive the integrated knowledge [academic and spiritual] that will nurture their faith and their desire to learn. The act of praying for our students in the classroom gives them a sense of community, togetherness, love, trust and belonging. (p. 10)

Prayer reassures students of what they are as Christians. In and out of class, the Bible teachers pray with and for them. Students come to the office in order to receive guidance and advice. The spiritual and character formation of students is impacted by the content and degree of interaction. Bible teachers also promote spiritual activities in order to create a spiritual environment. As Dykstra (1984) said: "If we are to help a person to grow in [Christian] faith, we must be sure to engage him or her in practices . . . in the context of actual face-to-face interactions with us and with other people" (p. 197). Examples of these practices are spiritual retreats and groups for prayer.

In some Christian universities like MU, one Bible course is required in every term of college enrollment. Therefore, effective Bible teaching during the college years will affirm the Christian commitment, faith, and values of students. Several studies conducted at MU revealed that Bible courses were significantly positive in the spiritual life and commitment of MU students. Undergraduate students generally feel satisfaction and positive effects from Bible courses (Castrejón, 1985; Grajales & León, 2011; Ruiloba, 1997). Some activities that take place outside of Bible class are spiritual retreats, night vigils, vespers, Agape dinners, receptions on Sabbath, and spiritual camp meetings. Bible teachers often oversee activities that take place in the church, such as preaching, worship service, Sabbath school, or coordinating committees. The major challenge of Bible teachers is to create a healthy emotional and spiritual network of support for each student while students are growing "in the grace and knowledge of our Lord and Savior Jesus Christ" (2 Pet 3:18) through Bible study.

Influence of Authoritative Institutional Agents

Although the quality of an educational institution rests in part on the abilities and qualifications of its faculty and students, important authoritative institutional agents (e.g., president, vice-president, deans) manage and lead all academic operations. Types of authoritative institutional agents vary according to the size, nature, and structure of the educational institution (Blau, 1993). Small Christian colleges, such as MU, typically have at least three types of institutional employees in positions of leadership: administrative leaders (e.g., president, vice-presidents, and deans of schools); religious leaders (e.g., pastors of the local church); and staff (e.g., counseling director, work supervisor, extracurricular activities director). The highest authorities within the college are the president, vice-presidents, and deans of schools. In the context of Adventist education, they are also spiritual leaders on the Christian campus, in addition to the pastors and chaplains (MU, 2011b).

Although personal, face-to-face interaction with students is limited, the influence of these educational leaders, in general, sets the spiritual tone of the institution through mission statements, strategic plans, policies, curriculum strategies, building construction, administrative regulations, and, in consequence, create the Christian campus culture (De Jong, 1990), which are among the most relevant and effective factors affecting religious commitment among students (Henderson, 2003; Woodfin, 2012).

President

Empirical studies reported by Gross and Grambsch (as cited in Blau, 1993, p. 178) among 68 American universities found that participants perceived the president as

the most powerful institutional agent, nearly matching the board´s power. The president´s personal characteristics can influence powerfully the orientation and goals of an educational institution (Blau, 1993). Bess and Dee (2008) admit that "university presidents have a primary role in securing a firm financial future for their institutions" (p. 23). Usually the daily operations are delegated to other administrators or vice-presidents. Indeed, the president influences students mainly through the administrative conduct of the vice-presidents, administrators, faculty, staff, and support departments (Flawn, 1990). The president´s role is primarily dedicated to external affairs, such as, speaking with alumni, sponsors, community leaders, and parents, and dealing with legal issues (Bess & Dee, 2008, p. 23). The president of a Christian college or university also influences the institutional ethos through policies, speeches, presence at institutional events and worship services, sermons, and promotional videos, conferences, and seminars, and similar activities.

The mission and character of a Christian college are fostered through the initiative of its main leaders. Through rituals, rules, programs, and events where the president and vice-presidents preside, these leaders may integrate faith and create a Christian culture on campus, thus encouraging students in their religious commitment through events and policies. For example, the initial program of the school year or the graduation ceremony, the motto of the college, policies, and rules create a Christian ethos that is understood by a particular religious denomination (Braskamp, 2007). The president of a Christian college will have the opportunity to meet with the officers of the student government and other student organizations from time to time. There are activities such as scholarship banquets, breakfasts, lunches, and dinners with student

organizations, honor ceremonies, and activities to begin and close the school year which can be a means of influencing students (Flawn, 1990).

No matter how great the effort college presidents make to be available to students and to attend student affairs, they will be able to accept only a small fraction of the invitations or appointments. Nevertheless, the Christian modeling and authenticity of presidents of Christian colleges will be effective to mark the spiritual tone of the campus and to impact the Christian commitments of students and employees (Litfin, 2004).

Vice-president of Academic Affairs

The Vice-President of Academic Affairs (VPAA) serves as the academic head and the one who sets the whole daily tone of the college concerning faculty and curriculum (Bess & Dee, 2008; Birnbaum, 1992). Most deans report to the VPAA. In some small colleges, the VPAA is the primary individual to select faculty members, make decisions regarding curriculum matters, and to oversee course offerings, schedules, and assignments. The VPAA must deal with student matters and not necessarily be a counselor and mentor for students, but rather, the decision maker for their programs, courses, and related matters. The Department of Academic Affairs takes care of the students' cognitive development while the Department of Student Affairs ministers to their affective and social growth. Terenzini and Pascarella (1994) argue that this is an organizational disadvantage and a myth. They propose a functional interconnectedness of the Departments of Academic and Student Affairs in order to create a well-coordinated environment that responds to the integral and balanced education.

In a Christian university the academic officer should foster the integration of faith in learning among faculty, speak on spirituality and divine calling, lead students in programs integrating entering freshmen, and communicate the religious culture of the entire college. It is expected also that the VPAA oversees the integration of faith and learning of all courses imparted in the institution in order to form a mature and thinking Christian life among students (Dudley, 1999; Guthrie, 1997; Land, 1997).

Vice-president of Student Affairs

Student life on campus outside classrooms and laboratories is mainly the responsibility of the Department of Student Affairs, the Vice-President of Student Affairs (VPSA), and the staff. The VPSA is typically charged with producing and implementing codes of conduct and policies and procedures that establish order and purpose in order to make sure the campus culture flows according to the mission of the sponsoring Christian denomination. Since rules are important for safeguarding students and the college's environment, they must to be formulated carefully. Discipline must be applied in such a way that students learn self-control and a responsible lifestyle (Schulze & Blezien, 2012). At MU, the VPSA is responsible for campus discipline, supervising student activities on campus, overseeing dormitory life, and for generally managing the social and moral life on campus. Through the counseling department, the VPSA assists students in adjusting to campus life, reaching their academic and personal objectives, and even giving spiritual support in crisis time. The VPSA also makes resources available and ensures that students' health care and housing needs are met (Tellefsen, 1990).

Because direct, face-to-face contact is lessened by a large student population, the influence of the VPSA at institutions with high enrollments is mainly indirect through dormitory deans; the counseling department; and programs, events, and activities for students. If the VPSA is a charismatic speaker, he or she may affect the students significantly through public addresses. However, the impact of the VPSA comes mainly through his or her associated offices such as the counseling department, the health center, scholarships, financial aid, and the center for student affairs, or by discipline, personal and academic advising, special programs for minority groups, and leadership consideration of individual students (Ross, 1970).

According to Ross (1970), the most important function of the VPSA is to help students make the most of their educational process. In other words, the VPSA and his or her team help students by guiding, orienting, and assisting them to reach institutional objectives outside of class. Therefore, while the academic head (VPAA) fosters the cognitive and spiritual dimension; the social head (VPSA) fosters social and spiritual issues in the holistic development of students (Braskamp, 2007). Since the VPSA and his or her team are responsible for extracurricular activities on campus, they are also responsible at a Christian college for affirming the Christian values, practices, and beliefs of students. In fact, if a Christian college wishes to foster the Christian life of students intentionally, then all agents on campus, including the VPAA and VPSA, must work together and discuss how to affirm a Christian meaning, purpose, calling to a vocation, religious commitment, and involvement for students (Braskamp, 2007).

Guthrie (1997) advised that it "should never be the custom of Christian student affairs professionals to contemporary thinking and practice without serious reflection

and analysis from a Christian point of view" (p. 70). He emphasized that the labor of the Christian VPSA is multidimensional, which means the VPSA must not only promote religious activities (e.g., prayer groups and outreach mission trips), but also help students with a balanced life (e.g., physical, psychological, vocational, civic, aesthetic, and moral issues) (p. 71). Guthrie recommends that Christian VPSs use the Christian worldview to connect what students learn in the classroom through faculty and with vocational decisions fostered through service to the community.

At MU, the VPSA is responsible for campus discipline, supervision of student activities on campus, dormitory life, and the students´ well-being. The VPSA establishes policies, rules, and moral order on campus, and through the extracurricular activities department assists students in planning and carrying out extracurricular programs and activities designed to make the students´ experience at the institution as enjoyable and enriched as possible in spiritual, social, cultural, and physical aspects (see MU, 2011a, 2011b).

School Deans

According to Davis (1970), the primary responsibilities of school deans are with the president and the faculty members. The role of the deans is one of leadership and support promoting academic work and overseeing the "budgets and policies for the school or college" (Bess & Dee, 2008, p. 27). They also are responsible for attending many events, speaking in public settings, or dealing with issues with students and faculty (Buller, 2007). For Buller personal interviews with students are important because they provide a source of information to assess students´ academic progress. As an academic leader, the dean must be able to perceive the needs of students and faculty

and must respond to them. It is possible that because of the population size and responsibilities of the office, deans have little interaction with students, but they may interact actively with them through teaching or in giving lectures or seminars in order to perceive the environment of the college. With electronic communication, deans can keep in contact with the parents, providing information about their children. A way to clarify issues with parents is establishing a parents´ council in which parents will learn how to help their children in constructive ways. Each school at MU has an academic dean who is not only responsible for creating a learning environment, but also for modeling, mentoring, and promoting the spiritual well-being of students (MU, 2011b). These school deans work in collaboration with other agents working at MU to reach the religious goals of the University. Each dean ensures that his or her school prepares students professionally and strengthens their Christian commitments and beliefs during the college years (MU, 1998, 1999b, 2011a).

Church Pastors

Church-related colleges are created with a religious purpose that must permeate the whole campus. The purpose of the church is to foster spiritual revival and reform in order to maintain God's principles and to develop the Christian commitment of students, faculty, and members of the community (De Jong, 1990). The church becomes a school for training and modeling in Christian lifestyle, worship, evangelism, preaching, music preferences, Christian friendship, and leadership. Church pastors promote the involvement of students and faculty in institutional religious, evangelistic, and service activities. Dumestre (1992) holds that the main purpose of a college-related church is to

help the college maintain a Christian perspective in its academic efforts to find truth, justice, and love.

Church pastors, with chaplains and Bible teachers, have the task of developing a Christian and spiritual environment. There is overwhelming evidence that children and adolescents who are involved with church and/or faith-based youth groups such as youth ministry clubs are not only more likely to avoid at-risk behaviors, but actually to thrive in their development (Nelson, 2009). This same phenomenon is likely to occur at the college level, as well. There is no substitute for a close, caring, mentoring environment formed by supportive and effective people working in a college (Kuh, 1995; Love, 2001; Parks, 2000). Religious leaders may foster a warm and affirming social environment. This contextualizes the best conditions for Christian commitment (Nelson, 2009; Roehlkepartain, Benson, King, & Wagener, 2006).

At MU, religious, service, and evangelistic institutional programs addressed to students come mostly from church initiatives, such as youth ministries, evangelistic campaigns, weeks of prayer, outreaching mission trips, among others. These church-sponsored activities and programs, with those curricular or co-curricular activities promoted by the office of the VPAA (e.g., Bible classes, community service), and those organized by the VPSA´s office and schools (e.g., cultural and social events), tend to create a Christian community and an environment of learning (MU, 1998, 1999b, 2011b).

Demographic Variables Related to Christian Faith

In social studies of colleges, researchers have analyzed many demographic variables dealing with the multi-dimensional phenomenon of the impact of college on

students' spirituality. Four of these variables are analyzed in this current study. They are gender, grade level, field of study, and residence.

Gender

This study attempted to assess gender differences about religious commitments of MU students. Indeed, numerous studies among American people have found that women are more spiritual and religious than men (Benson et al., 1989; Bryant, 2007; Hollinger & Smith, 2002; Francis, 2005). Some more comprehensive studies of adolescents, however, reported few gender differences (e.g., Campiche, 1993; Cornwall, 1989; Hammersla & Andrews-Qualls, 1986; Steggarda, 1993; Sullins, 2006). Loewenthal, MacLeod, and Cinnirella (2001), for instance, studying gender differences in religiosity among Christian and non-Christian groups from a sample in England, found that the general conclusion that women are more religious than men is a phenomenon that is "culture-specific, and contingent on the measurement method used" (p. 2). In their study, Loewenthal et al. found that Christian women reported slightly higher levels of religious activity than did men; however, they thought the gender differences observed were a reflection of cultural norms. Indeed, many studies indicate that Christian women in Western nations are more likely to participate in religious services and activities than men, as well as to report greater personal religious commitment and to pray more frequently during the college years (Gunnoe & Moore, 2002; Stoppa & Lefkowitz, 2010). Ma (2003) found significant differences in Christian spiritual development between women and men and also higher scores for women, considering both academic and non-academic factors. Bryant (2007), using a national and longitudinal sample of 3,680 college students in the United States, found women

scored higher than men in spiritual qualities. Kuh and Gonyea (2005) found women 3% more likely than men to be frequently involved in activities improving spirituality and to have a higher instance of self-reported development of a deeper sense of spirituality.

Different theories have emerged to explain these spiritual or religious differences between male and female. Biological, sociological, and psychological phenomena have been suggested to give an explanation in regard to gender differences (see Bradshaw & Ellison, 2009). For example, researchers argue endocrine functions in the body make women more likely to be religious or to share spiritual expressions (Stark, 2002). Others think that women take fewer risks than men, so women prefer a lovely environment with good relationships within a church community (Braskamp, 2007). Reinert and Edwards (2012) argue, however, that over the years, many empirical studies have analyzed, but not totally resolved, whether one parent influences children more than the other about the concept of God. Fewer studies have examined the influence of religiosity in relationship of the mother or the father with male or female children's religiosity. The concept of God as a loving God is apparently influenced more strongly by the parent who is of the same gender as the child. In addition, Reinert and Edwards (2012) found that, independent of gender, the frequency of attendance at religious services was influenced by the degree of religious engagement that college students retrospectively reported their mothers had had during their childhood. Cornwall (1988) suggests that gender is related negatively to personal religiosity (traditional orthodoxy and spiritual commitment), but gender has no direct influence on institutional religiosity when other variables are controlled.

Despite the fact that many studies in the United States have found women to be more religious than men (Benson et al., 1989), a study conducted by Tinoco-Amador (2006), analyzing 880 undergraduate students from 43 private and 15 public universities in Mexico City, found no significant differences in regard to religiosity between women and men, except in the dimension of belief in God. Apparently in Mexico gender is not a relevant predictor of religiosity among college students such as this empirical study found.

Grade Level

Because during the college years students affirm or disengage from their Christian commitments, what happens through the grade levels before college may have repercussions in their spiritual and religious life during college.

Findings about significant changes on students' religiosity and spirituality through college years are mixed. Kuh and Gonyea (2005), for example, found that freshman students report a deeper sense of spirituality (32%) compared with seniors (28%), but they do not differ in frequency of participation in religious activities with students of other grade levels. However, after reflecting on the findings, they concluded that there are many questions remaining on the phenomenon. They ask,

> [Is] this because students come to a qualitatively different understanding of spirituality by the time they are seniors and reveals the extent to which they have changed in this dimension? Do college experiences over time erode the students' sense of spirituality? Or does comparatively more spiritual development actually happen during the first-year of college? Perhaps the challenge of transitioning away from home spurs more personal reflection and values clarification during the first year of college. (p. 10)

Paredes-Collins and Collins (2011), using data from the College Students' Beliefs and Values survey from the UCLA Spirituality in Higher Education project,

found that seniors at religious institutions showed significant growth on spiritual identification and ethics of caring scales. However, religious commitment decreased during the college years. This decline is higher in those students enrolled in non-religious colleges than those in religious colleges (see also Astin, 1993). Smith and Snell (2009) found mostly more stability than change in religious commitments along college years for most college students. On the other hand, other studies report declining public religious practices, but stability or increase of intrinsic religious convictions and importance of beliefs across the college years. These last results are the general rule reported for college students in American colleges (Astin, 1993; Lee, 2000; Stoppa & Lefkowitz, 2010; Uecker et al., 2007).

Because the overall findings are not clear, there are mixed interpretations of the data. Some studies found high spirituality and low religiosity throughout the college years, while others found decreasing spirituality and stability or increasing religiosity. Other studies found that those both spiritual and religious are stable through grade levels for most college students. Indeed, more studies with strong methodologies and standardized definition of constructs are needed (Kuh & Gonyea, 2005).

In a Mexican context, Grajales and León (2011) found that the spiritual profile of college students at MU remain constant during their grade levels, while the religious participation of students increases. My study contrasted the Christian commitments of students across their grade levels in a Mexican context.

Field of Study/Major

To what extent do the fields of study in colleges or universities mediate the level of Christian commitments? The findings about this are mixed. Some studies found no

differences in the degree of Christian commitment among fields of study while others found significant differences. For example, Kuh and Gonyea (2005) did not find as many significant differences for seniors as for freshmen in religiosity across fields of study. They summarized, “Grades, major field, and first-generation status are generally unimportant in terms of spirituality-enhancing practices, interacting with students who have different beliefs, and deepening one’s spiritual moorings” (p. iii). Scheitle (2011), however, found that college students studying for natural science careers are more likely to experience a decrease in religiosity because they were more inclined to scientific thinking than all other major fields. Mathematics and engineering students also reported more loyalty to science and less to religion. Those enrolled in education are most likely to hold a pro-religion perspective, while business students are more divided in their commitments. “Students in the arts and humanities, education, and business fields are all more likely than natural science students to have a pro-religion conflict perspective” (Scheitle, 2011, p. 180). Students in the social sciences, engineering, and mathematics fields are less likely than natural science students to be religious.

Hollinger and Smith (2002), analyzing the religious worldviews of university students from five European and five American countries, found that students in the social sciences and arts are more distant from religion than students studying other areas of science. Students in arts and social sciences probably reported a lower degree of religiosity as a consequence of their “critical analysis of the role of religious institutions in society” (p. 244).

Hammersla and Andrews-Qualls (1986) argued that among religious students the power of their religious commitment and the nature of their concept of God influenced

their vocational decision or academic major. “Commitment to God was significantly related to academic major, but was unrelated to gender or year in school” (p. 425). Students with religion-related majors (e.g., biblical studies, Christian education, and theology) had the highest level of commitment in significant contrast with students in business or in the natural science areas of study field. There were no significant differences among other groups.

In summary, though the findings about the impact of field of study on student religiosity are mixed, many researchers agree that students in education and religious-related majors are more likely to have high religiosity, while students enrolled in science majors like social science, mathematics, engineering, and natural science are more likely to have low religiosity because of the dichotomy of science and religion. Business majors are placed in the middle of religiosity and science. The religiosity of arts majors mostly will depend of the culture and philosophy of the school or college (Kimball, Mitchell, Thornton, & Young-Demarco, 2009).

My study was designed to test Christian commitment of students in all fields at MU, and it will provide data from a Christian Mexican context.

On-Campus Residence

Residence halls have become an integral part of the educational landscape of many tertiary educational institutions. Besides offering basic housing accommodations for students who travel long distances to attend college, residence halls on campus originally had the main purpose of continuing the character and intellectual development of students (Schuh, 2004). Today, at the beginning of the 21st century, the purposes of a program of residences on campus do not seem to have changed too much, at least in

theory. For example, some educators argue that the program of residential halls should contribute to personal, cognitive, and social integration of all residents, and even enforce the values of behavior on behalf of society. Since housing is a 24-hour procedure, residence life personnel have great opportunities to impact students not only in formal and informal programs, but also in moments of crisis. For example, staff in housing are often the first to see signs of problems and to respond to urgent emergencies of residents (Hardy Cox, 2010).

The most important reason for institutional investment in residence halls is to organize the peer environment as a means of maximizing the opportunities of cognitive, social, moral, physical, and spiritual growth of students (Schuh, 2004). Many studies reveal positive outcomes of living in campus residences. Students living in residence halls are likely to have more social and academic interaction. They are involved in more institutional activities, interaction with faculty, and mentoring than are off-campus students (Terenzini & Pascarella, 1994). Pascarella and Terenzini (2005) found that "living on campus . . . appears to foster change indirectly by maximizing the opportunities for social, cultural, and extracurricular engagement" (p. 603).

Ma (2003) found that living in residence halls of Christian colleges significantly influences the spiritual growth of students. In residence halls students may live within an environment intentionally more enriched with learning and character development (LaNasa et al., 2007).

Astin (1993) argues that living in residence halls rather than at home increases the impact of peer values, behaviors, and attitudes of peers. The type of impact, of course, will depend on the nature of such relationships. Living in campus residence halls

of secular institutions led to a greater rate of joining social fraternities and hedonistic activities (Ma, 2003).

Although living in campus residences generally has a positive impact, this effect is indirectly mediated by student involvement in co-curricular or extracurricular activities (Pascarella & Terenzini, 1991).

Summarizing the findings, Pascarella and Terenzini (1991) noted that "living on campus is perhaps the single most consistent within-college determinant of impact" (p. 611). This study attempted to learn if there are differences in Christian commitments between students living in residence halls and those living off campus in a Mexican context.

Religious Life at Montemorelos University

Based on a systematic study of over 800 institutions, Pattillo and Mackenzie (as cited in Guthrie, 1992, p. 10) made a classification of church-related colleges and universities. Their taxonomy classifies church-related educational institutions in the United States into four types: Defender of the faith colleges, nonaffirming colleges, free Christian colleges, and church-related universities. Considering its purpose, MU should be classified within the category of defenders of the faith. In this type of church-related college, students are mostly members of the affiliate church and eventually become leaders within their religious denomination. The worldview of such a college or university is theistic and determines all activity.

