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A CORRELATIONAL STUDY ON PARENTAL ATTACHMENT AND SPIRITUAL DEVELOPMENT OF COLLEGE STUDENTS

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A CORRELATIONAL STUDY ON PARENTAL ATTACHMENT AND SPIRITUAL

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by

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A CORRELATIONAL STUDY ON PARENTAL ATTACHMENT AND SPIRITUAL DEVELOPMENT OF COLLEGE STUDENTS

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During college, students search for meaning in their lives and question their beliefs, behavior, and mortality (Garber, 1996). One way that students search for meaning is through their spiritual lives. Spirituality is "the personal quest for understanding of ultimate questions about life, about meaning, and about relationship to the sacred or transcendent" (Koenig, McCullough & Larson, 2001, p. 18). Parental attachment theory explains that students who have developed a secure attachment with their parents see their parents as a secure base from which to explore their environment (Kenny & Donaldson, 1991, p. 480). This environment may be internal or external. Students with a secure base from which to explore may have a higher level of spiritual development.

This study was conducted to determine if there was a correlation between parental attachment and spiritual development in traditional-aged undergraduate college students. The outcome of this research would have relevance to the kind of programs that institutions provide to their students and to the parents of their students to assist students in their spiritual development.

The population included 6,091 students enrolled in two regional campuses of a university located in the Northeastern United States. Subjects' levels of parental attachment was measured using the Parental Attachment Questionnaire (PAQ) and

subjects' spiritual development was measured by the Spiritual Experience Index-Revised (SEI-R). Other variables studied included gender, ethnicity, class level, and age.

A positive correlation between parental attachment and spiritual development was found. Female students scored higher on spiritual development than did males and non-Caucasian students had a higher level of spiritual development than Caucasian students. Older students reported higher levels of spiritual openness and lower levels of spiritual support than younger students. Additionally, younger students and those with lower class standings scored higher in the Parental Fostering of Autonomy than their older peers and those who had been in college longer.

This research provides higher education professionals information to use in creating programs and services for students and their parents.

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Chapter 1

Introduction

Socrates said, "Know thyself." College students search for knowledge of self, meaning in their lives and ask questions about beliefs, behavior and morality (Garber, 1996). One way in which students search for meaning is through their spiritual lives. "Spiritual development is an integral part of overall student development and learning" (Capeheart-Meningall, 2005, p. 31).

Roehlkepartain, King, Wagener, and Benson (2006) stated, "Spiritual development is a dimension of human life and experience as significant as cognitive development, emotional development, or social development" (p. 9). Student affairs professionals, in additional to other campus professionals, are charged with assisting students with these developmental tasks, including spiritual development. The Student Personnel Point of View (American Council on Education, 1949) provided the roadmap for student affairs professionals. The Student Personnel Point of View included "attention to the student's well-rounded development—physically, socially, emotionally, and spiritually—as well as intellectually" (p. 17) as a central purpose of higher education. In order to fulfill this purpose, one needs to understand spirituality in college students.

Students come to college with a high level of spiritual interest and involvement and expect higher education to help them develop emotionally and spiritually (Higher Education Research Institute [HERI], n.d., p. 3). Buttery and Roberson (2005) stressed that "We in higher education need to appreciate the value and virtue of the spiritual dimension and the potential for value-added aspects of life for our students" (p. 41). The

goal of the current research was to provide higher education professionals with new knowledge and insight on college students' spiritual development.

Purpose Statement

This study was conducted to determine if there was a correlation between parental attachment and spiritual development in traditional-aged undergraduate college students enrolled in two regional campuses of a university located in the Northeastern United States. The outcome of this research would have relevance to the kind of programs that institutions provide to their students and to the parents of their students to assist students in their spiritual development.

Research Considerations

The author collaborated with Deidra Graves Stephens on the literature review for her study, "A Correlational Study on Parental Attachment and Moral Competence in Millennial Generation College Students." Data collection was conducted simultaneously using a demographic questionnaire, The Parental Attachment Questionnaire, and Spiritual Experience Index-Revised. Additionally, the Moral Judgment Test was administered but was used only in Graves Stephens' study. This approach permitted the research team to study a variety of issues using only one data collection period and laid the foundation for more in-depth studies of these topics in the future.

Context

A January 2002 Gallup poll found that "50% of Americans described themselves as 'religious,' while another 33% said they were 'spiritual but not religious' (11% said neither and 4% said both)" (Gallup, 2003). Kirkpatrick (2005) found that attachment

history influenced how an individual relates to God. Granqvist and Dickie (2006)

theorized that "From an attachment perspective, however, it does not matter whether 'the

search for connectedness' . . . has occurred within institutionalized religion so long as the

search is for something greater than the self" (p. 198).

Delimitations

There were several delimitations that restricted this study:

1. Only responses from students from two regional campuses of a university in the Northeastern United States were used in the study.

2. Perceptions of students were measured only once; a longitudinal study was not attempted.

3. No attempt was made to predetermine the level of parental attachment or spiritual development of potential subjects prior to data collection.

4. Socioeconomic status was not measured due to the difficulty in collecting accurate information using self-report.

Limitations

1. Subjects and participants represented undergraduate students between the ages of 18-25 from two regional campuses of a university in the Northeastern United States. Findings are limited to this population only.

2. Faking of responses and response bias by subjects may have impacted results.

3. Use of a volunteer sample limited the generalization to a larger population.

4. Due to the correlation design of the study, causal relationships cannot be inferred from statistically significant results.

5. The study used self-report so recall bias may have skewed data.

6. Demographic variables were collected from subjects' self-reports and may not have been accurate.

7. Nonresponse bias may have affected the reliability of the data.

Background

Attachment Theory

John Bowlby theorized that attachment grew from social interactions with an infant's caregiver. As infants developed attachment to their caregivers, they also formed internal working models which influenced how they form attachments with others in the future. Bowlby (1977) defined attachment as "the propensity of human beings to make strong affectional bonds to particular others" (p. 201). Bowlby's theory of parental attachment served as a theoretical base for the present research.

Students' growth may be facilitated by positive bonds between parents and themselves. Positive interactions between parents and children are characterized as secure attachment (Young & Lichenberg, 1996). Children who do not have positive interactions are described as having insecure attachment (Ainsworth, Blehar, Waters & Wall, 1978). Secure attachment in adolescents help them develop autonomy (Allen & Land, 1999, p. 319). Due to their internal working models, adolescents with insecure attachments are less likely to build close, trusting and satisfactory relationships with their peers and others. Those adolescents may find they cannot experience security as they turn away from parents and toward peers for support (p. 322).

Spiritual Development

The study used Genia's (1995, 1997) model of psychospiritual development. Genia's model of psychospiritual development assumed that children's images of God were derived from their relationships with parents and significant others (Genia, 1995). However, her model and instrument were designed to assess spiritual development for both the religious and non-religious. Her initial developmental model, which she explained is neither linear nor smooth, contained five stages: egocentric faith, dogmatic faith, transitional faith, reconstructed faith, and transcendent faith. After her initial work, she developed the Spiritual Experience Index-Revised (SEI-R), and revised her model to include four spiritual stages: underdeveloped, dogmatic, transitional, and growth oriented (Genia, 1997, p. 353).

Additionally, the present research was grounded in the belief espoused by Parks (2000) that higher education "plays a primary role in the formation of critical thought and a viable faith" (p. 10). Parks (1986) used the term faith to "denote the activity of composing meaning in the most comprehensive dimensions of our awareness" (p. 16). Parks' (2000) model of faith development in young adults included three components that interact: forms of knowing, forms of dependence and forms of community. *Forms of knowing* are concerned with the cognitive aspects of faith development; *forms of dependence* are the affective aspects of faith development; and *forms of community* are the community aspects of faith development (Parks, as cited in Love, 2001, pp. 8-9). Parks' (2000) framework of faith development involved transformations from "authority-bound forms of meaning-making anchored in conventional assumed community, through

the wilderness of counterdependence and unqualified relativism, to a committed, inner-dependent mode of composing meaning" (p. 102). She saw higher education as serving as a "mentoring environment in the formation of adult faith development" (p. 159) and recognized that students come to the institution to learn to think critically and make meaning of their lives.

Faith, Religion and Spirituality

The concepts of religion and spirituality have been defined in different ways. First, some defined them as separate but overlapping (Pargament, Sullivan, Balzer, Van Haitama, & Raymark, 1995; Zinnbauer et al., 1997). Others defined them as separate concepts, such as by Klenke who stated, "Spirituality is not religion" (2003, p. 59). Finally, some defined spirituality as a broad concept that includes religion (Hufford, 2005).

Patrick Love (2002) used the terms spiritual development and faith development synonymously. Geroy (2005) pointed out one important difference between faith and spirituality by explaining that "spirituality is the internal expression of being, sense of place, interconnectedness, and meaning seeking" (p. 68), whereas Bee (1987, as cited in Love, 2002, p. 358) explained that faith is a social phenomenon that also concerns relationships with others.

Quest is an important concept in understanding spirituality. Webster's Dictionary defined quest (verb) as "to search for" (Neufeldt, 1988). Spirituality is one's "personal quest for understanding of ultimate questions about life, about meaning, and about relationship to the sacred or transcendent" (Koenig et al., 2001, p. 18). Spirituality is a

personal quest, while religion is shared system of beliefs (Love, 2001, p. 8). Spirituality

can be manifested in any number of ways "including all forms of reflection and

introspection in which the primary goal is to explore one's relationship to the

transcendent in order to deepen and enrich personal meaning, purpose, authenticity, and

wholeness" (Dalton, Eberhardt, Bracken, & Echols, 2006, p. 5). Religion on the other

hand, may be referred to as institutional, dogmatic, and restrictive (Pargament &

Mahoney, 2002, p. 647).

Definitions

Attachment: "enduring affective bond that can promote autonomy" (Kenny &

Donaldson, 1991, p. 480).

Attachment Behavior: "cognitive, script-like structures that develop out of

attachment experiences and expectations of parents in childhood" (Guttman-Steinmetz &

Crowell, 2006, p. 448).

Attachment Figure: primary caregiver of a child who "provides a secure base of

support that promotes active exploration and mastery of the environment and the

development of social and intellectual competence" (Kenny & Donaldson, 1991, p. 480).

The attachment figure is most often a parent, but at times, others serve as a primary

attachment figure (Geiger, 1996, p. 97).

Class standing: freshman, sophomore, junior or senior year of an undergraduate

degree program.

Compensation theory: Individuals with insecure childhood attachments have a greater need to establish attachment relationships with others, including God or a transcendent (Granqvist & Dickie, 2006, p. 199).

Correspondence theory: Individuals with secure childhood attachments have established working models that enable them to establish relationships with God or a transcendent (Granqvist & Dickie, 2006, p. 200).

Faith: A personal search for meaning, transcendence, wholeness, purpose, and "apprehension of the spirit (or Spirit) as the animating essence at the core of life" (Parks, 2000, p. 16).

Religion: "A shared system of beliefs, principles, or doctrines related to a belief in and worship of a supernatural power or powers regarded as creator(s) and governor(s) of the universe" (Love, 2001, p. 8).

Parental attachment: an emotional bond experienced with another who is sensed as a source of security and who provides a secure base anchoring exploration (Bowlby, 1988, p. 4). The four accepted forms of parental attachment are secure, anxious-avoidant, anxious-ambivalent (Ainsworth et al., 1978), and disorganized-disoriented (Main & Solomon, 1990).

Primary caregiver: the individual who serves as the principal attachment figure of a child. Bowlby (1951) considered the mother as a child's primary caregiver, but Geiger (1996, p. 97) found that the primary caregiver can be the father or third party.

Sacred: "A person, an object, a principle, or a concept that transcends the self" (Hill et al., 2000, p. 68).

Spiritual Openness: A scale used in the Spiritual Experience Index to determine the level of openness and inclusive approach to faith (Genia & Cooke, 1998, p. 117).

Spiritual Support: A scale used in the Spiritual Experience Index to determine the level of reliance on spirituality for support (Genia & Cooke, 1998, p. 117).

Spiritual development: "the process of growing the intrinsic human capacity for self-transcendence, in which the self is embedded in something greater than the self, including the sacred. It is the developmental 'engine' that propels the search for connectedness, meaning, purpose and contribution. It is shaped both within and outside of religious traditions, beliefs, and practices" (Benson, Roehlkepartain, & Rude, 2003, p. 205).

Spiritual transcendence: "the capacity of individuals to stand outside of their immediate sense of time and place to view life from a larger, more objective perspective" (Piedmont, 1999, p. 988).

Spirituality: "The personal quest for understanding of ultimate questions about life, about meaning, and about relationship to the sacred or transcendent, which may (or may not) arise from the development of religious rituals and the formation of community" (Koenig et al., 2001, p. 18). "It includes all forms of reflection and introspection in which the primary goal is to explore one's relationship to the transcendent in order to deepen and enrich personal meaning, purpose, authenticity, and wholeness" (Dalton et al., 2006, p. 5).

Student development theory: "The ways that a student grows, progresses, or increases his or her developmental capabilities as a result of enrollment in an institution of higher education" (Rodgers as cited in Evans, Forney, & Guido-DiBrito, 1998, p. 4).

Working model: "a self creation of the individual based on historical experiences with actual attachment figures" (West & Sheldon-Keller, 1994, p. 54).

These definitions will be discussed further in the review of literature.

Research Questions and Hypotheses

R1: Was there a correlation between parental attachment and spiritual development?

H1a: There was no correlation between the total score on the Parental Attachment Questionnaire (PAQ) and the Spiritual Support (SS) score on the Spiritual Experience Index-Revised (SEI-R).

H1b: There was no correlation between the total score on the Parental Attachment Questionnaire (PAQ) and the Spiritual Openness (SO) score on the Spiritual Experience Index-Revised (SEI-R).

H1c: There was no correlation between the scores on the Affective Quality of Attachment scale of the PAQ and Spiritual Support scale on the SEI-R.

H1d: There was no correlation between the scores on the Parental Fostering of Autonomy scale of the PAQ and Spiritual Support scale on the SEI-R.

H1e: There was no correlation between the scores on the Parental Role in Providing Emotional Support scale of the PAQ and Spiritual Support scale of the SEI-R.

H1f: There was no correlation between the scores on the Affective Quality of Attachment scale of the PAQ and Spiritual Openness scale of the SEI-R.

H1g: There was no correlation between the scores on the Parental Fostering of Autonomy scale of the PAQ and Spiritual Openness scale of the SEI-R.

H1h: There was no correlation between the scores on the Parental Role in Providing Emotional Support scale of the PAQ and Spiritual Openness scale of the SEI-R.

R2: Were there differences in parental attachment between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group?

H2a: There was no difference between the scores for female and male college students on the Affective Quality of Attachment scale on the PAQ.

H2b: There was no difference between scores for female and male college students on the Parental Fostering of Autonomy scale on the PAQ.

H2c: There was no difference between scores for female and male college students on the Parental Role in Providing Emotional Support scale on the PAQ.

H2d: There was no difference between scores for female and male college students on the total PAQ score.

H2e: There was no difference between scores for Caucasian and non-Caucasian college students on the Affective Quality of Attachment scale on the PAQ.

H2f: There was no difference between scores for Caucasian and non-Caucasian college students on the Parental Fostering of Autonomy scale on the PAQ.

H2g: There was no difference between scores for Caucasian and non-Caucasian college students on the Parental Role in Providing Emotional Support scale on the PAQ.

H2h: There was no difference between scores for Caucasian and non-Caucasian college students on the total PAQ score.

H2i: There was no difference between scores for college students by class standing on the Affective Quality of Attachment scale on the PAQ.

H2j: There was no difference between scores for college students by class standing on the Parental Fostering of Autonomy scale on the PAQ.

H2k: There was no difference between scores for college students by class standing on the Parental Role in Providing Emotional Support scale on the PAQ.

H2l: There was no difference between scores for college students by class standing on the total PAQ score.

H2m: There was no difference between scores for college students by age group on the Affective Quality of Attachment scale on the PAQ.

H2n: There was no difference between scores for college students by age group on the Fostering Autonomy scale on the PAQ.

H2o: There was no difference between scores for college students by age group on the Parental Role in Providing Emotional Support scale on the PAQ.

H2p: There was no difference between scores for college students by age group on the total PAQ score.

R3: Were there differences in spiritual development between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group?

H3a: There was no difference in scores on the Spiritual Support scale of the SEI-R between female and male college students.

H3b: There was no difference in scores on the Spiritual Openness scale of the SEI-R between female and male college students.

H3c: There was no difference in scores on the Spiritual Support scale of the SEI-R between Caucasian and non-Caucasian college students. Hispanic Caucasian students were included in the non-Caucasian group.

H3d: There was no difference in scores on the Spiritual Openness scale of the SEI-R between Caucasian and non-Caucasian college students. Hispanic Caucasian students were included in the non-Caucasian group.

H3e: There was no difference in scores on the Spiritual Support scale of the SEI-R for college students of different class standings.

H3f: There was no difference in scores on the Spiritual Openness scale of the SEI-R for college students of different class standings.

H3g: There was no difference in scores on the Spiritual Support scale of the SEI-R for college students in different age groups.

H3h: There was no difference in scores on the Spiritual Openness scale of the SEI-R for college students in different age groups.

R4: Were there differences between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group in terms of the correlation of parental attachment and spiritual development?

H4a: There was no difference in terms of the correlation of parental attachment and spiritual development between female and male college students.

H4b: There was no difference in terms of the correlation of parental attachment and spiritual development between Caucasian and non-Caucasian students college students.

H4c: There was no difference in terms of the correlation of parental attachment and spiritual development between college students of different class standings.

H4d: There was no difference in terms of the correlation of parental attachment and spiritual development between college students in different age groups.

Summary

Spiritual development is an important aspect in overall student development. This research was conducted to determine if a correlation existed between parental attachment and spiritual development in traditional-aged, undergraduate college students. Previous research had been conducted on parental attachment and religious development but research had not been conducted on parental attachment and spiritual development.

The researcher used quantitative research to study undergraduate students from two regional campuses of a university located in the Northeastern United States. Additionally, the differences in parental attachment, spiritual development, and the

relationship of these two constructs between genders; Caucasian and non-Caucasian students; students' class standings; and students' ages were studied.

There is a long history of research on both attachment and religion. However, research specific to spirituality and spiritual development has been appearing only since the 1990s. Concepts and research on attachment, religion, spirituality, and spiritual development will be presented in the following chapter.

Chapter 2

Literature Review

The purpose of this study was to determine if there was a correlation between parental attachment and spiritual development in traditional-aged undergraduate college students. During college, students search for meaning in their lives and question their beliefs, behavior, and mortality (Garber, 1996). As students struggle with questions of career, identity, relationships and purpose they often find themselves attracted to spiritual pursuits (Chickering, Dalton & Stamm, 2006, p. 153). Chickering and Reisser (1993, p. 199) reasoned that students with a stronger and healthier sense of themselves would be more successful in handling the demands of college. Students may gain a sense of self through spiritual quests.

In considering a correlation between parental attachment and spiritual development of college students, several areas will be explored. First, a synopsis of identity development theory is presented. Second, an overview of literature on attachment theory and a description of findings from research on the impact of parental attachment on adolescents and adults is provided. Third, the concepts of spirituality, religion, and spiritual development are addressed. Finally, the relationship of parental attachment and spiritual development found in the literature is explored.

Student Development Theory

Student development theories generally fall into one of four categories: (a) psychosocial theory, (b) cognitive-structural theory, (c) typology theory, or (d) person-environment theory (Evans et al., 1998, pp. 10-12). For the purpose of the

current study psychosocial theory was used to explore parental attachment and spiritual development of college undergraduate students.

Erikson developed a stage model of psychosocial development. Erikson (as cited in Parks, 2000, p. 36) identified eight stages of development: Trust vs. Mistrust (infants); Autonomy vs. Shame and Doubt (toddlers); Initiative vs. Guilt (preschoolers); Industry vs. Inferiority (school-age children); Identity vs. Role Confusion (adolescents); Intimacy vs. Isolation (young adults); Generativity vs. Stagnation (middle-age adults); and Integrity vs. Despair (older adults) (p. 37). During each stage, individuals must address particular developmental tasks and the resolution of these tasks influence the individual's basic attitudes and orientation toward the world (Evans, 1996, p. 55). College students generally fall into two of Erikson's stages: Identity vs. Role Confusion or Intimacy vs. Isolation.

Chickering's theory of student development was built upon Erickson's stage theory of psychosocial development (Evans et al., 1998, p. 10). Chickering's theory of student development was based on seven vectors that students move through on their way to individuation (Chickering & Reisser, 1993). The seven vectors are (a) developing confidence, (b) managing emotions, (c) moving through autonomy toward interdependence, (d) developing mature relationships, (d) establish identity, (e) developing purpose, and (f) developing integrity (Chickering & Reisser, 1993, pp. 45-51). Students move through these vectors at various rates, and while not necessarily sequential, vectors build on each other and lead to a more integrated, stable,

and complex individual (Evans et al., 1998, p. 38). These vectors were important in exploring both attachment and spiritual development.

Identity development, a stage in Erikson's theory and Chickering's fifth vector is a major task during the college years. The importance of identity development led Marcia to expand on Erickson's work (Evans, 1996, p. 56). Marcia theorized that "Whether or not individuals had experienced a crisis period regarding career choice, religion or political ideology and their commitment to their choice determine their identity resolution" (p. 56). Josselson studied identity development in women and found that crises in relationships lead to growth and change in women (as cited in Evans, 1996, p. 57). Her work also found that separation from parents and formation of meaningful relationships were particularly important in women's identity development (pp. 57-62). Taub and McEwen (as cited in Evans et al., 1998, p. 46) found that women developed mature interpersonal relationships earlier than men but the development of autonomy came later than for men.

Attachment

Precursors to Attachment Theory

Considerable research has been done to try to explain how children's early years contribute to the adult they will become (Blustein, Prezioso & Schultheiss, 1995, p. 416). Many theories were developed to try to explain this phenomenon. Freud explained attachment through a psychoanalytic view (Mercer, 2006). Mercer explained that "Freud based his thinking about attachment on the belief that feeding creates the child's emotional presence" (2006, p. 15). Freud (as cited in Mercer, 2006, p. 17) hypothesized

that the infant creates an internalized image of the mother as a dependable and nurturing

person. Freud believed that as infants grew, the internalization of this image continued to

help them develop a general perception of others and to help them meet their needs, both

physical and psychological.

Bowlby's Theory of Attachment

John Bowlby's ideas about attachment were different from previous theories. He

believed that attachment grew from social interactions rather than from feedings or

physical gratification (Mercer, 2006). Bowlby (1977) defined attachment as "the

propensity of human beings to make strong affectional bonds to particular others"

(p. 201).

Bowlby (1951, 1969/1982, 1979) theorized three basic functions for attachment.

Proximity maintenance occurs when a child is alarmed by some type of perceived danger.

When danger is perceived, the child will seek to be closer to an attachment figure

(Ainsworth et al., 1978). *Safe haven* means that the child uses the attachment figure as a

source of comfort, support, and reassurance (Bowlby, 1951, 1969/1982, 1979). *Secure*

base is the term used to describe how secure infants are more apt to explore the

environment. They are more comfortable straying from the attachment figure. The infant

uses "the mother as a secure base from which to explore" (Ainsworth et al., 1978, p. 22).

Bowlby stated that there are two main features of caregiver-child interactions.

First, behaviors are activated in the infant as a result of stress. Attachment behaviors

serve to reduce arousal and provide security. Secondly, because caregivers will

reciprocate by monitoring the infants' safety and security, the infant becomes safer and more secure (Bowlby, 1951).

According to Bowlby, in order for secure attachment to occur, the caregiver is available and responds quickly to the infant's distress. This prompt responsiveness helps the child to avoid excessive negative effects and creates a sense of security. The security encourages exploration and helps children master their physical and social environments. In turn, further development is encouraged (Bowlby, 1951).

Bowlby (1951) studied homeless infants in order to understand what happens when the child does not gain secure attachment to a caregiver. He found that the infants followed a somewhat standard pattern. When infants were separated from an attachment figure they cried and actively searched for their caregiver and resisted soothing from others. As the separation continued, the children became obviously sad and passive. This led to emotional detachment when it became obvious that their caregivers would not return.

The mother was considered as the primary caregiver in Bowlby's research. However, the principal attachment figure does not have to be the mother. The father or other principal caregiver can be a primary attachment figure (Geiger, 1996, p. 5). A majority of children develop more than one attachment relationship during the first year of life (Cassidy, 1999).

Bowlby was interested in attachment not only to explain infant behavior but to explain behaviors from cradle to grave (Bowlby, 1977). Bowlby believed that early attachment behaviors affected an individual's personality development. Bowlby was

particularly interested in how attachment history influenced mental health and criminal behavior (Mercer, 2006). Bowlby (1969/1982) found that human beings at any age were most well-adjusted when they had confidence in the accessibility and responsiveness of a trusted other. This confidence was gained by experiencing secure attachment with a principal caregiver as an infant and child.

Ainsworth et al. (1978) provided additional research on Bowlby's theory of attachment. Ainsworth sought to measure attachment through experimental research (Mercer, 2006, p. 40). Ainsworth's (1978) experiment, called "The Strange Situation Experiment," involved observing mothers, children, and strangers in a series of situations in which the parent left the child and a stranger entered the area (p. 43). Her research classified children from the ages of 12 to 18 months by attachment type (p. 45). These types are explained further in the Basic Patterns of Attachment section. West and Sheldon-Keller (1994) pointed out that "Almost all subsequent empirical and theoretical work on attachment in infancy is based on Ainsworth's methodology" (p. 14).