Components of the Montemorelos Curriculum

Every 10 years the MU curriculum is officially evaluated and changes are made. During the 2000-2010 period in which this study was conducted, four components were established as a curricular platform. They were (a) development of a relationship with God and His revelation, (b) professional training, (c) preparation for life, and (d) cultural heritage (MU, 1999a, b, c). These essential components comprise the curricular map at MU in this current study. I will explain all four components below, and then I will focus mainly on the results of statistical studies related to the religious life of students at MU.

The first component, "Development of a relationship with God and His revelation," promotes personal Bible study and daily communion with God. MU students must take a certain number of their credits in religion to fulfill academic requirements (e.g., Bible classes.) According to The 1998 Commission's Report to Alumni and Parents (MU, 1998), spiritual activities are the result of a set of strategies that point to the spiritual growth of both students and faculty. MU has three pastors based in the central church and a chaplain responsible for the spiritual life within each of the University´s seven schools. Pastors and chaplains are the responsible agents fostering the spiritual development of students and faculty. In every school, several students are designated as spiritual leaders who, along with the student association of the school and the chaplain, implement many religious activities such as prayer groups, prayer vigils, and spiritual retreats.

Medical brigades are held by students and faculty, particularly from the School of Health Sciences, to help the community. Other community service activities

performed by MU schools are the following: the School of Education teaches reading in the community through a method based on reading the Bible; the School of Engineering and Technology serves by giving technological support to computer labs in public schools and communities; the School of Business serves by teaching people with low economic status how to develop family businesses. The schools have many excellent opportunities for helping the poor by giving gifts, food, and clothing on special days such as Mother's Day, Children's Day, and Christmas.

The component labeled "Professional Training" is mainly composed of the formal curricular career plans plus Social Service (MU, 1999a, 1999b). The Ministry of Public Education, under the federal government of Mexico, requires all colleges and universities around the country to establish Social Service projects in which students give 600 hours of service as professionals visiting in poor communities, mainly through the coordination of government institutions.

"Preparation for Life" equips students to be healthy and productive in daily life. Students must take a certain number of credits in courses and seminars that promote family life and health as well as do manual work or participate in workshops in agriculture, carpentry, construction, electricity, plumbing, or home repair.

"Cultural Heritage" promotes events that encourage a taste for good music, literature, fine arts, and other forms of cultural or civic expression. Students are required to spend a certain number of hours attending these cultural events.

MU attempts to motivate a saving relationship with God among students, faculty, and staff in order to fulfill the Christian mission (MU, 1999b, 2001). MU´s *Catalog 2001-2003* (2001) affirms,

> The student-faculty relationship is possible within a friendly environment in which the mentor . . . shares his or her talents in a professional way beyond the classroom or campus limitations, in order to interact with students and members of the public whom the school serves. (p. 27)

All faculty members are Adventists and most of the MU personnel attend the University church and hold church positions such as children's Sabbath School teachers, adult Sabbath School teachers, deacons, deaconesses, elders, club leaders, communication leaders, music leaders, and directors of various departments to support the church's mission. Furthermore, MU personnel support the church's mission through sharing their testimony and example, cooperating in community service, giving Bible studies, taking part in church activities, providing advice and guidance to students, integrating faith in the classroom, supporting University events, participating in small groups, and using technology such as forums and e-mail appropriately. In this way, personnel at MU are institutionally involved in the MU mission. Lyon et al. (2002, p. 339) confirmed the value of hiring only Adventist personnel by saying "the same-denomination faculty members are also more likely to support religious university goals." My study analyzes the religious impact of student involvement in institutional activities (religious, evangelistic, service, cultural, physical, and social activities) within a Mexican context.

Religious Experiences

Since approximately 85% of undergraduate participants in this study came from Mexico and 5% from other Latin America countries (see Table 3), I will begin by presenting some statistics on Adventist young people's religiosity in Mexico and Latin America in order to understand the religious background of these data. In general,

studies on Adventist young people's religiosity in Latin America, including Mexico, have found a high degree of religious commitment. Just two studies are reported here. Ada García-Marenko (1996) found strongly committed Latin American Adventist young people by studying the religiosity of 20-39-year-old participants in Mexico, Central America, Colombia, Venezuela, and the Caribbean Islands. She found that 65% held a responsible position in their local congregation, 66% contributed 10% or more of their income for the local congregation, and 85% reported attending church at least once per week. According to García-Marenko, church attendance, the proportion of income being donated to the church for religious causes, and frequency of religious rituals at home are important indicators of the degree to which people are religious.

Six years later, Grajales (2002) studied the religiosity of nearly 2,000 Adventist young people from the Antillean Islands, Guyana, Haiti, Cuba, Dominican Republic, Mexico, Puerto Rico, and Venezuela. The religious habits, moral behaviors in Adventist culture, religious activities, inner spiritual perceptions, the level of a climate of caring in the church, and participation in evangelism and worship were studied. Grajales found the following: young people's perception of the church and its leaders determined 35% of their frequency of participation in evangelistic and devotional practices; access to internet and computers is positively related to higher levels of secularism; Adventist young people's missionary projects are strongly related to both their concept of the church and the activities that they practice; and there is a positive correlation between youth leadership and church leadership. Ninety-four percent of the participants were involved in worship services on Sabbath morning; 74%, in Adventist Youth activities; 40%, in evangelistic meetings every semester; 47%, in sharing religious literature; and

43% were involved in giving Bible studies. Again, these numbers indicate a high participation in religious activities and a strong commitment among Adventist young people in Mexico and other countries of Latin America.

Focusing particularly on the MU religious experience, Ruiloba (1997) completed a cross-sectional study of religious commitment with 405 MU undergraduate participants and found very positive results regarding Christian commitment: A high percentage of students (80%) reported being committed to the Adventist church; students who came from Southern Mexico had a stronger religious commitment than those who came from Northern or Central Mexico; there was a significant relationship between satisfaction in Bible classes and religious commitment to the Adventist church; satisfaction with Bible classes was significantly related to student-faculty relationships, Adventist student-student relationships, and student's acceptance of the faculty's efforts to integrate faith into teaching; satisfaction with the perceived spiritual climate related positively with the religious commitment of students to the Adventist church; religious commitment was related to place of origin and being an SDA member; and no significant difference was found in religious commitment between students living in campus residences and those living off campus. The following factors were identified as predictors of religious commitment: satisfaction in Bible class, Adventist student relationships, perception of the integration of faith-learning, and perception of the quality of teaching. The variable that best explained the religious commitment of MU undergraduate students was the student's acceptance of faculty efforts to integrate faith into teaching. Among the respondents, 86% reported that their professors helped them maintain communion with God, 87% said they had a friendly relationship with their

professors, 88% affirmed that their professors were very supportive and caring, 86% declared that their professors were interested in them, and 87% of students said that their professors were sincere (Ruiloba, 1997, pp. 217, 218, 219, 238).

Later, an institutional study focused on senior MU undergraduates (MU, 1999b) found the religious activities with the highest student involvement were, in descending order, week of prayer (93%), worship services on Sabbath (88%), Sabbath vespers (87%), communion (82%), worship services on Friday (79%), Sabbath School (75%), spiritual retreats (74%), and prayer groups (73%). Students living in campus residences are required to attend chapels, worship services on Sabbath, Sabbath School, and weeks of prayer. The level of satisfaction for most students was high (MU, 1999b). Though there is little research on this topic, it is clear that there has been a history of high satisfaction and participation in institutional religious activities among MU students.

A study conducted to evaluate the freshman experience in 2000 found that most freshman students lived in residence halls on campus, with family, or with an MU employee (MU, 2002). A total of 64% of the participants reported having studied in an Adventist high school, and 41% said they chose MU because of its Christian environment. Most freshmen said they had come to MU because their parents sent them. Most students (80%) reported that they enjoyed the spiritual activities at MU, and most students reported participating with satisfaction in church activities. Only 15% of freshmen said they had problems with adapting to the University's rules (MU, 1999b).

The importance of the Bible classes at MU for shaping a Christian profile was confirmed 13 years later by Grajales and León (2011). In their longitudinal study that lasted 5 school years (2005-2009), they found that Bible courses were among the most

influential activities for improving or maintaining the Christian Spiritual Participation Profile (CSPP) among undergraduate participants. Other relevant findings were that there was no significant difference in the CSPP across the college years. Nevertheless, there was a significant increase in participation in religious activities through the college years, especially from the first to the second year. Moreover, there was a significant correlation between religious participation and the 10 components of the CSPP. Out of eight religious institutional activities, only Bible classes, week of prayer, and the Lord´s Supper were significantly related to CSPP, particularly in freshman and sophomore students' profiles. The mentoring program and chaplaincy correlate with some aspects of the CSPP, particularly during the senior college year. Devotional activities in public settings, spiritual retreats, and night vigils were not significantly related to the spiritual profile components. Sports were negatively related to CSPP.

In general, the religious environment on the MU campus has a history of being strong and very committed to the Christian life and to the Adventist Church. My study adds understanding on how the Christian commitments perform and relate to institutional efforts.

Chapter Summary

This chapter reviewed the literature related to the variables used in this study. It began by examining the spiritual impact of college, in general, and the Christian college, in particular. It also analyzed the Christian commitment phenomenon in young adults, student involvement in extracurricular activities, and the influence of people in faith-based colleges. Further, this chapter identified select demographic variables (gender, major or field of study, years in college, and place of residence) in relationship to

commitment to Christian faith. Finally, this chapter explored some studies that describe the religious situation at MU, where the target population is located.

CHAPTER 3

METHODOLOGY

Introduction

This study assessed the level of commitment to the Christian life among undergraduate students at Montemorelos University (MU). In addition, it examined the extent to which commitment to the Christian life is related to student involvement in institutional activities, influential agents, and selected demographic variables. This chapter considers the following aspects: design of the research, population, sample, explanation of the instrument, procedure, and data analysis, and concludes with a table of operational procedures for the research questions.

Research Design

This is a cross-sectional, quantitative, correlational, and descriptive study aimed at answering the following research questions:

1. To what extent are undergraduate students at Montemorelos University committed to Christian life?

2. To what extent is commitment to Christian life related to involvement in religious, service, social, evangelistic, cultural, and physical activities?

3. To what extent is commitment to Christian life related to institutional, relational, and instructional agents?

4. To what extent is commitment to Christian life related to selected demographic variables (gender, major field, grade level, place of residence)?

The study was cross-sectional because data were collected at one point in time. It was descriptive and quantitative because the interpretation was based on data that undergraduate students at MU reported about themselves by filling out a survey questionnaire with numerical scales. Finally, the study was correlational because it analyzed the nature and strength of relationship existing between Christian commitment and other variables of the study (McMillan & Schumacher, 1997).

Population and Sample

The target population consisted of 1,252 undergraduate students enrolled at MU during the first semester of the school year 2002-2003. For the sample, each major field of study was represented through a proportional, stratified procedure. One out of three students was selected to participate in the study. “Proportional sampling is based on the percentage of subjects in the population that is present in each stratum” (McMillan & Schumacher, 1997, p. 168).

According to Alreck and Settle (1995), the strategy of sampling depends on the information needed and a combination of two elements: the amount of data and the size of the sample. At MU, the population seems to be similar in characteristics such as religion, civil status, region of origin, and age. I used proportional sampling to have representative groups of students who might have unique characteristics and to be able to assess any potential differences of those unique characteristics between groups.

A total of 420 undergraduate students was selected and invited to participate voluntarily. Seventy-nine percent (n = 332) of the sample filled out and returned the

survey. This level of response is consistent with the response rate previously seen in similar studies at MU (Ruiloba, 1997).

Instrumentation and Validation

The instrument for this project has four major sections that were adapted from different authors (Astin, 1993; Castillo & Korniejczuk, 2001; Thayer & Thayer, 1999). Table 1 shows the item-construct used in the final statistical analysis of this study. The complete instrument is found in Appendix B.

The first section of the questionnaire includes 18 questions to assess the demographic and personal information of the participants. These questions were selected and adapted from Astin (1993) and the Valuegenesis study (Dudley, 1992).

The second section is a translation of the Christian Commitment Scale developed by Thayer and Thayer (1999). This scale consists of 16 items to assess three categories of religious commitment: beliefs, 4 items; values, 3 items; and practices, 9 items. Though there are other validated measures on religious commitment (see Hill & Hood, 1999, pp. 205-216), this particular scale was selected because it has been used previously to assess Christian commitment among freshmen, seniors, and alumni of Andrews University, an Adventist-sponsored tertiary institution (O. J. Thayer, 2008). The Christian Commitment Scale uses mainly beliefs, values, and practices of the Christian life to define Christian commitment. Its use is appropriate for this study because, according to the theoretical framework, this study intended to analyze mostly religious behaviors and convictions that can be studied empirically within an Adventist context.

Table 1

Item-Construct Specification

Section	Items	Conceptual definition	Categories	Reference
Demographics	1-18	Demographic information related to college impact phenomenon	Gender, grade level, living in residence halls, field of study	Astin, 1993; Dudley, 1992
Christian commitment	19-34	Measure of commitment based on Christian beliefs, values, and practices, as reported by the students	Christian Commitment Personal Scale items: 20, 21, 22, 24, 25, 26 Christian Commitment Related to Mission of the Church Scale Items: 27, 30, 31, 33, 34	Thayer, 2008 Thayer & Thayer, 1999 A. C. Williams, 2006
Influential agents	37-51	Degree of positive contribution of MU agents to the Christian life of students as reported by students	Relational Agents Items: 37, 38, 39 Instructional Agents Items: 44, 46, 47 Authoritative Institutional Agents Items: 41, 42, 45, 49, 51	Astin, 1993 Dudley, 1992
Student involvement in institutional activities	78-82, 92-94, 144-146, 148-150, 152-154, 157-159	Inventory of institutional activities at MU in which students self-reported their intensity of involvement	Religious Items: 78, 79, 80, 81, 82 Service Items: 92, 93, 94 Cultural Items: 152, 153, 154 Evangelistic Items: 148, 149, 150 Social Items: 144, 145, 146 Physical Items: 157, 158, 159	Castillo & Korniejczuk, 2001

Beliefs, practices, and values of Christian life combine to provide evidence of the level of Christian commitment. The scale attempted to measure the degree to which students perceive themselves keeping their Christian commitments in a continuum of five possible response options for each question: 1 = Have not made this commitment, 2 = Am not keeping this commitment, 3 = Keep this commitment when convenient, 4 = Make considerable effort to keep this commitment, and 5 = Keep this commitment even at great personal sacrifice.

A simple structure found through repetitive factor analysis procedures clearly evidenced two dimensions in this scale. They were labeled as Christian Commitment Personal Scale, with six items; and Christian Commitment Related to the Mission of the Church Scale, with five items. Christian Commitment Personal Scale measures Adventist beliefs or convictions as personal commitments (e.g., "to accept Jesus Christ as your only Savior" or "to observe the seventh-day Sabbath"). Christian Commitment Related to the Mission of the Church measures practices in relation to the mission of the church (e.g., "to support world evangelism through personal participation or financial contribution").

The third section of the survey included a list of 15 agents of influence at MU. The list of influential agents was identified through interviews with the adviser to the MU President and two professors in the School of Education at MU. This section of the questionnaire used self-reported information to assess the extent to which students have been influenced in their Christian faith by influential agents at MU. These 15 items used a 6-point Likert scale to indicate the following options: *none, very little, little, moderate, much, very much,* and an extra option, *Not applicable in my case*.

The scale was divided into three subscales according to a final solution found through factor analysis. These subscales were labeled Authoritative Institutional Agents (5 items), Instructional Agents (3 items), and Relational Agents (3 items).

The fourth section of the survey aimed to assess student involvement in six categories of extra- and co-curricular institutional activities. Those categories of student involvement were: religious activities, 15 items; service activities, 8 items; social activities, 6 items; evangelistic activities, 4 items; cultural activities, 6 items; and finally, physical activities, 4 items.

The students indicated the degree of involvement they had had in these activities during their entire time of enrollment at MU. The response options for the activities were on a Likert scale with the options of *not applicable, nothing or very little, little, moderate, much,* or *very much*. The questionnaire had 43 items for the student involvement section that was reduced by factor analysis to 22 items divided into six subscales.

Methods to Assess the Validity and Reliability of Scales

A preliminary discussion of the scales used in this study was presented in Chapter 1 on the section of the theoretical framework for this study. I conducted interviews and open discussions with the members of my dissertation committee at Andrews University and with a research consultant for the President of UM to assess the face validity, the relevance, and the accuracy of the items and scales of the instrument used in this research project. A pilot test was conducted with 20 students who were not included in the study. The time needed to fill out the survey was measured, and the

design and wording were assessed by asking students for their feedback as soon as they concluded. A few adjustments were made.

Data Reduction and Internal Consistency Procedures

The following section explains the data reduction and the internal consistency procedures applied to the scales used in this research. Inasmuch as this study is mainly exploratory, a construct validity analysis of scales was needed.

A factor analysis was performed as I attempted to uncover the latent structure (dimensions) of a set of variables. With SPSS 11.0 and using the principal components method with orthogonal Varimax and oblique rotations, I analyzed the construction of factors. Varimax rotation was used to analyze student involvement and influence of agents, while oblique rotation with Kaiser Normalization, which allows for correlation between factors because some observed variables of this scale are highly correlated, was used to assess the Christian Life Commitment Scale. A principal components analysis was used because I attempted to explore all variance in the items. This method of principal components is commonly used and preferred as a first step among researchers in social sciences when trying to reduce the items to some composite scores specifically for a subsequent predictive analysis (Tabachnick & Fidell, 1996). A combination of Kaiser's criterion, the scree plot results, percentage of variance, and conceptual relevance was used to identify the number of factors in each scale (Hair, Anderson, Tatham, & Black, 1998; Tabachnick & Fidell, 1996). Criteria for an acceptable factor solution were (a) minimum eigenvalues of 1; (b) exclusion of factor loadings below 0.3; (c) a minimum of three items loading strongly on each factor (Tabachnick & Fidell,

1996); and (d) no cross loading of .3 or above. Missing values were excluded by list cases. These criteria were employeed to create the scales used in the analysis of the data.

The factor correlation matrices and clear interpretation were examined in order to make a decision between orthogonal and oblique rotation. For instance, since the factor correlation for the Christian Life Commitment Scale exceeded .60 (about a 36% overlap in variance), oblique rotation was determined to be most appropriate for this scale (Tabachnick & Fidell, 1996). All factor loadings were determined from the rotated pattern matrices, using an approximated cutoff point of .30 (Tabachnick & Fidell, 1996), .32 (Xitao & Konold, 2010), or .35 according to the quantity of the valid cases (Hair et al., 1998).

Principal Components Factor Analysis: Criteria and Procedures

I used data reduction techniques to shorten the scales used in this study. Those scales include Christian Life Commitment, Student Involvement in Institutional Activities, and Influential Agents at MU. The assumptions and procedures that follow were performed while applying principal components factor analysis.

As a first step in assessing the adequacy of performing a principal components analysis in my data set, I assessed the pertinence of conducting factor analysis of the items of each scale. All the following criteria to perform a Principal Components Analysis were met: a sample size greater than 50, preferably 100; at least a 1:5 ratio or better, 1:10 (items and cases) (Osborne & Costello, 2004); the correlation among variables around .30 or greater, to meet the Bartlett test of sphericity, should be statistically significant ($p < .05$) with Kaiser-Meyer-Olkin (KMO) of .60 or above; and

the sampling adequacy (MSA) of .50 or above. After checking and meeting the previous assumptions, I performed a principal component factor analysis procedure to achieve a simple structure of the scale.

Other criteria checked while performing a factor analysis include a representative and adequate pattern of relationships between variables and factors that explains 60% or more of the total variance, 50% or more of the variance in each variable (communality greater than .50), no variables with cross loading of .40 or higher, rejecting variables with multiple loading structure, and exclusion of factors that have only one variable with strong loading. In order to find a simple structure, I removed such problematic variables from the solution and repeated the principal component procedure. The final solutions are reported in Chapter 4.

Tests of consistency and stability were also conducted by splitting the sample randomly and then redoing the factor analysis procedure. This procedure was done at least three times. If the conditions of a simple structure loading described above were met repetitively, then I considered the test completed. I also identified outliers by computing the factor scores as standard scores and by identifying those that had a value greater than ±3.0 as outliers. Thus, I re-did the analysis after omitting the cases that were outliers. No significant changes in communality or factor structure in the solution were found. This implies that those outliers did not have a significant impact in the results, so the stability of the factors was tested. The stability of a simple structure was met for every component. Finally, summative scales were computed for each of the two factors based on the mean of the items which had their primary loadings in each factor. These scales were used to represent the original observed variables in this multivariate study.

Reliability Criteria and Procedures

Using Cronbach's alpha, items of a simple structure grouped into every scale and subscale were tested for internal reliability. Cortina (1993, p. 100) says, "Internal consistency refers to the degree of interrrelatedness among the items." Cronbach's alpha gives important information about the communalities of the items, but it does not offer information about stability across time. Cronbach's alpha is affected by the number of items in the scale, the inter-item correlation, and the number of dimensions within the scale. As Cortina (1993, p. 103) states, "Alpha can be used as a confirmatory measure of unidimensionality or as a measure of the strength of a dimension once the existence of a single factor has been determined." The measure would be considered reliable if the inter-item correlations were between $r = .20$ and $r = .70$; the item-total correlations were above $r = .53$; and Cronbach's alpha coefficient was above .70 (Cortina, 1993; Kidder & Judd, 1986). However, for exploratory studies, Cronbach's alpha of .60 is considered sufficient (Suhr & Shay, 2008). All scales of the study were found to be internally consistent given that the alpha of the scales and subscales ranged from .6 to .9.

The previous general principles and procedures were used to establish validity and reliability of the measures used in the study. The particular procedure to assess the validity and reliability of each scale is explained next.

Validity and Reliability of the Scales

Christian Life Commitment Scale

This scale has been used for many years to assess Christian faith commitments in freshmen, seniors, and alumni at Andrews University (AU). The original scale consists of 16 items, each with five possible responses (Thayer & Thayer, 1999).

Validity

I applied a data reduction technique through the principal components method in order to find a simple structure of latent factors that represent the entire scale. I repeated the factor analysis procedure using the SPSS 11.0 software package several times to reach a satisfactory solution. Principles and criteria to establish the validity of this scale were used as explained above and were met in every step. I performed a principal components factor analysis to reduce the items of the Christian Life Commitment Scale as explained above. The final solution was an 11-item scale with two simple factors named Christian Commitment Personal Scale (CCPS) and Christian Commitment Related to Church Mission Scale (CCCMS).