Elicker, Englund, and Stroufe (1992, p. 99) monitored children for at least ten years and found predictable personality and social behaviors based on their attachment history with their parents. Other researchers (Waters et al., as cited in Levy, Blatt & Shaver, 1998) monitored subjects for 20 years and found that 64% of subjects did not show a change in their attachment patterns. These two research studies supported the theory that attachment behaviors are unlikely to change over time.

Basic Patterns of Attachment

There are four recognized patterns of parental (caregiver) attachment: (a) secure; (b) insecure or anxious-avoidant; (c) insecure or anxious-resistant (Ainsworth et al., 1978, pp. 311-321); and (d) disorganized-disoriented (Main & Solomon, 1990).

Secure. A child demonstrating secure attachment will use the mother or caregiver as a secure base from which to explore an unfamiliar environment. Secure children actively investigate new situations when an attachment figure is present but become distressed when left alone. When the attachment figure comes back, the child seeks close contact and comfort and then resumes play quickly. Additionally, the child's interaction with his or her primary caregiver is more harmonious (Weinfield, Sroufe, Egeland & Carlson, 1999, p. 72). Secure children understand that their attachment figures are accessible and responsive, and they are easily calmed and reassured after a threatening situation (Guttmann-Steinmetz & Crowell, 2006). The child is quickly soothed by close bodily contact with the caregiver. The child also appears to be less anxious (Ainsworth et al., 1978, p. 312). Research on mothers of secure infants revealed that they respond to distress with sensitivity and are generally available and cooperative (Levy et al., 1998, p. 408). Thus, secure children feel comfortable with expressing their emotions and communicating their desires to caregivers, and they are confident their needs will be addressed (Bretherton & Munholland, 1999).

Anxious-Avoidant. The second pattern is called anxious-avoidant (Ainsworth et al., 1978). These children display little stress when left alone and often seek distance from the parent (Solomon & George, 1999, p. 291) Research on the mothers of these

infants revealed they found close contact aversive and often rejected their infants. These

caregivers seem remote and quick to anger (Levy et al., 1998, p. 408). The focus of these

attachment figures seems to be on encouraging independence and they respond with

limited emotion and physical affection (Ainsworth & Eichberg, 1991). Like secure

children, anxious-avoidant children explore the new environment but are not bothered by

the departure of the attachment figure. The child blatantly ignores the attachment figure's

return, concentrating solely on the environment. Thus, anxious-avoidant children avoid or

minimize the importance of their emotions and seem outwardly calm and indifferent.

However, they have been found to have higher stress levels than secure or anxious-

resistant children (Cassidy, 1999).

     Anxious-Resistant. Children who are classified as anxious-resistant display

intense distress when their caretaker leaves, and they are unable to be calmed when the

caretaker returns. These children lack confidence in the caregiver's reactions (Peluso,

Peluso, White & Kern, 2004, p. 140). Research on the mothers of these children found

they were more self-preoccupied and more sensitive to their own needs than those of their

children (Levy et al., 1998, p. 408). These caregivers were observed to be unpredictable

and indifferent, which resulted in the children's tendency to cling to their attachment

figure and show disinterest in the surrounding environment (Ainsworth et al., 1978,

p. 314). The child's primary focus is on the attachment figure and the child is

tremendously upset when separated from the caregiver. Anxious-resistant children

exaggerate their distress in a strange situation, and project feelings of distress, anger, and

anxiety in order to gain the attention of the inconsistent caregiver (Cassidy, 1999). The

inability to be consoled results from the child's fear that calming down will result in losing the caregiver's attention.

*Disorganized-Disoriented***.** The fourth category, disorganized-disoriented, was added later (Levy et al., 1998; Main & Solomon, 1990). Disorganized-disoriented children appear to be confused about how to respond to their caregivers and they are more likely to have been maltreated by parents (Lyons-Ruth, Connell, Zoll & Stahl, 1987). They seem frightened by the caregiver and may tend to avoid or resist his/her approaches. One striking characteristic is that infants may become very still when the caregiver is present (Main & Hesse, 1990). Parents of these children are more troubled, depressed, and abusive. These parents may be troubled by their own attachment-related traumas and losses (Belsky & Cassidy, 1994). Research has shown that parents of disorganized-disoriented children were more likely to be alcoholics (Lyons-Ruth & Jacobvitz, 1999) and/or involved in violent relationships (Wekerle & Wolfe, 1998).

In summary, secure children balance their desire for the attention of attachment figures and their interest in exploring the environment (Ainsworth et al., 1978). Secure children are much more likely to explore their environment. Early childhood attachment styles are usually maintained throughout one's lifetime.

Working Models

Bowlby's (as cited in Cassidy, 1999) concept of an internal working model consisted of "mental representations of the attachment figure, the self, and the environment, all of which are largely based on experiences" (p. 7). A working model is created by individuals based on their historical experiences with actual attachment figures

(West & Sheldon-Keller, 1994, p. 54). Bowlby (1969/1982) referred to the construction of "working models that are based on actual experience but are used to extrapolate those experiences to novel situations" (p. 80). A working model is created and internalized by children as they establish a stable pattern of attachment which is based on the continuing contact with their caregiver (Heiss, Berman & Sperling, 1996, p. 103). A working model may be partly conscious and partly unconscious. Individuals are often not aware of their internal working models. The model may not always be completely consistent or coherent (Levy et al., 1998).

A working model is a set of expectations about the likelihood that attachment figures will provide support during times of stress (care giving), as well as expectations about how one will interact (care seeking) with attachment figures (Bowlby, 1973/1999). Working models are composed not only of behaviors but also of affective, cognitive, and perceptual components (Chisholm, 1996). They impact the way people interpret situations as well as how they feel, think, and act.

Bowlby (1969/1982) was interested in how attachment influences future behavior and personality. By understanding how early attachment behaviors create working models, one can begin to predict future behavior. Working models create a useful framework for guiding behavior as one interacts with the attachment figure and others in their lives. The working model also enables one to predict one's own behavior as well as the social behavior of others (Kerns, 1994). Most importantly, working models pave the way for attachment throughout an individual's lifetime.

Kirkpatrick (2005) posited that God meets the five characteristics set out by Ainsworth (1985) as an attachment figure and can serve as an attachment figure. An individual's prior attachment experience, or working model, can influence how he or she will create attachment to others, including God or a transcendent in their lives. The current research is being conducted to determine if a correlation exists between parental attachment and spiritual development, which may or may not include God.

Attachment and Exploration

Bowlby recognized that the attachment system and exploration system were different yet interdependent (Grossman, Grossman, & Zimmerman, 1999). Individuals with secure bases have the confidence needed to explore the surrounding environment (Ainsworth, 1985). Grossman et al. (1999) affirmed that "the freedom to explore in the face of adversity and the freedom to call for and accept help are both necessary and important aspects of security" (p. 781). Secure exploration is a hallmark of secure attachment.

The concept of a secure base is important in attachment theory. "A secure parental base provides a child with the confidence needed for meeting the challenges of exploration" (Grossman et al.,1999, p. 761). In the present research, spirituality is defined as "the personal quest for understanding the ultimate questions about life, about meaning, and about relationship to the sacred or transcendent, which may (or may not) arise from the development of religious rituals and the formation of community" (Koenig et al., 2001, p. 18). One definition of quest is "to go in search of" (Neufeldt, 1988). Spiritual

development requires seeking, searching, and exploring. Students whose parents provide a secure base will be comfortable in undertaking exploration.

College Students and Attachment

When students go off to college they often are separating physically from their parents and gaining autonomy (Kenny, 1994). This is a time when they begin to disengage from childhood and learn to function in the college environment on their way to becoming an autonomous adult (Kalsner & Pistole, 2003, p. 92). Development of social, cognitive, and emotional autonomy from parents is a critical task during this period (Collins, 1990; Hill & Holmbeck, 1986). However, autonomy does not mean that the relationship with the parents suffers, but the autonomy occurs in the context of a close, enduring relationship with parents (Allen, Hauser, Bell & O'Connor, 1994; Collins, 1990). Chickering called this task "Moving Through Autonomy Toward Interdependence" and designated it his third vector (Evans et al., 1998, p. 39). As students move through this vector they "develop increased emotional independence, self-direction, problem-solving ability, persistence, and mobility, as well as recognition and acceptance of the importance of interdependence" (Evans, 1998, p. 168).

College students experience many new situations. These changes are similar to the situations contained in the "Strange Situation Experiment" by Ainsworth and her colleagues. As in Ainsworth et al.'s (1978) experiment, new college students are expected to explore and master their new environments in situations of stress and emotional discomfort. While experiencing stress, students' parents may serve as a secure bases of support, offering help, which enable them to feel more confident (Kenny, 1994).

As adolescents move into the adult world they face emotionally challenging exploration of diverse new roles and settings. This often mirrors many of the separation struggles of early childhood (Blustein et al., 1995).

Separation-individuation is a key process of adolescent development (Kalsner & Pistole, 2003). Daniels (1990) explained that individuation is a process where adolescents separate themselves while at the same time continue to participate as family members. Becoming autonomous while maintaining an interdependent relationship with parents are complementary behaviors and part of normal family growth and development (Daniels, 1990). This is an important developmental task for the college student. How students make this transition is related to their attachment to their parents. Students with secure attachment to their parents are more likely to continue to seek them out in situations of stress and view them as available as a source of support when needed in a way that does not threaten, but supports, the development of autonomy (Kenny, 1987, p. 19). While this may be counterintuitive, connection with one's parents is important in facilitating autonomous behavior (Josselson, 1988).

Most adolescents and their parents have to work out ways of negotiating separation after having shared a close relationship that evolved from early attachment ties (Mercer, 2006). When students move away from home their behaviors promoting proximity to attachment figures become less intense and less frequent. Because they may not see their parent(s) on a regular basis, their communication (phone calls, e-mail, etc.) become increasingly effective and important in providing comfort (Armsden & Greenberg, 1987).

A great deal of research has been conducted on the influence of attachment on the psychological well-being of adolescents (Fass & Tubman, 2002; Heiss et al., 1996). Kenny's (1990) research supported the usefulness of attachment theory in understanding the strength of family ties in late adolescence. Secure parental attachment is also related to general psychological well-being (Armsden & Greenberg, 1987). Armsden and Greenberg (1987) also found that students with secure parental attachment experienced greater self-satisfaction and were more likely to seek social support and reacted better to stressful situations (p. 427). On the other hand, insecure attachment has been linked to increased depression (Armsden, Greenberg, Burke, & Mitchell, 1990; MacKinnon et al., 1989). The correlation of parental attachment and spiritual development has not been explored previously.

What role does attachment style have in the development of adolescents and college students? Many researchers have correlated parental attachment to a variety of different characteristics. Researchers rely on two primary instruments to measure attachment quantitatively: Inventory of Parent and Peer Attachment (IPPA) and the Parental Attachment Questionnaire (PAQ).

The Inventory of Parent and Peer Attachment (IPPA) was developed in the mid-1980s by Armsden and Greenberg (1987) to measure adolescent attachment. The IPPA concentrates on attachments with peers and with parents as many researchers (Bretherton, 1985; Greenberg, Siegal, & Leitch, 1984; Kahn & Antonucci, 1980; Lerner & Ryff, 1978; Weiss, 1982) believed that attachment to parents develops children's working models of relationships and that adolescents use these models to form peer attachments.

The IPPA consists of 75 questions to measure attachment to mother, father, and peers (Armsden & Greenberg, 1987). For each attachment figure, the instrument measures subscales of trust, communication, and alienation.

The Parental Attachment Questionnaire (PAQ) was developed by Kenny to measure Ainsworth et al.'s (1978) concept of perceived attachment in adolescents and young adults (Kenny, 1985). The 55-item instrument measures subjects' perceptions of parental availability, acceptance, emotional support, and ability to cultivate independence, as well as students' satisfaction with parental support and coping techniques in times of stress. The PAQ consists of three scales derived from factor analysis: (a) Affective Quality of Attachment; (b) Parental Fostering of Autonomy; and (c) Parental Role in Providing Emotional Support. The items are presented on a 5-point Likert scale (where 1 is not at all and 5 is very much) and scores are calculated for each scale. Students are asked to consider their parents as a single unit when responding. Research has shown that overall family environment is more important than individual relationships with parents (Kenny, 1994). However, instrument instructions allow for students to consider only one parent, both parents, or an alternative attachment figure if separation, divorce, death, or re-marriage have broken the traditional family unit. The PAQ has been found valid and reliable, with a .92 test-retest score over a 2-week interval for the instrument as a whole, and scores ranging from .82 to .91 for each of the three scales (Kenny, 1990, p. 40). Cronbach's alpha was .96 for the first scale; .88 for the second; .88 for the third (Kenny & Donaldson, 1991, p. 481); and internal consistency as .93 for male and .95 for female students (Kenny, 1987, p. 21). The PAQ has been

favorably compared with subscales from other instruments measuring similar constructs such as the Moos Family Environmental Scale (FES; Kenny & Donaldson, 1991; Moos, 1985); Family Adaptability and Cohesion Evaluation Scale (FACES-III; Holmbeck & Wandrei, 1993; Olson, 1986); and the Inventory for Peer and Parental Attachment (IPPA; Armsden & Greenberg, 1987; Heiss et al., 1996). In a study to assess five different scales of parental attachment, Heiss et al. (1996, p. 111) found that the PAQ has convergent and construct validity. Using factor and correlational analysis, the researchers found that the PAQ adequately assessed constructs of attachment theory in relation to the other scales and had the expected correlation with scores on various personality criterion scales. (Kenny, 1987).

IPPA Studies. Many research projects have studied the impact of both parent and peer attachment on adolescent development with the IPPA instrument. In their longitudinal study of 77 families with high school freshmen children, Allen et al. (1994) found that attachment behavior and the tendency to use parents as a secure base for exploration continues into adolescence. Laible, Carlo, and Raffaelli (2000) assessed the influence of parent and peer attachment on 89 middle school and high school students. They found that both types of attachment are important to adolescents and had a similar impact on their levels of sympathy, aggression and depression. In Laible et al.'s study, secure peer attachment showed a slight advantage over secure parent attachment, but that adolescents with secure attachments to both parents and peers fared better overall. Armsden and Greenberg (1987) studied attachment of 86 undergraduate students between the ages of 17-20. Their study found that secure parent and peer attachments positively

influenced students' psychological well-being, and that parental attachment was the most

significant criterion of the subjects' overall happiness (p. 445). Fass and Tubman (2002)

also focused on both parent and peer attachment on a study of 357 undergraduate students

between the ages of 18 to 24. They found that parental and peer attachments were

significantly associated with perceived competence, self-esteem, sex-role adherence,

feelings of control, and optimism. Attachment was not found to be connected to academic

functioning of students (p. 570). Mattanah, Hancock and Brand (2004) tied parental

attachment to college adjustment for both females and males in their research on a sample

of 404 college students. Students who displayed secure parental attachment and

appropriate degrees of separation-individuation (defined as the lack of negative feelings

toward separation) were more adjusted to college life. Both females and males in

Mattanah et al.'s study indicated that their attachment to their mothers, rather than to their

fathers, more strongly influenced their feelings about separation. This is in line with

Kenny and Perez's (1996) finding that most college students identified their mother as

the primary attachment figure in their lives. Finally, in their review of the literature,

Blustein et al. (1995) found that secure parental attachment influenced identity formation,

adjustment, and positive ego development in college students.

PAQ Studies. The PAQ has been used in many studies to assess the parental

attachment of college students. Kenny (1987) found that attachment patterns are related

to career planning patterns and correlated to positive relationships, self-assertion, and

dating competency. Several studies used the PAQ to focus on the influence of parental

attachment on identity development. Kenny and Sirin's (2006) research of young adults

ages 22-29 and their mothers looked at the impact of parental attachment on the adult

children's self-worth, self-perception, and depression level. The sample was relatively

small (81 pairs), highly educated, and from one geographic region, but featured diversity

in ethnicity, income levels, and living arrangements. The research revealed that parental

attachment had an impact on all three variables, with secure attachment correlating with

high self-worth and self-perception and with low depression levels. Kenny and Sirin

(2006) also discovered that parental attachment appeared to be more related to

developing internal working models rather than serving as a base of support as children

became adults. Similarly, McCarthy, Moller, and Fouladi (2001) found that parental

attachment impacts the development of identity. In their study of 235 college juniors and

seniors, they found that parental attachment impacted the regulation and perception of

stress, which in turn influenced emotional functioning and the development of internal

working models. Young and Lichtenberg (1996) studied the influence of parental

attachment on identity development on a sample of 329 college seniors. They found that

students who were securely connected to their parents showed greater development in

terms of identity exploration and commitment.

  Thus, college students' secure parental attachment appears to be related to general

psychological well-being, greater self-satisfaction, identity development, increased ability

to handle stress and likelihood of seeking social support (Armsden & Greenberg, 1987;

Kenny & Sirin, 2006; McCarthy et al., 2001; Young & Lichtenberg, 1996). But what role

does parental attachment play in spiritual development? One may be tempted to infer that

developmental strides are a positive outcome of secure development, but further study is needed.

Attachment and Diversity

Gender. Kenny's (1990) research supported the usefulness of attachment theory in understanding the strength of family ties in late adolescence. Her research revealed relatively few gender differences in men's and women's descriptions of their parental attachments. However, women reported a stronger perception of parents as a source of emotional support and seemed to benefit in terms of confidence and assertion from secure parental attachment. Other researchers found that women scored significantly higher than men on the Affective scale and the Emotional Support scales of the PAQ (Kalsner & Pistole, 2003). Men who attended college further from home reported more positive feelings toward their parents and reported that parents were more supportive of their desire to be independent. Contrary to Kalsner and Pistole's findings, Lapsley, Rice and Fitzgerald (1990) found no significant differences between genders in their research (p. 564). Interestingly, Taub (1997) found that despite gains in autonomy from their first to the final year in college, women's perception of parental attachment remained steady. Taub's findings indicated that the popular notion of breaking away from parental authority in order to achieve independence may not be relevant for young women.

Class Level. Lapsley et al.'s (1990, p. 564) study of attachment and adjustment to college found that feelings of attachment to parents were not significantly different for first-year students than for upper-class students.

Race and Ethnicity. Very little research has been conducted on ethnicity or race and attachment. Hinderlie and Kenny (2002) tried to remedy this with a study of 186 African American college students ages 17 to 24. They found that their sample of African American students was indistinguishable from Caucasian students in previous studies in regards to parental attachment and college adjustment.

The idea of parental attachment can be controversial to mixed ethnic samples. Most studies on attachment ask students to report attachment to mother or father. However, Kenny and Perez (1996) found that 27% of non-Caucasian college students reported a family member other than a parent as their primary attachment figure. Various countries and cultures have different values and practices related to child care (Ainsworth, 1989). Differences in these values and practices may lead to different attachment behaviors than those considered the norm in the United States. There are no firm conclusions about cultural differences with regard to attachment because there is not an extensive multi-cultural data set (Blustein et al., 1995). As a result, Kalsner and Pistole (2003) used a modified PAQ that asked the respondent to report attachment behaviors as related to any primary caregiver.

Adults and Attachment

Adult attachment relationships are built on earlier experiences with attachment figures. They arise largely from working models of the attachment figure and significantly affect the adult's ability to form new attachment relationships (Bowlby, 1977). Adults who had developed secure attachment to their parents or caregivers were likely to develop secure attachments to peers and others. By understanding how early

attachment behaviors create working models one can begin to predict future behavior.

Working models create a useful framework for guiding behavior as one interacts with the

attachment figure and others. The working model also enables one to predict one's own

behavior as well as the social behavior of others (Kerns, 1994). Most importantly,

working models pave the way for attachment throughout an individual's lifetime.

Weiss (1982) outlined three characteristics that distinguish attachment in adults

from attachment in children. First, peer attachment supersedes parent attachment for

adults, although an individual's working model development from childhood attachment

relationships mold future relationships. Next, while attachment relationships in infants

impact their behavior in every setting, adults are able to compartmentalize their

attachments with other adults. Thus, attachment behavior does not necessarily influence

every action of the adult. Finally, most adult attachments contain a sexual relationship as

adults' primary attachment figures are usually spouses or significant others. In this way,

attachment maintains its biologically-based mechanism to ensure survival of the species.

As attachment in adolescents and young adults is studied, one must keep in mind

that the function of attachment is to keep the individual safe and secure. Attachment

relationships are particularly important in times of crisis in one's life. They also help

determine successful adaptation as adults (West & Sheldon-Keller, 1994). Bowlby (1988)

stated "the extent to which [an individual] becomes resilient to stressful life events is

determined to a very significant degree by the pattern of attachment he or she develops

during the early years" (p. 8). The working model of social relationships of adults is

multi-faceted, having been established in childhood and molded by life experiences. The

adult's working model should allow "for appropriate social and emotional relationships and behaviors with a variety of people" (Mercer, 2006, p. 101).

Summary

Research has shown that parental attachment continues to influence individuals throughout their lives. What pattern of parental attachment most accurately describes today's college students? Can we assume that they are securely attached based on their close connection with parents?

Only minimal data exist regarding the differences in parental attachment based on gender; race and ethnicity; class standing; and age of college students. Are there significant differences in these populations in terms of parental attachment? What about parental attachment's correlation with spiritual development? The present study sought to answer these questions and add to the understanding of parental attachment and spiritual development in college undergraduate students.

Next, spiritual development theory and the existing evidence of its interaction with parental attachment will be outlined.

Spiritual Development

Why is Spiritual Development Important?

Until the late 1990's there was little discussion of spirituality or spiritual development in student affairs and college student development literature (Love & Talbot, 1999). Love and Talbot (1999) pointed out that by not addressing students' spiritual development, higher education professionals did not consider spiritual development as an important aspect of student development. However, as students

increase their quest for spiritual or religious fulfillment, student affairs has a critical role in addressing spiritual development because of its commitment to provide programs that address students' development and learning (Capeheart-Meningall, 2005, p. 31).

In a multi-year research project (2003-2007) to examine spiritual development among college students, the Higher Education Research Institute (HERI, n.d.) found that college students were interested in spirituality. They reported that many undergraduate students were engaged in exploring the meaning and purpose of life and reported that they were committed to their religious beliefs (p. 3). Additionally, HERI found that "freshman have high expectations for the role their institutions will play in their emotional and spiritual development. They place great value on their college enhancing their self-understanding, helping them develop personal values, and encouraging their expression of spirituality" (p. 3).

Higher education institutions in the United States have been successful in helping students develop the expertise needed to be successful in the material world through the study of science, medicine, technology, and business. However, higher education has not paid much attention to the student's "inner" development which includes, among other areas, spiritual development (Chickering et al., 2006, p. vii).

Maslow appeared to use the terms self-transcendence and spirituality synonymously (Love & Talbot, 1999, p. 368). "The spiritual life is . . . part of the human essence. It is a defining characteristic of human nature, without which human nature is not full human nature" (p. 314) (Maslow, 1971 as cited in Love & Talbot, 1999, p. 368).

Definitions

 Spirituality. The literature contains a plethora of definitions for spirituality. Mohamed, Hassan and Wisnieski (2001) declared there are more definitions of spirituality than there are researchers to write about it. The debate surrounding the definition of spirituality indicates the importance of this topic (Schein, 1992).

 Aldridge (as cited in Thoresen, 1999, p. 293) presented 13 examples of definitions related to spirituality and healing. Most of them contained the following concepts: (a) transcendence; (b) relationship to God or some other universal power; (c) search for greater meaning, purpose, force or energy; and (d) healing by means of non-physical intervention.

 Dalton et al. (2006) used the term spirituality to "include all forms of reflection and introspection in which the primary goal is to explore one's relationship to the transcendent in order to deepen and enrich personal meaning, purpose, authenticity and wholeness" (p. 5). Pargament and Mahoney (2002) simply defined spirituality as "A search for the sacred" (p. 647). Hill et al. described the sacred as "a person, an object, a principle, or a concept that transcends the self" (2000, p. 68). Koenig et al. (2001) defined spirituality as "the personal quest for understanding the ultimate questions about life, about meaning, and about relationship to the sacred or transcendent, which may (or may not) arise from the development of religious rituals and the formation of community" (p. 18). The author used Koenig et al.'s (2001) definition in the current research as their definition entailed a common set of terms and concepts that were found in many definitions in the literature such as quest, relationship, transcendent, and questions of life.

Spiritual development. There is no standard and commonly agreed upon definition of spiritual development (Love & Talbot, 1999). However, Love and Talbot defined spiritual development as:

> An interrelated process of seeking self-knowledge and centeredness, transcending one's current locus of centricity, being open to and embracing community, recognizing an essence or pervasive power beyond human existence, and having that sense of spirit pervade one's life. (p. 367)

Benson et al. (2003) defined spiritual development as:

> The process of growing the intrinsic human capacity for self-transcendence, in which the self is embedded in something greater than the self, including the sacred. It [spirituality] is the developmental "engine" that propels the search for connectedness, meaning, purpose, and contribution. It [spirituality] is shaped both within and outside of religious traditions, beliefs, and practices. (pp. 205-206)

Benson et al.'s (2003) definition was the basis for the use of the term spiritual development in the present research.