Reliability

The internal consistency of the original Christian Commitment Scale on samples studied at Andrews University revealed an alpha level of .95 for the scale (Thayer & Thayer, 1999), while the sample of undergraduate students at MU for the whole 16-item scale scored an alpha level of .94. To assess the final solution of the 11-item scale´s internal consistency, Cronbach's alpha was also used. The assumptions and procedure described above were met. For the two subscales, the results yielded a Cronbach's alpha of .90 for CCPS and .86 for CCCMS.

CCPS showed non-normality performance (skewness > 1) and CCCMS near the normality (skewness < 1). Different methods of transformation were tried, but skewness was higher than without transformation; therefore, I left the original Christian Commitment Personal Scale without transformation. Thus, the Christian Life

Commitment Scale and its dimensions were validated and assured of internal consistency so they could be used with caution in multivariate correlation analyses.

Student Involvement in Institutional Activities Scale

Most of the content of this measurement was adapted from an inventory of the institutional programs at MU listed originally in 1999 by Castillo and Korniejczuk (2001). I collected other items through interviews with the pastoral staff, president's consultant, and two professors of the School of Education. The classification of these 43 institutional activities was made in consultation with the chair of this dissertation.

Validity

In order to identify statistically the underlying dimensions of the data, a principal components analysis was conducted. First, the pertinence to proceed with factor analysis or factorability was assessed through significant correlation coefficients among most items and a significant KMO coefficient. Second, to find the number of components, the combination of Kaiser's criterion (> 1), the scree plot results, 60% of total variance as minimum, and the conceptual interpretation of each factor were used to identify the number of factors in the scale (Hair et al., 1998; Tabachnick & Fidell, 1996). The criteria for a simple factor analysis were also met. Then, repetitive principal components procedures with varimax rotation were conducted in order to find a simple structure with easier interpretation of the data. A simple structure composed of a 20-item scale strongly loading in six components was confirmed.

Tests of stability were also met. At least three times the sample was split randomly and a factor analysis was conducted each time. The criteria of simple structure

were met each time. This test of stability was also conducted, omitting cases with standard factor scores ±3.0 as outliers. Thus, I re-did factor analysis procedure. No significant changes in communality or factor structure in the solution were found. The conditions for a simple structure and generalization were confirmed. Twenty-three items were eliminated; however, the original six-factor structure was maintained. The structure became simple with an approximately normal distribution for each subscale. Summative scales were created for each of the six subscales of student involvement. These scales were named Student Involvement in Religious Activities, Student Involvement in Evangelistic Activities, Student Involvement in Service Activities, Student Involvement in Cultural Activities, Student Involvement in Social Activities, and Student Involvement in Physical Activities.

Reliability

Again, the criteria to establish the reliability of the scale were assessed. Every scale was formed by the average of means of those items to which their primary loadings contributed. For instance, the scale of Student Involvement in Religious Involvement consisted of the means of student involvement in Sabbath worship, Friday evening consecration, Youth Society meetings, week of prayer worships, and Sabbath vespers.

The results of internal consistency for the 20-item scale and six scales of student involvement were examined using Cronbach's alpha. In general, no substantial increases in alpha for any of the scales could result by eliminating items. The results of alpha coeficients, which ranged from .71 to .93, revealed the internal consistency of the six student-involvement scales.

For these reasons, the student-involvement scale and its subscales were validated and assured of internal consistency so they could be used with caution in multivariate correlation analyses.

Influential Agents Scale

This scale was developed with the specific purpose of numerically assessing undergraduate students' perception of the extent that people at MU exert a Christian influence on them during their college years.

Validity

To increase content validity, this scale was based for relevance and accuracy on interviews with the MU president´s consultant, the youth pastor of MU Church, and two professors of the School of Education at MU. To assess the construct validity, the scale met the criteria of factorability for the 15 items. The results showed that it was appropriate to proceed with factor analysis because there were significant inter-correlations among most items, the KMO measure of sampling adequacy above .6 for exploratory analysis, and the diagonal of the anti-image correlation matrix with all measures of sampling adequacy (MSA) over .5, supporting the inclusion of each item in the factor analysis. Finally, the communalities were all above .4, confirming that each item shared some common variance with other items.

Given these overall indicators, a factor component analysis was conducted with all 15 items of the scale. The Kaiser criterion, scree plot, and clear interpretation were keys to determine how many dimensions would be selected. Using orthogonal extraction to find a simple structure for easier interpretation, repetitive steps were needed to redo

factor solutions, omitting some items from the analysis because they failed to meet a minimum criteria of having a primary factor loading of .4 or above. No cross-loading of .3 or above was retained. Tests of stabilization and generalization of results were conducted by randomly splitting the data and omitting cases with standard factor scores ±3 as outliers. Thus, I re-did a factor analysis. No significant changes in the communality or factor structure in the solution were found. The conditions for a simple structure and generalization were confirmed. The results were consistent across the tests. Summative scales were created for each of the three factors, based on the mean of the items which had their primary loading on each factor. The three scales were named Relational Agents, Instructional Agents, and Authoritative Institutional Agents.

Reliability

To determine the internal reliability of the Influential Agents Scale, an item analysis using Cronbach's alpha was conducted. A coefficient alpha of .83 was found for the entire scale of Influential Agents. The coefficient alpha for the Authoritative Institutional Agents subscale is .85; for the Instructional Agents subscale, .75; and for the Relational Agents subscale, .60. The criteria for reliability were met, and the scales were considered validated and reliable to be used with caution in multivariate analysis.

Sampling and Data Collection Procedures

This project was part of an institutional study conducted in the 2002-03 school year by the administration of the MU, and I was authorized by a letter signed by the MU president to administer my survey and use the data collected from volunteer students. A copy of this letter of authorization is in Appendix A.

I obtained a complete list of undergraduate students by major fields from the enrollment office and selected a third of the list (every third student listed in alphabetic order of every major in each school). This selection of participants ended in the first week of September 2002, when the time for enrollment had ended. Meanwhile, more than 400 copies of the questionnaire had been printed by the second week of September. The list of selected participants was arranged by schools and grade level in order to identify those courses that the students were taking. In this way, it was easier to identify the professors who could help in the process of identifying the participants and delivering the questionnaires to them.

I asked the professors for permission to hand out the instrument during class time. Some professors agreed to hand out the survey themselves. Either the professor or I explained that filling out the questionnaire was completely voluntary and that the results would be strictly confidential used only collectively for research purposes; there would be no academic penalty if the students decided not to do it. Next, the professor or I read the list of randomly selected participants. Those students who voluntarily remained in the classroom were those who filled out the survey. Some students listed as participants were absent from the classroom at that time, so two student assistants and I met them individually and explained to them the purpose and importance of the study. Each individual student was told that filling out the questionnaire was optional and without academic penalty. If the student agreed to participate voluntarily, the survey was handed to him or her. After it had been filled out, the student placed it in an envelope and returned it to the researcher. Confidentiality was guaranteed because the identity of

respondents was not collected on the questionnaire. The questionnaires were taken for analysis to a private office where only I had access.

By the end of November 2002, most of the questionnaires were collected and the database input began. A few questionnaires were returned in January 2003. Handing out and getting the questionnaires voluntarily was very difficult.

Research Questions and Data Analysis Procedures

In order to examine the level of commitment to the Christian life among undergraduate students at MU and to analyze the extent this commitment is related to involvement in institutional activities, influential agents, and selected demographic variables, four research questions were formulated. Table 2 summarizes the statistical techniques used to analyze and answer these research questions. To analyze Research Question 1, “To what extent are undergraduate students at Montemorelos University committed to the Christian life?” descriptive statistics were used.

To assess Research Question 2, “To what extent is commitment to Christian life related to involvement in religious, service, social, evangelistic, cultural, and physical activities?” a canonical correlation procedure was used as being the most suitable because, according to Xitao and Konold (2010, p. 29), “the general goal of CCA is to uncover the relational pattern(s) between two sets of variables by investigating how the measured variables in two distinct variable sets combine to form pairs of canonical variates, and to understand the nature of the relation(s) between the two sets of variables.”

Table 2

Operational Procedures for Research Question Analysis

Research Questions	Variables	Level of Measurement	Analysis of Statistics
1. To what extent are undergraduate students at Montemorelos University committed to the Christian life?	Christian Life Commitment	Continuous	Descriptive statistics; mean, standard deviations, and percentages
2. To what extent is commitment to Christian life related to involvement in religious, service, social, evangelistic, cultural, and physical activities?	Set 1: a. Christian Commitment Personal Scale b. Christian Commitment Related to Church Mission Scale Set 2: Involvement in a. Religious b. Service c. Social d. Evangelistic e. Cultural f. Physical activities	Continuous Continuous	Canonical correlation
3. To what extent is commitment to Christian life related to institutional, relational, and instructional agents?	Set 1: a. Christian Commitment Personal Scale b. Christian Commitment Related to Church Mission Scale Set 2: Influential agents a. Relational b. Instructional c. Authoritative Institutional	Continuous Continuous	Canonical correlation
4. To what extent is commitment to Christian life related to selected demographic variables (gender, major field, grade level, place of residence)?	Set 1: a. Christian Commitment Personal Scale b. Christian Commitment Related to Church Mission Scale Set 2: a. Gender b. Major field c. Grade level d. Place of residence	Continuous Nominal Nominal Ordinal Nominal	MANOVA Univariate analysis Post-hoc tests

A canonical correlation analysis is the most appropriate statistical analysis when one attempts to explore simultaneously multiple dependent variables from multiple independent variables. Using canonical correlation, the risk of committing a Type I error is also minimized (Tabachnick & Fidell, 1996).

I conducted a canonical correlation to assess the extent of the relationship between the set of variables: CCPS and CCMS, and another set of variables: religious, service, social, evangelistic, cultural, and physical involvement. The statistical procedure was performed following recommendations by Sherry and Henson (2005) and Xitao and Konold (2010). A redundancy analysis was also conducted to rule out potential weaknesses of canonical correlation analysis. Tziner (1983) says that "the redundancy analysis tests to what extent each of the extracted canonical factors is prominent in its domain" (p. 51).

To assess Research Question 3, "To what extent is commitment to Christian life related to institutional, instructional, and relational agents?" a canonical correlation analysis was also conducted. The criterion set was CCPS and CCCMS, and the predictor set was the Authoritative Institutional Agents, Instructional Agents, and Relational Agents. Similar procedures described for Research Question 2 were also performed to assess Research Question 3.

Finally, to analyze Research Question 4, "To what extent is commitment to Christian life related to selected demographic variables (gender, major field, grade level, residence place)?" a factorial multivariate analysis of variance (MANOVA) was conducted including univariate analysis and post-hoc tests. MANOVA was found appropriate because "the purpose of a multivariate analysis of variance therefore is to

identify, define, and interpret the constructs determined by the linear composites separating the populations being compared" (Olejnik, 2010, p. 315). In other words, the purpose of MANOVA is to "examine the relations between one or more grouping variables . . . and two or more outcome variables" (Olejnik, 2010, p. 316). In fact, this study used MANOVA to answer Research Question 4 because it maximizes the differences between gender, major field, grade level, and place of residence in regard to CCPS and CCCMS as outcome variables and because it would facilitate the interpretation (Tabachnick & Fidell, 1996).

Chapter Summary

This chapter described the goal of the study, the research questions, the population and sample of the study, the instruments used, relevant methodological issues related to the validity and reliability of the scales, and the statistical procedures used to answer the research questions. The sample population consisted of 332 undergraduate students stratified from the entire student population of MU. Four research questions were formulated to analyze Christian commitment and its relationship to student involvement in institutional activities, influential agents, and selected demographic variables. This cross-sectional study used univariate and multivariate correlation analyses to address the research questions. The data were analyzed with SPSS software. The main statistical analyses used include descriptive statistics (percentages, means, and standard deviations), factor analysis, canonical correlation, MANOVA, univariate analysis, and post-hoc tests. The results of the statistical analyses are described in Chapter 4.

CHAPTER 4

ANALYSIS OF THE DATA

As described in the previous chapter, a descriptive, correlational study using survey research methodology was conducted to explore Christian commitment in relationship to student involvement, influence of agents at MU, and selected demographic variables. This chapter describes the characteristics of the participants, the variables in the study, and the results of the data analysis of responses to the research questions.

Description of Participants

The participants were 332 undergraduate students (26.6% of the population) enrolled at MU during the school year of 2002-2003. Table 3 shows the descriptive results for categorical demographic variables. Most of the participants ranged in age from 17 to 24 with an average of slightly over 21 (M = 21.11, SD = 4.02). Of all the participants, 189 (56.8%) were female and 144 (43.2%) were male. Regarding denominational affiliation, 311 (93%) of the participants indicated that they were Seventh-day Adventists; only 20 (6%) were non-Adventist.

Most of the college students were single (316; 94.9%); only 14 (4.2%) were married. The average number of years that the students were enrolled in Adventist schools was 7.8, with a range from 0 to 20 years.

Table 3

Frequencies and Percentages for Categorical Demographic Variables

Variables	*n*	%
Marital status (*n* = 330)		
Single	316	94.9
Married	14	4.2
Missing values	03	0.9
Field of study (*n* = 331)		
Engineering and Technology	62	18.7
Health Sciences	107	32.1
Theology	34	10.2
Accounting and Management	53	15.9
Education	58	17.4
Visual Arts	10	3.0
Music	07	2.1
Missing values	02	0.6
Grade (*n* = 332)		
Freshmen	100	30.0
Sophomores	126	37.8
Juniors	53	15.9
Seniors (4^{th} and 5^{th} years)	54	16.2
Gender (*n* = 332)		
Male	144	43.2
Female	189	56.8
SDA church membership (*n* = 331)		
Yes	311	93.4
No	20	6.0
Missing values	02	0.6
If you live off campus, with whom? (*n* = 211)		
Parents	73	21.9
Relatives	41	12.3
Adventist peer	27	8.1
Non-Adventist peer	01	0.3
MU employee	33	9.9
Denominational worker	05	1.5
Alone	24	7.2
Other	07	2.1
Missing values	122	36.6

Table 3─*Continued*.

Variable	*n*	%
Place of Origin (*n* = 330)		
North Mexico	83	24.9
Central Mexico	64	19.2
South Mexico	134	40.2
Central America	16	4.8
South America	14	4.2
USA	15	4.5
Elsewhere	04	1.2
Missing values	03	0.9
Work? (*n* = 317)		
Yes	210	63.1
No	107	32.1
Missing values	16	4.8

There were about twice as many students in the freshman and sophomore classes as in the junior and senior classes. By field of study, almost one-third were from Health Sciences. The smallest numbers were from Visual Arts and Communication (3%) and Music (2.1%). Just over one-third lived with their parents. By far the largest percentage (84.3) of students were Mexican and the smallest percentage (4.5) were from the United States.

Table 4 shows the descriptive statistics for demographic continuous variables. Most of the participants were baptized between the ages of 10 and 12. The participants reported having lived off-campus twice as many years as in campus residences. It is very probable that while the participants filled out the survey, they took into account the years that they were living around the campus with parents or relatives, even before enrolling at MU as undergraduates. Each week the students spent an average of about 32 hours in class and at work and about 7 hours of leisure. Students reported an average of slightly more than six friends among the MU employees and around four Adventist best

friends. In general these descriptive statistics represent a homogeneous group of participants linked to a close religious community.

Table 4

Means and Standard Deviations for Continuous Personal and Demographic Variables

Variable	*n*	*M*	*SD*
Years enrolled in Adventist schools	326	7.77	5.25
Age	308	21.11	4.02
Hours spent studying at home	321	13.57	12.09
Hours of leisure	309	6.79	6.42
How long have you been baptized?	279	8.70	4.48
Hours weekly in classes	324	20.18	10.87
Hours weekly working for pay	263	11.74	10.61
Years living in residence halls	175	1.97	1.33
Years living off-campus	229	4.19	4.74
Years of employment on-campus	173	2.69	2.83
Years of employment off-campus	98	3.27	3.23
Number of Adventist best friends	325	4.43	1.85
Number of friends among MU employees	317	6.28	8.41

Preliminary Analyses

Commitment to Christian Life

Validity

Zero-order correlation coefficients for Christian Life Commitment items are presented in Table 5. All correlation coefficients are significant and positive; most of them range from .3 through .75. However, four correlation coefficients ranged .30 or lower. “To accept Jesus Christ as your Savior" had a low correlation with “To read or study daily the Bible or devotional literature” (r = .30), “To participate actively in the life and work of local church” (r = .26), and “To support world evangelism through personal participation or financial contribution” (r = .30) . This last item on personal or financial participation also correlated low with “To live by biblical principles of sexual morality” (r = .28). On the other hand, four correlations showed larger coefficients than .70. These item correlations are “To know God” with “To receive salvation” (r = .74); “To receive salvation” with “To submit to God’s will” (r = .71); “To submit to God’s will” with “To use the Bible as God’s revealed word” (r = .75); and “To belong to a church” with “To observe the seventh-day Sabbath ” (r = .71). In general, the correlation matrix shows from moderate to high interrelationship among the items indicating the principal components analysis is adequate. In order to find out if the items in the Christian Life Commitment Scale fall into different components, several tests were made prior to conducting the principal components analysis. This last analysis was considered pertinent in this case because summarizing the data with a smaller number of latent variables loses as little information as possible.

Table 5

Intercorrelations, Means, and Standard Deviations for Christian Life Commitment

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	---															
2	.74	----														
3	.62	.61	---													
4	.63	.71	.63	---												
5	.58	.62	.61	.75	---											
6	.48	.55	.54	.64	.62	----										
7	.52	.54	.65	.65	.62	.61	---									
8	.49	.57	.56	.65	.64	.64	.71	---								
9	.45	.51	.39	.57	.61	.47	.55	.57	---							
10	.45	.51	.43	.51	.54	.49	.41	.44	.49	---						
11	.57	.53	.50	.67	.62	.50	.55	.53	.55	.54	---					
12	.50	.52	.30	.55	.63	.46	.41	.50	.59	.47	.66	---				
13	.31	.40	.26	.40	.47	.34	.35	.43	.51	.39	.36	.50	---			
14	.55	.61	.55	.66	.68	.62	.57	.62	.61	.58	.58	.56	.57	---		
15	.52	.52	.40	.57	.64	.40	.45	.51	.58	.45	.51	.62	.56	.60	---	
16	.37	.40	.30	.43	.53	.28	.32	.38	.60	.36	.43	.53	.53	.53	.61	---
M	4.13	4.10	4.53	4.13	4.06	4.32	4.43	4.36	3.70	3.87	4.05	3.70	3.17	4.03	3.68	3.41
SD	.93	.96	.90	1.03	1.08	1.11	.99	1.07	1.27	.98	1.06	1.16	1.33	1.02	1.21	1.28

Note. $N = 311$. (1) To know God, (2) To receive salvation, (3) To accept Jesus Christ as your only Savior, (4) To submit to God' s will, (5) To use the Bible as God's revealed word, (6) To live by biblical principles of sexual morality, (7) To belong to a church, (8) To observe the seventh-day Sabbath, (9) To give systematic tithes and offerings, (10) To live a lifestyle that promotes physical health, (11) To pray daily, (12) To read or study daily the Bible or devotional, (13) To participate actively in the life and work of a local church, (14) To reflect and apply Christian values in your career, (15) To tell others of the Christian message, (16) To support world evangelism through personal participation or financial contribution. All coefficients are significant at the $\alpha < .001$ level.

The first solution obtained an excellent KMO (.945) and significant Bartlett's test of sphericity with χ^2 (120) = 3524.88, $p < .001$ indicating that the assumption of identity was rejected. In addition, the diagonals of the anti-image correlation matrix pointing out the measure of sampling adequacy (MSA) were all larger than 0.9, supporting the inclusion of each item in the factor analysis. Finally, the communalities were all above .4. This clearly confirms that each item shared some common variance with other items. The initial ratio between valid cases (n = 311) and items (n = 16) within the scale was near 20:1. Given these overall indicators, factor analysis was deemed to be suitable with all 16 items.

In order to find a simple structure of the scales that gives a clear interpretation of the data, I repeatedly conducted many principal component analyses through SPSS with Varimax, Oblimin direct method, and Promax rotation, always resulting in two factor solutions above 1 eigenvalue. The scree plot (see Appendix C) shows clearly two components above the elbow supporting a two-factor solution. Therefore, two components were retained with eigenvalues above 1 (Kaiser Criterion). The first one had an initial eigenvalue of 6.09 and a variance of 55.39%, while the second had an initial eigenvalue of 1.37 and a variance of 12.43%. The total variance of both components was 67.82%. A two-factor solution is explainable because empirically some researchers have found two dimensions in religiosity, for instance, vertical and horizontal dimensions of Christian life (J. D. Thayer, 1993), spirituality and religiosity, meaning and belonging, individualism and collectivism, beliefs and behaviors (see Cukur & Guzman, 2004; Holdcroft, 2006).

As shown in Table 6, the first factor (6 items) is called Christian Commitment Personal Scale (CCPS) because it seems to include statements which all converge on commitments related to personal beliefs, values, or practices in a Christian life. The strongest item, "To accept Jesus as your personal Savior" (.91), identifies the label, Christian Commitment Personal Scale (CCPS). Items of the first factor—accepting Jesus Christ as only Savior, belonging to a church, living by biblical principles of sexual morality, submitting to God's will, observing the Sabbath day, and receiving salvation—refer to commitment related to personal Christian life.

Table 6

Rotated Final Factor Loading Solution for Christian Life Commitment

Items	CCPS	CCCMS	Communality
To accept Jesus Christ as your only Savior	0.910	--	.690
To belong to a church	0.843	--	.714
To live by biblical principles of sexual morality	0.820	--	.655
To submit to God's will	0.753	--	.751
To observe the seventh-day Sabbath	0.737	--	.696
To receive salvation	0.678	--	.635
To support world evangelism through personal participation or financial contribution	--	0.901	.706
To participate actively in the life and work of a local church	--	0.811	.611
To tell others of the Christian message	--	0.759	.700
To read or study daily the Bible or devotional literature	--	0.714	.641
To give systematic tithes and offerings	--	0.646	.661

Note. Factor loadings <.4 were suppressed. *N* = 312. CCPS = Christian Commitment Personal Scale; CCCMS = Christian Commitment Related to Church Mission Scale.

These items represent a personal conviction of some of the 28 Fundamental Beliefs of the Seventh-day Adventist Church: the experience of salvation (belief 10), the church (belief 12), the Christian behavior (belief 22), growing in Christ (belief 11), the Sabbath (belief 20), and the experience of salvation again (belief 10) (Asociación General de los Adventistas del Séptimo Día, 2007).

The second factor includes statements which converge on Christian commitments related to church mission. The strongest loaded item was “To support world evangelism through personal participation or financial contribution" (.901). Therefore, this factor was labeled Christian Commitment Related to Church Mission Scale (CCCMS) with five items. The only item in the second factor that could hinder the interpretation was commitment “to read or study the Bible or other devotional literature daily.” Nevertheless, in the context of MU, reading or studying the Bible and devotional literature in relationship to others is comprehensible. There are some kinds of spiritual programs such as family worship, Youth Ministry activities, and dorm worships in which reading or studying the Bible is done as a Christian commitment related to the mission of the church.

Finally, summative scales were computed for each of the two factors based on the mean of the items which had their primary loadings on each factor. These scales were used to represent the original observed variables in this multivariate study.

Reliability

As shown in Table 7, the total scale and subscales were found internally reliable, having an excellent Cronbach´s coefficient alpha of .91 for the total scale, .90 for the first factor (6 items), and .86 for the second factor (5 items). Inter-item correlations

ranged from r = .25 to r = .70 and corrected item-total correlations ranged from r = .58 (Church participation) to r = .77 (Submit to God´s will).

Table 7

Descriptive Statistics for Christian Commitment Dimensions

Subscales	*n*	Items	*M*	*SD*	Variance	Skewness	Kurtosis	Alpha
CCPS	316	6	4.31	0.82	55.39	-2.16	4.97	.9049
CCCMS	326	5	3.56	1.0	12.43	-0.626	-0.338	.8593

Note. The scale ranges from 1 to 5. CCPS = Christian Commitment Personal Scale; CCCMS = Christian Commitment Related to Church Mission Scale.

Considering that I used the Oblimin method for the analysis, the correlation between subscales ended moderately high (.63─about 40% of shared variance). Overall, these analyses indicated that two distinct factors underlie the Christian Life Commitment Scale and these factors were highly consistent internally. The skewness and kurtosis indicate abnormal distribution for the CCPS (using the rule of thumb of ± 1), while CCCMS fell within a tolerable range, assuming an approximately normal distribution (± 1).

In spite of the fact that both subscales were submitted to transformation in different procedures, the results regarding skewness and kurtosis were better without transformation. Hair et al. (1998) advise that “if the technique has robustness to departures from normality, then the original variables may be preferred for the comparability in the interpretation phase" (p. 81). Thus, the original data appeared better

suited to be used with caution in posterior multivariate statistical analyses inasmuch as it consists of data that were outside the normal ranges.

In conducting a posterior correlation analysis, two subscales were compared. The factors of the final solution (11 items) were compared with the factors of the initial solution (16 items). This revealed a very high significant correlation for both CCPS (r = .972) and CCCMS (r = .992). Therefore, the simple structure was very representative of all original items of the Christian Life Commitment Scale.

Student Involvement

Validity

As it was explained in Chapter 3, the scale of Student Involvement in Institutional Activities was developed initially from an inventory of activities made by Castillo and Korniecjzuk (2001) and by questioning different people at MU. A total of 43 activities organized in six categories were defined as possible subscales. Nevertheless, given that this study is exploratory, a principal component factor analysis was needed to identify the statistical latent dimension of the data, to validate the results, and to find a simple structure to proceed to posterior multivariate analyses.

Initially the proportion between items and cases of the Student Involvement in Institutional Activities was observed. The total of valid cases to include in the factor analysis was 65, which could be too few cases to analyze the 43 items of student involvement. The proportion was not appropriate to proceed. The scale ranged 1= *nothing or very little,* 2=*little,* 3=*moderate,* 4=*much,* and 5=*very much*. An additional option was "not applicable in my case." Thus, I opted to include in the analysis this last option coding it as 0. Therefore, these answers were really not missing values. Of

course, the mean declined from 2.79 to 2.35 for all of the 43 items, but the number of valid cases increased to 181, allowing more realistic results and with a better condition to perform factor analysis.

Then, the factorability of the 43 items was examined. Primarily, zero-order correlation coefficients of items in the student involvement scale were analyzed (see Appendix C). Most of the correlation coefficients were significant, ranging from .115 to .83, except for the four lowest correlation coefficients that ranged < .1. All correlation coefficients were significant except for eight that mainly related to the student labor program. These results suggested a reasonable factorability that had a ratio of 1:4 between items (n = 43) and valid cases (n = 181) for an initial solution. Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was initially .921, above the recommended value of .6, and Bartlett´s test of sphericity was significant ($\chi 2$ (903) = 5629.88, p < .001). Also, the diagonals of the anti-image correlation matrix had a Measure of Sampling Adequacy (MSA) all above .8, thus supporting the inclusion of each item in the factor analysis. Finally, the communalities were all above .50. Given these overall indicators, a principal components analysis was conducted with all 43 items.

A principal components analysis was used because the primary purpose was to identify and compute those latent structures that may represent all items. I started extracting those factors with eigenvalues >1 (Kaiser criterion) hoping to find six components which would represent an ample variety of institutional activities, as suggested in consultation with my adviser at the outset of this research. The first solution, however, yielded nine components with a total variance of 70.73% and a

complex structure, several items loaded strongly toward two or more components, while other components were strongly loaded by just one item. Therefore, I decided to reduce the number of components I would extract for analysis. The scree plot (see Appendix C) revealed approximately 4-, 5-, or 6-factor solutions as possibly correct.

A 4-factor solution could be seriously considered as being adequate, but it yielded only 56.16% of shared variance for this first solution. The best results were with the 5- and 6-factor solutions considering a simple structure representing above 60% of total variance. Comparing the percentage of variance between 5-factor with 6-factor solutions and the scree plot, I found that they followed a similar pattern. Only the 5-factor solution omitted all physical activities items. Therefore, I decided finally to keep the 6-factor solution for the analysis because retaining the variate of the original 6 factors makes use of all the data gathered, as well as maintaining consistency with the initial direction of research as mentioned previously. Thus, I obtained the same original 6 factors with fewer items (20) with a simple structural loading, which properly represent the remaining data. The component analysis served for a clearer and more simple structure with fewer items to confirm the six original factors.

Once I identified the number of factors for extraction, I started a new process using all 43 items of the Student Involvement in Institutional Activities Scale. Varimax rotation and Promax rotations with six forced factors were performed and the results were compared. A Varimax solution was selected, given its clear and well-defined structure to study every factor. Across repetitive steps, a total of 23 items were eliminated because they did not contribute to a simple factor structure and failed to meet the minimum criterion of having a primary loading of .4 or above and no cross-loading

of .3 or above. A final principal components factor analysis of the remaining 20 items using Varimax rotation and six factors explaining 74.58% of the total variance provided the best-defined factor structure and final solution. The percentage of variance for each factor was the following: the first factor explained 37.82% (eigenvalue = 7.583); the second factor, 9.83% (eigenvalue = 1.967); the third factor, 8.31% (eigenvalue = 1.663); the fourth factor, 8.11% (eigenvalue = 1.622); the fifth factor, 5.54% (eigenvalue = 1.108); and the sixth factor, 4.87% (eigenvalue = .974).

All items had a primary loading above .5. The factor loading matrix for this final solution is shown in Table 8. In order to generalize the results, several tests were conducted randomly splitting the sample and conducting factor analyses several times. No relevant changes were noticed on communality and cross loadings. I also selected outliers by computing the factor scores as standard scores and identified those that had a value greater than ±3.0 as outliers. Thus, I re-did the principal components analysis, omitting the cases that were outliers. No significant changes in communality or factor structure in the solution were found. This implies that outliers did not have a significant impact on the results and thus the conditions for a simple structure and generalization were confirmed.

Given that items of the first factor embrace religious, church-based activities ─for example, involvement in Sabbath worship, Friday evening consecration, Youth Society or Week of Prayer ─this factor was labeled "involvement in religious activities." The second factor is related to cultural events ─for example, homecoming, cultural, or civic events, and therefore was named "involvement in cultural events." The third factor contains items related to service activities ─for example, involvement in

club meetings, ingathering, or community service, and therefore was labeled "involvement in service activities." The fourth factor contains items associated with activities such as canvassing and evangelistic meetings, and therefore was labeled "involvement in evangelistic activities."

Table 8

Rotated Final Factor Loadings and Communalities for Student Involvement in Institutional Activities

Student Involvement items	Religious	Cultu-ral	Service	Evangelistic	Social	Physical	Commu-nality
Sabbath worship	0.859	---	---	---	---	---	.829
Friday evening consecration	0.856	---	---	---	---	---	.859
Youth Society	0.831	---	---	---	---	---	.730
Week of prayer	0.778	---	---	---	---	---	.852
Sabbath vespers	0.727	---	---	---	---	---	.824
Homecoming events	---	0.797	---	---	---	---	.790
Cultural events	---	0.797	---	---	---	---	.641
Civic activities	---	0.736	---	---	---	---	.682
Club meetings	---	---	0.880	---	---	---	.729
Ingathering	---	---	0.865	---	---	---	.818
Community service	---	---	0.742	---	---	---	.740
Canvassing in summer	---	---	---	0.879	---	---	.812
Canvassing during school	---	---	---	0.848	---	---	.653
Evangelistic meetings	---	---	---	0.717	---	---	.700
Activities of Student Association	---	---	---	---	0.781	---	.723
Social games and recreational activities	---	---	---	---	0.749	---	.697
Informal activities of the class	---	---	---	---	0.693	---	.612
Sports and fitness	---	---	---	---	---	0.785	.787
Courses on healthy lifestyle	---	---	---	---	---	0.722	.665
Student labor program	---	---	---	---	---	0.694	.770

Note. Factor loadings < .4 were omitted. *N*= 245.

The fifth factor contains items linked to social activities such as those of the student association, social games, and recreational activities, and therefore was named "involvement in social activities." The sixth factor is associated with physical activities such as sports and fitness, courses on healthy lifestyle, or the student labor program, and therefore was labeled "involvement in physical activities."

Reliability

Internal consistency for each of the Student Involvement in Institutional Activities subscales was examined using Cronbach's alpha. These ranged from .70 to .92 as shown in Table 9. No substantial increases in alpha for any of the scales could have been achieved by eliminating items, except for involvement in evangelistic activities. If involvement in evangelistic meetings were deleted, then the alpha of involvement in the evangelistic activities subscale could go to .8192 instead of .8114. Given the fact that the deletion of this item did not represent much of an increase in the alpha level, I decided to leave this item intact.

Table 9

Descriptive Statistics for Student Involvement in Institutional Activities

Subscales	Items	*N*	*M*	*SD*	Variance	Skewness	Kurtosis	Alpha
Religious	5	325	2.43	1.32	1.75	0.17	-0.86	.9257
Cultural	3	321	2.25	1.34	1.79	0.36	-.054	.8373
Service	3	321	2.48	1.44	2.07	0.14	-0.94	.8474
Evangelistic	3	321	1.59	1.42	2.03	0.69	-0.50	.8114
Social	3	327	2.77	1.26	1.58	0.00	-0.74	.7792
Physical	3	321	2.77	1.31	1.72	-0.22	-0.67	.7085

Note. Scale ranged from 1 = Nothing or Very Little to 5 = Very Much; 0 = Not applicable.

Summated scales were created for each of the six components. Every subscale was formed by the average of the means of those items to which their primary loadings contributed. Skewness and kurtosis were within a tolerable range for assuming a normal distribution, and examination of the histograms indicated that the distributions looked approximately normal (± 1).

To assess the correlations and potential collinearity between the subscales of Student Involvement in Institutional Activities, an inter-correlation analysis among factors was conducted. As Table 10 shows, evangelistic activities correlated with cultural, social, and physical activities (r = .231, .268, and .289 respectively) as the lowest correlations, and social involvement correlated with cultural involvement (r = .555) as the highest correlation. The physical had a significant, low correlation with service involvement (r = .245).

Table 10

Inter-correlation for Subscales of Student Involvement in Institutional Activities

Subscale	Religious	Cultural	Service	Evangelistic	Social	Physical
Religious	---					
Cultural	.49	---				
Service	.43	.33	---			
Evangelistic	.32	.23	.32	---		
Social	.43	.55	.42	.27	---	
Physical	.38	.48	.24	.29	.43	---

Note: All correlations were significant at $p < .01$.

Overall, the correlation analysis of these six subscales indicated that they were positive and moderately correlated in their correlation coefficients ranking from .24 to .49. In short, 20 items remained loading in six factors with a simple structure, with good internal consistency, and with an approximately normal distribution. The data were well suited for parametric statistical analyses.

Influential Agents

Validity

The Agents of Influence scale identifies the degree of influence, using a range of *nothing* (1) to *very much* (6), that students perceived people impacting their Christian experience during their college years. The list of 15 influential people at MU was based on interviews with the MU president´s consultant, the youth pastor of MU Church, and two professors of the School of Education at MU.

As Table 11 shows, most correlation coefficients (74%) were significant and positive. Just the following five correlation coefficients were not significant and negative: between parents' influence and Bible teacher and chaplain (r = -.05); parents' influence and dormitory dean's influence (r = -.04); best friends' influence and dormitory dean's influence (r = -.01); boyfriend's or girlfriend's influence and Bible teacher's and chaplain's influence (r = -.05); finally, boyfriend´s or girlfriend´s influence and counseling director's influence (r = -.03). In general, the correlation matrix shows a consistent positive interrelationship among items. The correlations suggest a reasonable factorability of the data.

Second, the KMO measure of sampling adequacy was .826 and Bartlett's test of sphericity was significant ($\chi 2$ (105) = 520.36, p < .001).

Table 11

Intercorrelation, Means, and Standard Deviations for Influential Agents

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	---														
2	**.47*** **	---													
3	**.43*** **	**.39*** **	---												
4	**.27***	**.42*** **	**.33** **	---											
5	**.22***	**.22***	.07	**.36*** **	---										
6	.14	.18	**.19***	**.42*** **	**.68*** **	---									
7	.17	.07	**.24***	**.25***	**.56*** **	**.54*** **	---								
8	.18	**.29** **	**.19***	**.31** **	**.40*** **	**.42*** **	**.58*** **	---							
9	.12	.06	.08	**.43*** **	**.56*** **	**.64*** **	**.49*** **	**.44*** **	---						
10	-.05	.05	-.05	**.26***	**. 37** **	**.34** **	**.36*** **	**.59*** **	**.47*** **	---					
11	.13	**.25***	.04	.18	**.38*** **	**.41*** **	**.52*** **	**.51*** **	**.39*** **	**.51*** **	---				
12	.06	**.27***	-.03	**.39*** **	**.52*** **	**.63*** **	**.38*** **	**.45*** **	**.54*** **	**.52*** **	**.50*** **	---			
13	-.04	-.01	.08	.18	**.48*** **	**.58*** **	**.43*** **	**.32** **	**.47*** **	**.26***	**.32** **	**.50*** **	---		
14	.00	**.23***	**.20***	.12	**.27** **	**.50*** **	**.23***	**.32** **	**.25***	.17	**.40*** **	**.47*** **	**.52*** **	---	
15	.02	.09	.02	**.36*** **	**.51*** **	**.66*** **	**.50*** **	**.38*** **	**.61*** **	**.37*** **	**.36*** **	**.66*** **	**.59*** **	**.43*** **	---
M	5.38	4.40	4.00	3.47	2.96	2.48	3.16	3.75	3.27	3.47	3.48	2.49	2.56	2.99	2.45
SD	1.02	1.46	1.73	1.31	1.66	1.52	1.57	1.57	1.62	1.76	1.76	1.76	1.76	1.68	1.64

Note. Influence of (1) Parents, (2) Best friend, (3) Boy or girlfriend, (4) Peers, (5) President, (6) Vice-presidents, (7) Director and coordinators, (8) Faculty, (9) Pastors, (10) Bible teacher and chaplain, (11) Mentors or adviser (12) Counseling director, (13) Dormitory dean, (14) Work supervisor, (15) Director of extracurricular activities. $N = 73$. Scale ranged: 1) None, 2) Very little, 3) Little, 4) Moderate, 5) Much, and 6) Very much. All bolded numbers are significant.

*$p < .05$. **$p < .01$. ***$p < .001$.

The diagonal of the anti-image correlation matrix had all the measures of sampling adequacy (MSA) over .5, supporting the inclusion of each item in the factor analysis

Finally, the communalities were all above .6 (see Table 12), confirming the fact that each item shared some common variance with the other items. Given these overall indicators, a factor component analysis was conducted with all 15 items.

Table 12

Rotated Factor Loadings and Communalities for Influential Agents

Agents of Influence	Institutional	Instructional	Relational	Communality
Vice-presidents	.814	---	---	.761
Director of extracurricular activitities	.791	---	---	.700
Dormitory dean	.785	---	---	.619
President	.726	---	---	.619
Pastors	.699	---	---	.615
Mentor or adviser	---	.784	---	.651
Bible teacher and chaplain	---	.762	---	.679
Faculty	---	.728	---	.676
Parents	---	---	.782	.615
Best friend	---	---	.777	.666
Boyfriend and girlfriend	---	---	.766	.615

Note. The factor loadings < .4 are suppressed. $N = 88$.

A principal components analysis was conducted to reduce the number of variables in latent factors and to compute the summated scale that represents the data. The initial eigenvalues showed that the first factor explained 40% of the variance, the second factor, 13.33% of the variance, the third factor, 8.12% of the variance, and finally, the fourth factor yielded 7.03% of the total variance. Though the initial solution

with a minimum eigenvalue of 1 as the criterion yielded four factors, a three-factor solution, which explained 61.46% of the variance, was preferred. It was preferred because I wanted a clear structure with theoretical support. The scree plot also showed a consistent three-components solution (see Appendix C). In addition, the number of primary loading factors was insufficient and the fourth and subsequent factors were difficult to interpret. All these are reasons for preferring three components for the scale. The simple structure of the final solution with Varimax and Oblimin rotations was very similar. I opted for the Varimax solution because of the easier interpretation and clearer explanation. Across the repetitive steps for re-doing the factor solutions, four items were omitted because they did not contribute to a simple factor structure and failed to meet the minimum criteria of having a primary factor loading of .4 or above and no cross-loading of .3 or above.

The communalities of .4 or above were also a minimum condition for retention of an item. A principal components factor analysis of the remaining 11 items was conducted using Varimax rotation. The results yielded three factors explaining 65.6% of the variance. The first factor (eigenvalue = 4.325) explained 39.32% of variance; the second factor (eigenvalue = 1.786) explained 16.24% of variance; and the third factor (eigenvalue = 1.105) explained 10.05% of the variance. Table 12 shows the factor loading matrix for this final solution. All items had a primary loading over .5. In order to generalize the results, several tests were conducted randomly, splitting the sample and conducting factor analyses again several times.

I also selected outliers by computing the factor scores as standard scores and identified those that had a value greater than ±3.0 as outliers; I re-did the principal

component analysis, omitting those cases that were outliers. No significant changes in the communality or the factor structure in the solution were found. This implies that the outliers did not have a significant impact in the results and, thus, the conditions for a simple structure and the generalization of the simple structure were confirmed.

The first factor includes agents who influence institutional programs. Stronger items loading on this factor may be identified as agents working in authoritative institutional positions. This factor was labeled “authoritative institutional agents.” The second factor includes items that consider influential agents such as Bible teacher, chaplain, faculty, and mentor or adviser. For this reason, this factor was labeled “instructional agents.” The low cross-loading with other dimensions for these agents is understandable because it is usual for MU staff directors, directors and coordinators of schools, vice-presidents, and the president to teach at least one course every term in addition to their administrative duties. The third factor includes agents such as parents, best friends, boyfriend and girlfriend who emotionally embrace a relationship with the students mainly in an informal setting. This factor was labeled “relational agents.”

Reliability

To determine the internal reliability of the Influential Agents Scale an item analysis was conducted using Cronbach’s alpha as a model. The measure would be considered reliable if (a) the inter-item correlations were between $r = .20$ and $r = .70$, (b) the item-total correlations were above $r = .53$, and (c) Cronbach’s coefficient alpha was .60 or above for the exploratory analysis of this study (Cortina, 1993; Kidder & Judd, 1986). As shown in Table 13, the Influential Agents Scale was found internally reliable with a Cronbach´s coefficient alpha of .83 for the total scale, .85 for the Authoritative

Institutional Agents subscale, .75 for the Instructional Agents subscale, and .60 for the Relational Agents subscale. Inter-item correlations ranged from *r* = .39 to *r* = .64 for the Authoritative Institutional Agents subscale, from *r* = .46 to *r* = .56 for the Instructional Agents subscale, and *r* = .28 to *r* = .41 for the Relational Agents subscale.

Table 13

Descriptive Statistics for Perceived Influence of Agents

Subscales	Items	*N*	*M*	*SD*	Variance	Skewness	Kurtosis	Alpha
Institutional	5	325	2.76	1.30	1.686	.419	-.672	.85
Instructional	3	328	3.74	1.33	1.779	-.324	-.668	.75
Relational	3	331	4.85	0.98	0.960	-.945	.747	.60

Note. Scale ranged from 1= Nothing, to 6 = Very Much.

Considering the importance of those relational agents for young people (Kreider, 1984; Kuh, 1995; Lamport, 1993; Pascarella & Terenzini, 1991), the Relational Agents subscale was retained intact within the study in spite of its low alpha level because the alpha level was enough for an exploratory study. No substantial increase in alpha for any of the scales could have been achieved by eliminating more items, except for the Authoritative Institutional Agents subscale. If the dean of dorm´s influence were omitted, the coefficient alpha would rise from .85 to.86. Nevertheless, these items were left intact because the range of improvement of the alpha level was not important.

Summative scales were created for each of the three factors, based on the mean of the items which had their primary loading on each factor. Descriptive statistics are presented in Table 13. Considering the means, relational agents were reported as the most influential type of people among MU undergraduate students with a negative skewness almost in the limit of a normal distribution (±1). The skewness and kurtosis were well within a tolerable range for assuming a normal distribution (±1), and examination of the histograms suggested that the distributions looked approximately normal.