Self-transcendence. Kirk, Eaves, and Martin (1999) defined self-transcendence as "the capacity to reach out beyond oneself and discover or make meaning of experience through broadened perspective and behavior" (p. 81). Kirk et al. stated that self-transcendence is a developmental aspect of spirituality. Slife, Hope, and Nebeker (1999) described transcendence as having one or two forms. Transcendence can suggest relating to a divine being by rising above our physical selves and/or going beyond our physical selves to a heightened awareness of ourselves (p. 65).

Spiritual Openness. Spiritual Openness is a measure used in the Spiritual Experience Index (SEI-R) (Genia, 1997). Spiritual Openness was strongly linked to the levels of dogmatism, level of tolerance for ambiguity and fundamentalism. There was a moderate correlation between Spiritual Openness and spiritual quest (p. 349). Spiritual

Openness can be used to predict open-mindedness and tolerance for a variety of religious

beliefs (p. 353). Those with an open and inclusive approach to faith have high levels of

Spiritual Openness (p. 348).

Spiritual Support. Spiritual Support is a measure used to determine the level of

reliance on spirituality for support (Genia & Cooke, 1998, p. 117). Spiritual Support is

linked to intrinsic faith, spiritual well-being, and worship attendance (Genia, 1997,

p. 349).

Spiritual-transcendence. Piedmont (1999) defined spiritual transcendence as:

> the capacity of individuals to stand outside of their immediate sense of time and
> place to view life from a larger, more objective perspective. This transcendent
> perspective is one in which a person sees a fundamental unity underlying the
> diverse strivings of nature. (p. 988)

Measuring Spirituality

There are many instruments that have been designed to measure spiritual wellness

and spiritual development (Moberg, 2002, p. 47). Unfortunately, the majority of

instruments available that purport to measure spirituality are designed to measure

Christian or theistic spirituality (p. 49). The Spiritual Assessment Inventory (SAI)

measured spiritual maturity from a Judeo-Christian perspective (Hall & Edwards, 1996).

Another often used instrument is the Spiritual Well Being Scale (Ellison, 1983). The

Spiritual Well-Being Scale (SWBS) was established as a valid indicator of one's sense of

well-being in relationship to God as well as one's overall sense of life purpose and

satisfaction (Ellison, 1983). Like the Spiritual Assessment Inventory, the SWBS

measures spirituality from a theistic point of view. The Spiritual Transcendence Scale

(STS) (Piedmont, 1999) was constructed to measure non-religious spirituality. However,

the STS measured only one aspect of spirituality, spiritual transcendence. The Faith Maturity Scale (FMS) was designed to assess how much one's life was energized by a fulfilling faith orientation (Benson, Donahue, & Erickson, 1993). The FMS had two subscales; the Horizontal scale assessed how much one's faith leads to helping others, and the Vertical subscale considered one's sense of closeness to God. The Vertical subscale measured closeness to God and designed for subjects who had a belief in a God.

The Spiritual Experience Index (SEI-R) was developed by Genia (1997) as a revision to her original Spiritual Experience Index which was developed in 1991. The scale was developed so that the study of faith could be expanded to include those who do not subscribe to a particular religious tradition (Genia, 1997). The 23-item instrument was used to gauge spiritual experience within a developmental framework. The SEI-R consisted of two scales derived from factor analysis: Spiritual Support (SS) and Spiritual Openness (SO). The items were presented on a 6-point Likert scale (where 1 was strongly disagree and 6 was strongly agree) and scores were calculated for each scale.

Cronbach's alpha for the Spiritual Support scale (SS) was .95 and .79 for the Spiritual Openness (SO) scale. Internal consistency for all 23 items was .89 (Genia, 1997). Reinert and Bloomingdale (2000) found evidence supporting the validity of the revised Spiritual Experience Index. They found the SEI-R to be "an integrated instrument with two subscales useful for psychospiritual research within a developmental perspective" (p. 180).

Relationship Between Spirituality and Religion

Cherry, DeBerg, and Porterfield (2001) found that many undergraduate students were "spiritual seekers rather than religious dwellers, and many of them were constructing their spirituality without much regard to the boundaries dividing religious denominations, traditions, or organizations" (p. 276). In a national survey of adults, Gallup (2003) found "49% of respondents said they are 'religious,' while 39% said they are 'spiritual but not religious.'" Johnson, Kristeller, and Sheets (n.d.) found that "Most individuals . . . described themselves as both spiritual and religious, but a significant minority (especially among baby boomers and practitioners of New Age spirituality) described themselves as spiritual, but not religious" (p. 3).

In any discussion of spirituality, pointing out the differences and similarities between religion and spirituality are important. The concepts of religion and spirituality have been defined in different ways. First, they have been described as separate but overlapping (Pargament et al., 1995; Zinnbauer et al., 1997). They are also defined as separate concepts. Klenke stated, "Spirituality is not religion" (2003, p. 59). Spirituality has also been defined as a broad concept that includes religion (Hufford, 2005). These three views are outlined in Figure 1.

Pargament and Mahoney (2002, p. 647) referred to religion as institutional, dogmatic, and restrictive while spirituality is personal and subjective. Love (2001) defined religion as "a shared system of beliefs, principles, or doctrines related to a belief in and worship of a supernatural power or powers regarded as creator(s) and governor(s) of the universe" (p. 8).

Religion and Spirituality
as Separate but
Overlapping Concepts

Religion and Spirituality
as Separate Concepts

Spirituality as a Broad
Construct that includes
Religion
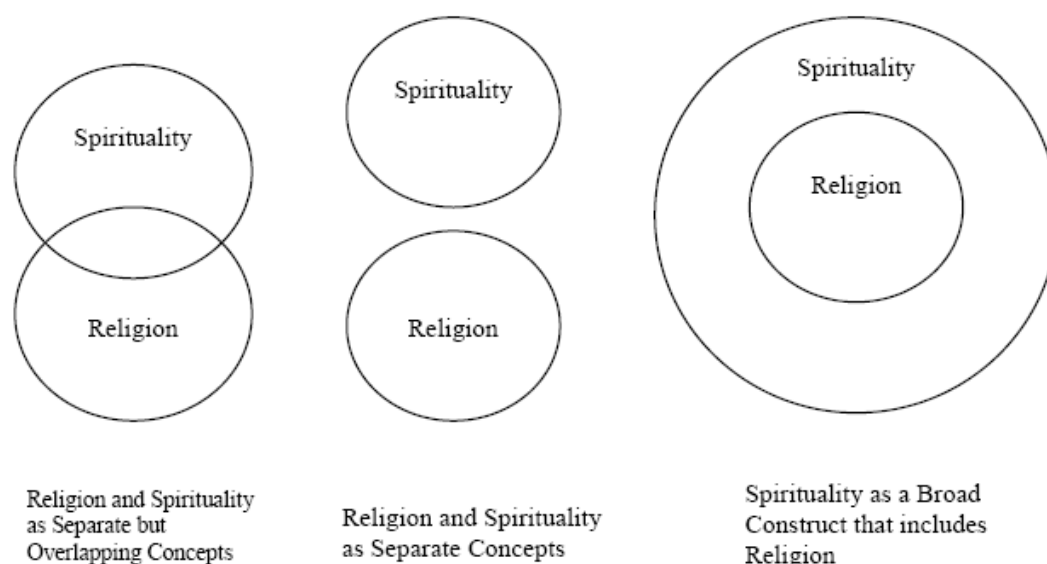
Adapted from Johnson et al., (n.d.).

Figure 1. Relationship between spirituality and religion.

Hill et al. (as cited in Chickering et al., 2006) analyzed research on religion and

spirituality from the perspective of several disciplines. They list the following for

distinguishing and defining religion and spirituality:

1. Religion and spirituality are both understood by individuals to

   include "subjective feelings, thoughts, and behaviors that arise

   from search for the sacred." (p. 68)

2. Religion may include a search for the non-sacred goals, such as

   social identity, affiliation; and health and wellness, within a

   context that has as its primary goal the facilitation of the search

   for the sacred—for example, membership in a church.

3. Religion involves means and methods through which the

   search for the sacred is validated by and receives support from

   a recognized group. Spirituality may not require external

   validation. (p. 48)

Theories

    Fowler's faith development theory. Fowler's (1981) faith development theory was built on Kohlberg's research and development of moral development stage theory. Fowler explained that faith, a term often used synonymously with spirituality, is universal and can exist either within or outside of religion. Faith is a person's way of responding to transcendent value and power in such a way that the trust in and loyalty to the source of transcendence integrates identity and gives one's life unity and meaning. Fowler and Dell (2006) outlined seven stages of faith development.

    Primal Faith (infancy – age 2). Attachment with the primary and secondary caregiver occurs during the primal faith stage.

    Intuitive-Projective Faith (toddlerhood and early childhood). During this period the "emergence of a style of meaning-making based on an emotional and perceptional ordering of experience" (Fowler & Dell, 2006, p. 38).

    Mythic-Literal Faith (middle childhood and beyond). During the Mythic-Literal Faith stage the child does not "construct God in particularly personal terms or attribute to God highly differentiated internal emotions and interpersonal sensitivities. God is often constructed on the model of a consistent and caring, but just, ruler or parent" (Fowler & Dell, 2006, p. 39).

Synthetic-Conventional Faith (adolescence and beyond). In this stage individuals develop attachments to specific beliefs, values that link them with the most significant others among their peers, family, and other non-family adults. According to Fowler's theory, many traditional-aged college freshmen are in the Synthetic-Conventional Faith stage.

Individuative-reflective Faith (young adulthood and beyond). During this stage individuals develop "the ability to reflect critically on the values, beliefs and commitments one subscribed to as part of constructing the previous stage" (Fowler & Dell, 2006, p. 40). Reexamining deeply held beliefs can be painful and occurs in many individuals during early adulthood which is often during the college years.

Conjunctive Faith (early mid-life and beyond). Many individuals never pass into the Conjunctive Faith stage. During this stage one recognizes that multiple truths exist and that one must balance and maintain the tensions between the multiple perspectives.

And finally*,* during the *Universalizing Faith* (midlife and beyond) stage, one is "concerned about creation and being as a whole relatedness of nationality, social class, gender, age, race, political ideology, and religious tradition. In this ultimate stage of faith, the self is drawn out of its own self-limits into a groundedness and participation in one's understanding of the Holy" (Fowler & Dell, 2006, pp. 41-42).

These stages involve a shifting from an external focus of religious authority to a more personal faith (Johnson et al., n.d.).

Parks' theory of faith development for the college years. Parks elaborated on Fowler's stages of faith development to build her model of faith development during the

college years (Chickering et al., 2006). Parks' model included two separate stages, young

adult and adult, within Fowler's Individuative-Reflective stage (Chickering et al., 2006).

These further refined stages provided greater insight to faith development during the

college years. Parks also differentiated adults into two categories; tested adults and

mature adults (Parks, 1986). Beginning with adolescence, Parks' model consisted of four

stages, adolescent, young adult, tested adult, and mature adults.

Parks (2000) characterized faith development as having three interactive

components: *forms of knowing, forms of dependence,* and *forms of community.* Within

this framework, she saw faith development occurring as a series of transformations from

"authority bound forms of meaning-making . . . to a committed, inner-dependent mode of

composing meaning" (p. 102).

Stage 1: *Adolescent or Conventional Faith.* Individuals in this stage have faith

characterized by authority-bound forms of knowing, dependent/counterdependent forms

of dependence, and conventional forms of community. Often the individual's faith is

formed by authority figures such as parents and churches. Absolute forms of knowing

break down as individuals mature and they may resist authority and a commitment to a

particular community weakens (Chickering et al, 2006, pp. 59-60).

Stage 2: *Young Adult Faith.* Parks characterized the Young Adult Faith stage as

having probing commitment forms of knowing; fragile inner-dependent forms of

dependence; and mentoring forms of community. During this time young adults begin to

create meaning and faith in their lives. Since they may still be dependent on parents, the

process of developing self-identity remains fragmented. Individuals in this stage are

usually college students and they start to challenge established ideas and identify new authorities through influence of faculty, peers, co-curricular experiences, and others in the college community (Chickering et al., 2006, p. 60).

Stage 3: *Tested Adult Faith.* Individuals at this stage begin to understand and accept their commitments, meanings, and faith. Faith development becomes internally focused rather than externally focused. As an individual's faith develops to this extent, he or she begins to self-select groups that share similar values. Typically, most undergraduate students do not move into this stage but graduate students and beyond are likely to move into this stage (Chickering et al., 2006, pp. 60-61).

Stage 4: *Mature Adult Faith*. Individuals in this stage are characterized by convictional commitment as a form of knowing. They also become interdependent and are open to other forms of community. This stage is usually not manifested until one's middle-ages (Chickering et al., 2006, p. 61).

Genia's psychospiritual model. Genia's (1997) model of psychospiritual development also includes four spiritual types: spiritually underdeveloped, dogmatic, transitional, and growth oriented (p. 353). Her model drew upon Allport & Ross' (1967) theory of intrinsic/extrinsic faith and Batson's (1976) concept of religion as quest. The Allport–Ross Religious Orientation Scale (ROS) differentiated those who are truly committed to their faith from those who use their faith for self-serving motives (Allport & Ross, 1967). Those who show an intrinsic religious orientation are authentically committed to their faith and use religion for personal benefits. Those with an extrinsic religious orientation use religion for social reward (Gorsuch & McPherson, 1989).

Allport and Ross (1967) explained "The extrinsically motivated person *uses* his religion, whereas the intrinsically motivated *lives* his" (p. 434).

Batson and Ventis (1982, p. 150) suggested that there is a third dimension of being religious called "religion as quest." Quest involves exploring existential questions and not accepting simple answers to life's difficult questions. Batson and Schoenrade (1993) pointed out:

> An individual who approaches religion in this way recognizes that he or she does not know, and probably never will know, the final truth about such matters. Still, the questions are deemed important, and, however tentative and subject to change, answers are sought. (p. 417)

Using the works of previous theorists, Genia (1997) established criteria for mature spirituality. These criteria led to her classification of the four levels of spiritual maturity. The criteria for achieving mature spirituality are:

1. Transcendent relationship to something greater than oneself

2. Consistency of lifestyle, including moral behavior, with

    spiritual values

3. Commitment with absolute certainty

4. Appreciation of spiritual diversity

5. Absence of egocentricity and magical thinking

6. Equal emphasis on both reason and emotion

7. Mature concern for others

8. Tolerance and human growth strongly encouraged

9. Struggles to understand evil and suffering

10. A felt sense of meaning and purpose

11. Ample room for both traditional beliefs and private

interpretations. (Genia, 1997, p. 345)

Genia's (1997) model used two dimensions, Spiritual Support and Spiritual

Openness, to categorize individuals into four spiritual types as illustrated in Figure 2.

Spiritual Openness		Spiritual Support	
		High	*Low*
	High	Growth Oriented	Transitional
	Low	Dogmatic	Underdeveloped

Figure 2. Genia's (1997) model of spiritual development.

Genia (1997) found that:

Reliance on spirituality for support helps to anchor the spiritually committed with a faith community. However, if used to quell doubts and encourage elitism, spiritual support serves as a crutch for the emotionally insecure. On the other hand, spiritual openness without firm convictions and a sustained sense of responsibility is equally undesirable. (p. 353)

Type I: *Underdeveloped* types score low on both spiritual support (SS) and

spiritual openness (SO) and "lack spiritual rootedness and commitment" (Genia, 1997,

p. 356).

Type II: *Dogmatic* types score high on spiritual support (SS) and low on spiritual

openness (SO) and often form an attraction to a particular faith and form an

unquestioning devotion to that spiritual community (Genia, 1997). The Dogmatic stage is

similar to Parks' Adolescent or Conventional Faith stage and Fowler's Synthetic-

Conventional Faith stage.

Type III: *Transitional* types, those with low spiritual support (SS) scores and high

spiritual openness scores (SO), examine their beliefs and ideals and become curious

about different faiths (Genia, 1997). Transitional types are similar to those in Parks'

Young Adult Faith stage and Fowler's Individuative-Reflective Faith. In these stages,

individuals question previously held ideas.

Type IV: *Growth-oriented* types are individuals who have both high spiritual

support (SS) and high spiritual openness (SO). This is the most mature of the four types

(Genia, 1997). These individuals are committed to a specific spirituality but also remain

open to accept others' beliefs. This type is similar to Fowler's Conjunctive Faith and

Parks' Mature Adult Faith.

Summary

Spiritual development, though difficult to define, is an important aspect of college

students' development. In the present research, spiritual development is defined:

> The process of growing the intrinsic human capacity for self-
> transcendence, in which the self is embedded in something greater than the
> self, including the sacred. It [spirituality] is the developmental "engine"
> that propels the search for connectedness, meaning, purpose, and
> contribution. It [spirituality] is shaped both within and outside of religious
> traditions, beliefs, and practices (Benson et al., 2003, pp. 205-206).

The concepts of quest, transcendence, and self-transcendence are important

aspects of spirituality. There are several theories of spiritual development. The present

research used Genia's (1995) theory of psychospiritual development.

Attachment and Spiritual Development

Granqvist and Dickie (2006) cited research on attachment theory related to institutional forms of religion but not to spirituality. However, they theorized that "From an attachment perspective, however, it does not matter whether 'the search for connectedness' . . . has occurred within institutionalized religion so long as the search is for something greater than the self" (p. 198).

Attachment between infants and their parents/caregivers is a process with important implications for the child's future relationships. Fowler and Dell (2006) explained "This includes not only the individuals' relationships with others but also with a Supreme Being" (p. 37). There are several hypotheses on how an individual's attachment experience may influence his or her spiritual development. These hypotheses have mainly concerned spirituality in the context of organized theistic religion (Granqvist, 2002).

Compensation and Correspondence Hypotheses

The compensation hypothesis of attachment and religion assumed individuals who have experienced insecure childhood attachment relationships with their primary attachment figures sought attachment relationships to try to control distress and feel more secure (Kirkpatrick, 1992, p. 16). Ainsworth (1985, p. 199) described this as "God as a surrogate attachment figure." She received support in findings showing that distress-driven religious changes and conversions are linked to attachment insecurity. When considering this phenomenon in a theistic religion, Kirkpatrick (1999) theorized that the individual who did not have a secure attachment experience would turn to God in times

of stress as a perfect attachment substitute (p. 812). In another study, Eshleman, Dickie,

Merasco, Shepard, and Johnson (1999) found that children whose parents spent less

quality time with them viewed God as closer. Apparently these children, during times of

stress and periods of loneliness, found God fulfilling the role of attachment figure and

view Him as close and available.

The correspondence hypothesis of attachment and religion suggested that

individuals who have experienced secure childhood attachments have established a

foundation on which a secure relationship with others and God could be built

(Kirkpatrick, 1992, p. 18). Kirkpatrick explained:

> Bowlby's emphasis on the relative constancy of mental models throughout the life
> span suggests . . . that people's beliefs about attachment figures (including God,
> in this case) should directly reflect prior experience with attachment relationships.
> (p. 18)

Exploration Behavior

An important aspect in spiritual development may be the individual's comfort in

exploring his or her environment. The environment may be internal as well as external.

Individuals with secure parental bases have the confidence needed for meeting the

challenges of exploration (Grossman et al., 1999). Securely attached individuals are able

to strike a balance between attachment and exploration. When stressed, securely attached

individuals turn to their attachment figure and during other periods they are comfortable

exploring (Granqvist & Dickie, 2006).

Underlying the present research was that spiritual development was higher in

college students with stronger parental attachment because, due to their working models,

they were secure in exploring their environment. The exploration of their internal

"environment" is reflective of Benson et al.'s (2003) definition of spiritual development

as:

> The process of growing the intrinsic human capacity for self-transcendence, in which the self is embedded in something greater than the self, including the sacred. It [spirituality] is the developmental "engine" that propels the search for connectedness, meaning, purpose, and contribution. It [spirituality] is shaped both within and outside of religious traditions, beliefs, and practices. (pp. 205-206)

Securely attached children learn that trusted others will be available as a secure

base for comfort, support, and reassurance during times of stress and danger (Ainsworth

et al., 1978). As children grow into adolescence and young adulthood, they will continue

to have parents as a secure base as they begin to become autonomous and learn

interdependence (Kenny, 1987). Those students who have high levels of attachment to

their parents will be comfortable in exploring their environments, as they will have a

secure base to which they can return during times of stress and danger.

Summary

College students arrive on campus with a strong interest in spirituality (HERI,

n.d.). There were many definitions of spirituality (Mohamed et al., 2001) but the

common theme in the definitions was that spirituality was a search for meaning,

connections, and purpose (Aldridge, as cited in Thoresen, 1999). Koenig et al. (2001)

defined spirituality as "the personal quest for understanding to ultimate questions about

life, about meaning, and about relationship to the sacred or transcendent" (p. 18).

Individuals who had high levels of attachment to their parents were more comfortable

exploring their internal and external environments (Ainsworth, 1985).

Faculty, staff, and others working in higher education should provide students with the opportunity to grow in their spirituality (American Council on Education, 1949). Gaining an understanding of students' spiritual development may help college personnel provide relevant programs and services in support of their students continuing development.

The methodology used to explore the correlation between parental attachment and spiritual development in undergraduate college students will be explained in the next chapter. Quantitative research was used to address several questions pertaining to the correlation between these two important concepts.

Chapter 3

Methodology

The purpose of this study was to determine if there was a correlation between parental attachment and spiritual development in college students. The literature supported the idea that parental attachment, and the working models derived from early attachment experiences, influenced an individual's religious development (Granqvist & Dickie, 2006). However, many college students report that they are spiritual, but not religious (Cherry et al., 2001, p. 275). The present study explored the concept that parental attachment was correlated to spiritual development, not only religious development.

Research Questions and Hypotheses

R1: Was there a correlation between parental attachment and spiritual development?

H1a: There was no correlation between the total score on the Parental Attachment Questionnaire (PAQ) and the Spiritual Support (SS) score on the Spiritual Experience Index-Revised (SEI-R).

H1b: There was no correlation between the total score on the Parental Attachment Questionnaire (PAQ) and the Spiritual Openness (SO) score on the Spiritual Experience Index-Revised (SEI-R).

H1c: There was no correlation between the scores on the Affective Quality of Attachment scale of the PAQ and Spiritual Support scale on the SEI-R.

H1d: There was no correlation between the scores on the Parental Fostering of Autonomy scale of the PAQ and Spiritual Support scale on the SEI-R.

H1e: There was no correlation between the scores on the Parental Role in Providing Emotional Support scale of the PAQ and Spiritual Support scale of the SEI-R.

H1f: There was no correlation between the scores on the Affective Quality of Attachment scale of the PAQ and Spiritual Openness scale of the SEI-R.

H1g: There was no correlation between the scores on the Parental Fostering of Autonomy scale of the PAQ and Spiritual Openness scale of the SEI-R.

H1h: There was no correlation between the scores on the Parental Role in Providing Emotional Support scale of the PAQ and Spiritual Openness scale of the SEI-R.

R2: Were there differences in parental attachment between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group?

H2a: There was no difference between the scores for female and male college students on the Affective Quality of Attachment scale on the PAQ.

H2b: There was no difference between scores for female and male college students on the Parental Fostering of Autonomy scale on the PAQ.

H2c: There was no difference between scores for female and male college students on the Parental Role in Providing Emotional Support scale on the PAQ.

H2d: There was no difference between scores for female and male college students on the total PAQ score.

H2e: There was no difference between scores for Caucasian and non-Caucasian college students on the Affective Quality of Attachment scale on the PAQ.

H2f: There was no difference between scores for Caucasian and non-Caucasian college students on the Parental Fostering of Autonomy scale on the PAQ.

H2g: There was no difference between scores for Caucasian and non-Caucasian college students on the Parental Role in Providing Emotional Support scale on the PAQ.

H2h: There was no difference between scores for Caucasian and non-Caucasian college students on the total PAQ score.

H2i: There was no difference between scores for college students by class standing on the Affective Quality of Attachment scale on the PAQ.

H2j: There was no difference between scores for college students by class standing on the Parental Fostering of Autonomy scale on the PAQ.

H2k: There was no difference between scores for college students by class standing on the Parental Role in Providing Emotional Support scale on the PAQ.

H2l: There was no difference between scores for college students by class standing on the total PAQ score.

H2m: There was no difference between scores for college students by age group on the Affective Quality of Attachment scale on the PAQ.

H2n: There was no difference between scores for college students by age group on the Fostering Autonomy scale on the PAQ.

H2o: There was no difference between scores for college students by age group on the Parental Role in Providing Emotional Support scale on the PAQ.

H2p: There was no difference between scores for college students by age group on the total PAQ score.

R3: Were there differences in spiritual development between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group?

H3a: There was no difference in scores on the Spiritual Support scale of the SEI-R between female and male college students.

H3b: There was no difference in scores on the Spiritual Openness scale of the SEI-R between female and male college students.

H3c: There was no difference in scores on the Spiritual Support scale of the SEI-R between Caucasian and non-Caucasian college students. Hispanic Caucasian students were included in the non-Caucasian group.

H3d: There was no difference in scores on the Spiritual Openness scale of the SEI-R between Caucasian and non-Caucasian college students. Hispanic Caucasian students were included in the non-Caucasian group.

H3e: There was no difference in scores on the Spiritual Support scale of the SEI-R for college students of different class standings.

H3f: There was no difference in scores on the Spiritual Openness scale of the SEI-R for college students of different class standings.

H3g: There was no difference in scores on the Spiritual Support scale of the SEI-R for college students in different age groups.

H3h: There was no difference in scores on the Spiritual Openness scale of the SEI-R for college students in different age groups.

R4: Were there differences between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group in terms of the correlation of parental attachment and spiritual development?

H4a: There was no difference in terms of the correlation of parental attachment and spiritual development between female and male college students.

H4b: There was no difference in terms of the correlation of parental attachment and spiritual development between Caucasian and non-Caucasian students college students.

H4c: There was no difference in terms of the correlation of parental attachment and spiritual development between college students of different class standings.

H4d: There was no difference in terms of the correlation of parental attachment and spiritual development between college students in different age groups.

Research Design

A quantitative research design was chosen to address the above-mentioned research questions. Quantitative research is systematic, objective, deductive, and can be generalized to larger populations (Fraenkel & Wallen, 1996). For the purpose of the current research, the research design was descriptive rather than experimental; no attempt was made to change behavior or conditions. The study used a cross-sectional approach, where subjects' characteristics were only studied once before relationships were determined.

Population/Sample

The population surveyed included 6,091 students ages 18-25 enrolled in two regional campuses of a university located in the Northeastern United States. The researcher received 1289 usable responses from the survey for a response rate of 21%. One campus was a commuter campus located in an urban setting and the other primarily was primarily a residential campus with a high number of students from rural areas and small towns. One campus had a Carnegie classification as Baccalaureate-Arts & Sciences and the other was classified as Baccalaureate-Diverse Fields. Demographic characteristics available from an Open Records request are shown in Table 1. Other demographic characteristics not available from an Open Records request are shown in Table 2. These data are for the entire undergraduate population, including those over the age of 25 and were culled from the institutions' common data sets.

In an attempt to increase the response rate, five contacts and specific methods of survey implementation were used as recommended by Dillman (2000) and adapted for on-line delivery. Five contacts were made by e-mail to those selected for the study: a pre-notice e-mail, the survey e-mail, a post-survey reminder/thank you, another reminder to those who had not completed the survey and a final reminder to non-responders. Additionally, respondents were eligible for a drawing for one of five $100 gift cards.

Variables

One of the independent variables studied was parental attachment. Parental attachment is the emotional bond experienced with another who is sensed as a source of

Table 1

Demographic Characteristics of Population

Variable	N	%
Gender		
Female	2497	41
Male	3594	59
Age		
18-19	2671	44
20-21	2175	36
22-23	956	16
24-25	289	5

Table 2

Demographic Characteristics for the Surveyed Campuses (all undergraduate students)

Variable	N	%
Racial/Ethnic		
Caucasian	5416	73
Non-Caucasian	1329	18
Not reported	637	9
Enrollment Status		
Part-time	1003	14
Full-time	6379	86

security and who provides a secure base for anchoring exploration (Bowlby, 1988, p. 4).

Parental attachment was measured with three scales on the Parental Attachment

Questionnaire (PAQ), (a) Affective Quality of Attachment (Affective), (b) Parental

Fostering of Autonomy (Autonomy), and (c) Parental Role in Providing Emotional

Support (Support) (Kenny, 1985). The researcher chose to concentrate on parental

attachment instead of peer attachment due to the fact that today's current college students

have indicated that they are closer to their parents than any previous generation (Wills,

2005) and many report that they would prefer spending time with family than with

friends (Verhaagen, 2005). Although friends are still important to these students (Howe

& Strauss, 2003), the researcher was specifically interested in how parents continue to

influence their children into their college years.

Other independent variables included gender (female or male), ethnicity

(Caucasian or non-Caucasian), class standing (freshman, sophomore, junior, senior), and

age (18-19, 20-21, 22-23, 24-25).

The dependent or criterion variable was spiritual development. Spiritual

development is:

> the process of growing the intrinsic human capacity for self-transcendence, in
> which the self is embedded in something greater than the self, including the
> sacred. It is the developmental 'engine' that propels the search for connectedness,
> meaning, purpose and contribution. It is shaped both within and outside of
> religious traditions, beliefs, and practices. (Benson et al., 2003, pp. 205-206)

Spiritual development was measured by the Spiritual Experience Index-Revised

(SEI-R) (Genia, 1997) which used two scales, Spiritual Support (SS) and Spiritual

Openness (SO).

Instrumentation

A short demographic questionnaire and three instruments were used: (a) Parental Attachment Questionnaire (PAQ) as revised by Kalsner and Pistole (2003), (b) Spiritual Experience Index – Revised (SEI-R), and (c) Moral Judgment Test (MJT). The MJT was only used in Graves Stephens' research.

Parental attachment. The Parental Attachment Questionnaire (PAQ) was designed to assess perceived parental availability, understanding, acceptance, respect for autonomy, interest in interaction with parents and affect toward parents during visits, student help-seeking behavior in situations of stress, and satisfaction with help obtained from parents (Kenny, 1994). The PAQ was chosen for the current study because the PAQ measures only the extent of parental attachment rather than both parental and peer attachment. Some researchers have used the Inventory of Parent and Peer Attachment (IPPA) to measure only parental attachment by eliminating the peer scale (i.e., Mattanah et al., 2004). However, in selecting the PAQ, the researcher focused on parental attachment without altering the instrument. The PAQ measured students' perceptions of how their parents foster autonomy and provide emotional support, which falls in line with classic student development theory (Sanford, 1967). In addition, the PAQ allowed for subjects to choose a non-parent attachment figure, making the PAQ instrument a better option for a diverse sample. Finally, the PAQ was designed for and has been used primarily on samples of college students which were the focus of the present research.

The PAQ, a 55-item instrument, measured subjects' perceptions of parental availability, acceptance, emotional support, and ability to cultivate independence, as well

as students' satisfaction with parental support and coping techniques in times of stress. The PAQ had three scales derived from factor analysis (a) Affective Quality of Attachment, (b) Parental Fostering of Autonomy, and (c) Parental Role in Providing Emotional Support. The items were presented on a 5-point Likert scale (where 1 is not at all and 5 is very much) and scores were calculated for each scale. Students were asked to consider their parents or other caregivers as a single unit when responding. Research has shown that overall family environment is more important than individual relationships with parents (Kenny, 1994, p. 400). However, instrument instructions allowed for students to consider only one parent if separation, divorce, death, or re-marriage had broken the traditional family unit. The revisions suggested by Kalsner and Pistole (2003) allowed for a caregiver other than a parent to be considered.

The PAQ has been found valid and reliable, with a .92 test-retest score over a 2-week interval for the instrument as a whole, and scores ranging from .82 to .91 for each of the three scales (Kenny, 1990). Cronbach's alpha was .96 for the first scale, .88 for the second, and .88 for the third (Kenny & Donaldson, 1991), and internal consistency as .93 for male and .95 for female students (Kenny, 1987). The PAQ has been favorably compared with subscales from other instruments measuring similar constructs such as the Moos Family Environmental Scale (FES; Kenny & Donaldson, 1991; Moos, 1985); Family Adaptability and Cohesion Evaluation Scale (FACES-III; Holmbeck & Wandrei, 1993; Olson, 1986); and the Inventory for Peer and Parental Attachment (IPPA; Armsden & Greenberg, 1987; Heiss et al., 1996).

In a study assessing five different scales of parental attachment, Heiss et al. (1996) found that the PAQ has convergent and construct validity. Using factor and correlational analyses, the researchers found that the PAQ adequately assessed constructs of attachment theory in relation to the other scales and had the expected correlation with scores on various personality criterion scales (p. 109).

Spiritual development. There are many instruments that have been designed to measure spiritual wellness and spiritual development (Moberg, 2002, p. 47). The revised Spiritual Experience Index (SEI-R) was developed by Genia (1997) as a revision to her original Spiritual Experience Index which was developed in 1991. The scale was developed so that the study of faith could be expanded to include those who did not subscribe to a particular religious tradition (Genia, 1997). The 23-item instrument was used to gauge spiritual experience within a developmental framework. The SEI-R consisted of two scales derived from factor analysis: (a) Spiritual Support (SS) and (b) Spiritual Openness (SO). The items were presented on a 6-point Likert scale (where 1 was strongly disagree and 6 was strongly agree) and scores were calculated for each scale.

Cronbach's alpha for the Spiritual Support scale (SS) was .95 and .79 for the Spiritual Openness (SO) scale. Internal consistency for all 23 items was .89 (Genia, 1997). Reinert and Bloomingdale (2000) found evidence supporting the validity of the revised Spiritual Experience Index. They found the SEI-R to be "an integrated instrument with two subscales useful for psychospiritual research within a developmental perspective" (p. 180).

Pilot Study

A pilot study was conducted to assess the planned order of instruments and the effectiveness of general instructions. Eighty subjects sharing similar characteristics of the study population were asked to complete the web survey. These subjects were selected randomly from a different campus of the same University used in the study. There were twenty versions of the web survey with the instruments in different orders. Four students were asked to complete each version of the survey. A pre-notice of the survey was sent to the students. A second e-mail, containing the link to the survey was sent and was followed by three subsequent reminders. A total of twelve students completed the entire survey. Five students began the survey but did not complete it. Completion rate for the survey was 15.18%. The completion rate was lower than anticipated, but there were no additional incentives given for students to complete the survey.

The order of the instruments often affects response rate (Sieving, Hellerstedt, Mcneely, Fee, Snyder & Resnick, 2005), but in the case of the current research, the data from the pilot study did not indicate that a particular order of the instruments led to a change in response rate. Sieving et al. also explained, "It is commonly assumed that more sensitive questions should be asked later in a survey; respondents become gradually desensitized to more intimate items" (p. 160). The surveys were presented in the following order: (a) demographic questionnaire, (b) Moral Judgment Test (MJT), (c) Spiritual Experience Index-Revised (SEI-R), and (d) Parental Attachment Questionnaire (PAQ).

A short follow-up survey was sent to responders and to those who completed part of the survey. Five students responded to the request for feedback on the survey. All students indicated that an incentive would make it more attractive to respond. All respondents indicated that they thought offering a chance to win a $100 Amazon.com gift card would make student much more or somewhat more likely to respond to the survey. The average time to complete the survey was 14 minutes. Sixty percent of the student indicated that they did not think survey was too long. Students who had not completed the survey also were contacted to determine the reason for not responding. The three students who answered the nonresponder survey indicated that they were too busy or did not have time to complete the survey.

Given the response rate on the pilot survey the following strategies were employed to increase the response rate. Respondents were entered into a drawing for one of five $100 gift cards from Amazon.com. Amazon.com was chosen as the incentive because students can purchase a wide variety of items from textbooks to music to recreational items. Deutskens, Ruyter, Wetzels, and Oosterveld (2004) proposed that "lotteries are probably the most effective reward in an online environment, as they lead to the highest response rate in the short version [of a survey] and still a respectable response in the long version, while being much more cost–efficient than vouchers" (p. 32). They also found that respondents who were offered entrance into a lottery responded more quickly than those given a voucher. They surmised that respondents may believe they have a greater chance of winning if they respond quickly. Bosnjak and Tuten (2003)

found offering subjects the opportunity to be entered into a prize drawing increases response rates and reduces the number of incomplete submissions in web surveys.

Data Collection

Data were collected via instruments delivered to students electronically using the commercial software Zoomerang®. Best, Kruegar, Hubbard, and Smith (2001) expressed concern regarding the use of Internet surveys since some populations may not have access to the Internet. This concern was addressed since all members of the study population had Internet access and e-mail by virtue of their student status and the resources provided to them by their respective institutions.

The instrument questions and instructions were presented in an identical manner to the paper-and-pencil version. Research has shown that in general, adapting paper-and-pencil questionnaires into web versions has not impacted validity and reliability of the instruments (Best et al., 2001). One survey with the demographic questionnaire and three instruments was sent to the selected students. After viewing the Waiver of Informed Consent, the subjects were asked to complete the demographic questionnaire, then the MJT, the SEI-R, and finally the PAQ. After participants clicked the "submit" button, a thank you message was displayed. Each page used a consistent design scheme.

In an attempt to reduce nonresponse error, five contacts and specific methods of survey implementation were used as recommended by Dillman (2000). First, all students' directory information releasable under the Family Educational Rights to Privacy Act was obtained through an Open Records request to the institutions' Registrar's offices. Dillman (2000) suggested that subjects receive a physical post card through postal mail to increase

response rates. However, staff at the University of Nebraska-Lincoln Evaluation and

Research (NEAR) Center informed the researcher that postal mail is ineffective with

student populations because many do not list current addresses (C. Haines, personal

communication, October 19, 2007). In lieu of a physical post-card, students were sent a

preliminary e-mail notifying them that an electronic survey would be sent to them in one

week (Appendix A). They were informed of the nature of the study and the importance of

their contributions. The e-mail also told them about an incentive to participate in the

survey. The incentive was an automatic entry into a drawing for one of five $100 gift

certificates from Amazon.com. According to Bosnjak and Tuten (2003), offering subjects

the opportunity to be entered into a prize drawing increased response rates and reduced

the number of incomplete submissions in web surveys.

　　　　One week after the pre-notice e-mail, a follow-up e-mail was sent to all subjects

informing them that they had been selected to participate in a survey (Appendix B). The

message explained that the purpose of the survey was to help higher education

administrators better understand the importance of parents in college students' lives. The

e-mail contained a link to the survey. The initial page of the survey (Appendix C)

contained the Institutional Review Board Waiver of Informed Consent. Students who

agreed to the Institutional Review Board Waiver of Informed Consent clicked on the link

and were automatically transferred to the first page of the web-based questionnaire.

　　　　After an additional week, a thank you/reminder message was e-mailed to each

student (Appendix D). The short e-mail message thanked the student for participating in

the study and provided the link again in case the student had not completed the survey.

Ten days later, another e-mail was sent those who had not yet responded (Appendix E).

As the final contact, Dillman (2000) suggested sending each nonresponsive

subject a letter via priority mail to urge participation. Staff from the NEAR Center

advised that postal mail is not effective with college students therefore postal mail was

not used (C. Haines, personal communications, October 19, 2007). NEAR Center staff

also advised against calling each nonresponsive member, indicating that a phone call

could make subjects feel their confidentiality was not secure. Therefore, the final contact

was by e-mail as well. The final message was sent 14 days after the last message in an

effort to increase response rates. The e-mail offered the survey link again, encouraged

participants to ask questions of the researchers, and stressed the importance of the study

(Appendix F).

Data Analysis

Genia (1997) analyzed the results of the SEI-R by using a split-mean procedure in

order to place each respondent into one of four spiritual types. A mean-split procedure

changes a continuous variable into two categories, one that includes all the scores above

the mean, and the other that includes all the scores below the mean. Statisticians have

identified three reasons for not using a split-mean procedure for dichotomizing

continuous variables (Aiken & West, 1991; Cohen, 1983; Cohen & Cohen, 1983; Hunter

& Schmidt, 1990, as cited in Kowalski, 1995). First, because the distributions of scores

vary by sample, the mean used to dichotomize the scores varies by sample (Kowalski,

1995). This could be avoided if normative data were available, but norms for the SEI-R

are not available across populations and cultures. This issue was particularly problematic

with the sample of students in this research as prior research has shown that most

individuals who would be classified as growth oriented types are usually beyond the age

of 25 (Genia, 1997). Secondly, it was problematic to classify subjects whose scores fall

close to the mean as one's classification may change based on a one or two point

difference in his or her scale score (Kowalski, 1995). And finally, the split-mean test

would have decreased the power of the statistical tests (Aiken & West, 1991; Cohen,

1983, as cited in Kowalski, 1995).

Due to the issues in using the mean-split procedure, the researcher did not attempt

to classify the subjects into one of the four spiritual types. Rather, continuous variables

were used for all statistical measures. Pearson product-moment correlations were used to

determine the existence or absence of correlations between the scores on the Parental

Attachment Questionnaire (PAQ) and the Spiritual Experience Index-Revised (SEI-R).

Significant differences were determined for students by gender and Caucasian/non-

Caucasian categories by using t-tests. One-way ANOVAs were used to determine if

significant differences in scores on the PAQ and the SEI-R existed for students of

different class standings and different age groups.

Research Validity

Threats to internal and design validity compromise many research projects and

should be managed carefully. In this study, threats involving sample selection and

regression to the mean were prevented by surveying the entire population. Threats from

history, maturation, repeated testing, regression to the mean, and selection-maturation

interaction were prevented by subjects completing all instruments at the same time.

Instrumentation threats were prevented by using instruments that had been determined to

be reliable through other research studies. Experimenter bias was prevented by

distributing all instruments in the same manner and giving all participants the same

instructions. Finally, experimental mortality threats pose a problem if participants do not

complete all three instruments. This was controlled by discarding responses from subjects

who submitted incomplete surveys. Nonresponse bias is another issue that may have

affect results. Creswell (2008) stated "response bias [also called nonresponse bias] occurs

in survey research when the responses do not accurately reflect the views of the sample

and the population" (p. 403). Issues involving nonresponse bias will be discussed in

Chapter 4.

Ethical Issues

Research in which no manipulation to subjects is conducted poses very few

ethical dilemmas. However, the researcher ensured that each subject was provided with

information concerning the risks and benefits of the research project and had ample

opportunity and access to ask questions. A Waiver of Informed Consent as required by

the participating institutions was included in the instrument. The collected data were kept

confidential and subjects' names were maintained separately from their scores.

Summary

This quantitative study was conducted to determine if there was a correlation

between parental attachment and spiritual development in college students. Results of a

survey that was sent to 6091 students, yielding 1289 usable responses, were analyzed

using descriptive and inferential statistics. The results will add to the literature on parental attachment and spiritual development and provide information to higher educational professionals to help in developing strategies to assist students in their spiritual development.

Analysis and results of the study will be outlined in the following chapter. Each hypothesis will be addressed using descriptive statistics, correlation analysis, Tukey HSD post-hoc tests, t-tests, ANOVA and inferential statistics.

Chapter 4

Results

The purpose of this research was to determine if there was a correlation between parental attachment and spiritual development in undergraduate college students. This was determined by testing for a correlation between scores on the Parental Attachment Questionnaire (PAQ) and the Spiritual Experience Index-Revised (SEI-R).

Four research questions, with corresponding hypotheses, regarding the correlation of parental attachment and spiritual development in traditional-aged undergraduate college were addressed. Students from two regional campuses of a university in the Northeastern United States were surveyed. The survey included two instruments: The Parental Attachment Questionnaire (PAQ) and the Spiritual Experience Index-Revised (SEI-R) along with a demographic questionnaire.

As data are presented in subsequent tables, rather than use longer names of the scales of the Parental Attachment Questionnaire (PAQ) and the Spiritual Experience Index-Revised (SEI-R), names are shortened for ease of reading and clarity. *Affective Quality of Attachment* is referred to as *Affective*, *Parental Fostering of Autonomy* is called *Autonomy*, and *Parental Role in Providing Emotional Support* is called *Support*. *Spiritual Support* is denoted as *SS* and *Spiritual Openness* is denoted as *SO*.

Data were analyzed at the 95% confidence level. Notations were made when the level of significance was higher.

The survey yielded 1289 valid responses from a population of 6,091 (21% response rate). Of the total population surveyed, 23% of females who were sent the

survey responded and 20% of males who were sent the survey responded. Response rates

by class were (a) Freshmen responded at an 18% level, (b) Sophomores responded at a

24% level, (c) Juniors at a 23% level, (d) Seniors responded at a 23% response rate.

Racial and ethnic data were not available for the population, but based on the total

enrollment of the campuses, 19% of Caucasians responded and 20% of non-Caucasians

responded.

Wave analysis was conducted to investigate possible nonresponse bias. Wave

analysis is based on the assumption that subjects who respond later were more like non-

respondents (Armstrong & Overton, 1977, p. 397). Four waves of responses were

analyzed. The initial wave included responses to the survey from the time the initial

survey e-mail was sent until the first reminder (467 responses). The second wave

included responses after the first reminder and until the second reminder (411 responses).

The third wave included responses after the second reminder until the final reminder (120

responses). The final wave included responses after the final reminder was sent (291

responses). An ANOVA was used to compare means for the scales of the PAQ and the

SEI-R by wave (Table 3). Using data from the wave analysis, the researcher determined

that there was a significant difference in Spiritual Openness scores for responses in the

four waves. Through a Tukey HSD post-hoc procedure the researcher determined that

there was significant difference in mean scores on Spiritual Openness between those in

wave two with those in waves three and four. There was no significant difference

between those in the initial wave and any of the later waves (Table 4). Typically, one

looks for differences between the first and later waves to determine if nonresponse bias is

Table 3

ANOVA for PAQ and SEI-R scales by Response Wave

Scale		SS	df	MS	F	*p*
Spiritual Support	Between Groups	2668.99	3	889.66	2.39	0.067
	Within Groups	477545.53	1285	371.63		
	Total	480214.52	1288			
Spiritual Openness	Between Groups	765.28	3	255.09	4.6	0.003*
	Within Groups	71244.28	1285	55.44		
	Total	72009.56	1288			
Affective	Between Groups	1162.57	3	387.52	1.89	0.13
	Within Groups	264161.05	1285	205.57		
	Total	265323.61	1288			
Autonomy	Between Groups	188.15	3	62.72	1.01	0.388
	Within Groups	79874.57	1285	62.16		
	Total	80062.72	1288			
Support	Between Groups	266.58	3	88.86	1.33	0.263
	Within Groups	85841.58	1285	66.8		
	Total	86108.16	1288			
PAQ Total	Between Groups	1600.6	3	533.53	0.76	0.514
	Within Groups	897062.7	1285	698.1		
	Total	898663.29	1288			

*$p < .05$

Table 4

Tukey HSD Post-hoc Procedure for Spiritual Openness by Response Wave

Scale	(I) wave	(J) wave	Mean Difference (I-J)	SE	*p*
Spiritual Openness	1	2	-0.732	0.504	0.466
		3	1.306	0.762	0.317
		4	1.121	0.556	0.182
	2	1	0.732	0.504	0.466
		3	2.039[*]	0.773	.042*
		4	1.854[*]	0.57	.007*
	3	1	-1.306	0.762	0.317
		2	-2.039[*]	0.773	.042*
		4	-0.185	0.808	0.996
	4	1	-1.121	0.556	0.182
		2	-1.854[*]	0.57	.007*
		3	0.185	0.808	0.996

*p < .05

present. In this research, no differences were found between the first wave and the third

and fourth waves. The mean score in Spiritual Openness for those in wave two was

higher than those in wave three or four. These data indicated possible nonresponse bias

which Creswell (2008) defined as "response bias [also called nonresponse bias] occurs in

survey research when the responses do not accurately reflect the views of the sample and

the population" (p. 403).

It was determined by using an ANOVA that there was a significant difference in the rate of responses by males by wave (Table 5). Males were 59% of the population of the study. However, males were only 55% of the respondents. Males responded later than did females. Response rates by wave for females and males are shown in Table 6. Based on these data males were more likely to be non-responders than females.

Table 5

ANOVA for Demographics by Response Wave

Demographic		SS	df	MS	F	*p*
Gender	Between Groups	2.12	3	0.71	2.87	0.04*
	Within Groups	314.67	1278	0.25		
	Total	316.79	1281			
Caucasian or non-Caucasian	Between Groups	1.86	3	0.62	0.72	0.54
	Within Groups	1092.56	1265	0.86		
	Total	1094.42	1268			
Class Standing	Between Groups	7.06	3	2.35	1.89	0.13
	Within Groups	1597.15	1285	1.24		
	Total	1604.21	1288			
Age	Between Groups	0.70	3	0.23	0.31	0.82
	Within Groups	949.76	1285	0.74		
	Total	950.45	1288			

p < .05, 7 missing values for gender

Table 6

Response Rates for Females and Males by Response Wave

	Gender					
	Female		Male		Missing	
Wave	N	%	N	%	N	%
1	231	49	234	50	2	0
2	176	43	234	57	1	0
3	52	43	68	57		0
4	113	39	174	60	4	1
Total	572	44	710	55	7	1

7 missing values for gender

Nonresponse Bias

Nonresponse bias is described by Creswell (2008) as "response bias [also called nonresponse bias] occurs in survey research when the responses do not accurately reflect the views of the sample and the population" (p. 403). Using a wave analysis, it was determined that nonresponse bias may be present in this study. Due to the low response rate and the results of the wave analysis, the findings of this study may not be able to be generalized to the entire population studied and maybe limited only to the respondents.

Summary

A wave analysis was conducted in determine if nonresponse bias was present in the data collected. Through the wave analysis, the researcher found that there was a significant difference in Spiritual Openness in wave two as compared to waves three and

four. This indicates possible nonresponse bias. Through the wave analysis, it was determined that males responded later, and were more likely to be nonresponders.

Demographic characteristics of the respondents are reported in Table 7. Hispanic students, both Caucasian and non-Caucasian, were included in the non-Caucasian data. The descriptive statistics for the Parent Attachment Questionnaire's (PAQ) three subscales (Affective, Autonomy, and Support) and the overall score are listed on Table 8 and descriptive statistics for the Spiritual Experience Index Revised Instrument's (SEI-R) scores are found on Table 7. The overall population was comprised of 41% females and 59% males but respondents were 44% females and 55% males. Males responded at a lower rate than females. The overall population was comprised of 18-19 year-old students (43.8%), 20-21 year-old students (35.7%), 22-23 year-old students (15.6%) and 24-25 year-old students (4.7%). The 18-19 year-old students responded at a lower rate (36.9%) than their representation in the population and Sophomores responded at a higher rate (41%) than their representation in the population, juniors responded at a slightly higher rate (17%) than their representation in the population and seniors responded at 5.2% which is slightly higher than their representation in the population.

Research Question 1: Was there a correlation between parental attachment and spiritual development?

The Pearson Product Moment Correlation was used to determine correlations between the scores on the PAQ with the scores on the SEI-R. The correlation analysis is shown on Table 10. These data were used to test hypotheses H1a- H1h. The N for all cells was 1289.