The Research Questions

Descriptive statistics, canonical correlational, and factorial MANOVA procedures were used to answer the four research questions of this study.

Research Question 1

Research Question 1 asked, “To what extent are undergraduate students at Montemorelos University committed to the Christian life?” In order to answer this question, descriptive statistics, item and scale mean, and standard deviations were used. Table 14 summarizes the level of commitment to the Christian life among the undergraduate students at Montemorelos University.

The table has been arranged by mean in descending order for the Christian commitment scale. The overall mean for the entire scale (ranging from 1 to 5) was 4.06, *SD* = .71. In general, undergraduate students did not see themselves as completely committed to a Christian life, but most of them perceive themselves as “making considerable effort to keep" commitments to it.

Table 14

Level of Commitment to the Christian Life Among Undergraduate Students at Montemorelos

Items in scales	*n*	*M*	*SD*	Level of Christian commitment: Have not made %	Am not keeping %	Keep when convenient %	Make considerable effort to keep %	Keep even at great personal sacrifice %
CCPS	329	4.40	0 .65	4	3	4	32	55
To accept Jesus Christ as your only savior	330	4.53	0.90	4	1	2	23	69
To belong to a church	330	4.43	0.98	4	3	4	25	64
To observe the seventh-day Sabbath	329	4.36	1.06	4	4	4	24	62
To live sexual morality by biblical principles	324	4.34	1.10	6	2	4	25	60
To submit to God's will	331	4.13	1.01	4	4	5	45	40
To receive salvation	328	4.09	0.94	3	6	4	51	34
CCCMS	330	3.64	0.97	8	17	10	39	25
To read or study daily the Bible or devotional	328	3.68	1.17	6	14	10	44	25
To give systematic tithes and offerings	330	3.68	1.27	9	14	7	41	29
To tell others of the Christian message as found in Scripture	331	3.65	1.21	6	17	10	39	27
To participate actively in the life and work of a local church	330	3.45	1.32	9	20	11	32	26
To support world evangelism through personal participation or financial contribution	331	3.37	1.29	10	22	11	37	20
Christian Life Commitment (11 items)	332	4.06	0.71	5	9	8	38	40

Note. Scale ranged: (1) Have not made; (2) I am not keeping; (3) Keep when convenient; (4) Make considerable effort to keep; and (5) Keep even at great personal sacrifice. CCPS = Christian Commitment Personal Scale; CCCMS = Christian Commitment Related to Church Mission Scale. The percentages do not add up to 100 because of rounding errors.

The participants of this study reported high mean scores for the items that reflect Christian convictions or private Christian practices such as “To accept Jesus Christ as your only Savior” (M = 4.53), to belong to a church (M = 4.43), to observe the seventh-day Sabbath (M = 4.36).The lowest mean scores were for those items linked to supporting the life and work of the local church (M = 3.45) and supporting world evangelism (M = 3.37).

In general, the scores of perceived Christian commitment among undergraduate students were high. Students who "make considerable effort to keep" their commitments and those that "keep [commitments] even at great personal sacrifice" are considered in this study to be committed Christian students. Students who "have not made,"[are] not keeping," and "keep [commitments] when convenient" are considered to be not committed Christian students. Using these definitions, 78% of MU students reported being committed to their Christian life (entire scale), while about 22% reported they are not committed. For the sub-category of CCPS, 87% of students declared they are committed, while only 11% did not. For the sub-category of CCCMS, 64% of students indicated they are committed, while 35% said they are not.

Research Question 2

Research Question 2 asked, “To what extent is commitment to Christian life related to involvement in religious, service, social, evangelistic, cultural, and physical activities?" The predictor set of variables was student involvement in religious, service, social, evangelistic, cultural, and physical activities, and the criterion set of variables was Christian Commitment Personal Scale (CCPS) and Christian Commitment Related

to Church Mission Scale (CCCMS). Table 15 shows how the predictor variables are correlated with the criterion variables.

The CCPS has a significant correlation with two Student Involvement in Institutional Activities scales: religious and evangelistic activities.

Table 15

Correlations of the Christian Commitment Scales With Student Involvement in Institutional Activities

Scale	*m*	*SD*	1	2	3	4	5	6	7	8
					Christian Life Commitment					
1. CCPS	4.40	0.65	---	.63**	.15**	.09	.10	.20**	-.04	.06
2. CCCMS	3.64	0.97		---	.32**	.17**	.23**	.32**	.07	.18**
					Student Involvement in Institutional Activities					
3. Religious	2.43	1.32			---	.49**	.44**	.32**	.43**	.38**
4. Cultural	2.25	1.34				---	.33**	.23**	.55**	.48**
5. Service	2.48	1.44					---	.32**	.42**	.24**
6. Evangelistic	1.59	1.42						---	.27**	.29**
7. Social	2.77	1.26							---	.43**
8. Physical	2.77	1.31								---

Note. CCPS = Christian Commitment Personal Scale; CCCMS = Christian Commitment Related to Church Mission Scale.
** $p < .01$.

The CCCMS shows a significant correlation with five Student Involvement in Institutional Activities scales: religious, cultural, service, evangelistic, and physical activities. Neither commitment scale correlated with involvement in social activities.

Table 16 shows the results of a canonical correlation analysis reporting how predictor functions are correlated with criterion functions.

Table 16

Canonical Solution for Christian Commitments and Student Involvement

Variable	First Function			Second Function			
	β	r_s	r_s^2	β	r_s	r_s^2	h^2
Set 1: Criterion variables							
Christian Life Commitment							
CCPS	-.087	.576	.332	1.285	.817	.67	1.002
CCCMS	1.053	.998	.996	-.742	.068	.00	.996
Adequacy		66.360			33.63		
Redundancy		12.060			.86		
Set 2: Predictor variables							
Student Involvement in Activities							
Evangelistic	.526	.760	.578	.429	.121	.01	.588
Religious	.578	.780	.608	-.188	-.342	.12	.728
Service	.224	.542	.294	-.168	-.384	.15	.444
Physical	.218	.490	.240	-.159	-.324	.10	.34
Social	-.356	.216	.047	-1.024	-.814	.66	.707
Cultural	-.003	.368	.135	.570	-.114	.01	.145
Adequacy		31.690			17.644		
Redundancy		5.76			.454		
Eigenvalue		.222			.026		
Canonical Correlation		.426	.181		.160	.02	
Wilks's λ			.797		.974		
F			5.959		1.577		
df			12/596		5/299		
p			.000		.166		

The full model across all functions was statistically significant (Wilks´s λ = .797 criterion, F (12, 596) = 5.96, $p < .001$). The analysis yielded two functions. The first function was statistically significant ($p < .001$) and explained 18% of the shared variance between the first pair of variates (squared canonical correlation of .182). The second function was not statistically significant ($p = .166$).

Table 16 shows the set of criterion variables with their respective coefficients. The primary contributor for the first criterion canonical variate was CCCMS. Since CCCMS represents mainly items related to church life and mission (e.g., "To participate actively in the life and work of a local church" or "To support world evangelism through personal participation or financial contribution"), the criterion latent variable defined by the first variate was labeled "Christian commitment related to the church mission."

Table 16 shows the set of predictor variables with their respective coefficients. The primary contributors for the first predictor canonical variate were religious and evangelistic involvement. The secondary contributor was service involvement. Because the primary contributors of the predictor set were items related to church-related activities (e.g., religious and evangelistic activities), the predictor latent variable was labeled "involvement in church-related institutional activities."

According to the adequacy coefficients shown in Table 16, Christian commitment related to church life (canonical variate) extracted 66% from its own observed criterion variables and student involvement in church-related institutional activities (canonical variate) extracted 32% from its own observed predictor variables. In analyzing redundancy coefficients, however, Christian commitments (original

variables) shared 12% of its variance with student involvement in church-related institutional activities (canonical variate)

On the contrary, the contribution of student involvement in institutional activities (original variables) was practically irrelevant, sharing only about 6% of its variance to Christian commitment related to church mission (canonical variate).

In fact, the results revealed that, overall, just one pair of canonical variates in the model was correlated significantly. CCCMS was the main variable in the Christian Life Commitment set that correlated with the first canonical variate. Among the Student Involvement in Institutional Activities set, a combination of religious and evangelistic activities mainly was correlated with the canonical variate. Therefore, the pair of canonical variates indicates that those students with religious and evangelistic involvements were mainly associated with Christian commitments related to church mission.

Hair et al. (1998) suggest that an analysis of sensitivity to canonical correlation coefficients is pertinent in order to validate the canonical correlation statistic model. The validation is performed by eliminating one variable at a time from the analysis while comparing the results before and after the elimination of variables. Similar results indicate the validity of the model. Therefore, this analysis, that alternately omitted three predictor variables, was performed to assess differences in the canonical coefficients, standardized weights, and structure coefficients. The results are presented in Table 17.

Table 17

Analysis of Sensibility of the Results of Canonical Correlation

	Intact scores (n = 306)		Results after elimination of: Evangelistic (n = 311)		Social (n = 306)		Cultural (n = 308)	
	β	r_s	β	r_s	β	r_s	β	r_s
Rc	.426		.381		.412		.425	
R^2	.182		.145		.169		.180	
Set 1: Criterion variables								
Christian Life Commitment								
CCPS	-.087	.576	-.146	.342	-.206	.497	-.080	.579
CCCMS	1.053	.998	1.086	.994	1.117	.987	1.048	.998
Adequacy		66.36		64.02		61.08		66.60
Redundancy		12.06		9.30		10.34		12.02
Set 2: Predictor variables								
Student Involvement in Institutional Activities								
Evangelistic	.526	.760	Omitted	Omitted	.513	.779	.523	.758
Religious	.578	.780	.787	.896	.570	.817	.583	.781
Service	.224	.542	.367	.617	.171	.573	.233	.548
Physical	.218	.490	.301	.526	.176	.518	.203	.480
Social	-.356	.216	.375	.232	Omitted	Omitted	-.356	.215
Cultural	-.003	.368	-.007	.421	-.140	.384	Omitted	Omitted
Adequacy		31.69		33.81		40.36		35.20
Redundancy		5.76		4.91		6.84		6.35

Note. β = Standardized Canonical Coefficient; r_s = Structure coefficient. CCPS = Christian Commitment Personal Scale; CCCMS = Christian Commitment Related to Church Mission.

After alternately deleting the variables related to student involvement in evangelistic, social, and cultural activities, the results of canonical correlation coefficients remained similar to the full model and the R_c^2 varied from .145 to .182 with a maximum difference of .037 (approximately 4% of difference of shared variance). The consistency in the results of the R_c^2, before and after, from the selective exclusion of variables indicates that the results reported in this study are stable. For instance, when looking at the independent variables, when the score of cultural involvement is deleted, compared with intact scores, the results indicated just .001 of difference.

As Table 17 shows, CCCMS was the most stable among the dependent variables because its structure coefficient remained similar throughout the omissions (.998, .994, .987, and .998). Overall, the model is shown to be stable across systematic omissions of selected independent variables. One can conclude that the results of the model reported here are trustworthy inasmuch as when the variables were systematically omitted, the results in general were appropriate and the model was apparently consistent (Hair et al., 1998).

Research Question 3

Research Question 3 asked, “To what extent is commitment to Christian life related to institutional, relational, and instructional agents?" The predictor set of variables was Authoritative Institutional Agents, Instructional Agents, and Relational Agents, and the criterion set of variables was the CCPS and the CCCMS. Table 18 shows the zero-order correlations between the predictor set of variables and the criterion set. All correlations among factors were significant within and between sets of variables.

Table 18

Scale Means, Standard Deviations, and Zero-Order Correlations for Christian Life Commitment and Influential Agents

Scales	*M*	*SD*	Correlations				
			1	2	3	4	5
Christian Life Commitment							
1. CCPS	4.31	0.82	---				
2. CCCMS	3.56	1.01	.63**	---			
Influential Agents							
3. Authoritative Institutional	2.76	1.30	.14*	.18**	---		
4. Instructional	3.74	1.33	.17**	.19**	.59**	---	
5. Relational	4.85	0.98	.22**	.29**	.16**	.23**	---

Note. CCPS = Christian Commitment Personal Scale; CCCMS = Christian Commitment Related to Church Mission Scale.
* $p < .05$. ** $p < .01$.

The weakest significant correlation was reported between CCPS and the influence of Authoritative Institutional Agents ($r = .14$). The highest inter-scale correlations were reported between CCPS and CCCMS ($r = .63$) and between Authoritative Institutional Agents and Instructional Agents ($r = .59$). This last case is explainable because, many times institutional people teach at least one course in the schools.

The results of the canonical correlation analysis are reported in Table 19. The full model across all functions was statistically significant (Wilks's $\lambda = .876$, F (6, 632) = 7.165, $p < .001$).

Table 19

Canonical Solution for Christian Life Commitment and Influential Agents

Variable	First Function			Second Function			
	β	r_s	r_s^2	β	r_s	r_s^2	h^2
Set 1: Criterion variables							
Christian Life Commitment							
CCPS	.366	.818	.669	-1.218	-.575	.33	.999
CCCMS	.732	.958	.918	1.040	.288	.08	.998
Adequacy		79.31			20.69		
Redundancy		9.68			.028		
Set 2: Predictor variables							
Influential Agents							
Institutional	.179	.499	.249	.947	.278	.08	.329
Instructional	.328	.616	.379	-1.203	-.570	.32	.699
Relational	.792	.895	.801	.300	.173	.03	.831
Adequacy		47.68			14.38		
Redundancy		5.82			5.84		
Eigenvalue		.139			.001		
Canonical correlation (*Rc*)		.350	.122		.037	.001	
Wilks's λ		.876			.998		
F		7.165			.212		
df		6/632			2/317		
p		.000			.809		

Note. $n = 321$. β = Standardized Canonical coefficient, r_s = Structure coefficient, r_s^2 = Squared Structure coefficient, h^2 = Communality. CCPS = Christian Commitment Related to Personal Spirituality Scale; CCCMS = Christian Commitment Related to Church Mission Scale.

The first function was statistically significant ($p < .001$) and explained 12% of the shared variance between the first pair of variates (squared canonical correlation of .122). The second function was both not statistically and not practically important ($p = .809$) with 0% of shared variance (squared canonical correlation of .001).

Table 19 shows the set of criterion variables with their respective coefficients: standardized, structure, and squared structure coefficients. The primary contributor for the first criterion canonical variate was CCCMS and secondly CCPS. This conclusion was supported by the squared structure coefficient.

Given that both criterion variables contributed strongly to this canonical variable, but mostly CCCMS (92% and 67% of shared variance, respectively), the criterion latent variable has been labeled “Christian commitments related mostly to church life.”

Table 19 shows the set of predictor variables with their respective coefficients. The primary contributor for the predictor canonical variate was the Relational Agents (80% of the shared variance). A secondary contributor to their canonical variate was the Instructional Agents (38% of shared variance). Given the important contribution of relational people, the variate was labeled “influential close people.” In fact, the pair of variates, “influence of close people” as predictor and “Christian commitments related mostly to church life" as criterion, suggests 12% of students’ Christian commitments related mostly to church life are associated with people in college who were perceived to be in close relationships with them.

In addition, according to the redundancy coefficient, Christian commitments (observed variables) of undergraduate students shared in common about 10% with “influential close people” at college (canonical variate.) On the other hand, the

influential agents at MU (original variables) were practically not important (6% of shared variance) when associated linearly to the “Christian commitments related mostly to church life" (canonical variate) of undergraduate students.

Hair et al. (1998) suggest that an analysis of sensitivity for canonical correlation coefficients is pertinent in order to validate the canonical correlation statistical model. The validation is performed by eliminating from the analysis one variable at a time while comparing the results before and after the elimination of variables. Similar results indicate the validity of the model.

Therefore, this analysis that alternately omitted three predictor variables was performed to assess relevant differences in the canonical coefficients, standardized weights, and structure coefficients. The results are presented in Table 20.

After alternatively deleting the variables related to influence of agents at college, the results of canonical correlation coefficients remained quite similar to the full model--the Rc^2 varied from .223 to .350 with a maximum difference of .127. The consistency in the results of the Rc^2 before and after selective exclusion of variables indicates that the results reported in this study are relatively stable. In addition, the structure coefficient for the respective criterion variables remained similar throughout the omissions. The structure coefficients of the predictor variables remained consistent before and after their alternate omissions, except when the influence of relational agents was omitted.

The structure coefficient then rose in comparison to the intact scores and the redundancy coefficient dropped. Overall, with this exception, the model is shown without large alterations. We can conclude that the results of the model reported here are as trustworthy as when the variables were systematically omitted.

Table 20

Analysis of Sensibility of the Results of Canonical Correlation for Influential Agents at College

	Intact scores		Results after elimination of					
			Institutional		Instructional		Relational	
	β	r_s	B	r_s	β	r_s	β	r_s
R_C		.350		.330		.341		.223
R_C^2		.12		.111		.117		.050
Set 1: Criterion variables								
Christian Life Commitment								
CCPS	.366	.818	.304	.793	.344	.805	.442	.853
CCCMS	.732	.958	.781	.971	.751	.962	.665	.938
Adequacy		79.31		78.60		78.73		80.35
Redundancy		9.68		8.72		9.18		4.00
Set 2: Predictor variables								
Influential Agents								
Institutional	.179	.499	Omitted		.403	.540	.277	.756
Instructional	.328	.616	.406	.600	Omitted		.811	.975
Relational	.792	.895	.823	.919	.853	.918	Omitted	
Adequacy		47.68		60.21		56.69		76.12
Redundancy		5.82		6.68		6.61		3.79

Note: CCPS = Christian Commitment Personal Scale, CCCMS = Christian Commitment Related to Church Mission Scale. β = Standardized Canonical Coefficient, r_s = Structure coefficient.

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The results, in general, were appropriate within limitations and that the model was apparently consistent (Hair et al., 1998).

Research Question 4

Research Question 4 asked, "To what extent is commitment to Christian life related to selected demographic variables (gender, field of study, grade level, and living in a residence hall)?" The predictor set of variables consists of gender, field of study, grade level, and living in a residence hall, and the criterion set of variables consists of CCPS and CCCMS.

In order to increase and balance the number of cases within every cell, some adjustments were needed. First, fields of study were regrouped into just three categories: (a) arts and humanities, (b) health sciences, and (c) accounting and computer sciences. The rationale for this re-arrangement was based on common areas of study in MU. For example, the first group embraced majors such as teaching science and literature, educational psychology, and theology and pastoral studies, which belong to the arts and humanities disciplines. The second group of majors in medicine, nursing, chemistry, and nutrition all related to physical health. Finally, the third group embraced majors in accounting, management, office management, systems management, and software engineering which study mathematics and computer sciences.

In addition, the variable years in residence halls were re-coded into a dummy variable with 0 indicating no years living in residence halls and with 1 indicating from one college term to 5 years living in residence halls. Finally, the grade level was re-coded to 1 for freshman, 2 for sophomore, and 3 for junior and senior classes. Gender was kept intact (1 = female, 2 = male).

Checking out the Box's M test, I found significant results (< .001). Thus, there was a significant difference in Christian commitment in the covariance matrices and an increased possibility of Type I error. I wanted to make a smaller error (Hair et al., 1998; Tabachnick & Fidell, 1996), so I redid the analysis with a confidence of .01 and still got significant results. In addition, given the fact that the assumption of homogeneity of variance-covariance was violated, I used Pillai's trace because it is more robust than the other three tests reported by SPSS (Hair et al., 1998; Tabachnick & Fidell, 1996).

Table 21 shows factorial MANOVA effects results. A significant multivariate main effect was found for living in the residence hall (Pillai's Trace = .06; F (2, 292) = 8.477, p = .001; partial eta square = .06). The power to detect the effect was .90. MANOVA revealed also a significant multivariate main effect for field of study (Pillai's trace = .06; F (4, 586) = 4.32; p < .01; partial eta square = .03). The power to detect the effect was .81. Multivariate main effects for gender and grade level were not statistically significant (p > .05).

Since there were two significant multivariate main effects, univariate tests were conducted. As Table 22 shows, no significant univariate effect for living in residence hall was found for CCPS taking in account a significant level of .01 as cutoff.

However, significant univariate effect for living in a residence hall was found for CCCMS. Students who reported never having lived in a residence hall (M = 3.82) were found higher in CCCMS than were students who lived at least one semester in a residence hall (M = 3.31).

Table 21

Multivariate Main and Interaction Effects for Demographic Variables

Variables	Pillai's	*F*	*df*	*p*	η_p^2	Potential
Intercept	0.96	3736.62	2, 292	.000	.96	1.00
Gender	0.01	1.08	2, 292	.340	.01	0.09
Grade level	0.02	1.34	4, 586	.253	.01	0.21
Field of study	0.06	4.32	4, 586	.002**	.03	0.81
Living at residence hall	0.06	8.77	2, 292	.000***	.06	0.90
Living in residence hall and field of study	0.03	2.41	4, 586	.048	.02	0.46
Grade level and field of study	0.06	2.09	8, 586	.035	.03	0.66
Gender and living in residence hall	0.01	1.25	2, 292	.288	.01	0.11
Gender and grade level	0.01	1.09	4, 586	.362	.01	0.15
Living in residence hall and grade level	0.02	1.45	4, 586	.216	.01	0.23
Gender, living in residence hall, and grade level	0.01	1.04	4, 586	.385	.01	0.14
Gender and field of study	0.02	1.63	4, 586	.165	.01	0.27
Gender, living in residence hall, and field of study	0.01	1.01	4, 586	.402	.01	0.14
Gender, grade level, and field of study	0.04	1.62	8, 586	.115	.02	0.49
Living in residence hall, grade level, and field of study	0.03	1.14	8, 586	.331	.02	0.30
Gender, living in residence hall, grade level, and field of study	0.01	0.41	8, 586	.912	.01	0.07

Note. η_p^2 = Partial Eta Squared. Mean differences were significant at the level of $p = 0.01$.
** $p < .01$. *** $p < .001$.