Table 7

Demographic Characteristics of Respondents

Variable	N	%
Gender		
Female	572	44.4
Male	710	55.1
Missing	7	.5
Ethnicity		
Caucasian	1020	79.1
Non-Caucasian	269	20.9
Class Standing		
Freshman	365	28.3
Sophomore	352	27.3
Junior	287	22.3
Senior	285	22.1
Age		
18-19	475	36.9
20-21	528	41.0
22-23	219	17.0
24-25	67	5.2

Table 8

Descriptive Statistics for PAQ Scales

PAQ Scale	N	M	SD
Affective	1289	97.57	14.353
Autonomy	1289	50.39	7.884
Support	1289	45.94	8.176
Total	1289	193.90	26.414

Table 9

Descriptive Statistics for SEI-R Scales

SEI-R scale	N	M	SD
SS	1289	44.34	19.30
SO	1289	39.09	7.47

H1a: There was no correlation between the total score on the Parental Attachment Questionnaire (PAQ) and the Spiritual Support (SS) score on the Spiritual Experience Index-Revised (SEI-R). The hypothesis was rejected. There was a significant positive correlation, $r(1287) = .199$, $p < .001$, between the total score on the PAQ and the Spiritual Support score on the SEI-R.

H1b: There was no correlation between the total score on the Parental Attachment Questionnaire (PAQ) and the Spiritual Openness (SO) score on the Spiritual Experience Index-Revised (SEI-R). The hypothesis was rejected. There was a significant positive

Table 10

Correlations Between PAQ Scales and SEI-R Scales

Scale		SS	SO	Affective	Autonomy	Support
SS	Pearson Correlation					
	Sig.					
SO	Pearson Correlation	-.032				
	Sig.	.247				
Affective	Pearson Correlation	.177**	.095**			
	Sig.	.000	.001			
Autonomy	Pearson Correlation	.078**	.099**	.756**		
	Sig.	.005	.000	.000		
Support	Pearson Correlation	.258**	.029	.567**	.453**	
	Sig.	.000	.294	.000	.000	
Total	Pearson Correlation	.199**	.091**	.945**	.850**	.753**
	Sig.	.000	.001	.000	.000	.000

N = 1289, ** $p < .001$, 2-tailed

correlation, $r(1287) = .091$, $p < .001$, between the total score on the PAQ and the Spiritual Openness score on the SEI-R.

H1c: There was no correlation between the scores on the Affective Quality of Attachment scale of the PAQ and Spiritual Support scale on the SEI-R. The hypothesis

was rejected. There was a significant positive correlation, $r(1287) = .177$, $p < .001$, between the Affective score on the PAQ and the Spiritual Support score on the SEI-R.

H1d: There was no correlation between the scores on the Parental Fostering of Autonomy scale of the PAQ and Spiritual Support scale on the SEI-R. The hypothesis was rejected. There was a significant positive correlation, $r(1287) = .078$, $p < .001$, between the Autonomy score on the PAQ and the Spiritual Support score on the SEI-R.

H1e: There was no correlation between the scores on the Parental Role in Providing Emotional Support scale of the PAQ and Spiritual Support scale of the SEI-R. The hypothesis was rejected. There was a significant positive correlation, $r(1287) = .258$, $p < .001$, between the Support score on the PAQ and the Spiritual Support score on the SEI-R.

H1d: There was no correlation between the scores on the Parental Fostering of Autonomy scale of the PAQ and Spiritual Support scale on the SEI-R. The hypothesis was rejected. There was a significant positive correlation, $r(1287) = .078$, $p < .001$, between the Autonomy score on the PAQ and the Spiritual Support score on the SEI-R.

H1e: There was no correlation between the scores on the Parental Role in Providing Emotional Support scale of the PAQ and Spiritual Support scale of the SEI-R. The hypothesis was rejected. There was a significant positive correlation, $r(1287) = .258$, $p < .001$, between the Support score on the PAQ and the Spiritual Support score on the SEI-R.

H1f: There was no correlation between the scores on the Affective Quality of Attachment scale of the PAQ and Spiritual Openness scale of the SEI-R. The hypothesis

was rejected. There was a significant positive correlation $r(1287) = .095$, $p < .001$ between Affective score on the PAQ and Spiritual Openness on the SEI-R.

H1g: There was no correlation between the scores on the Parental Fostering of Autonomy scale of the PAQ and Spiritual Openness scale of the SEI-R. The hypothesis was rejected. There was a significant positive correlation $r(1287) = .099$, $p < .001$ between the Autonomy score on the PAQ and Spiritual Openness on the SEI-R.

H1h: There was no correlation between the scores on the Parental Role in Providing Emotional Support scale of the PAQ and Spiritual Openness scale of the SEI-R. The hypothesis was not rejected. There was no significant correlation $r(1287) = .029$, $p > .05$, between the Support score on the PAQ and Spiritual Openness score on the SEI-R.

Summary

A positive correlation was found between parental attachment and spiritual development. There was a positive correlation between all scales of the PAQ and those of the SEI-R except between Parental Role in Fostering Emotional Support and Spiritual Openness. This indicates that students reporting high levels of Parental Attachment also demonstrate high levels of Spiritual Development.

Research Question 2: Were there differences in parental attachment between the

following groups: females and males; Caucasians and non-Caucasians; students by

class standing; and students by age group?

Females and Males

Descriptive statistics and t-test results for the Affective, Autonomy, and Support

scales and the total score of the (PAQ) by gender are displayed in Table 11. These data

were used to test hypotheses H2a-H2d.

H2a: There was no difference between female and male college students on the

Affective Quality of Attachment scale on the PAQ. The hypothesis was not rejected. The

mean scores on the Affective scale on the PAQ are not significantly different,

$t(1280) = .81$, $p > .05$, between females and males.

H2b: There was no difference between female and male college students on the

Parental Fostering of Autonomy scale on the PAQ. The hypothesis was not rejected. The

mean scores on the Autonomy scale on the PAQ were not significantly different,

$t(1280) = -1.710$, $p > .05$, between females and males.

H2c: There was no difference between female and male college students on the

Parental Role in Providing Emotional Support scale on the PAQ. The hypothesis was

rejected. Scores for female and male students showed significant differences, t(1184) =

4.46, p < .001, on the Support scale of the PAQ. Female students had higher mean scores

than males.

Table 11

Descriptive Statistics and t-tests for the PAQ Scales by Gender

Scale	Gender								
	Female			Male					
	N	M	SD	N	M	SD	t	df	p
Affective	572	97.92	14.46	710	97.27	14.27	.81	1280	.421
Autonomy	572	49.95	7.96	710	50.71	7.80	-1.71	1280	.087
Support	572	47.07	8.40	710	45.02	7.85	4.46	1184.80	.000**
Total	572	194.94	26.96	710	193.01	25.90	1.30	1280	.436

**$p < .001$, 7 missing values for gender

H2d: There was no difference between scores for female and male college students on the total PAQ score. The hypothesis was not rejected. The mean scores on the Autonomy scale on the PAQ were not significantly different, $t(1280) = 1.30$, $p > .05$, between females and males.

The only significant difference between females and males on the PAQ scores was on the Support scale. Female students scored higher than males on the Support scale.

Caucasian and Non-Caucasian Students

Descriptive statistics and t-test results for the Affective, Autonomy and the Support scales and total score of the Parental Attachment Questionnaire (PAQ) for Caucasian and non-Caucasian students are shown in Table 12. These data were used to test hypotheses H2e-H2h.

Table 12

Descriptive Statistics and t-tests for the PAQ Scales for Caucasian and Non-Caucasian

Students

	Caucasian or non-Caucasian								
	Caucasian			non-Caucasian					
	N	M	SD	N	M	SD	t	df	p
Affective	1020	99.01	13.64	269	92.11	15.64	-6.60	382	.000**
Autonomy	1020	51.16	7.51	269	47.45	8.57	-6.47	383	.000**
Support	1020	46.14	7.96	269	45.17	8.90	-1.73	1287	.083
Total	1020	196.32	25.17	269	184.74	25.94	-5.99	382	.000**

** $p < .001$

H2e: There was no difference between Caucasian and non-Caucasian college students on the Affective Quality of Attachment scale on the PAQ. The hypothesis was rejected. Caucasian and non-Caucasian students showed significant differences, t(382) = -6.60, $p < .001$, on the Affective scale of the PAQ. Caucasian students had significantly higher mean scores than non-Caucasian students on the Affective scale.

H2f: There was no difference between Caucasian and non-Caucasian college students on the Parental Fostering of Autonomy scale on the PAQ. The hypothesis was rejected. Caucasian and non-Caucasian students showed significant differences, t(383) = -6.47 $p < .001$, on the Autonomy scale of the PAQ. Caucasian students had higher mean scores than non-Caucasian students on the Autonomy scale.

H2g: There was no difference between Caucasian and non-Caucasian college students on the Parental Role in Providing Emotional Support scale on the PAQ. The hypothesis was not rejected. The mean scores on the Autonomy scale on the PAQ were not significantly different, $t(1287) = -1.73$, $p > .05$, between Caucasian and non-Caucasian students.

H2h: There was no difference between Caucasian and non-Caucasian college students on the total PAQ score. The hypothesis was rejected. The mean scores on the Autonomy scale on the PAQ were significantly different, $t(382) = -5.99$, $p < .05$, between Caucasian and non-Caucasian students.

Caucasian and non-Caucasian students demonstrated significant differences in the Affective scale, the Autonomy scale, and the Total score. Caucasian students had a higher total PAQ score and scored higher on both the Affective and Autonomy scales.

Class Standing

The next set of hypotheses concerned the scales of the PAQ and class standing. Descriptive statistics for the Affective, Autonomy, and Support scales and total score of the PAQ by class standing are shown in Table 13. A one-way ANOVA compared the mean scores for the three scales and total score of the PAQ by class standing (Table 12). These data were used to test hypotheses H2i-H2l.

H2i: There was no difference between college students by class standing on the Affective Quality of Attachment scale on the PAQ. The hypothesis was not rejected. The mean scores on the Affective scale of the PAQ were not significantly different by class standing, $F(3,1285) = 1.60$, $p > .05$.

Table 13

Descriptive Statistics for Students by Class Standing for the PAQ Scales

PAQ Scale	Class Year	N	M	SD
Affective	Freshman	365	96.48	14.59
	Sophomore	352	97.2	14.45
	Junior	287	98.33	13.86
	Senior	285	98.66	14.36
Autonomy	Freshman	365	49.24	7.90
	Sophomore	352	50.11	7.98
	Junior	287	51.27	7.21
	Senior	285	51.32	8.22
Support	Freshman	365	46.46	8.23
	Sophomore	352	45.66	7.80
	Junior	287	46.14	8.39
	Senior	285	45.41	8.35
Total	Freshman	365	192.18	26.76
	Sophomore	352	192.97	26.44
	Junior	287	195.74	25.25
	Senior	285	195.40	27.02

H2j: There was no difference between college students by class standing on the Parental Fostering of Autonomy scale on the PAQ. The hypothesis was rejected. There was a significant difference in mean scores on the Autonomy scale by class standing, $F(3,1285) = 5.30$, $p < .001$. By using data from a Tukey HSD post-hoc procedure (Appendix J), it was determined that significant pairwise differences ($p < .05$) existed

between the mean scores of freshmen students and the mean scores of both junior and

senior students on the Autonomy scale of the PAQ. The mean score for freshmen

students was lower than the mean score for both junior students and for senior students.

H2k: There was no difference between college students by class standing on the

Parental Role in Providing Emotional Support scale on the PAQ. The hypothesis was not

rejected. The mean scores on the Support scale of the PAQ were not significantly

different by class standing, $F(3,1285) = 1.08$, $p > .05$.

H2l: There was no difference between college students by class standing on the

total PAQ score. The hypothesis was not rejected. The mean scores on the total score of

the PAQ were not significantly different by class standing, $F(3,1285) = 1.43$, $p > .05$.

Table 14

ANOVA for Class Standing and PAQ Scales

Scale		SS	df	MS	F	*p*
Affect	Between Groups	985.704	3	328.57	1.60	0.188
	Within Groups	264337.91	1285	205.71		
Autonomy	Between Groups	979.204	3	326.40	5.30	0.001**
	Within Groups	79083.51	1285	61.54		
Support	Between Groups	215.870	3	71.96	1.08	0.358
	Within Groups	85892.29	1285	66.84		
Total	Between Groups	2987.27	3	995.76	1.43	.233
	Within Groups	895676.01	1285	697.02		

**$p < .001$

The only significant differences in PAQ score between students of different class standings were in the Autonomy scale. Freshmen students scored lower than both junior students and for senior students.

Age Group

The three scales and total score of the PAQ were considered by age group to determine if there were significant differences between the groups. Descriptive statistics for the Affective Quality of Attachment scale, the Parental Fostering of Autonomy, the Parental Role in Providing Emotional Support scales and total score of the Parental Attachment Questionnaire (PAQ) by age group are shown in Table 15. A one-way ANOVA compared the mean scores for the three scales of the PAQ by age (Table 16). These data were used to test hypotheses H2m-H2p.

H2m: There was no difference between college students by age group on the Affective Quality of Attachment scale on the PAQ. The hypothesis was not rejected. The mean scores on the Affective scale of the PAQ were not significantly different by age group, $F(3,1285) = 1.83$, $p > .05$.

H2n: There was no difference between college students by age on the Fostering Autonomy scale on the PAQ. The hypothesis was rejected. There was a significant difference in mean scores on the Autonomy scale by class standing, $F(3,1285) = 8.25$, $p < .001$. Using a Tukey HSD post-hoc procedure (Appendix K), it was determined that significant pairwise differences ($p < .05$) existed between the mean scores of 18-19 year-old students and the mean scores for both 22-23 year-old and 24-25 year-old students on the Autonomy scale of the PAQ.

Table 15

Descriptive Statistics for Students by Age for the PAQ Scales

Scale	Age	N	M	SD
Affective	18-19	475	96.65	14.14
	20-21	528	97.69	14.54
	22-23	219	98.41	14.23
	24-25	67	100.46	14.45
Autonomy	18-19	475	49.29	7.87
	20-21	528	50.52	7.58
	22-23	219	51.47	8.16
	24-25	67	53.57	8.17
Support	18-19	475	46.55	8.15
	20-21	528	45.83	8.09
	22-23	219	45.54	8.21
	24-25	67	43.82	8.66
Total	18-19	475	192.49	26.13
	20-21	528	194.04	26.43
	22-23	219	195.42	26.73
	24-25	67	197.85	27.12

Table 16

ANOVA for PAQ Scales and Age

Scale		SS	df	MS	F	*p*
Affective	Between Groups	1126.22	3	375.41	1.83	.141
	Within Groups	264197.39	1285	205.60		
Autonomy	Between Groups	1513.19	3	504.40	8.25	.000**
	Within Groups	78549.52	1285	61.13		
Support	Between Groups	516.79	3	172.27	2.59	.052
	Within Groups	85591.36	1285	66.61		
Total	Between Groups	2511.35	3	837.11	1.20	.308
	Within Groups	896151.94	1285	697.40		

**p* < .001

H2o: There was no difference between college students by age on the Parental Role in Providing Emotional Support scale on the PAQ. The hypothesis was not rejected. The mean scores on the Support scale of the PAQ were not significantly different by age group, $F(3,1285) = 2.59$, $p > .05$.

H2p: There was no difference between college students by age on the total score on the PAQ. The hypothesis was not rejected. The mean scores on the Support scale of the PAQ were not significantly different by age group, $F(3,1285) = 1.20$, $p > .05$.

As with Class Standing, the only significant differences found on PAQ scores by Age Group were on the Autonomy scale. On the Autonomy scale, 18-19 year-old students scored lower than did both 22-23 year-olds and 24-25 year-olds.

Summary

Only the Emotional Support score of the PAQ differed significantly between females and males, with females scoring higher. Caucasian and non-Caucasian students demonstrated significant differences in the Affective, Autonomy, and Total PAQ scores. Caucasian students had higher scores on these three measures. The Autonomy score of the PAQ was significantly different for students by class year. Freshmen students scored lower than both juniors and seniors on Parental Fostering of Autonomy. There were no pair-wise differences with sophomores. Scores on Autonomy increased significantly as students got older.

Research Question 3: Were there differences in spiritual development between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group?

Females and Males

Means, standard deviations, and t-test statistics for the Spiritual Support and Spiritual Openness scores of the SEI-R for females and males are found on Table 17.

Table 17

Descriptive Statistics and t-tests for SEI-R Scales by Gender

		Gender						
		Female			Male			
Scale	N	M	SD	N	M	SD	*t*	DF
SS	572	46.60	19.46	710	42.64	19.01	3.67**	1280
SO	572	39.88	7.54	710	38.44	7.34	3.43**	1280

** $p < .001$, 7 missing values for gender

H3a: There was no difference in scores on the Spiritual Support scale of the SEI-R between females and males. The hypothesis was rejected. There was a significant difference $t(1280) = 3.67$, $p < .001$, between the mean scores of females on the Spiritual Support Scale and the mean scores for males. Females scored significantly higher on the Spiritual Support scale of the SEI-R than did males.

H3b: There was no difference in scores on the Spiritual Openness scale of the SEI-R between females and males. The hypothesis was rejected. There was a significant difference, $t(1280) = 3.43$, $p < .001$, between the mean scores of females and males on the Spiritual Openness scale. Females scored significantly higher on the Spiritual Openness scale.

Female students scored significantly higher than male students on both Spiritual Support and Spiritual Openness. Higher scores on both measures indicate a higher level of overall Spiritual Development.

Caucasian and Non-Caucasian Students

Descriptive statistics and t-test statistics for the Spiritual Support scale and the Spiritual Openness scale for Caucasian and non-Caucasian students are found in Table 18.

H3c: There was no difference in scores on the Spiritual Support scale of the SEI-R between Caucasian and non-Caucasian students. Hispanic Caucasian students were included in the non-Caucasian group. The hypothesis was rejected. There was a

Table 18

Descriptive Statistics and t-test for SEI-R Scales for Caucasians and Non-Caucasians

	Caucasian or non-Caucasian							
	Caucasian			non-Caucasian				
Scale	N	M	SD	N	M	SD	*t*	DF
SS	1020	43.37	19.170	269	48.00	19.433	-3.51**	1287
SO	1020	39.30	7.562	269	38.30	7.104	1.96	1287

*** p < .001*

significant difference, $t(1287) = -3.51$, $p < .001$, between Caucasian students and non-Caucasian students in Spiritual Support scores on the SEI-R, with non-Caucasian students scoring higher.

H3d: There was no difference in scores on the Spiritual Openness scale of the SEI-R between Caucasian and non-Caucasian students. Hispanic Caucasian students were included in the non-Caucasian group. The hypothesis was not rejected. There was no significant difference, $t(1287) = -1.96$, $p > .05$, between Caucasian and non-Caucasian students' scores on the Spiritual Openness scores on the SEI-R.

Non-Caucasian students scored significantly higher than Caucasian students on Spiritual Support on the SEI-R. There was not a significant difference between the two groups on Spiritual Openness.

Class Standing

H3e: There was no difference in scores on the Spiritual Support scale of the SEI-R for students with different class standings. The hypothesis was not rejected. Using

a one-way ANOVA (Table 19) no overall differences, F(3,1285) = 1.62, $p > .05$, between

students by class standing (freshman, sophomore, junior, and senior) were found.

Table 19

ANOVA for SEI-R Scales by Class Standing

Scale		SS	df	MS	F	p
SS	Between Groups	1811.89	3	603.96	1.62	0.182
	Within Groups	478402.63	1285	372.29		
SO	Between Groups	658.79	3	219.59	3.95	0.008*
	Within Groups	71350.767	1285	55.52		

*$p < .05$

H3f: There was no difference in scores on the Spiritual Openness scale of the SEI-R for students with different class standings. The hypothesis was rejected. The researcher found a significant difference in Spiritual Openness by class standing F(3,1285) = 3.95, $p < .05$. by using one-way ANOVA (Table 19). Using data from a Tukey HSD post-hoc procedure (Appendix L), the researcher found significant differences, $p < 0.05$, between the mean scores for juniors and seniors and the mean scores of freshmen in Spiritual Openness (SO), with juniors and seniors scoring higher than freshmen.

Means and standard deviations for the Spiritual Support and Spiritual Openness scales by class standing are found in Table 20.

Table 20

Descriptive Statistics for the SEI-R Scales by Students' Class Standing

Scale	Class Year	N	M	SD
SS	Freshman	365	45.98	19.99
	Sophomore	352	44.38	19.17
	Junior	287	43.81	19.27
	Senior	285	42.72	18.55
SO	Freshman	365	38.11	7.18
	Sophomore	352	38.93	7.16
	Junior	287	39.79	7.93
	Senior	285	39.83	7.65

There was a significant difference in Spiritual Openness by Class Standing, but not in Spiritual Support. Junior and senior year students scored higher in Spiritual Openness than did freshmen students. There were no pair-wise differences with sophomores.

Age Group

Descriptive statistics for the Spiritual Support and Spiritual Openness scales of the SEI-R by age group are displayed in Table 21.

H3g: There was no difference in scores on the Spiritual Support scale of the SEI-R for students by age groups. Students were grouped in to four age categories: ages 18-19, 20-21, 22-23, and 24-25. The hypothesis was rejected. A one-way ANOVA (Table 22) was conducted and the researcher determined that there was a significant difference between students in mean Spiritual Support scores by age group,

Table 21

Descriptive Statistics for SEI-R Scales by Age

Scale	Age	N	M	SD
SS	18-19	475	45.81	19.67
	20-21	528	44.31	19.17
	22-23	219	42.56	18.61
	24-25	67	39.99	19.36
SO	18-19	475	38.34	7.27
	20-21	528	39.20	7.51
	22-23	219	39.78	7.82
	24-25	67	41.31	6.91

Table 22

ANOVA for SEI-R Scales and Age

Scale		SS	df	MS	F	*p*
SS	Between Groups	2985.14	3	995.04	2.68	0.046*
	Within Groups	477229.37	1285	371.38		
SO	Between Groups	711.43	3	237.14	4.27	0.005*
	Within Groups	71298.12	1285	55.48		

p < .05

F(3,1285) = 2.68, p < .05. No significant differences were found in pairwise comparisons in Spiritual Support using the Tukey HSD procedure (Appendix M).

H3h: There was no difference in scores on the Spiritual Openness scale of the SEI-R for students in different age groups. The hypothesis was rejected. Through an ANOVA (Table 20), the researcher determined that there was a significant difference, $F(3,1285) = 4.27$, $p < .05$, between the means of the Spiritual Openness scale by age group. Using the Tukey HSD post-hoc procedure (Appendix N), the researcher found significant pairwise differences (p < .05) between the mean scores 24-25 year-old students and 18-19 year-olds on the Spiritual Openness scale. The mean score for 24-25 year-olds was higher than the mean score for 18-19 year-old students.

There were significant differences in both the Spiritual Support and Spiritual Openness scores by Age group. Younger students scored higher on Spiritual Support than did older students. The converse occurred with Spiritual Openness as older students scored higher than did younger students.

Summary

Female students scored significantly higher on both Spiritual Support and Spiritual Openness than males. Non-Caucasian students scored significantly higher than Caucasian students in Spiritual Support. Juniors and seniors scored higher on Spiritual Openness than did freshmen. There were significant differences in both Spiritual Support and Spiritual Openness for students by age. While there were no significant pair-wise differences by age in Spiritual Support, scores decreased as students got older. The

opposite occurred with Spiritual Openness as scored increased as the students' ages increased.

Research Question 4: Were there differences between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group in terms of the correlation of parental attachment and spiritual development?

Females and Males

A correlation analysis between the subscales of the PAQ and the scales and total score of the SEI-R for females and males is found in Table 23.

H4a: There was no difference in terms of the correlation of parental attachment and spiritual development between females and males. The hypothesis was rejected as there were differences in significant correlations between the three scales of the PAQ and the two scales of the SEI-R. There was no significant correlation between Autonomy and Spiritual Support for females but there was for males. Additionally, females demonstrated a significant correlation in total PAQ score with Spiritual Openness while males did not. Each interaction between PAQ scales and SEI scales were considered.

The Affective scale had a positive correlation with Spiritual Support for both females and males. The Autonomy scale had a positive correlation with Spiritual Support for males, but there was no correlation between Autonomy and Spiritual Support for females. Parental Support had a positive correlation with Spiritual Support for both females and males.

Table 23

Correlations Between the PAQ and SEI-R Scales by Gender

		Female		Male	
		SS	SO	SS	SO
Affective	Pearson Correlation	0.127**	0.115**	0.220**	0.074*
	Sig.	0.002	0.006	0.000	0.048
	N	572	572	710	710
Autonomy	Pearson Correlation	0.034	0.131**	0.129**	0.081*
	Sig.	0.421	0.002	0.001	0.031
	N	572	572	710	710
Support	Pearson Correlation	0.188**	0.028	0.301**	0.008
	Sig.	0.000	0.508	0.000	0.837
	N	572	572	710	710
Total	Pearson Correlation	0.137**	0.109**	0.251**	0.068
	Sig.	.001	.009	.000	.072
	N	572	572	710	710

$*p < .05$, $** p < .001$, 2-tailed, 7 missing values for gender

Both the Affective and Autonomy scales had positive correlations with Spiritual Openness for both females and males. Parental Support had no correlation with Spiritual Openness for either females or males.

The total PAQ score was positively correlated to Spiritual Support and Spiritual Openness for both females and males. The total PAQ score was positively correlated to Spiritual Openness for females but not for males.

Caucasian and Non-Caucasian Students

Correlations of the scales of the PAQ and scales of the SEI-R for Caucasian and non-Caucasian students are shown in Table 24.

H4b: There was no difference in terms of the correlation of parental attachment and spiritual development between Caucasian and non-Caucasian students. The hypothesis was rejected. As with the previous hypothesis, each interaction was evaluated individually.

Table 24

Correlations of PAQ and SEI-R Scales for Caucasian and Non-Caucasian Students

		Caucasian		Non-Caucasian	
		SS	SO	SS	SO
Affective	Pearson Correlation	.190[**]	.106[**]	.241[**]	.021
	Sig.	.000	.001	.000	.736
	N	1020	1020	269	269
Autonomy	Pearson Correlation	.083[**]	.107[**]	.150[*]	.033
	Sig.	.008	.001	.014	.591
	N	1020	1020	269	269
Support	Pearson Correlation	.264[**]	.036	.266[**]	-.008
	Sig.	.000	.247	.000	.902
	N	1020	1020	269	269
Total	Pearson Correlation	.211[**]	.101[**]	.256[**]	.019
	Sig.	.000	.001	.000	.762
	N	1020	1020	269	269

** $p < .001$, 2-tailed

All three scales of the PAQ Affective, Autonomy, Parental Support scales and total score had positive correlations between Spiritual Support for both Caucasian and non-Caucasian students.

The Affective scale, Autonomy scale and total score had positive correlations with Spiritual Openness for Caucasian students, but no correlation for non-Caucasian students. There was no correlation between the Parental Support scale and Spiritual Support scale for either Caucasian or non-Caucasian students.

Class Standing

H4c: There was no difference in terms of the correlation of parental attachment and spiritual development between students of different class standings. The hypothesis was rejected. Correlations between the scales of the PAQ and those of the SEI-R for students in each of the four class standings are outlined on Tables 25 though 28.

Affect had a positive correlation with Spiritual Support for all class standings. Autonomy had a positive correlation with Spiritual Support for freshmen, but for no other class standings. Parental Support had a positive correlation with Spiritual Support for all class standings. The total PAQ score had a positive correlation with Spiritual Support for all class standings.

Affect had a positive correlation with Spiritual Openness for freshmen, sophomores, and seniors, but there was no correlation between Affect and Spiritual Openness for juniors. There was a positive correlation between Autonomy and Spiritual Openness for sophomores, but no other class standings. There was no correlation between Parental Support and Spiritual Openness for any class standing. The total PAQ score had

Table 25

Correlations between PAQ and SEI-R Scales for Freshmen

Scale		SS	SO
Affect	Pearson Correlation	.218**	.119*
	Sig.	.000	.023
Autonomy	Pearson Correlation	.115*	.066
	Sig.	.029	.209
Support	Pearson Correlation	.264**	.029
	Sig.	.000	.584
Total	Pearson Correlation	.234**	.093
	Sig. (	.000	.075

N= 365, *p < .05, **p < .001, 2-tailed

Table 26

Correlations between PAQ and SEI-R Scales for Sophomores

Scale		SS	SO
Affect	Pearson Correlation	.163**	.124*
	Sig.	.002	.020
Autonomy	Pearson Correlation	.063	.165**
	Sig.	.237	.002
Support	Pearson Correlation	.251**	.094
	Sig.	.000	.077
Total	Pearson Correlation	.182**	.145**
	Sig.	.001	.006

N = 352, *p < .05, **p < .001, 2-tailed

Table 27

Correlations between PAQ and SEI-R Scales for Juniors

Scale		SS	SO
Affect	Pearson Correlation	.185**	-.016
	Sig.	.002	.792
Autonomy	Pearson Correlation	.058	.027
	Sig.	.328	.643
Support	Pearson Correlation	.274**	-.044
	Sig.	.000	.460
Total	Pearson Correlation	.209**	-.015
	Sig.	.000	.796

N = 287, *p < .05, **p < .001, 2-tailed,

Table 28

Correlations between PAQ and SEI-R Scales for Seniors

Scale		SS	SO
Affect	Pearson Correlation	.152*	.123*
	Sig.	.010	.038
Autonomy	Pearson Correlation	285	285
	Sig.	.098	.091
Support	Pearson Correlation	.100	.125
	Covariance	285	285
Total	Pearson Correlation	.233**	.050
	Covariance	.000	.399

N = 285, *p < .05, **p < .001, 2-tailed

a positive correlation with Spiritual Openness for sophomores, but not for any other class standings.

H4d: There was no difference in terms of the correlation of parental attachment and spiritual development between students of different ages. The hypothesis was rejected. There were numerous differences in interactions between the scales of the PAQ and the scales of the SEI-R by age group of student. Correlations between the scales for each age group are outlined in Tables 29 through 32.

Affect had a positive correlation between Spiritual Support for 18-19 and 20-21 year olds but not for 22-23 and 24-25 year olds. Autonomy had a positive correlation between Spiritual Support for 18-19 and 20-21 year olds but not for 22-23 and 24-25 year olds. Parental Support had a positive correlation with Spiritual Support for all age groups.

Table 29

Correlations between PAQ and SEI-R for Students ages 18-19

Scale		SS	SO
Affect	Pearson Correlation	0.183**	0.112*
	Sig.	0.000	0.015
Autonomy	Pearson Correlation	0.111*	0.062
	Sig.	0.016	0.175
Support	Pearson Correlation	0.275**	0.049
	Sig.	0.000	0.282
Total	Pearson Correlation	.218**	.095**
	Sig.	.000	.039

N = 475, *$p < .05$, **$p < .001$, 2-tailed

Table 30

Correlations between PAQ and SEI-R for Students Ages 20-21

Scale		SS	SO
Affective	Pearson Correlation	0.210**	0.043
	Sig.	0.000	0.323
Autonomy	Pearson Correlation	0.107*	0.107*
	Sig.	0.013	0.014
Support	Pearson Correlation	0.239**	0.019
	Sig.	0.000	0.660
Total	Pearson Correlation	0.220**	0.060
	Sig.	0.000	0.016

N = 528, *p < .05, **p < .001, 2-tailed

Table 31

Correlations between PAQ and SEI-R for Students Ages 22-23

Scale		SS	SO
Affective	Pearson Correlation	0.110	0.159*
	Sig.	0.104	0.018
Autonomy	Pearson Correlation	0.028	0.084
	Sig.	0.684	0.216
Support	Pearson Correlation	0.204**	0.057
	Sig.	0.002	0.397
Total	Pearson Correlation	0.130	0.128
	Sig.	0.055	0.059

N = 219, *p < .05, **p < .001

Table 32

Correlations between PAQ and SEI-R for Students Ages 24-25

Scale		SS	SO
Affective	Pearson Correlation	0.201	0.076
	Sig.	0.102	0.543
Autonomy	Pearson Correlation	0.010	0.118
	Sig.	0.938	0.343
Support	Pearson Correlation	0.358**	0.023
	Sig.	0.003	0.852
Total	Pearson Correlation	0.225	0.083
	Sig.	0.068	0.503

N= 67, **$p < .001$, 2-tailed.

The total score on the PAQ had a positive correlation with Spiritual Support for 18-19 and 20-21 year olds, but not for 22-23 and 24-25 year olds.

Affect had a positive correlation between Spiritual Openness only for 18-19 and 22-23 year olds. Autonomy had a positive correlation with Spiritual Openness for 20-21 year olds, but there was no correlation for any other age group. There was no correlation between Parental Support and Spiritual Openness for any age groups. The total score on the PAQ had a positive correlation to Spiritual Openness for 18-19 year olds only.

Summary

A positive correlation between Parental Attachment and Spiritual Development was found. Parental attachment correlated positively with both Spiritual Support and Spiritual Openness. Additionally, Affective Quality of Attachment scale, the Parental

Fostering of Autonomy and the Parental Role in Providing Emotional Support scales of the Parental Attachment Questionnaire (PAQ) were positively correlated with Spiritual Support. Affective Quality of Attachment scale and the Parental Fostering of Autonomy scale were correlated with Spiritual Openness, but Parental Role in Providing Emotional Support scale of the PAQ was not correlated with Spiritual Openness.

The only significant difference between females and males in terms of parental attachment was that females scored higher in the Parental Role in Providing Emotional Support scale of the PAQ. Significant differences were found between females and males in spiritual development, with females scoring higher on both Spiritual Support and Spiritual Openness.

Caucasian students scored higher on both the Affective Quality of Attachment scale and the Parental Fostering of Autonomy scale of the PAQ, but there was no difference between these two groups on the Parental Role in Providing Emotional Support scale. Non-Caucasian students scored significantly higher in Spiritual Support than did Caucasian students. There was no difference between Caucasian and non-Caucasian students in Spiritual Openness.

There were no differences found between students by class year in the Affective Quality of Attachment scale or the Parental Role in Providing Emotional Support scale, but the researcher found that freshmen scored significantly lower on the Parental Fostering of Autonomy scale than both juniors and seniors. There were no significant differences between class standing in Spiritual Support but seniors showed significantly higher levels of Spiritual Openness than freshmen.

As with class standing, the only significant differences found in parental attachment were in the Autonomy scale, with the youngest group of students (18-19) scoring lower than the students ages 22-23 and 24-25. Students ages 20-21 also scored significantly lower than students ages 24-25. There were significant differences found in spiritual development by age. There was a significant difference in both Spiritual Support and Spiritual Openness. The Spiritual Support score decreased as the students got older. The opposite occurred for Spiritual Openness. Students ages 24-25 scored significantly higher in Spiritual Openness than students ages 18-19.

A single difference in correlations between the PAQ scales and the SEI-R scales was found between females and males. A significant correlation between Spiritual Support and the Parental Fostering of Autonomy scale was found for males but not for females.

Differences were found in correlations between the PAQ scales and the SEI-R scales between Caucasian and non-Caucasian students. There were differences between both the Affective and Autonomy scales with the Spiritual Openness scale. A positive correlation was found for Caucasian students and no significant correlation was found for non-Caucasian students on both the Affective scale and the Autonomy scale.

Numerous differences were found in the correlations between the PAQ scales and the SEI-R scales for students by class standing and by age. For class standing Spiritual Openness had a positive correlation with the Affective scale for all classes except juniors. Freshmen demonstrated a positive correlation between Spiritual Support and the Autonomy scale, but students in the other classes did not. Only sophomore students had a

positive correlation between Spiritual Openness and the Autonomy scale. Sophomores were also the only students that had a correlation between Spiritual Openness and the total PAQ score.

Students in the age groups 18-19 and 20-21had a positive correlation between Spiritual Support and the score on the Affective scale and the Autonomy scale, while students in the other two age groups did not. Students in the age groups 18-19 and 22-23 had a positive correlation between Spiritual Openness and the Affective scale, while the two other groups did not. Only students in the 20-21 age group had a positive correlation between Spiritual Openness and the Autonomy scale and only students in the 18-19 year old age group had a positive correlation between Spiritual Openness and the Total PAQ score. Students in the 18-19 and 20-21 age group had a positive correlation between Spiritual Support and the total PAQ score, while the two older groups did not.

These findings will be discussed further in the next chapter. Additionally, the significance of the findings and recommendations for future research and practice will be presented.

Chapter 5

Conclusions and Discussion

Summary of Study

Spiritual development has been recognized as an important aspect in college student development (Chickering et al., 2006). College students arrive on campus with a high level of spiritual interest and involvement and expect higher education to help them develop emotionally and spiritually (Higher Education Research Institute, n.d.). Understanding more about spiritual development may assist researchers and practitioners expand resources to assist college students in their spiritual quests.

This study was conducted to determine if there was a correlation between parental attachment and spiritual development in college students. The outcome of this research would have relevance to the kind of programs that institutions provide to their students and to the parents of their students to assist students in their spiritual development.

The Parental Attachment Questionnaire was used to measure parental attachment and The Spiritual Experience Index-Revised was used to measure spiritual development. Data collected from surveys completed by undergraduate students at two regional campuses of a university in the Northeastern United States were analyzed using descriptive statistics, correlational analysis, Tukey HSD post-hoc tests, ANOVAs, t-tests and inferential statistics. The study sought also to determine if there were significant differences in parental attachment, spiritual development and the correlation between the two between groups by gender, ethnicity (Caucasian or non-Caucasian), class standing and age.

Sample and Procedure

The population surveyed included 6,091 students enrolled in two regional campuses of a university located in the Northeastern United States. The entire population was surveyed. Low response rates on surveys administered to college students are not uncommon so Dillman's (2000) method of survey implementation of five contacts, adapted for an on-line environment, was used. A pre-notice was e-mailed to all the students. The second contact, also by e-mail, contained a link to the Waiver of Informed Consent and to the survey. The third contact was a reminder/thank you e-mail. The fourth e-mail was another reminder and the final e-mail was another request to complete the survey. Using commercially available software, Zoomerang®, the respondents were asked to complete the instruments. The response rate was 21%.

The overall population was comprised of 41% females and 59% males but respondents were 44% females and 55% males. Males responded at a lower rate than females. The overall population was comprised of 18-19 year-old students (43.8%), 20-21 year-old students (35.7%), 22-23 year-old students (15.6%), and 24-25 year-old students (4.7%). The 18-19 year-old students responded at a lower rate (36.9%) than their representation in the population and Sophomores responded at a higher rate (41%) than their representation in the population, juniors responded at a slightly higher rate (17%) than their representation in the population and seniors responded at 5.2% which is slightly higher than their representation in the population.

Instruments

The Parental Attachment Questionnaire (PAQ) was used to measure parental attachment. The instrument was comprised of 55 items yielding on overall parental attachment score and three scores: Affective Quality of Attachment (Affective), Parental Fostering of Autonomy (Autonomy), and Parental Role in Providing Emotional Support (Support). Spiritual development was measured with The Spiritual Experience Index-Revised (SEI-R). The SEI-R's 23 items yielded two scales: Spiritual Support (SS) and Spiritual Openness (SO). The Moral Judgment Test was also administered but was not used in this study. A demographic questionnaire was designed to collect students' information regarding age, class standing, ethnicity and gender. The instruments were presented in the following order: (a) demographic questionnaire, (b) Moral Judgment Test, (c) Spiritual Experience Index (SEI-R), and the Parental Attachment Questionnaire.

Data Analysis

Quantitative data analysis, using the results from the PAQ, SEI-R, and demographic questionnaire, was conducted to answer the research questions in this study. Data were analyzed using SPSS.

The researcher conducted a wave analysis. Four waves were identified: (a) between survey e-mail and first reminder, (b) between first and second reminders, (c) between second the third reminders, and (d) between third and final reminders. An ANOVA was used to compare scores on the scores of the SEI-R and PAQ for each wave. A Tukey HSD post-hoc procedure was conducted to determine specific waves with significant differences. Another ANOVA was conducted to determine if significant

differences existed by demographic characteristics in each wave. Again, a Tukey HSD post-hoc procedure was conducted to determine which characteristics had significant differences by wave.

A Pearson product-moment correlation was used to determine the correlations between all scores on the PAQ and the two scores on the SEI-R. T-tests were used to determine if significant differences existed between females and males and Caucasian and non-Caucasians for all scores on both the PAQ and the SEI-R. One-way ANOVAs were used to ascertain significant differences between the scores on the PAQ and SEI-R for students by class level and by age.

Using Pearson product-moment correlations for scores on the PAQ and SEI-R were calculated for each gender and results were compared to determine differences. The same analysis was used for Caucasians and non-Caucasians, students by class year and students by age.

Limitations

The researcher recognized several limitations to the present study. The survey yielded a response rate of 21%. The low response rate may have led to possible nonresponse bias. A wave analysis indicated that nonresponders may not share the same characteristics as those who responded. Male students were more likely to be nonresponders. Nonresponse bias is described by Creswell (2008) as "response bias [also called nonresponse bias] occurs in survey research when the responses do not accurately reflect the views of the sample and the population" (p. 403). Using a wave analysis, it was determined that nonresponse bias may have been present in this study. Due to the

low response rate and the results of the wave analysis, the findings of this study may not be able to be generalized to the entire population studied, but limited only to the respondents.

Because of the correlation design of the study, causal relationships cannot be inferred from statistically significant results. Data were collected from students at two regional campuses of a university located in the Northeastern United States; findings are limited to this population only.

This research was cross-sectional rather than longitudinal so results did not determine whether positive parental attachment caused higher spiritual development or whether higher spiritual development leads to a more positive parental attachment. The researcher determined a correlation between parental attachment and spiritual development for a limited number of students.

Students used self report in responding to the survey so recall bias may have skewed the data, faking of responses may have impacted results. Additionally, demographic variables such as gender, ethnicity (Caucasian or non-Caucasian), class standing and age) were collected from subjects' self-reports and may not be accurate.

Summary of Findings

- Parental attachment was positively correlated to spiritual development in college undergraduate students as measured by the PAQ and the SEI-R.

- Female undergraduate students demonstrated a higher level of spiritual development than male students, as females scored higher on both the Spiritual Support and Spiritual Openness scales of the SEI-R.

- Non-Caucasian students demonstrated a higher level of spiritual development than Caucasian students.

- Students in their senior year of college demonstrated a higher level of Spiritual Openness than did freshman students.

- Students ages 24-25 demonstrated a higher level of Spiritual Openness than did students ages 18 and 19.

- Spiritual Support scores were lower for older students and for students with higher class standing.

- The Spiritual Support scores were lower for older students.

- Female students perceived their parents or caregivers as providing a higher level of emotional support than did males.

- Caucasian students perceived their parents or caregivers fostering autonomy more than non-Caucasian students.

- Freshman students perceived their parents or caregivers fostering autonomy less than the junior and senior level students.

- The Spiritual Openness scores were higher for students with higher class standing.

- Younger students perceive their parents or caregivers fostering autonomy less than the older students.

- A significant correlation between Spiritual Support and the Parental Fostering of Autonomy scale was found for males but not for females.

- There were differences between both the Affective Quality of Attachment and the Parental Fostering of Autonomy scales correlations with Spiritual Openness. A positive correlation was found for Caucasian students but no significant correlation was found for non-Caucasian students.

Discussion

The researcher used the analysis of the data to answer the research questions posed in this study.

Research Question 1: Was there a correlation between parental attachment and spiritual development?

A primary finding in the present study was that undergraduate college students with a higher level of parental attachment also displayed a higher level of spiritual development. This finding can lead to student affairs departments creating programs and services to assist students and their parents with programs to strength their mutual relationships as they undergo the changes that college brings.

Underlying the main hypothesis of this study was that spiritual development is higher in college students with stronger parental attachment because, due to their working models, they are secure in exploring their environment. Individuals with secure parental attachment have the confidence needed for meeting the challenges of exploration (Grossman et al., 1999). Dalton et al. (2006) stated that spirituality "include[s] all forms of reflection and introspection in which the primary goal is to explore one's relationship to the transcendent in order to deepen and enrich personal meaning, purpose, authenticity,

and wholeness" (p. 5). Reflection and introspection are both forms of internal

exploration.

Research Question 2: Were there differences in parental attachment between the

following groups: females and males; Caucasians and non-Caucasians; students by

class standing; and students by age group?

   Females and Males. Females reported a higher level of Emotional Support from

parents. It is generally thought that females seek emotional support from their parents and

others because they tend to be more relationship oriented. This finding is consistent with

Kenny's (1994) research in which she studied students enrolled in a post high school

program and also with her research with college seniors (Kenny, 1990). Kenny found that

women described their parents as providing higher levels of emotional support than their

male counterparts. Both this research and Kenny's research found no differences in the

Affective and Autonomy scales between men and women. This finding is illustrated in

Figure 3.

   Caucasians and non-caucasian students. Using data in this study, the researcher

determined that Caucasian students reported their parents or caregivers fostered

autonomy more than non-Caucasian students (Figure 4). Non-Caucasian students in this

study included those of African Americans, Hispanic, Asian and Native American

backgrounds. There has been little research on parental attachment by race or ethnicity.

Hinderlie and Kenny (2002) found that a sample of African-American students were

indistinguishable from Caucasian students in terms of parental attachment and college

adjustment. The number of African American students responding was not high enough
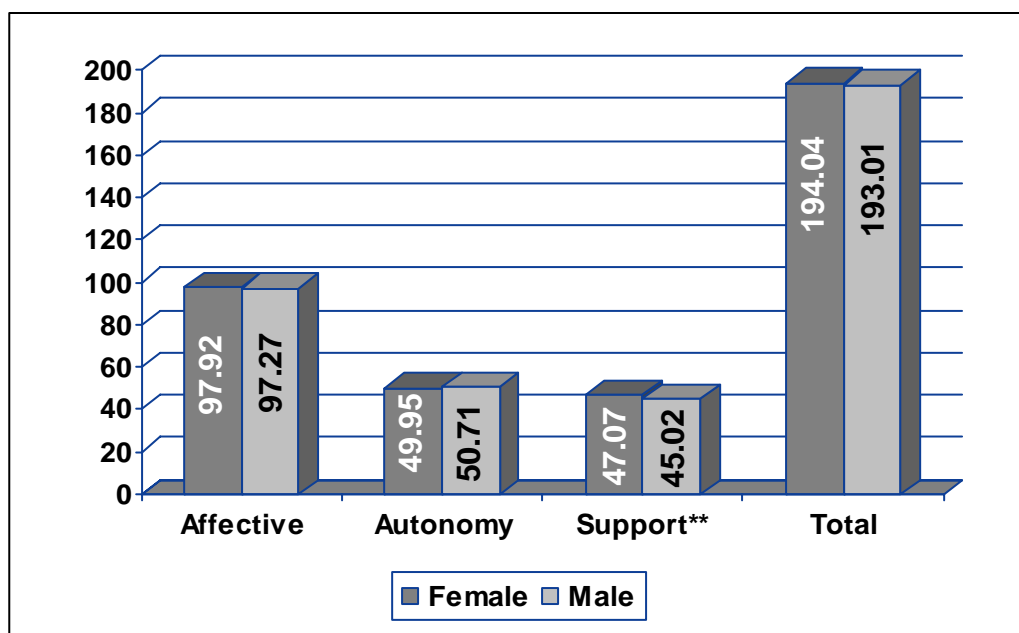
Figure 3. PAQ scores for Females and Males
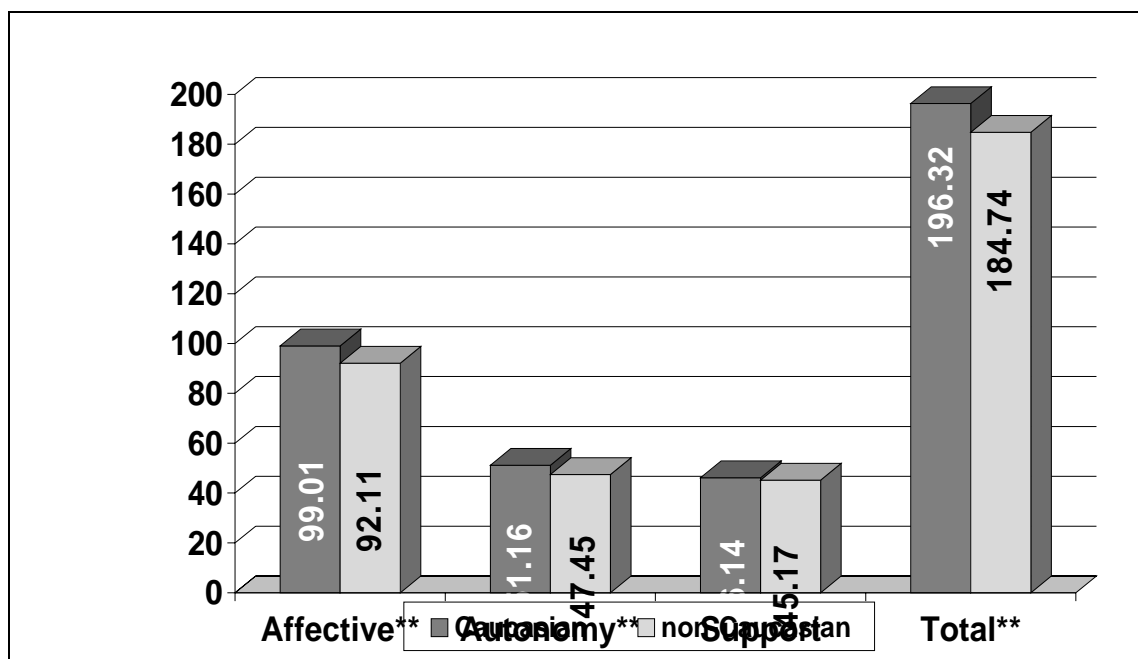
Figure 4. PAQ Scores for Caucasian and non-Caucasian students

to draw conclusions regarding differences in parental attachment for African American and Caucasian students in order to compare the results to Hinderlie and Kenny's (2002) research.