Table 22

Univariate Contrast Between Subjects Effected by Living in Residence Halls

Dependent Variable	*df*	*F*	*p*	η_p^2	Living in Residence Halls	*M*	99% Confidence Interval	
							Lower Bound	Upper Bound
CCPS	1, 293	6.20	0.013	0.02	Yes	4.17	4.00	4.35
					No	4.42	4.23	4.61
CCCMS	1, 293	17.59	0.000	0.06	Yes	3.31	3.09	3.52
					No	3.82	3.59	4.05

Note. CCPS = Christian Commitment Personal Scale, CCCMS = Christian Commitment Related to Church Mission Scale. η_p^2 = Squared partial eta. Mean differences were significant at the level of $p = .01$.

A univariate effect test for fields of study, shown in Table 23, revealed significant difference between fields of study for both CCPS and CCCMS.

A post-hoc multiple comparison analysis was performed in order to identify significant differences by the effect of independent variables. Levene´s test was conducted to assess equality of group variances. Since the results were significant for both CCPS ($p < .001$) and CCCMS ($p < .028$), the groups of variances were considered unequal. Therefore, the Games-Howell test for unequal groups was conducted for comparing the means of these groups.

Results shown in Table 23 reveal that students in arts and humanities ($M = 4.53$) were higher in CCPS than were those students in accounting and computer sciences ($M = 4.16$). Students in health sciences did not show a significant difference in CCPS from students in arts and humanities or from students in accounting and computer sciences.

Table 23

Univariate Between Group Effects for Field of Study

Dependent Variable	*df*	*F*	*p*	η_p^2	Field of Study	*M*	99% Confidence Interval	
							Lower Bound	Upper Bound
CCPS	2, 293	6.70	.001	0.04	Arts and humanities	4.53	4.34	4.72
					Health sciences	4.20	3.93	4.47
					Accounting and computer sciences	4.16	3.96	4.36
CCCMS	2, 293	7.35	.001	0.05	Arts and humanities	3.86	3.62	4.10
					Health sciences	3.45	3.12	3.78
					Accounting and computer sciences	3.38	3.13	3.62

Note. CCPS = Christian Commitment Personal Scale; CCCMS = Christian Commitment Related to Church Mission Scale. η_p^2 = Squared partial eta. Mean differences were significant at the level of $p = .01$.

A univariate effect test between groups for field of study in regard to CCCMS was significant. Power to detect was .82. Then, in order to identify particular differences, post-hoc tests were performed using the Games-Howell test for unequal groups. The results revealed students in arts and humanities reported higher CCCMS (M = 3.86) than did students in accounting and computer sciences (M = 3.38). There was no significant difference between the CCCMS of students in health sciences and students in arts and humanities or students in accounting and computer science.

Chapter Summary

The main findings indicate that students did not see themselves as completely committed to a Christian life. However, most students perceived themselves as making a considerable effort to keep Christian commitments. The strongest personal commitments were "to accept Jesus Christ as your only Savior," "to belong to a church," and "to observe the Seventh-day Sabbath." The lowest Christian commitments were related to the church´s work and mission.

A moderate and positive relationship was found between Christian commitment to church life and student involvement in church-related institutional activities. Student involvement in social activities did not contribute directly to Christian commitment.

The results showed that people close to students moderately influenced the students´ Christian commitments related mostly to church life. The relational agents (parents, friends, and girl/boyfriends) were the primary Christian influence for undergraduate students; in second place were the instructional agents (e.g., faculty, Bible teacher); and in third place were authoritative institutional agents (e.g., president, vice-presidents, dormitory dean).

Gender and grade level were not associated directly with CCPS and CCCMS. However, those students who lived in residence halls at least one term were lower in their CCCMS with respect to those students who had never lived in residence halls. Field of study modified both CCPS and CCCMS.

Those students enrolled in arts and humanities majors were higher in CCPS and CCCMS than were students in accounting and computer science majors. Students in health sciences showed no significant difference in either CCPS or CCCMS from students in arts and humanities or from students in accounting and computer science. Discussion and recommendations will be presented in the next chapter.

CHAPTER 5

SUMMARY OF THE STUDY WITH DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This summary of the study includes an overview of the problem, highlights of the literature review, the instrumentation, methodology, main findings with discussion, and conclusions and recommendations.

Overview of the Problem

From the establishment of colleges and universities in the Seventh-day Adventist (Adventist) educational system to the present, the Christian commitment of students has been an important goal for administrators, policy makers, and religious leaders of the Adventist Church (Gillespie, 1992; Knight, 2001a, 2001b). Therefore, several studies and projects on faith commitment have been developed to understand and to improve spirituality and religiosity among Adventist students (Dudley, 1992, 1993, 1994, 1999, 2000; Gillespie, 1990, 1992, 2012).

Montemorelos University (MU), as an Adventist Church-sponsored educational institution, is not an exception in this endeavor. Administrators attempt constantly to keep a high level of commitment to church and to beliefs and practices of the Christian faith among students and people working at the college (MU, 2001, 2002, 2011a, 2011b).

Nevertheless, not many research studies have been made on this topic in either Mexico or Latin America countries. Educational and religious leaders in the Adventist Church have few studies to make more accurate decisions, efficient policies, and sound strategic plans about Christian commitment in Adventist young people.

The purpose of this research was to study the level of commitment to the Christian life among undergraduate students at MU, examining also the extent to which commitment to Christian life is related to (a) involvement in institutional activities, (b) influential agents, and (c) selected demographic variables. In consequence, four research questions emerged to be answered through this study. They are:

1. To what extent are undergraduate students at Montemorelos University committed to Christian life?

2. To what extent is commitment to Christian life related to involvement in religious, service, social, evangelistic, cultural, and physical activities?

3. To what extent is commitment to Christian life related to institutional, relational, and instructional agents?

4. To what extent is commitment to Christian life related to selected demographic variables (gender, school, grade level, place of residence)?

Highlights of the Literature Review

The literature review focused first on the general religious impact of college on students and second on selected religious characteristics related to students at MU. Important works referring to Christian commitment, people of influence in college, and student involvement in institutional activities were analyzed in order to place the study in context.

The literature suggests that the phenomenon of college impact is complex due to multivariable interactions (Pascarella & Terenzini, 1991, 2005). However, there are significant changes in student values that can be attributed to the college environment and curricular programs in both formal and informal settings. Theorists especially attribute changes in affective outcomes to the social environment more than to formal curriculum or teaching strategies (Astin, 1993; Feldman & Newcomb, 1969). The inquisitive environment during the college years influences students to become open-minded and flexible, with decreasing respect for both conservatism and authoritarianism. In addition, the college experience has a positive effect in developing a meaningful philosophy of life in students and enhancing the inner experiences in life (Pascarella & Terenzini, 1991, 2005).

Researchers have found that a big part of maturing occurs with college attendance. With the transition to college, adolescent students begin to act by themselves. They attempt to be independent of their parents; so they give great importance to peer relationships and intimacy (Arnett, 2001; Erikson, 1968; Kolhberg, 1984; Perry, 1970). They need companionship and closeness with peers and small groups. Especially during this developmental stage, they need identity within a close circle of relationships and a tender community of faith to support them emotionally and spiritually during these times (Roehlkepartain et al., 2006).

The type of college impacts students´ values, commitments, and beliefs (Astin, 1985, 1993; Chickering, 1993; Dudley, 1992; Feldman & Newcomb, 1969; Gillespie, 1990; Himmelfarb, 1977; Hernandez, 2001; Hoge, 1974; Jacob, 1957, 1968; Pascarella & Terenzini, 1991). For example, students attending evangelical colleges reported, in

general, more Christian commitment and involvement in religious activities than did students enrolled in liberal Christian colleges or public colleges (Bowman & Small, 2010; Paredes-Collins & Collins, 2011; Railsback, 2006; Rice, 1990; Smith & Snell, 2009). In a study of public and private Mexican universities, Tinoco-Amador (2006) found significant differences of religiosity mediated by type of university. Students enrolled in religious universities were more religious than those in public universities. College ethos and environment significantly impact the spiritual journey of students (Braskamp, 2007; Braskamp et al., 2005; Braskamp & Remich, 2003). Indeed, empirical evidence suggests that conservative Christian colleges, such as MU, are more likely to impact positively the religiosity of students than are secular colleges (Braskamp, 2007; Bryant et al., 2003; Cherry et al., 2001; Railsback, 2006).

Research has produced mixed findings about the most influential people for college students. Several researchers found that parents are the most influential people for students' religious life in college. The religiosity of parents and the quality of parent-child relationships will many times determine the religiosity of the college students (Benson et al., 1989; Boyatzis et al., 2006; McNamara et al., 2009, 2010; Nelson, 2009; Nelson, Padilla-Walker, Christensen, Evans, & Carroll, 2010; Ozorak, 1989; Rice & Gillespie, 1992; Sherkat & Darnell, 1999; Smith & Snell, 2009; Stoppa & Lefkowitz, 2010). However, other researchers disagree about the stability of the parents´ influence through the college years. Apparently, when college students want to establish a mature relationship of autonomy and interdependence, their peers and friends become the primary influence affecting their religiosity (Gunnoe & Moore, 2002; Henderson, 2003; Lee, 2000). Gunnoe and Moore (2002) and Ma (2003) found that the peer relationships in

American colleges were rated among the most significant factors related to the spiritual growth of students. The peers may change the students' values, beliefs, and religious practices (Henderson, 2003; Lee, 2000).

After peers and friends, faculty emerge as the next most important influential agent (Braskamp, 2007). When students come to college, they find adults like faculty, staff, and administrators who supply guidance as agents of socialization on campus (Astin, 1993; McNamara et al., 2009). Frequency, content, and quality of interaction between students and faculty will determine the strength of influence. These interactions create some degree of emotional and spiritual closeness that is important to transmit or inspire commitments and beliefs (Astin, 1985).

Researchers have embraced the idea that religious commitment and participation decrease through the college years. But findings on grade levels mediating changes in religiosity of students are mixed. Some studies show that grades are not related to frequency of religiosity and spiritual practices through college years (Kuh & Gonyea, 2005). Other findings, however, show declining religious practices or stability (Astin, 1993; Stoppa & Lefkowitz, 2010; Uecker et al., 2007) or even increasing religious convictions (Astin & Astin, 2003; Braskamp, 2007; Lee, 2000) through the college years. Certainly evidence suggests that students in college reexamine, refine, and integrate their religious values and beliefs with other beliefs and philosophical currents often causing students to dismiss their religious participation (Bryant et al., 2003; Lee, 2002; Pascarella & Terenzini, 2005). However, Smith and Snell (2009) confront the traditional assumption of massive declining of religious commitment and participation among undergraduate students. They note that most college students really do not experience a declining

religiosity but most of them consistently keep the same level of religious commitment that they had before coming to college, whether this has been high, moderate, or low. Some students, indeed, decrease their religious commitment and practices, and a few others increase their religious commitments and practices. But their numbers are small.

It is clear that student involvement in religious, service, and evangelistic activities are related to young people´s Christian commitments (Braskamp & Remich, 2003; Kuh & Gonyea, 2005, 2006; Pascarella & Terenzini, 1991; Stoppa & Lefkowitz, 2010; Uecker et al., 2007). Some studies have found that attending religious services is a predictor of religious beliefs. However, findings reveal that student involvement in college activities is mediated by institutional factors (Gane, 2005; Henderson, 2003; Lee, 2000, 2002, p. 379; Railsback, 1994).

Apparently, colleges with "a faith-based mission and a supportive campus culture appear to be major factors influencing student participation in religious activities and creation of a deeper sense of spirituality" (Kuh & Gonyea, 2005, p. 9). There are activities in the Christian campus environment that encourage students' spiritual practices and, in consequence, affect also students´ Christian commitment (Kuh & Umbach, 2004; Ma, 2003).

Gender differences in religiosity seem to be a cultural phenomenon (Loewenthal et al., 2001). Many studies of American colleges report women to be more religious than men (Benson et al., 1989; Bryant, 2007; Francis, 2005; Hollinger & Smith, 2002; Loewenthal et al., 2001). However, findings reported on college students in Mexico found, in general, no religious difference between male and female (Tinoco-Amador, 2006).

Findings on the effect of the field of academic study on the religiosity of students are mixed also. Some researchers found no significant differences in religiosity among students from different study fields (Kuh & Gonyea, 2005). Others, nevertheless, found differences in religiosity (Hammersla & Andrews-Quall, 1986). For example, Scheitle (2011) argues that students enrolled in natural sciences, mathematics, or engineering majors are more likely to decrease their religiosity. Also, Hollinger and Smith (2002) argue that students enrolled in arts and social sciences are more likely to dismiss their religiosity compared with other study fields.

Living in residential halls of colleges promotes several types of religious changes (Ma, 2003). Mostly through socialization of peers and friends living closely in residential dorms, students are influenced in their religious values, behaviors, and beliefs (LaNasa et al., 2007; Schuh, 2004).

In general, the Inter-American Division young people consistently have shown both strong commitments to Jesus and the church and religious participation (García-Marenko, 1996; Grajales, 2002). MU historically has shown a high number of students involved in religious, evangelistic, and service institutional activities with a high level of satisfaction. They also have had a moderate level of students practicing their personal Christian faith such as praying, worshiping, or reading (MU, 2002; Ruiloba, 1997).

Instrumentation

The composite instrument used in this study was compiled and adapted from different authors. Besides demographic and personal variables, the instrument contains the Christian Commitment scale developed by Thayer and Thayer (1999) and used previously to assess Christian commitment among freshmen, seniors, and alumni of

Andrews University, an Adventist-sponsored tertiary institution in the United States of America (O. J. Thayer, 2008). This scale uses mainly beliefs, values, and practices of the Christian life to define Christian commitment particularly within an Adventist college environment. The construct validity of this scale was shown using principal components procedures. Two factors were found and named Christian Commitment Personal Spirituality Scale (CCPS) (with six items) and Christian Commitment Related to Church Mission Scale (CCCMS) (with five items). Reliability was found to be high for the two scales of Christian commitments.

The items that loaded on the CCPS are "accept Jesus Christ as your only Savior," "belong to a church," "observe the seventh-day Sabbath," "live by biblical principles of sexual morality," "submit to God´s will," and "receive salvation."

The items that loaded on the CCCMS are "read or study daily the Bible or devotional literature," "give systematic tithes and offerings," "tell others of the Christian message," "participate actively in the life and work of a local church," and "support world evangelism through personal participation or financial contribution." These items are more linked to the church´s work and mission than related to a personal commitment.

The Student Involvement in Institutional Activities scale was developed from an inventory of activities at MU created by Castillo and Korniejczuk (2001). Through principal components analysis, 20 activities were found and classified into six different factors that were called Student Involvement in these activities: Religious, Evangelistic, Service, Social, Cultural, and Physical. The reliability of the scales was tested using Cronbach’s alpha and ranged in reliability from moderate to high.

The scale named Influential Agents was developed by interviewing selected persons at MU and collecting their suggestions of influential campus personnel. Then through principal components analysis, this scale was divided into three subscales called Authoritative Institutional Agents, Instructional Agents, and Relational Agents. The reliability was tested using Cronbach´s alpha. The results gave moderate to high alpha coefficients.

Methodology and Sampling

This design was descriptive, correlational, and cross-sectional. A survey was conducted to explore the relationship between Christian life commitments of undergraduate students at MU and student involvement in institutional activities and with influential agents.

Questionnaires were analyzed from a target population of 1,257 undergraduate students at MU during the fall term of the 2002-2003 college year. Each field of study in the seven schools at MU was represented in a stratified sample. The Admissions Department of MU drew 30% (400) of enrolled undergraduate students from a complete list of students. However, many surveys that were handed out were never returned and, in the end, 332 participants remained.

The dependent variables were CCPS and CCCMS, and the independent variables were involvement in MU activities, influential agents, and four important demographic variables: gender, living in residence halls, grade level, and field of study. The research questions were answered using descriptive statistics, canonical correlation, and factorial MANOVA procedures. Also post hoc tests were performed to detail the differences.

Main Findings

Nearly 80% of the undergraduate students see themselves as making a great effort, even to the point of sacrifice, to keep their Christian commitments, while slightly more than 20% reported that they are not committed to the Christian life or are committed only when it is convenient. The assessment of Christian commitments indicated that 87% of undergraduate students perceived themselves to be committed to Christian personal spirituality (CCPS) and about 64% of them, committed to church mission (CCCMS).

The set of involvement in institutional activities (religious, evangelistic, service, cultural, social, and physical activities) is moderately and positively associated (18% of shared variance) with the set of Christian commitments (CCPS and CCCMS). Higher levels of Christian commitment are associated with greater student involvement in institutional activities, except social activities. Student involvement in both institution-sponsored evangelistic and religious activities has the greatest association with Christian commitments. In fact, student involvement is defined primarily by evangelistic and religious activities, and secondly by service and physical activities. Student involvement in cultural activities was a poor contributor to CCCMS, and the effect size of student involvement in social activities was practically zero.

The set of three influential agents—institutional, instructional, and relational—can explain approximately 12% of the variance in commitment to Christian life. Relational and instructional agents are the most influential in the Christian commitments of students.

Living off campus is associated positively with the CCCMS. Those students who did not live in residence halls, even one semester, were more likely to develop higher

CCCMS than those students who lived at least one semester in residence halls. Students enrolled in theology, arts, communication, education, and music scored higher on both CCPS and CCCMS than did students in management, accounting, and computer sciences. Students enrolled in health sciences majors had no significant difference in CCPS and CCCMS from students in any other study fields. There were no significant differences in either scale of Christian commitment in regard to gender or grade level.

Discussion

Christian education aims at promoting commitment to Christian life and values based on biblical teaching. Every activity delivered on the campus of a Christian university, including social, physical, and cultural activities, should attempt to develop students holistically, and consequently also may contribute to their commitment to the Christian life (Knight, 2001a, 2001b). MU, as an educational institution sponsored by the Adventist Church, is committed to affirming the Adventist faith of students by facilitating, maintaining, and increasing their Christian commitment (General Conference of the Seventh-day Adventists, 2003). The mission statement of MU (2011a) declares: "The Montemorelos University educates holistically young people providing oportunities for research, innovation, and altruistic service with a Christian worldview and a worldwide vision" (p. 4).

Evidently the findings reveal an alive and active Christian commitment at MU campus, where the majority of participants reported that they are making a great effort even to the point of sacrifice to keep Christian commitments. A minority of students reported that they have not made such commitments or are not keeping them or keep them only when it is convenient.

Apparently the findings of this study are consistent with many other studies in an Adventist context (Gane, 2005; O. J. Thayer, 2008) and in other evangelical contexts (Mayrl & Oeur, 2009; Uecker et al., 2007). Dudley (1999) argues that students at Adventist colleges scored higher than students at secular colleges with regard to personal religious commitment and commitment to the church. Research findings indicate that in religious institutions with conservative evangelical beliefs like MU, students´ religiosity is even higher than those in liberal evangelical colleges (Cherry et al., 2001; Small & Bowman, 2011).

The high Christian commitments revealed in this study may have several explanations. In the first place, historically the religious participation and commitments of Adventist young people in Latin America countries, including Mexico, have been reported high (García-Makenko, 1996; Grajales, 2002). Secondly, MU creates a certain attraction for Adventist young people (in this sample 93% were Adventists). In addition, all of the faculty and personnel confess to being Adventists, which creates a consistent worldview permeating the campus at MU (1991, 1998, 1999a, 1999b, 2002, 2011b).

Evidently, the curricular, co-curricular, and extracurricular culture at MU promotes an Adventist Christian environment on campus. For example, important academic programs like the opening public assemblies of college terms and graduations are conducted in the church sanctuary. The MU academic catalogs of majors explicitly show their Christian worldview. Workshops for faculty constantly instruct them about the Christian philosophy that should undergird their teaching. The MU president is a pastor, as well as an educator and professional leader, who often speaks publicly in the church (MU, 1998, 2001, 2011b). The co-curricular components for developing adult life are

oriented to form useful and well-rounded Christian persons. For example, the components of community service, manual training, physical fitness, and cultural programs are designed to develop and refine the whole person.

Another effort to form committed Christian students at MU is the Bible classes. MU assigns students one Bible course each college semester. Through these classes students expand their understanding about their faith. The students living in residence halls are required to attend worship services every Sabbath and, in addition, at least three other times a week. Also every morning and evening there are required chapels for students living in residence halls. Prayer-time programs every morning at schools and every night on campus are available for those students who voluntarily want to attend (MU, 2001, 2002).

Despite the high commitment to beliefs and to private practices of the Christian life, there is evidence of lower commitment to participating in the church´s work and mission. However, when students do participate in activities related to the mission of the church, the impact is so great that it defines their overall Christian life commitment. Although involvement in institutional activities has their strongest association with the church's work and mission, this involvement secondarily affects beliefs and devotional practices of the Christian life of students.

The same tendency of lower commitment to engage in church mission than a commitment to personal religious practices and convictions was shown by Grajales (2005) in a study conducted at MU. The percentages of students reporting high Christian commitment decreased as the commitments were addressed toward the responsibilities of church members. Apparently, students conceive of Christian commitment as more

oriented toward a private rather than a corporate matter. This tendency toward lower commitment for church mission is reflected also among American college students (Bryant et al., 2003; Henderson, 2003; Mayrl & Oeur, 2009; Small & Bowman, 2011, Uecker et al., 2007) and even among Adventist college students. For example, O. J. Thayer (2008, pp. 12, 13), reporting the percentages of Andrews University seniors who have not made or are not keeping their Christian commitments, revealed an increasing percentage ranging from accepting Jesus Christ as their only savior to supporting world evangelism through personal participation or financial contribution.

Among possible explanations for the low commitment to participating in the mission of the church may be that young adults tend to have a skeptical attitude toward institutions including the church organization (Long, 2004). This attitude undermines the confidence necessary for making commitments. Braskamp (2007) argues that the low religious commitment to church work and mission grows out of the church programs that are not meaningfully and purposefully addressed to emerging adults. Therefore, students mostly express their beliefs through informal settings.

A partial explanation for the higher commitment to Christian personal spirituality than Christian commitment related to church mission, may be a result of methodological limitations. This study was a self-report where students indicated their own level of Christian commitment. Henderson (2003), for example, argues that the perception about internal and personal phenomenon are reported with better accuracy than the behaviors of that same person. Therefore, the results of this study could simply be reflecting the methodological limitations of self-reported surveys. Another limitation was the cross-

sectional method of the study, which supposes the capacity of the instrument to measure in a single picture a complex phenomenon.

The results of this study show that the high Christian commitment of college students clearly does not support findings of some other studies. For example, Clydesdale (2007) argues that the majority of American young adults, in general, during the college years place their religious identity in a locked box, which means that most of their religious identity is stored because of a hostile college environment while other areas of identity are developed (for example, vocational or relational areas). Later, in a more secure stage of life, they will reopen the box of their religious life. Meantime they proceed through their college years giving top priority to financial and academic issues until they leave college. Given that only a very small percentage of participants in this study reported that they do not keep Christian commitments, these findings do not seem to support Clydesdale´s explanation probably because, firstly, MU is an Adventist college where most students are Adventists and do not feel conflict with the campus environment; and secondly, the Mexican context is Christian, unlike the U.S., which is more secular.

Also this study does not support other research findings that the majority of students are searching for their religious faith and commitments as Braskamp (2007) proposes; on the contrary, the majority of undergraduate students at MU self-reported as being committed Christians. According to the identity theory of Marcia (Kroger, Martinussena, & Marcia, 2009), who distinguishes four states in the psychosocial development of the human being, MU participants of this study could be placed in either the foreclosure or achieved status of identity. If MU students are in foreclosure status,

they are certainly committed Christians, based mostly on parental religious beliefs and practices, having accepted the parents´ religious commitment without personal examination. If this is the case, they have not reached a mature identity as Christians (see Osborne, 2011). On the other hand, if MU students are in an achieved status of ego identity, then they have had a psychosocial crisis and have developed an internal, well-defined religious identity that will enable them to be firm in their own Christian commitments for the future (Blisker & Marcia, 1991).

This research found parents and friends to be among the most important contributors to the Christian commitments of students. Indeed, systematic studies using longitudinal and cross sectional U.S. data concur in the importance of the religious influence of parents not only in the young adult stage but throughout the entire life (Benson et al., 1989; Dudley, 1993, 2000; Gillespie, 2008; Gunnoe & Moore, 2002; Kim, 2001; Nelson, 2009; Nelson et al., 2010; Ozorak, 1989; Sherkat, 2003; Sherkat & Darnell, 1999; Sherkat & Wilson, 1995; Smith & Snell, 2009; Stoppa & Lefkowitz, 2010). However, the influence of close friends will tend to also influence students' values, beliefs, and commitments (Henderson, 2003; Lee, 2000) particularly because these relationships engage higher portions of emotional energy and time spent together (Gunnoe & Moore, 2002; Schwartz et al., 2006).

The present study found that MU women and men students do not show significant difference on Christian commitments. Numerous studies conducted mostly in the U.S. report women in general being more religious than men (Benson et al., 1989; Bryant, 2007; Francis, 2005; Gunnoe & Moore, 2002; Hollinger & Smith, 2002; Ma, 2003; Stoppa & Lefkowitz, 2010). However, Tinoco-Amador (2006), who studied

undergraduate students in private and public universities in Mexico City, found no significant differences in regard to religiosity between women and men, except in the dimension of belief in God. Some comprehensive studies in the U.S. and worldwide also have reported little or no gender differences in religiosity (e.g., Campiche, 1993; Cornwall, 1989; Hammersla & Andrews-Qualls, 1986; Steggarda, 1993; Sullins, 2006).

This study found that MU students enrolled in engineering, technology, management, and business majors were more likely to have lower Christian commitment than were students enrolled in theology, education, and music majors. Of course, students with religion-related majors (e.g., biblical studies, Christian education, and theology) had the highest level of commitment in significant contrast with students in business majors, supporting what Hammersla and Andrews-Qualls (1986) found in American college students. Similarly, studies conducted in the U.S. showed that mathematics and engineering students were more committed to science than to religion (Scheitle, 2011). He found that students enrolled in education majors were more inclined to be religious than were other majors. Indeed, Hammersla and Andrews-Qualls (1986) support the finding that field of study is associated with Christian commitments of students, arguing that religious commitments and the concept of God mediate the election of a major or profession. They affirm, “Commitment to God was significantly related to academic major, but was unrelated to gender or year in school” (p. 425). Clearly the findings of this study concur with the findings of Hammersla and Andrews.

This study found that students living in off-campus residences are more likely to express a higher commitment related to church work and mission than were students living on campus. It is important to recall the MU policies for off-campus residents.

These policies require students to be 24 years or older and to live with parents, relatives, or a denominational employee. Apparently, off-campus policies promote a family environment for off-campus residents that elevates or maintains their Christian commitments related to church mission. That is understandable because authoritative figures (e.g., parents, employees) encourage students to go to the church and to be involved in religious activities (see Schulze & Blezien, 2012).

Campus residents, instead, are influenced strongly by peers and friends in the residence halls. Despite the fact that MU campus residents are required to attend worship service, Sabbath school, Youth Society meetings, and other church-sponsored activities, they may not be necessarily involved in cognitive, emotional, and relational ways. Cornwall (1988) found the influence of parents and family mostly oriented to affirm personal Christian faith of children, whereas the peer association is related mostly to public or corporate Christian commitments. According to Cornwall´s ideas, probably the parents´ influence on personal Christian faith of MU students was highly consistent for both types of residents since they were found with similar magnitude in Christian commitments, whereas the social network of peers or other factors may have weakened the Christian commitments related to church mission for on-campus residents.

In summary, the findings of this study support the findings of other studies (e.g., Erickson, 1992; Gillespie, 2008, 2012) that family, church, and school are determinant settings that promote Christian commitments among young people. Agents and activities from these three settings contributed in affirming the Christian commitment of students.

Conclusions

The environment created by campus agents and activities of a faith-based college continually influences the Christian commitment of students. Student involvement in both church-sponsored and institutional activities, agents interacting with students in college, and demographic variables are important elements that affect the Christian commitments of students. From this study I have drawn the following conclusions applicable to Montemorelos University (MU), and possibly generalizable to similar institutions, particularly those in Central and South America:

1. In a conservative Christian university located in Mexico, like MU, the Christian commitments of most students are likely to be strong.

2. Students are more committed to personal spirituality than to church mission.

3. Student involvement in institutional activities is more associated with Christian commitments related to church mission than to personal spirituality.

4. Students highly committed to the Christian life are more likely to be primarily involved in religious and evangelistic activities, secondarily in service and physical activities, and only poorly in cultural activities.

5. Student involvement in institutional social activities is not associated with any Christian commitments.

6. People with an open, close, and trusting relationship with students, such as parents and friends, are the most likely to influence the Christian commitments of students.

7. People in instructional functions, such as faculty, Bible teachers, and chaplains, are more likely than other employees impacting positively the Christian commitments of

students.

8. Field of study is an important influence associated with the Christian commitments of students.

9. Students enrolled in theology, education, and music disciplines are more likely to be more highly committed Christians than students from engineering, computer sciences, business, and management.

10. In general, Christian commitments of students do not show significant variation throughout grade levels.

11. Students living off-campus with a Christian family model of residence are more likely to develop their Christian commitments related to church mission than those students living in campus residences.

12. Place of residence does not appear to influence the commitments related to personal spirituality of students.

13. The Christian commitments of college students do not differ by gender.

Recommendations

Although most participants in this study were from Mexico, some were from other countries of the Inter-American Division of the Seventh-day Adventist Church. Therefore, the following recommendations may also be applicable to other Seventh-day Adventist colleges and universities in that division.

To Educational Administrators

Adventist educational administrators should:

1. Affirm in curricular, co-curricular, and extracurricular settings a clear identity with the Adventist Church, instilling a sense of being a Christian and church member.

2. Develop institutional strategies to elevate the quality, depth, and quantity of Christian relationships among students and faculty.

3. Support the mentoring program not only for retention and academic purposes, but also for spiritual and religious reasons.

4. Provide an annual, systematic assessment to identify the trends of the students´ Christian commitments and respond appropriately to the assessments.

5. Develop programs in which students can commit personally to Christ in a close circle of friends and so increasingly become responsible and mature Christians.

6. Emphasize among students the concept of "God´s calling" to value spiritually their professional preparation to serve in the name of the Lord, to support the work of a local church, and to fulfill the worldwide mission of the church.

7. Organize programs of serious personal reflection and free expression on Christian themes, for example, on Bible knowledge, spiritual commitments, sexual issues, relationships, controversial beliefs, reasons of Christian practices, personal experiences, and worldview for a Christian life.

8. Implement educational strategies to engage young adults in church activities that are more relevant to them.

To Faculty

Faculty should:

1. Design classroom strategies that encourage students to elevate the commitment of their Christian life.

2. Model authentic Christian commitments in a close and trusting relationship with students.

3. Promote critical thinking in class to explore from a Christian worldview the questions that give meaning, purpose, and value to life.

To Campus Religious Agents

Campus pastors should:

1. Implement strategies for gaining more spiritual trust, closeness, and open relationship with students.

2. Design training workshops for faculty on spiritual mentoring and how to make Christian disciples.

3. Develop new strategies and resources to improve the personal spirituality of students. For example: workshops on how to make a personal spiritual retreat or how to fast for spiritual purpose.

4. Develop new approaches and innovative religious, evangelistic, and service ministries so that students will have choices based on their personal preference, ability, personality, or experience.

5. Establish an educational program in the MU church for a responsible membership and stewardship according to the different levels of church engagement.

Chaplains should:

1. Create a Christian environment of authentic fellowship around the campus.

2. Design a variety of ministries, programs, and events where students express freely their personal faith and affirm their religious convictions in preparation to serve in the world.

3. Develop attractive activities for students in supporting the work of the smaller churches around campus.

4. Promote evangelistic activities in the social service of students.

Bible teachers should:

1. Design Bible courses to relate to student needs.

2. Use small groups for interactive learning.

3. Share practical lessons of Christianity in a critical way. For example, how to know God personally, how to submit to God´s will, how to use the Bible as a practical guide in life, how to live biblical principles in regard to sex and romantic relationships, what it means belonging to a local church, how to enjoy the Sabbath, or how to apply Christian values in one's career.

4. Promote the relevance and meaning of church activities in their classroom, creating opportunities of church engagement.

For Further Research

1. A mixed longitudinal study using both qualitative and quantitative methods is required to understand more fully the phenomenon of a Christian college´s impact on Christian commitments.

2. Social networks contribute to the environment on campus; therefore, it would be valuable to design comparative studies on the Christian commitments of students, parents, and faculty in order to identify the nature, strength, and content of these social interactions in relationship to issues of the Christian life.

3. Religious or spiritual impact of an Adventist college may be evaluated by comparing the Christian commitments of Adventist college students enrolled in Adventist

colleges with Adventist students attending non-Adventist colleges. Also, it could be valuable to compare the Christian life of former students from these two types of colleges or universities.

4. A better comprehension of Christian commitment could result from studying other areas of Christian commitment, for example, spiritual experiences, Christian worldview, or Bible knowledge.

5. Some research questions to consider: How do students express their Christian commitments in informal settings? Are the Christian commitments of students borrowed from parents or from internal conviction? (In which psycho-social stage are the MU students?) What kind of motivation ignites the students´ Christian commitment (e.g., legalistic or grace-oriented, intrinsic or extrinsic orientation)? What are the best practices of an engaging church?

APPENDIX A

LETTER

UNIVERSIDAD DE MONTEMORELOS

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June 4, 2004

Dr. Jane Thayer
Andrews University

Dear Dr. Thayer:

Mr. Esteban Quiyono has collected data for his doctoral dissertation at Montemorelos University.

This project was realized with the knowledge, approval and consent of my office.

I expect the results of Quiyono's research to be significant for decision making here at our institution.

We thank you for the support you have provided to Mr. Quiyono in his research.

Cordially,

Prof. Ismael Castillo
President

APPENDIX B

QUESTIONNAIRE

EXPERIENCIES AT THE UNIVERSITY OF MONTEMORELOS ON UNDERGRADUATE STUDENTS

Directions. We are attempting to learn the relationship between experiences at Montemorelos University (MU) and the Christian life of undergraduate students. The survey is completely voluntary, anonymous, confidential, and without academic punishment if you choose not to fill it out. Check the blank, mark a "X" or circle the number indicating the response for each item that best describes you or your opinions. Please omit any item that does not apply to you. We would appreciate your completing this questionnaire.

Part 1. Demographic data.

<table>
<tr>
<td>Marital status:

__Single
__Married (a)
__ Other:_____</td>
<td>School:
__Engineering
__Health Sciences
__Theology
__Business
__Education
__Arts and Comunication
__Music</td>
<td>Grade level:
__ First
__ Second
__ Third
__ Fourth
__ Fifth</td>
<td>Years enrolled at Adventist schools including these here at UM:

☐☐

(Write the years in the frame)</td>
</tr>
<tr>
<td>Gender:
__ Female
__ Male

Age: ☐☐

(Write the years in the frame)</td>
<td>Have you been baptized?

__Yes __ No

Sección 1.01 <u>If so, when?</u>

__Less than one year

☐☐ Years

(Write the years in the frame)</td>
<td colspan="2">Have you worked for pay?:
__Yes __No
If you said "yes", please, answer where and how long …
➢
➢ On campus industry/school:
___Less from one year
☐☐ Years (Write the years in the frame)

➢ Off campus industry/school:
__Less from one year
☐☐ Years (Write the years in the frame)</td>
</tr>
</table>

Years living:	**If you live off campus, with whom?**	**Place of origin:**
On campus in residence hall (Write the years in the frame) ☐☐ Off campus (Write the years in the frame) ☐☐	__ Parents __ Relatives __ Adventist peers __ Non Adventist peers __ MU employee __ Denominational worker __ Alone __ Other: (Specifies)_____	__North Mexico __Central Mexico __South México __Central America __South America __United States of America __Other part of the world

Part 2. The Christian commitment.

14. During the entire period you have been enrolled at MU, to what extent have you kept the following commitments?

	Keep even at great personal sacrifice	Make considerable effort to keep	Keep when convenient	Am not keeping	Have not made
To know God?					
To receive salvation?					
To accept Jesus Christ as your only Savior?					
To submit to God's will for your life?					
To use the Bible as God's revealed word for truth and guidance?					
To live by biblical principles of sexual morality (sex only within marriage)?					
To belong to a church?					
To observe the seventh-day Sabbath?					
To give systematic tithes and offerings?					
To live a lifestyle that promotes physical health?					
To pray daily?					
To read or study daily the Bible or devotional literature?					
To participate actively in the life and work of a local church?					
To reflect and apply Christian values in your career to glorify God?					
To tell others of the Christian message as found in Scripture?					
To support world evangelism through personal participation or financial contribution?					

Part 3: Influence of people at MU

- How many of the best friends are Adventists? | | |

- How many of the faculty, staff, pastors, administrators, and employees do you consider to be your friends? | | |

- During the entire period you have been enrolled at MU, to what extent has your relationship with the following persons contributed positively to your Christian experience? Mark with a "X" that better represents your case.

	No se aplica en mi caso	Nada	Muy poco	Poco	Moderado	Mucho	Muchísimo
Your parents	NA						
Your best friend	NA						
Your boyfriend or girlfriend	NA						
Your peers	NA						
President of MU	NA						
Vice-Presidents	NA						
Director of school and Coordinator of your field of study	NA						
Professor of your field of study	NA						
Church pastors	NA						
Your Bible teacher and chaplain	NA						
Mentor or advisor assigned to you	NA						
Director of Counseling	NA						
Dormitory Dean	NA						
Your work supervisor	NA						
Director of Extra-curricular activities	NA						
Other? Specify, _____	NA						

Parte 4. Student involvement.

Please answer the following three questions. During the entire period you have been enrolled at MU…
Mark the number that corresponds to your case using the proper codes.

Institutional activities	*How Frequency of attendance?*					*How much involvement?*						*How much interaction with faculty and staff?*					
	Never or almost never	Rarely	Sometimes	Very Often	Always or Almost always	Not applicable in my case	Nothing or Very little	Little	Moderate	Much	Very much	Not applicable in my case	Nothing or Very little	Little	Moderate	Much	Very much
1. *Religious activities*																	
Spiritual retreat	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Sabbath School	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Prayer Meetings	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Sabbath vespers	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Sabbath worship services	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Friday evening vespers services	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Youth Society	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Weeks of prayer	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Vigil nights	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Lord's Supper	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Conferences (e.g. on Bible or family relationships)	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Religious concerts	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Dorm worship services	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Music groups	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Chapels	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
2. Service activities																	
Church responsibilities	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Responsibilities in student	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5

associations, clubs, groups, etc.																		
Meetings of youth ministries	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Ingathering	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Community service	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Medical comunity services	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Meetings with your advisor	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Student work in schools or schools industries	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
3. Social activities																		
Campouts	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
“Vendimias” and celebrations of MU	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Meals in cafeteria	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Social and recreational activities in cafetería, plaza, gimnasio, etc.	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Student Association activities	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Class activities	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
4. Evangelistic activities																		
Missionary work	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Canvassing in summer	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Canvassing during school year	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Evangelistic conferences	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
5. Cultural activities																		
Art activities, literature and writing activities	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Civic activities	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Homecoming events	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Cultural events (concerts, conferences, and so on)	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
General assemblies	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
Study trips	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5	
6. Physical activities																		

Courses on healthy lifestyle	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Sports and fitness	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Student's labor program	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Conferences on health	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5

Part 5. . Based on your experience during the entire period of enrollment at MU, to what extent do you agree with the following statements? Circle the number that summarizes your case. Use the following key:

5. Strongly agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Most faculty members model a Christian character	1	2	3	4	5
I see faculty attempting to live as true Christians	1	2	3	4	5
The relationship with people on campus help my Christian commitment	1	2	3	4	5
My interactions out of class with faculty and staff have been friendly	1	2	3	4	5
My interactions at informal settings with faculty are normal and constant	1	2	3	4	5
I feel comfortable sharing my problems with some members of the faculty	1	2	3	4	5
I feel comfortable sharing my problems with some of the pastoral staff (church pastors and chaplains)	1	2	3	4	5
Some faculty members and staff know me by name	1	2	3	4	5
I discuss class content with teachers out of class	1	2	3	4	5
My interactions with peers have been friendly	1	2	3	4	5
I discuss class content with other students out of class	1	2	3	4	5
I tutor someone	1	2	3	4	5
I feel strengthened my spiritual life as MU student	1	2	3	4	5

In general, according to your student experience, what is your attitude to each of the following type of activities? Mark the number that summarizes your case. Use the following key:

8. I am committed to these activities.
7. I collaborate and involved in these activities.
6. I support these activities, and recommend them to my friends, but do not get involved in them.
5. Accept the possibility of being involved in these activities.
4. I feel indifference to these institutional activities.
3. I resist giving help, but I would not stop my friends from helping in these activities.
2. I feel impelled to stop these activities.
1. If it were possible, I would sabotage these activities.

1. Religious activities (worships, youth society, prayer meetings, etc.)	1	2	3	4	5	6	7	8
82. Service activities (youth ministries, medical community service, community service, etc.)	1	2	3	4	5	6	7	8
3. Social and recreational activities (potlucks, celebrations, social games, etc.)	1	2	3	4	5	6	7	8
4. Evangelistic activities (evangelistic conferences, canvassing, missionary work, etc.)	1	2	3	4	5	6	7	8
5. Cultural activities (concerts, conferences, general “asambleas¨, etc.)	1	2	3	4	5	6	7	8
6. Physical and health activities (health conferences, manual work, etc.)	1	2	3	4	5	6	7	8

This is the end

Thank you very much for completing this questionnaire!

EXPERIENCIAS ESTUDIANTILES
EN LA UNIVERSIDAD DE MONTEMORELOS

Instrucciones generales. Estimado estudiante, este estudio es el requerimiento final para un doctorado en filosofía por la universidad Andrews. Estamos tratando de identificar tu experiencia universitaria en relación al compromiso de tu vida cristiana. Este estudio es importante porque podrá proponer nuevas estrategias institucionales que ayuden a mejorar el impacto espiritual de la UM, enriqueciendo de esta forma la vida estudiantil. Puedes tener plena certeza que tus respuestas son anónimas, confidenciales, y voluntarias, sin ningún castigo académico si decidieras no llenarla.
Observa las partes en blanco y marca en ellas una "X" o llena el recuadro indicando tu respuesta para cada declaración que mejor te describa a ti o tu opinión. Por favor cualquier declaración que no se aplica a tu caso marca "NA" (no se aplica). Apreciaríamos mucho que llenaras completamente este cuestionario. De antemano, muchas gracias por tu amable participación.

Parte 1. Información poblacional

Estado civil:
- ❍ Soltero (a)
- ❍ Casado (a)
- ❍ Otro: _____

Facultad o escuela:
- ❍ FIT
- ❍ FACSA
- ❍ FATAME
- ❍ FCAC
- ❍ FE
- ❍ Artes y Comunicación
- ❍ Música

Año de estudio:
- ❍ 1°
- ❍ 2°
- ❍ 3°
- ❍ 4°
- ❍ 5°

Años cursados en escuelas adventistas incluyendo estos aquí en la UM:
(indica el número en recuadro) ☐☐

Género:
- ❍ Femenino
- ❍ Masculino

Edad: ☐☐
(indica el número en recuadro)

¿Eres bautizado (a) en la iglesia Adventista?
- ❍ Si
- ❍ No

En caso afirmativo, indica hace cuánto tiempo.
- ❍ Menos de un año

☐☐ Años (el número en el recuadro)

Promedio de HORAS por SEMANA que gastas...
(escribe el número en el recuadro)
- ➢ Asistiendo a clases: ☐☐
- ➢ Trabajando: ☐☐
- ➢ Estudiando o haciendo tareas de la escuela: ☐☐
- ➢ Divirtiéndote en tu tiempo libre (deportes, mirando TV, videos, PC games, etc.) ☐☐

Años viviendo en UM...
Interno: ☐☐
Externo: ☐☐
(escribe el número en el recuadro)

Si vives externo, ¿con quién vives?
- ❍ Padres
- ❍ Familiares
- ❍ Compañeros adventistas
- ❍ Compañeros no advents.
- ❍ Empleados de la UM
- ❍ Obrero denominacional
- ❍ Solo (a)
- ❍ Otro: (Especifica)_____

Lugar de procedencia:
- ❍ Norte de México
- ❍ Centro de México
- ❍ Sur de México
- ❍ Centroamérica
- ❍ Sudamérica
- ❍ EUA
- ❍ Otra parte del mundo

Tiempo que has pasado trabajando por salario:
- ❍ No sea aplica, no he trabajado
- ➢ En las industrias u oficinas de la UM:
  - ❍ Menos de un año
  - ☐☐ Años
- ➢ En los negocios fuera de la UM:
  - ❍ Menos de un año
  - ☐☐ Años

(escribe el número en el recuadro)

Parte 2. El compromiso cristiano

➢ Desde que te inscribiste en UM, ¿en qué medida has mantenido los siguientes compromisos?