Class standing and age. No differences were found in Affective Quality of Attachment or the Parental Role in Providing Emotional Support by class standing (Figure 5) or age (Figure 6). Freshmen students were found to have lower scores on the Parental Fostering of Autonomy than did students in higher class standings. Results for the present study differed from Lapsley et al.'s (1990) found no difference in attachment between freshman and senior students. Intuitively, one would surmise that as students mature, the parents are more likely to encourage autonomy.
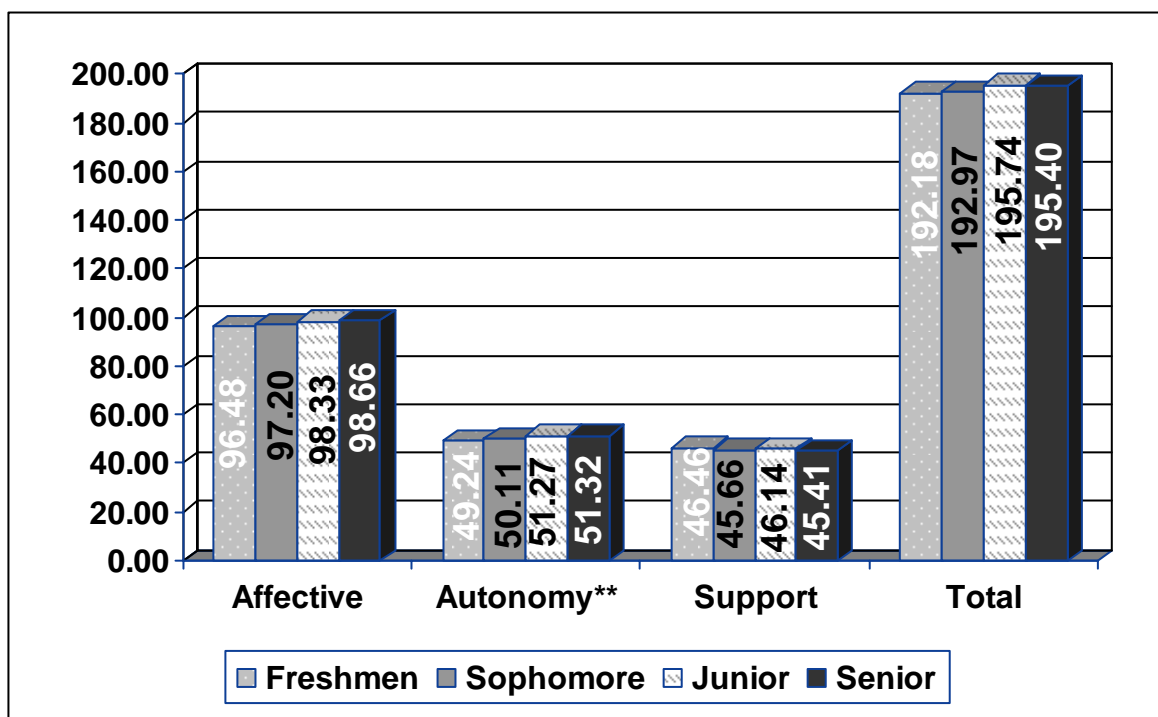
Figure 5. PAQ Scores by Class Standing.
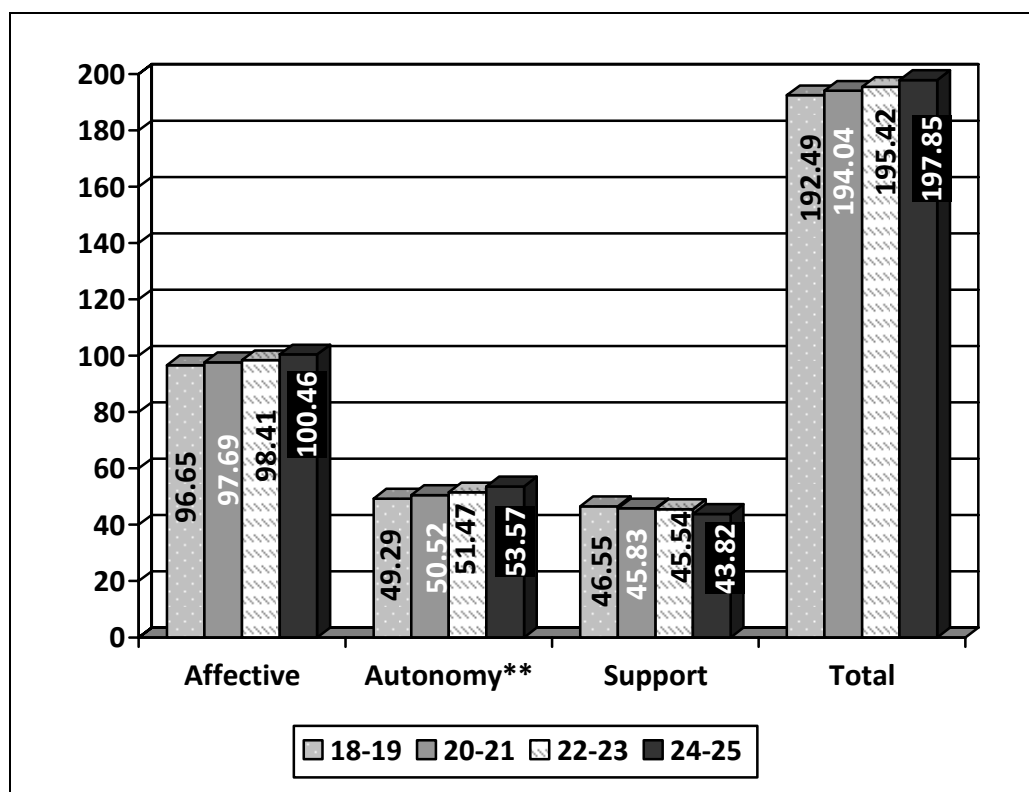
Figure 6. PAQ Scores by Age Group.

Research Question 3: Were there differences in spiritual development between the following groups: females and males; Caucasians and non-Caucasians; students by class standing; and students by age group?

  Females and males. Differences between females and males in spiritual development were found (Figure 7). Females scored higher than males on the both scales of the Spiritual Experience Index. This finding is consistent with Bryant's (2007) research that "women scored higher than men did on dimensions related to spirituality, spiritual quest, and self-rated spiritual/religious growth" (p. 840).
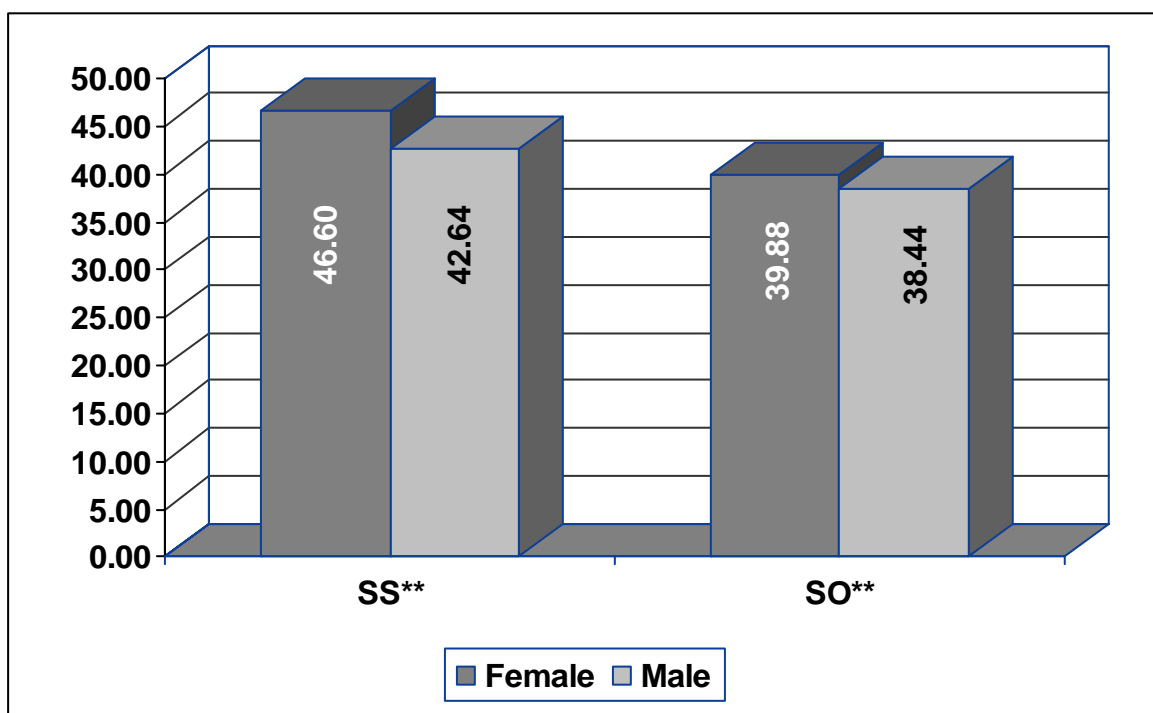
Figure 7. SEI-R Scores for Females and Males.

Caucasian and non-caucasian students. There is very little research on spiritual development using racially and ethnically diverse students. Non-Caucasian students demonstrated significantly higher scores than Caucasian students in Spiritual Support but there was no difference in Spiritual Openness (Figure 8). Cultural influences may play a role in Spiritual Support for non-Caucasian students that is not present for Caucasian students.

Class standing. Using the data collected in the current study, while not longitudinal, the researcher found that students in their junior and senior years of college scored higher in Spiritual Openness than did freshmen (Figure 9).There were no pair-wise differences for sophomores. From the data it was determined also that older students
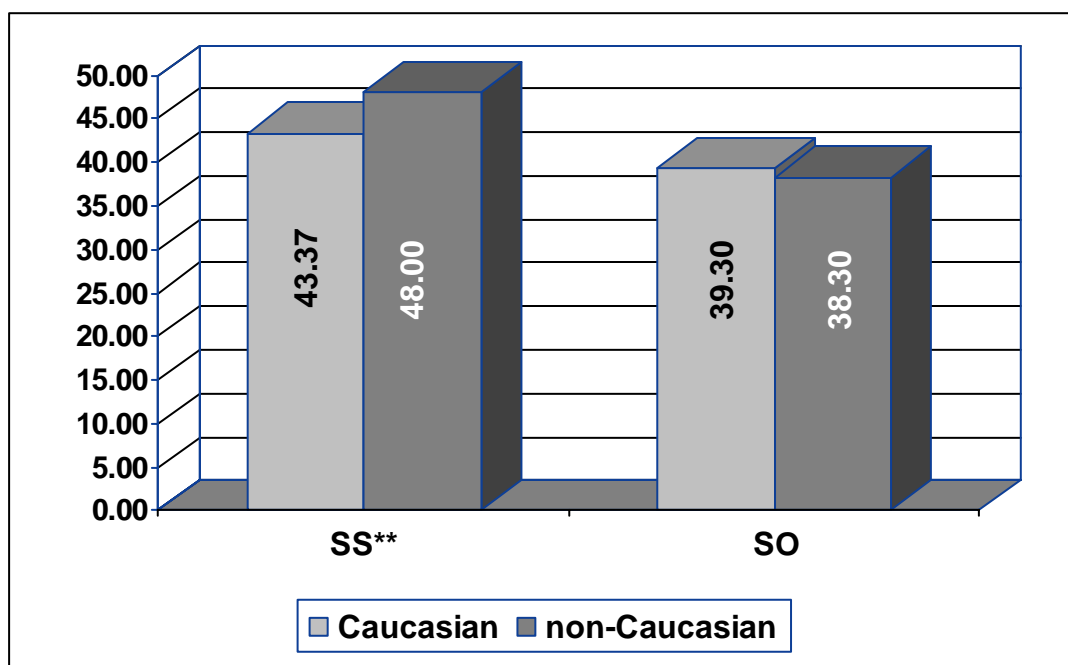
Figure 8. SEI-R Scores for Caucasian and non-Caucasian students.
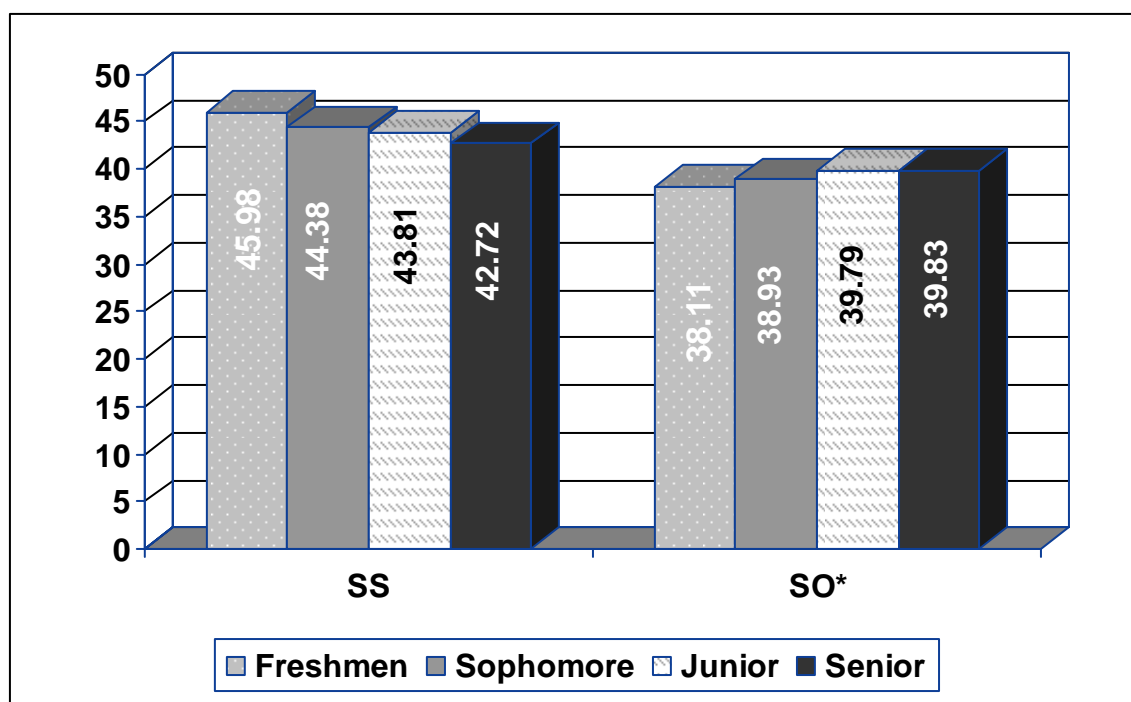
Figure 9. SEI-R Scores by Class Standing

scored higher in Spiritual Openness but lower in Spiritual Support. Genia's (1997) theory of spiritual development developed four spiritual types (Figure 2) that she proposed are developmental. Her dogmatic type (Type II) are those who scored high on Spiritual Support and low on Spiritual Openness, while her transitional type (Type III) scored low on Spiritual Support and high on Spiritual Openness. In her model, transitional types have higher levels of spiritual development than dogmatic types. Results were not evaluated using Genia's (1997) model of four spiritual types due to issues of split-mean analysis. An individual with an increase in Spiritual Openness and a decrease in Spiritual Support who is the dogmatic type will move to the transitional type which indicates a higher level of spiritual development. As students move through their college years their level of spiritual development increases. The of the increase in autonomy from their parents or from the opportunities available in college for introspection may be reasons for the increase in spiritual development.

Age. There was a significant difference by age for both Spiritual Support and Spiritual Openness (Figure 10). Students in the age group 18-19 scored significantly higher in Spiritual Support than students in the age group 24-25. As students get older their reported level of Spiritual Support decreased and the level of Spiritual Openness increased. In Genia's model, this indicates that students' spiritual development as they get older. Older students are more open-minded and accepting of others' spiritual beliefs and practices and depend less on their own spirituality for support. It is common for students to question previously held beliefs during their college years and explore other forms of spirituality. Students' questioning and challenging of previously held beliefs,
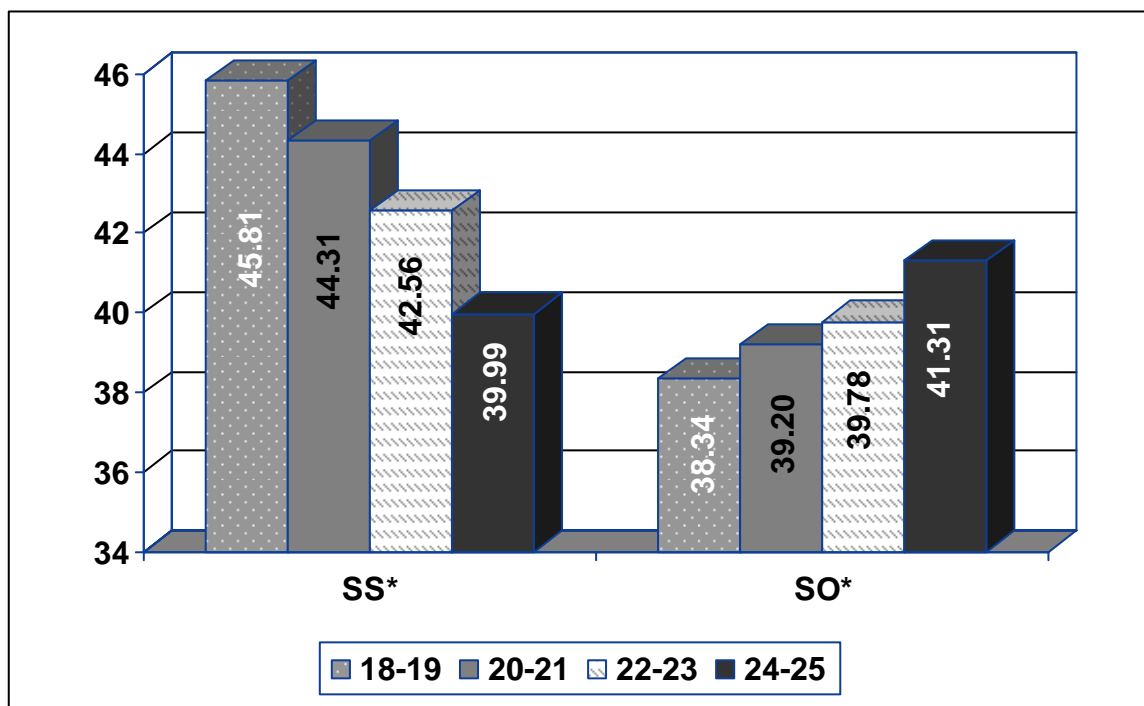
Figure 10. SEI-R Scores by Age Group

opportunities for introspection, and greater autonomy from their parents may be reasons

for the increase in spiritual development as students get older.

Research Question 4: Were there differences between the following groups: females

and males; Caucasians and non-Caucasians; students by class standing; and students

by age group in terms of the correlation of parental attachment and spiritual

development?

   Females and males. A significant correlation between Parental Fostering of

Autonomy and Spiritual Support was found for males but not for females. Affective

Quality of Attachment and Parental Role in Providing Emotional Support and Spiritual

Support had a positive correlation for both females and males. Both Affective Quality of

Attachment and Parental Fostering of Autonomy had a positive correlation with Spiritual

Openness for both females and males. Parental Role in Providing Emotional Support and

Spiritual Support were not correlated for either females or males. A summary of

significant correlations in found in Table 33.

Table 33

Summary of Significant Correlations between PAQ and SEI-R scores for Females and

Males

	Females		Males	
	SS	SO	SS	SO
Affect	++	++	++	+
Autonomy		++	++	+
Support	++		++	
Total	++	++	++	

+positive correlation, p < .05, ++ positive correlation, p < .001

Parental Fostering of Autonomy and Spiritual Support were significantly

correlated when the responses from all respondents were analyzed. However, this is not

the case for females. Females scored significantly higher on Spiritual Support than males

and this may have accounted for the lack of correlation between these two scales.

Encouraging autonomy for female students will have no significant affect on their level

of Spiritual Support. For males, their independence from parents appears to encourage

development of spiritual support. Males may use spiritual support as a way of dealing with their independence from their parents.

Caucasian and non-caucasian students. The three scales of the PAQ had positive correlations with Spiritual Support for both Caucasian and non-Caucasian students. The Affective Quality of Attachment and Parental Fostering of Autonomy scores were positively correlated with Spiritual Openness for Caucasian students but Spiritual Openness did not correlate with any of the scales of the PAQ for non-Caucasian students. A summary of significant correlations is found in Table 34.

Table 34

Summary of Significant Correlations between PAQ and SEI-R Scales for Caucasian and non-Caucasian Students.

	Caucasian		Non-Caucasian	
	SS	SO	SS	SO
Affect	++	++	++	
Autonomy	++	++	++	
Support	++		++	
Total	++	++	++	

+positive correlation, p < .05, ++ positive correlation, p < .001

For non-Caucasian students, the level of Parental Attachment is not related to their Spiritual Openness. Caucasian students scored higher on Spiritual Openness than did non-Caucasian students. The Affective Quality of Attachment and Fostering of

Autonomy relationship to Spiritual Openness suggests that for Caucasian students, these qualities may enhance their Spiritual Openness but will not influence Spiritual Openness for non-Caucasian students. Cultural differences in family relationships may contribute to this difference between Caucasian and non-Caucasian students.

Class standing. Numerous differences were found in the correlations between the PAQ scales and the SEI-R scales for students by class standing (Table 35). Fostering of Autonomy had a positive correlation with Spiritual Support for freshmen, but not for students in other class standings. Both Affective Quality of Attachment and Parental Role in Providing Emotional Support had positive correlations with Spiritual Support for all class standings.

Table 35

Summary of Significant Correlations between PAQ and SEI-R Scales by Class Standing

	Freshman		Sophomore		Junior		Senior	
	SS	SO	SS	SO	SS	SO	SS	SO
Affect	++	+	++	+	++		+	+
Autonomy	+			++				
Support	++		++		++		++	
Total	++		++	++	++		++	

+positive correlation, p < .05, ++ positive correlation, p < .001

Affective Quality of Attachment had a positive correlation with Spiritual Openness for freshmen, sophomores, and seniors, but there was no correlation between Affect and Spiritual Openness for juniors. There was a positive correlation between

Fostering of Autonomy and Spiritual Openness for sophomores, but no other class standings. There was no correlation between Parental Role in Providing Emotion Support and Spiritual Openness for any class standing.

There are several possible reasons that the positive correlation between Fostering of Autonomy and Spiritual Support was present for freshmen but not for students with the higher class standing. First, freshmen feeling that their parents are encouraging more autonomy than they feel they are ready for may turn to their spirituality as a means of support in times when they feel that their parents want them to be independent. On the other hand, the parents who perceive that their children have strong spiritual support to help them in times of stress may be more likely to encourage their autonomy.

Age. Scores on the Affect scale had a positive correlation between Spiritual Support for 18-19 and 20-21 year olds but not for 22-23 and 24-25 year olds (Table 36). Autonomy had a positive correlation between Spiritual Support for 18-19 and 20-21 year olds but not for 22-23 and 24-25 year olds. Parental Support had a positive correlation with Spiritual Support for all age groups.

Affective Quality of Attachment had a positive correlation between Spiritual Openness only for 18-19 and 22-23. Parental Fostering of Autonomy had a positive correlation with Spiritual Openness for 20-21 year olds, but there was no correlation for any other age group. There was no correlation between Parental Role in Providing Emotional Support and Spiritual Openness for any age groups.

Table 36

Summary of Significant Correlations between PAQ and SEI-R Scales by Age

	18-19		20-21		22-23		24-25	
	SS	SO	SS	SO	SS	SO	SS	SO
Affect	++	+	++			+		
Autonomy	+		+	+				
Support	++		++		++		++	
Total	++	++	++					

+ indicates a positive correlation, *p* < .05, ++ indicates a positive correlation, p < .001

The correlation that was found between Parental Fostering of Autonomy and

Spiritual Support for 18-19 year-olds and 20-21 year-olds, but not for the two older age

groups has several possible reasons. As with class standing, younger students, believing

that their parents are encouraging more autonomy than they feel they are ready for, may

turn to their spirituality as a means of support in times when their parents want them to be

independent. On the other hand, the parents who perceive that their children have strong

spiritual support to help them in times of stress may be more likely to encourage their

autonomy. As students get older, they may expect their parents to encourage their

autonomy and therefore this may explain the lack of correlation between Autonomy and

Spiritual Support.

Conclusions

The primary finding of this study was that there was a positive correlation

between Parental Attachment and Spiritual Development. This finding can be used by

colleges and universities in planning programs and services for students and their parents to help them understand the changes in their mutual relationships that often occur during the college years.

The results of this study shed some additional light on spiritual development of college students. Dalton et al. (2006) stated "It is important for educators to recognize the changing forms of college student spirituality today and to deepen their resources, understanding, and commitment to spiritual growth as an important aspect of their mission to promote students' holistic development" (p.22). Hammermeister and Peterson (2001) determined that students with high self-esteem and low levels of loneliness and hopelessness demonstrate higher levels of spiritual development. Through the present research it was determined that students with positive parental attachment demonstrated higher levels of spiritual development as well.

Recommendations for Future Practice and Research

Future Practice

Colleges and universities have been given a number of strategies through research literature to respond to the spiritual needs and interests of today's college students. Chickering et al.'s (2006) book, *Encouraging Authenticity and Spirituality in Higher Education* is full of suggestions for programs, both inside and outside the classroom, to encourage spiritual development. While there are many suggestions for encouraging spiritual development, one area often overlooked in programs to increase spiritual development is a process to provide both students and their parents with tools to

understand and accommodate the changes that occur in their relationship throughout the students' college career.

Parents of many college students are involved closely in their children's lives (Howe & Strauss, 2003). Colleges often provide parent orientations, newsletters, and other resources for them (Howe & Strauss, 2003). Using the data in this study, the researcher found a correlation between parental attachment and spiritual development. Colleges should consider providing, if they do not already do so, resources to help parents with the changing relationship they have as their child enters and progresses through college. Information and suggestions regarding parents' availability to the student, acceptance, not necessarily agreement, of their decisions, provisions for emotional support, and cultivation of independence may give parents tools to develop a more secure base that encourages their children's spiritual quest and development during their college years.