⑤Lo mantengo aún con gran sacrificio personal
④Hago un considerable esfuerzo por mantenerlo
③Lo mantengo cuando conviene
②No lo estoy manteniendo
①No lo he hecho

¿Conocer a Dios?	①	②	③	④	⑤
¿Recibir la salvación?	①	②	③	④	⑤
¿Acepto a Jesucristo como mi único Salvador?	①	②	③	④	⑤
¿Someter tu vida a la voluntad de Dios?	①	②	③	④	⑤
¿Usar la Biblia como la Palabra de Dios revelada como norma de fe y práctica?	①	②	③	④	⑤
¿Vivir de acuerdo a los principios bíblicos de moralidad sexual? (sexo sólo en el matrimonio)	①	②	③	④	⑤
¿Pertenecer a una iglesia?	①	②	③	④	⑤
¿Observar el séptimo día, sábado?	①	②	③	④	⑤
¿Dar sistemáticamente diezmos y ofrendas?	①	②	③	④	⑤
¿Vivir un estilo de vida que promueve la salud física?	①	②	③	④	⑤
¿Orar diariamente?	①	②	③	④	⑤
¿Leer o estudiar diariamente la Biblia o literatura devocional?	①	②	③	④	⑤
¿Participar activamente en la vida y trabajo de una iglesia local?	①	②	③	④	⑤
¿Reflejar y aplicar valores cristianos en tu carrera para gloria de Dios?	①	②	③	④	⑤
¿Contar a otros del mensaje cristiano como se encuentran en las Escrituras?	①	②	③	④	⑤
¿Apoyar el evangelismo mundial a través de mi participación personal o por mi contribución financiera?	①	②	③	④	⑤

Parte 3: Influencia de personas en la UM

- De tus cinco mejores amigos, ¿cuántos son adventistas? (escribe un número en el recuadro) ☐☐
- ¿Cuántas personas que trabajan en la UM consideras tus amigos? (escribe un número en el recuadro) ☐☐

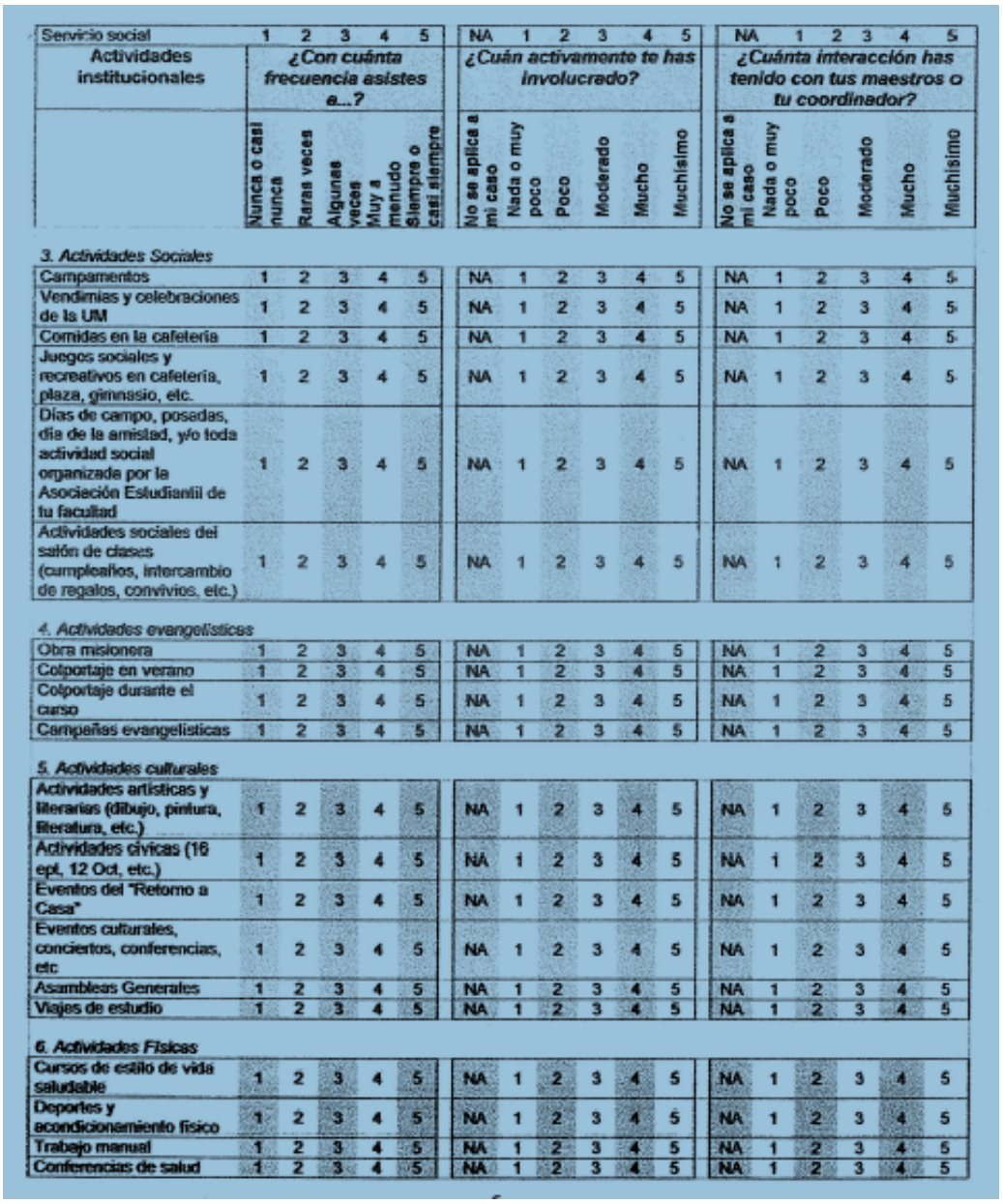
- Durante todo el período en que has estado inscrito en la UM, ¿en qué medida tu relación con las siguientes personas ha contribuido positivamente a tu vida cristiana? Marca con una "X" en el cuadro que más represente tu caso.

	No se aplica en mi caso	Nada	Muy poco	Poco	Moderado	Mucho	Muchísimo
Tus padres	NA	①	②	③	④	⑤	⑥
Tu mejor amigo (a)	NA	①	②	③	④	⑤	⑥
Tu novio (a)	NA	①	②	③	④	⑤	⑥
Los compañeros de clase	NA	①	②	③	④	⑤	⑥
El Rector de la UM	NA	①	②	③	④	⑤	⑥
Los vicerrectores (académico, financiero, estudiantil)	NA	①	②	③	④	⑤	⑥
El director de la escuela y el coordinador de tu carrera	NA	①	②	③	④	⑤	⑥
Un maestro (a) de tu especialidad de estudio	NA	①	②	③	④	⑤	⑥
Los pastores de la iglesia	NA	①	②	③	④	⑤	⑥
Tu maestro de Biblia y capellán	NA	①	②	③	④	⑤	⑥
El mentor o consejero asignado para ti	NA	①	②	③	④	⑤	⑥
El Director del Depto. de Orientación y Consejería	NA	①	②	③	④	⑤	⑥
El Director (a) del Dormitorio	NA	①	②	③	④	⑤	⑥
El supervisor (a) de tu trabajo	NA	①	②	③	④	⑤	⑥
El Director de Actividades Complementarias	NA	①	②	③	④	⑤	⑥
Otro? Especifique, _____	NA	①	②	③	④	⑤	⑥

Parte 4. Experiencia estudiantil.

- A continuación aparecen cuatro columnas. En la primera columna de la izquierda están enlistadas algunas actividades institucionales. En la segunda columna, identifica con cuánta frecuencia has asistido a aquellas actividades todo el tiempo en que has estado inscrito en la UM. En la tercera, cuán activamente has tenido participación en ellas, y en la cuarta columna, cuánta interacción has tenido con tus profesores o con tu coordinador.
  Por favor, en cada columna marca con una "X" el número que mejor responda a tu caso en cada actividad.

Actividades institucionales	*¿Con cuánta frecuencia has asistido a...?*					*¿Cuán activamente te has involucrado en...?*						*¿Cuánta interacción has tenido con tus maestros o tu coordinador en...?*					
	Nunca o casi nunca	Raras veces	Algunas veces	Muy a menudo	Siempre o casi siempre	No se aplica a mi caso	Nada o muy poco	Poco	Moderado	Mucho	Muchísimo	No se aplica a mi caso	Nada o muy poco	Poco	Moderado	Mucho	Muchísimo
1. *Actividades religiosas*																	
Retiros espirituales	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Escuela Sabática	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
"Hora del Poder" y/o bandos de oración	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Recepciones y/o despedidas de sábado	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Servicios de adoración en Sábado	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Cultos de viernes	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Sociedad de Jóvenes	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Semanas de oración	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Noches de vigilias	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Santa Cena	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Conferencias (sobre la Biblia, familia, noviazgo...)	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Conciertos religiosos	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Culto matutino y/o vespertino en dormitorio o en el trabajo	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Grupos musicales	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Cultos entre semana	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
2. *Actividades de servicio*																	
Responsabilidades de la iglesia	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Responsabilidades en asociaciones, grupos, salones, clubes, etc.	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Reuniones de los clubes	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Recolección	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Servicio a la comunidad	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Brigadas médicas a la comunidad	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Reuniones con tu consejero	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Trabajo estudiantil en oficinas y escuela-empresa	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5



Servicio social	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Actividades institucionales	¿Con cuánta frecuencia asistes a...?					¿Cuán activamente te has involucrado?						¿Cuánta interacción has tenido con tus maestros o tu coordinador?					
	Nunca o casi nunca	Raras veces	Algunas veces	Muy a menudo	Siempre o casi siempre	No se aplica a mi caso	Nada o muy poco	Poco	Moderado	Mucho	Muchísimo	No se aplica a mi caso	Nada o muy poco	Poco	Moderado	Mucho	Muchísimo
3. Actividades Sociales																	
Campamentos	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Vendimias y celebraciones de la UM	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Comidas en la cafetería	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Juegos sociales y recreativos en cafetería, plaza, gimnasio, etc.	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Días de campo, posadas, día de la amistad, y/o toda actividad social organizada por la Asociación Estudiantil de tu facultad	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Actividades sociales del salón de clases (cumpleaños, intercambio de regalos, convivios, etc.)	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
4. Actividades evangelísticas																	
Obra misionera	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Colportaje en verano	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Colportaje durante el curso	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Campañas evangelísticas	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
5. Actividades culturales																	
Actividades artísticas y literarias (dibujo, pintura, literatura, etc.)	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Actividades cívicas (16 ept, 12 Oct, etc.)	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Eventos del "Retorno a Casa"	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Eventos culturales, conciertos, conferencias, etc	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Asambleas Generales	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Viajes de estudio	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
6. Actividades Físicas																	
Cursos de estilo de vida saludable	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Deportes y acondicionamiento físico	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Trabajo manual	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5
Conferencias de salud	1	2	3	4	5	NA	1	2	3	4	5	NA	1	2	3	4	5

➢ Basado en tu experiencia durante el tiempo que has estado inscrito en la UM, en qué medida estás de acuerdo con los siguientes declaraciones? Rellena o marca con una "X" la opción que mejor represente tu opinión.

⑤ Fuertemente de acuerdo
④De acuerdo
③No tengo opinión
②En desacuerdo
①Fuertemente en desacuerdo

La mayoría de mis maestros modelan un carácter cristiano	①	②	③	④	⑤
Veo a los maestros intentar vivir como verdaderos cristianos	①	②	③	④	⑤
La relación con personas en el campus me ha ayudado en mi compromiso cristiano	①	②	③	④	⑤
Mis interacciones fuera de clases con mis maestros y coordinador han sido amigables	①	②	③	④	⑤
Mis interacciones con mis maestros en momentos informales son frecuentes y constantes	①	②	③	④	⑤
Me siento confortable compartir mis problemas con mis maestros	①	②	③	④	⑤
Me siento confortable compartir mis problemas con los pastores de mi iglesia y capellán	①	②	③	④	⑤
Algunos maestros, mi coordinador y director me conocen por nombre	①	②	③	④	⑤
Discuto fuera del salón el contenido de clases con mis profesores	①	②	③	④	⑤
Mis interacciones con mis compañeros han sido amistosas	①	②	③	④	⑤
Discuto fuera del salón el contenido de clases con otros compañeros	①	②	③	④	⑤
Doy tutoría a alguno de mis compañeros	①	②	③	④	⑤
Siento que mi vida espiritual se ha fortalecido durante el tiempo de estudiante en la UM	①	②	③	④	⑤

➢ ¿Cuál es actitud que tomas hacia cada uno de las actividades institucionales? A la derecha de las actividades, rellena o marca el círculo que mejor resume tu caso.

⑧ Estoy positivamente comprometido (a) en estas actividades.
⑦ Colaboro y me involucro en estas actividades.
⑥ Apoyo estas actividades y las recomiendo a mis amigos, pero yo no me involucro en ellas.
⑤ Acepto la posibilidad de involucrarme en estas actividades.
④ Siento indiferencia de estas actividades institucionales.
③ Resisto dar ayuda, pero no objetaría que mis amigos ayudarán en estas actividades.
② Siento un impulso de parar estas actividades.
① Si fuere posible, yo sabotearía estas actividades.

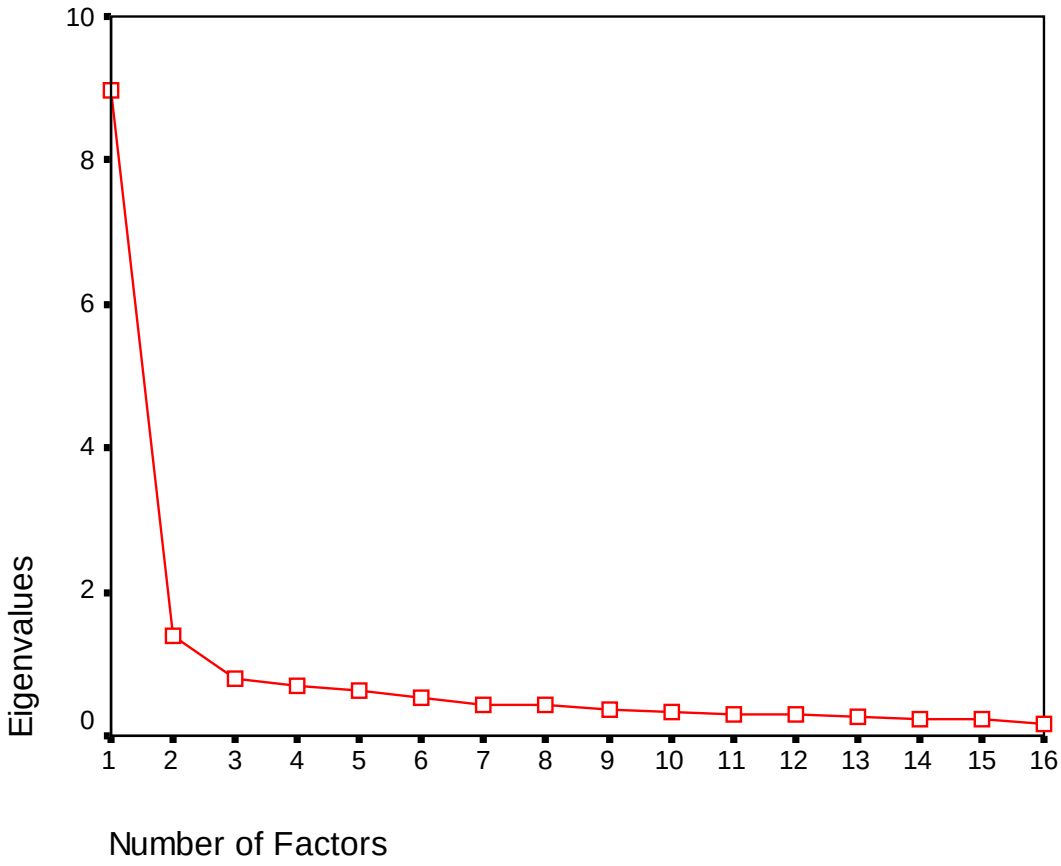
Actividades religiosas (cultos, Sociedad de Jóvenes, bandos de oración, etc.)	①	②	③	④	⑤	⑥	⑦	⑧
Actividades de servicio (clubes juveniles, brigadas de salud, servicio a la comunidad, etc.)	①	②	③	④	⑤	⑥	⑦	⑧
Actividades sociales y recreativas (convivios, celebraciones, juegos sociales, etc.)	①	②	③	④	⑤	⑥	⑦	⑧
Actividades evangelísticas (campañas evangelísticas, colportaje, obra misionera, etc.	①	②	③	④	⑤	⑥	⑦	⑧
Actividades culturales (conciertos, conferencias, asambleas, exposiciones, etc.)	①	②	③	④	⑤	⑥	⑦	⑧
Actividades físicas y de salud (deportes, conferencias de salud, trabajo manual, etc.)	①	②	③	④	⑤	⑥	⑦	⑧

¡Muchas gracias por completar este cuestionario!

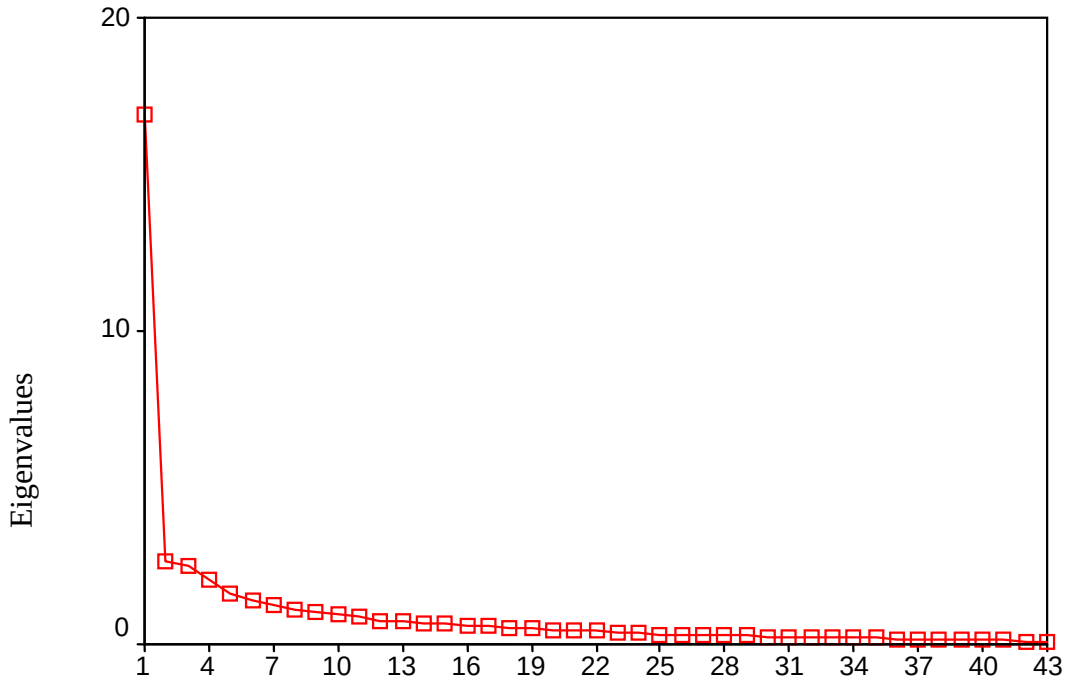
APPENDIX C

PLOTS

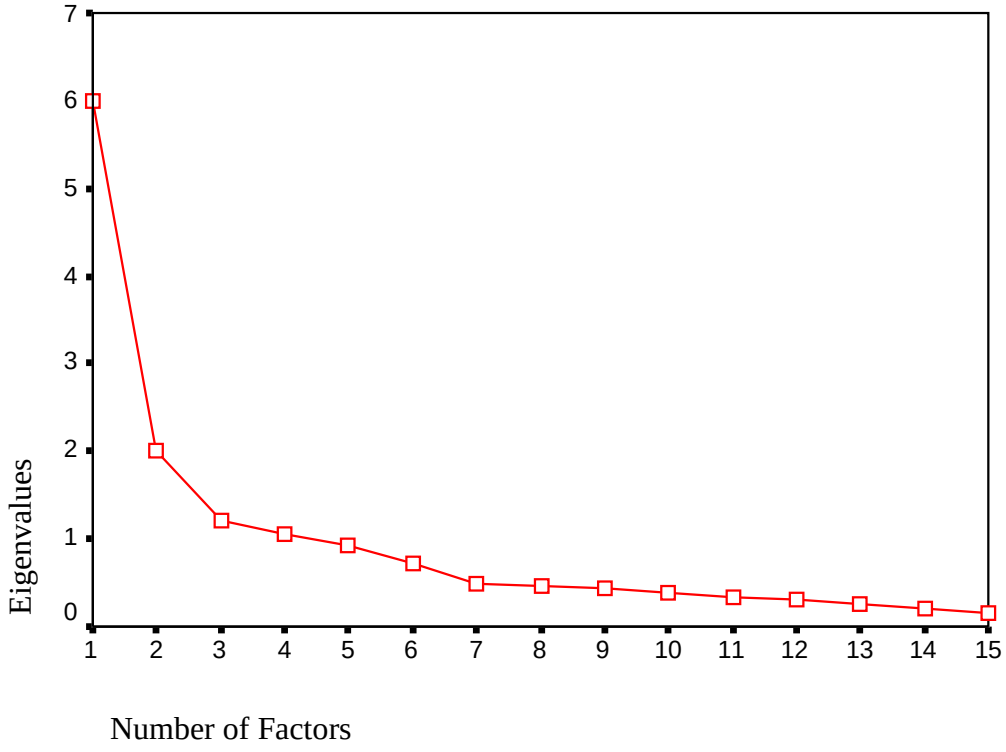
Scree Plot for Christian Commitments



Scree Plot for Student Involvement Activities



Scree Plot for Influential Agents



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