As colleges and universities create programs to enhance the spiritual development of their students, they should not neglect to include programs and services that may serve to enhance the understanding of the changing nature of their relationship that the students have with their parents. Current activities found on college campuses that encourage spiritual development are included in traditional student activities such as: campus speakers, activities, learning communities, leadership development activities, residence hall programs and service-learning programs (Dalton et al., 2006). Current activities can be supplemented to give students tools that may help them enhance their relationship with their parents as the students change and develop.

An example of one such program is "Soup for the Soul" held at Penn State Erie, The Behrend College. The 4-week series, held twice each academic year, provides an informal soup lunch and a speaker. The Fall 2008 program focused on the changing nature of students' relationships with their parents during their college years (Appendix J).

Additionally, because freshmen students were less spiritually open, campus diversity programs should include topics of spiritual differences in addition to the other topics which often include racial, ethnic, gender, and religious differences. Male students showed lower levels of spiritual development than did females. Programs specifically addressing male spirituality should be considered. Programs for male students may be integrated in to activities that draw a large male attendance. On many college campuses athletic intramural programs draw a large number of male participants so developing programs for introspection could be incorporated in these programs. Programs for fraternities regarding both parental relationships and spirituality could be created and offered.

Future Research

As with most research, the results study answered some questions but left new questions to consider. Research using quantitative and qualitative techniques, or other methodology is needed. Using different methodology may lead to a higher response rate.

Research is needed with a larger sample of non-Caucasian students to determine how parental attachment is related to spiritual development among various races and

ethnicities. Research based on race and/or ethnicity may lead to additional insight on cultural influences on both parental attachment and spiritual development.

Research regarding Parental Attachment and Spiritual Development with students attending religiously affiliated institutions, large public universities, secular private institutions and community colleges is needed. This research studied students at two small to mid-sized regional campuses of a public university. Similar research with students at other types of intuitions may yield interesting findings.

Additional research regarding students' collegiate housing status: on-campus residence hall, off-campus housing, or commuting from parents' home is needed. This additional research would add another dimension to learning more about college students' spiritual development. Research considering students' majors and spiritual development should be developed to increase knowledge about college students' spiritual development.

Since data were collected with Graves' research on parental attachment and moral judgment using the same respondents, research on the relationship between spiritual and moral development could provide additional insight into the relationship of both of these important developmental tasks.

Additionally, research using data collected from both students and their parents may provide additional insight on how each perceives the child-parent relationship and if the spiritual development of the parents is related to the spiritual development of the students. An in-depth, longitudinal study is needed to investigate a causal link between parental attachment and spiritual development.

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Appendix A

Pre-Survey E-mail

PRE-SURVEY E-MAIL

Dear <Name>,
In a few days, you will receive an e-mail request to fill out a web questionnaire. The questionnaire is for an important research project being conducted for our dissertations. We are doctoral students at the University of Nebraska at Lincoln, and we must complete this research project in order to graduate.

The questionnaire concerns the experiences of undergraduate students with their parents and how their relationships influence their decision-making skills and thoughts about spiritual matters. The study is important because it will help the administration, faculty and staff at <institution> to better understand your needs and will assist them in providing services to you, your parents, and other students and their parents.

Thank you in advance for your time and consideration. Your unique experiences will provide much useful information for this study. We recognize that participation in this research project is voluntary, and we very much appreciate your assistance. It is only with the generous help of students like you that our research can be successful.

This research is being conducted in collaboration with +++++++++ University.

Sincerely,   814-898-6336
Deidra Graves Stephens
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University of Nebraska at Lincoln   Faculty Advisor
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Lincoln   Faculty Advisor
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P.S. As a way of saying thanks for your participation, you will be entered into a drawing for one of several Amazon.com gift certificates after you successfully submit your web survey.

Appendix B

Survey E-mail

SURVEY E-MAIL

Dear <Name>,

We are writing to request your help with an important research project being conducted for our dissertations at the University of Nebraska at Lincoln. The study is part of an effort to learn more about undergraduate students' relationships with their parents. As a student, we are sure you understand how important it is for us to get your response back for our research.

 We are contacting all +++++++++ an ++++++++++++ students to ask them about how their relationships with their parents influence their decision-making skills and thoughts about spiritual matters.

The study is important because it will help the administration, faculty and staff at ++++++++++ to better understand your needs and will assist them in providing services to you, your parents, and other students and their parents.

The questionnaire will take about 20 minutes to complete. As a token of appreciation for your participation, you will be automatically entered into a prize drawing for one of five $100 Amazon.com gift certificates upon completion of the web survey. Winners will be contacted via e-mail after the data collection period ends.

Your answers are completely confidential and will be released only as summaries in which no individual's answers can be identified. When you enter the survey, you will be asked to type in a number on the web survey. This is to help us know when you return your completed questionnaire so that we can delete your name from the mailing list and enter your name into the prize drawing. Your name will never be connected to your answers in any way.

This survey is voluntary. However, you can help us very much by taking a few minutes to share your thoughts. If for some reason you choose not to respond, please let us know by entering the web survey, inserting your number, and submitting the blank questionnaire. Please read the attached Informed Consent Form. By clicking the survey link you are verifying your consent to participate in this research.

To begin the survey, please click on the following link: <link>. You will be asked to enter in a number. Please enter in the following number: <#####>.

If you have any questions or comments about this study, please feel free to contact us or our advisors using the information below. This research is being conducted in collaboration with +++++++++ University.

Thank you very much for helping with this important study.

Sincerely,

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Appendix C

Survey Instrument

Nebraska
UNIVERSITY OF
Lincoln

Department of Educational Administration

INFORMED CONSENT FORM

Identification of Project: The influence of parental attachment on spiritual development and decision-making in college students.

Purpose of the Research: The purpose of this research is to determine if college students' relationships with their parents' influence their spiritual lives and how they make decisions.

Procedures: You will be asked to complete a survey that will ask you questions about your relationship with your parents, your spiritual beliefs, and making decisions. It will take approximately 20 minutes to complete the survey.

Risks and/or Discomforts: There are no known risks or associated with this research.

Benefits: You may find it helpful to think about your relationship with your parents and also how you feel about spiritual matters. The information gained from this study may help college administrators, staff, and faculty better understand college students.

Confidentiality: Your answers are completely confidential and will be released only as summaries in which no individual's answers can be identified. When you enter the survey, you will be asked to type in a code on the web survey. This is to help us know when you return your completed questionnaire so that we can delete your name from the mailing list and enter your name into our prize drawing. Your name will never be connected to your answers in any way. The data will be stored in a password-protected file on a secure server and will only be seen by the investigators during the study and for three years after the study is complete. The information obtained in this study may be published in scholarly journals or presented at scholarly meetings but the data will be reported as aggregated data. Your confidentiality will be kept to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet by any third parties.

Compensation: By participating in this research you will be eligible to be entered into a drawing for one of five $100 gift cards from amazon.com. The name and PSU User ID for winners of the gift cards will need to be forwarded to Penn State's Accounting Department for tax purposes.

Opportunity to Ask Questions: You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may call Mary-Ellen Madigan at any time, office phone, 866-374-3378 (toll-free), or by email MEA1@psu.edu; Deidra Graves Stephens, 512-788-3327 or by email deidra.stephens@mccombs.utexas.edu ;or Dr. Richard Hoover, (402)472-3058 or by email rhoover2@unl.edu . If you have questions concerning your rights as a research subject that have not been answered by the investigator or to report any concerns about the study, you may contact the University of Nebraska-Lincoln Institutional Review Board, telephone (402) 472-6965.

Freedom to Withdraw: Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

Consent: You are voluntarily making a decision whether or not to participate in this research study. Taking the survey certifies that you have decided to participate having read and understood the information presented. You may print a copy of this consent for your records. Completion and submission of the survey implies your consent to participate in this research.

This research is not affiliated with Penn State University except that one of the researchers is a Penn State employee.
Participants must be 18 years of age or older.

Names and Phone number and email of investigator
Mary-Ellen Madigan, Principal Investigator
4701 College Drive, Erie, PA 16563

Phone: 866-374-3378 or 814-898-6336
MEA1@psu.edu

Deidra Graves Stephens, Principal Investigator
1 University Station, B6004, Austin, TX 78712

Phone: 512-788-3327
deidra.stephens@mccombs.utexas.edu

Dr. Richard Hoover, Supervisory Investigator
119 TEAC, University of Nebraska
Lincoln, NE 68588

Phone: 402-472-3058
rhoover2@unl.edu

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Parental Attachment, Spiritual Development & Opinions About Social Problems

Thank you for taking this survey and assisting us with our research. With your permission, we will contact you to gather your thoughts about this survey. Your input will help us as we design our final survey instrument.

1   Please enter the survey number which was sent to you in the email you received.

SUBMIT

Parental Attachment, Spiritual Development & Opinions About Social Problems

2   What is your current class standing?

3   What is your age?

4   What is your gender?

5   What is your race/ethnicity?

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Parental Attachment, Spiritual Development & Opinions About Social Problems

OPINIONS ABOUT SOCIAL PROBLEMS

This questionnaire is aimed at understanding how people think about social problems. Different people often have different opinions about questions of right and wrong. There are no "right" answers in the way that there are right answers to math problems. We would like you to tell us what you think about several problem stories. Your responses will be analyzed to find the average for the whole group, and no one will see your individual answers.

In this questionnaire, you will be asked to give your opinions about several stories.

(c) 1977-2002 by George Lind, http://www.uni-konstanz.de/ag-moral

6   First Story

Due to some seemingly unfounded dismissals, some factory workers suspect managers of eavesdropping on their employees through an intercom and usinig this information against them. The manager officially and emphatically deny this accusation. The union declares that it will only take steps against the company when proof has been found that confirms these suspicious. Two workers then break into the administrative offices and take tape transcripts that prove the allegation of eavesdropping.

Would you disagree or agree with the workers' behavior?

I strongly disagree						I strongly agree
1	2	3	4	5	6	7

7   How acceptable do you find the following arguments *in favor* of the two workers' behavior? Suppose someone argued they were *right*...

1 I strongly reject	2	3	4	5	6	7	8	9 I strongly accept

because they didn't cause much damage to the company

1	2	3	4	5	6	7	8	9

because due to the company's desregard for the law, the means used by the two workers were permissible to restore law and order

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①　②　③　④　⑤　⑥　⑦　⑧　⑨

because most of the workers would approve of their deed and many of them would be happy about it

①　②　③　④　⑤　⑥　⑦　⑧　⑨

because trust between people and individual dignity count more than the firm's internal regulations

①　②　③　④　⑤　⑥　⑦　⑧　⑨

because the compnay had committed an injustice first, the two workers were justified in breaking into the offices

①　②　③　④　⑤　⑥　⑦　⑧　⑨

because the two workers saw no legal means of revealing the company's misuse of confidence, and therefore chose what they considered the lesser evil

①　②　③　④　⑤　⑥　⑦　⑧　⑨

8　How acceptable do you find the following arguments *against* the two workers' behavior? Suppose someone argued they were *wrong*...

| 1
I strongly
reject | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9
I strongly
accept |

because we would endanger law and order in society in everyone acted as the two workers did

①　②　③　④　⑤　⑥　⑦　⑧　⑨

because one must not violate such a basic right of property ownership and take the law into one's own hands, unless some universal moral principle justifies doing so

①　②　③　④　⑤　⑥　⑦　⑧　⑨

because risking dismissal from the company on behalf of other people is unwise

①　②　③　④　⑤　⑥　⑦　⑧　⑨

because the two should have run through the legal channels at their disposal and not committed a serious violation of the law

①　②　③　④　⑤　⑥　⑦　⑧　⑨

because one doesn't steal and commit burglary if one wants to be considered a decent and honest person

①　②　③　④　⑤　⑥　⑦　⑧　⑨

because the dismissals of the other employees did not affect them and thus they had no reason to steal the transcripts

①　②　③　④　⑤　⑥　⑦　⑧　⑨

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Parental Attachment, Spiritual Development & Opinions About Social Problems

9   Doctor's Dilemma

A woman had cancer and she had no hope being saved. She was in terrible pain and so weakened that a large dose of a painkiller such as morphine would have caused her death. During a temporary period of improvement, she begged the doctor to give her enough morphine to kill her. She said she could no longer endure the pain and would be dead in a few weeks anyway. The doctor complied with her wish.

Do you disagree or agree with the doctor's behavior?

I strongly disagree						I strongly agree
1	2	3	4	5	6	7

**10** How acceptable do you find the following arguments *in favor* of the doctor? Suppose someone said he acted *rightly*...

1 I strongly reject	2	3	4	5	6	7	8	9 I strongly accept

because the doctor had to act according to his conscience. The woman's condition justified an exception to the moral obligation to preserve life.

1	2	3	4	5	6	7	8	9

because the doctor was the only one who could fulfill the woman's wish; respect for her wish made him act as he did

1	2	3	4	5	6	7	8	9

because the doctor only did what the woman talked him into doing. He need not worry about the consequences

1	2	3	4	5	6	7	8	9

because the woman would have died anyway and it didn't take much effort for him to give her an overdose of painkiller

1	2	3	4	5	6	7	8	9

because the doctor didn't really break a law. Noboby could have saved the woman and he only wanted to shorten her suffereing

1	2	3	4	5	6	7	8	9

because most of his fellow doctors would presumably have done the same in a similar situation

1	2	3	4	5	6	7	8	9

11 How acceptable to you find the following arguments *against* the doctor? Suppose somone said that he acted *wrongly*...

1   9

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I strongly reject	2	3	4	5	6	7	8	I strongly accept

because he acted contrary to his colleages' convictions. If they are against mercy-killing the doctor shouldn't do it

[1] [2] [3] [4] [5] [6] [7] [8] [9]

because one should be able to have complete faith in a doctor's devotion to preserving life even if someone with great pain would rather die

[1] [2] [3] [4] [5] [6] [7] [8] [9]

becuase the protection of life is everyone's highest moral obligation. We have no clear moral criteria for distinguishing between mercy-killing and murder

[1] [2] [3] [4] [5] [6] [7] [8] [9]

because the doctor could get himself into much trouble. They have already punished others for doing the same thing

[1] [2] [3] [4] [5] [6] [7] [8] [9]

because he could have had it much easier if he had waited and not interfered with the woman's dying

[1] [2] [3] [4] [5] [6] [7] [8] [9]

because the doctor broke the law. If one thinks that mercy-killing is illegal, then one should refuse such requests

[1] [2] [3] [4] [5] [6] [7] [8] [9]

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Survey Page 5

Parental Attachment, Spiritual Development & Opinions About Social Problems

The following questions will ask you about your feelings on spiritual matters. Please choose the answer that best describes your level of agreement with the statement.

12 Please provide the answer that best describes your agreement with the following statements

| 1 Strongly Disagree	2	3	4	5	6 Strongly Agree

I often feel strongly related to a power greater than myself.

[1] [2] [3] [4] [5] [6]

My faith gives my life meaning and purpose

[1] [2] [3] [4] [5] [6]

My faith is a way of life.

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| 1 | 2 | 3 | 4 | 5 | 6 |

I often think about issues concerning my faith.

| 1 | 2 | 3 | 4 | 5 | 6 |

My faith is an important part of my individual identity.

| 1 | 2 | 3 | 4 | 5 | 6 |

My relationship to God or other supreme being is experienced as unconditional love.

| 1 | 2 | 3 | 4 | 5 | 6 |

My faith is often a deeply emotional experience.

| 1 | 2 | 3 | 4 | 5 | 6 |

I gain spiritual strength by trusting a higher power.

| 1 | 2 | 3 | 4 | 5 | 6 |

13 Please provide the answer that best describes your agreement with the following statements

| 1 Stronly Disagree | 2 | 3 | 4 | 5 | 6 Stronly Agree |

My faith is often a deeply emotional experience.

| 1 | 2 | 3 | 4 | 5 | 6 |

I make a conscious effort to live in accordance with my spiritual values.

| 1 | 2 | 3 | 4 | 5 | 6 |

My faith enables me to experience forgiveness when I act against my moral conscience.

| 1 | 2 | 3 | 4 | 5 | 6 |

Sharing my faith with others is important for my spiritual growth.

| 1 | 2 | 3 | 4 | 5 | 6 |

My faith guides my whole approach to life.

| 1 | 2 | 3 | 4 | 5 | 6 |

I believe that there is only one true faith.

| 1 | 2 | 3 | 4 | 5 | 6 |

Ideas from faiths different from my own may increase my understanding of spiritual truth.

| 1 | 2 | 3 | 4 | 5 | 6 |

14 Please provide the answer that best describes your agreement with the following statements

| 1 Strongly Disagree | 2 | 3 | 4 | 5 | 6 Strongly Agree |

One should not marry someone of a different faith,

| 1 | 2 | 3 | 4 | 5 | 6 |

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I believe that the world is basically good.

1   2   3   4   5   6

Learning about different faiths is an important part of my spiritual development.

1   2   3   4   5   6

I feel a strong spiritual bond with all of humankind.

1   2   3   4   5   6

I never challenge the teachings of my faith.

1   2   3   4   5   6

My spiritual beliefs change as I encounter new ideas and experiences.

1   2   3   4   5   6

Persons of different faiths share a common spiritual bond.

1   2   3   4   5   6

I believe that the world is basically evil.

1   2   3   4   5   6

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Survey Page 6

Parental Attachment, Spiritual Development & Opinions About Social Problems

The statements describe family relationships and the kinds of feelings and experiences frequently reported by young adults. Please respond to each item by filling in the number on a scale of 1 to 5 that best describes your parents or other primary caregiver, your relationship with them, and your experiences and feelings. Please provide a single rating to describe your parents or other primary caregiver and your relationship with them. If only one parent/caregiver is living, or if your parents/caregivers are divorced, respond with reference to your living parent/caregiver or the parent/caregiver with whom you feel closer.

15 In general, my parents/caregivers....

1	2	3	4	5
Not at All	Somewhat	A Moderate Amount	Quite a Bit	Very Much

Are persons I can count on to provide emotional support when I feel troubled.

1   2   3   4   5

Support my goals and interests.

1   2   3   4   5

Live in a different world.

1   2   3   4   5

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Understand my problems and concerns.

[1] [2] [3] [4] [5]

Respect my privacy.

[1] [2] [3] [4] [5]

Restrict my freedom or independence.

[1] [2] [3] [4] [5]

16 In general, my parents/caregivers....

1 Not at All	2 Somewhat	3 A Moderate Amount	4 Quite a Bit	5 Very Much

Are available to give me advice or guidance when I want it.

[1] [2] [3] [4] [5]

Take my opinions seriously.

[1] [2] [3] [4] [5]

Encourage me to make my own decisions.

[1] [2] [3] [4] [5]

Are critical of what I can do.

[1] [2] [3] [4] [5]

Impose their ideas and values on me.

[1] [2] [3] [4] [5]

Have given me as much attention as I have wanted

[1] [2] [3] [4] [5]

Are persons to whom I can express differences of opinion on important matters.

[1] [2] [3] [4] [5]

17 In general, my parents/caregivers...

1 Not at All	2 Somewhat	3 A Moderate Amount	4 Quite a Bit	5 Very Much

Are sensitive to my feelings and needs

[1] [2] [3] [4] [5]

Are disappointed in me.

[1] [2] [3] [4] [5]

Give me advice whether or not I want it.

[1] [2] [3] [4] [5]

Respect my judgment and decisions, even if different from what they would want.

[1] [2] [3] [4] [5]

Do things for me, which I could do for myself.

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| 1 | 2 | 3 | 4 | 5 |

Are persons whose expectations I feel obligated to meet.

| 1 | 2 | 3 | 4 | 5 |

Treat me like a younger child.

| 1 | 2 | 3 | 4 | 5 |

18 In general, my parents/caregivers...

| 1 | 2 | 3 | 4 | 5 |
| Not at All | Somewhat | A Moderate Amount | Quite a Bit | Very Much |

Have no idea what I am feeling or thinking.

| 1 | 2 | 3 | 4 | 5 |

Have provided me with the freedom to experiment and learn things on my own.

| 1 | 2 | 3 | 4 | 5 |

Are too busy or otherwise involved to help me.

| 1 | 2 | 3 | 4 | 5 |

Have trust and confidence in me.

| 1 | 2 | 3 | 4 | 5 |

Try to control my life.

| 1 | 2 | 3 | 4 | 5 |

Protect me from danger and difficulty

| 1 | 2 | 3 | 4 | 5 |

Ignore what I have to say.

| 1 | 2 | 3 | 4 | 5 |

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Survey Page 7

Parental Attachment, Spiritual Development & Opinions About Social Problems

19 During recent visits or time spent together, my parents/caregivers were persons. . .

| 1 | 2 | 3 | 4 | 5 |
| Not At All | Somewhat | A Moderate Amount | Quite a Bit | Very Much |

I looked forward to seeing.

| 1 | 2 | 3 | 4 | 5 |

With whom I argued.

| 1 | 2 | 3 | 4 | 5 |

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With whom I felt relaxed and comfortable.

| 1 | 2 | 3 | 4 | 5 |

Who made me angry.

| 1 | 2 | 3 | 4 | 5 |

I wanted to be with all the time.

| 1 | 2 | 3 | 4 | 5 |

Towards whom I felt cool and distant.

| 1 | 2 | 3 | 4 | 5 |

20 During recent visits or time spent together, my parents/caregivers were persons. . .

| 1 | 2 | 3 | 4 | 5 |
| Not At All | Somewhat | A Moderate Amount | Quite a Bit | Very Much |

Who got on my nerves.

| 1 | 2 | 3 | 4 | 5 |

Who aroused feelings of guilt and anxiety.

| 1 | 2 | 3 | 4 | 5 |

To whom I enjoyed telling about the things I have done and learned.

| 1 | 2 | 3 | 4 | 5 |

For whom I felt a feeling of love.

| 1 | 2 | 3 | 4 | 5 |

I tried to ignore.

| 1 | 2 | 3 | 4 | 5 |

To whom I confided my most personal thoughts and feelings.

| 1 | 2 | 3 | 4 | 5 |

Whose company I enjoyed.

| 1 | 2 | 3 | 4 | 5 |

I avoided telling about my experiences.

| 1 | 2 | 3 | 4 | 5 |

21 Following time spent together, I leave my parents/caregivers. . .

| 1 | 2 | 3 | 4 | 5 |
| Not At All | Somewhat | A Moderate Amount | Quite a Bit | Very Much |

With warm and positive feelings.

| 1 | 2 | 3 | 4 | 5 |

Feeling let down and disappointed by my family.

| 1 | 2 | 3 | 4 | 5 |

22 When I have a serious problem or an important decision to make. . .

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1	2	3	4	5
Not At All	Somewhat	A Moderate Amount	Quite a Bit	Very Much

I look to my family for support, encouragement, and/or guidance.

[1] [2] [3] [4] [5]

I seek help from a professional, such as a therapist, college counselor, or clergy.

[1] [2] [3] [4] [5]

I think about how my family might respond and what they might say.

[1] [2] [3] [4] [5]

I work it out on my own, without help or discussion with others.

[1] [2] [3] [4] [5]

I discuss the matter with a friend.

[1] [2] [3] [4] [5]

I know that my family will know what to do.

[1] [2] [3] [4] [5]

I contact my family if I am not able to resolve the situation after talking it over with my friends.

[1] [2] [3] [4] [5]

23 When I go to my parents/caregivers for help. . .

1	2	3	4	5
Not At All	Somewhat	A Moderate Amount	Quite a Bit	Very Much

I feel more confident in my ability to handle the problems on my own.

[1] [2] [3] [4] [5]

I continue to feel unsure of myself.

[1] [2] [3] [4] [5]

I feel that I would have obtained more understanding and comfort from a friend.

[1] [2] [3] [4] [5]

I feel confident that things will work out as long as I follow my parent's advice.

[1] [2] [3] [4] [5]

I am disappointed with their response.

[1] [2] [3] [4] [5]

SUBMIT

Survey Page 8

Appendix D

First Follow-up E-mail

FIRST FOLLOW-UP E-MAIL

Dear <Name>,

Last week a questionnaire was e-mailed to you seeking information about your relationship with your parents and how it influences your decision-making skills and thoughts about spiritual matters.

If you have already completed and submitted the questionnaire, please accept our thanks. If not, please do so today. We recognize that participation in this research project is voluntary, but we are especially grateful for your help because it is only by asking students like you about your experiences that we can improve university services and programs.

If you did not receive a web link to the questionnaire or if our previous e-mail was misplaced, please click on this link to access the survey: <link>. You will be asked to enter in a number. Please enter in the following number: <#####>.

If you have any questions or comments about this study, please feel free to contact one of us using the information below. This research is being conducted in collaboration with ++++++++++ University.

Thank you very much for helping with this important study.

Sincerely,

	Dr. Richard Hoover
Mary-Ellen Madigan	Faculty Advisor
Student	University of Nebraska Lincoln
University of Nebraska Lincoln	402-472-3058
814-898-6336	rhoover2@unl.edu
MEA1@psu.edu	
Deidra Graves Stephens	Dr. Ronald Joekel
Student	Faculty Advisor
University of Nebraska Lincoln	University of Nebraska Lincoln
512-788-3327	402-472-0971
deidra.stephens@mccombs.utexas.edu	rjoekel2@unl.edu

Appendix E

Second Follow-up E-mail

SECOND FOLLOW-UP E-MAIL

Dear <Name>,

Several weeks ago we sent you a questionnaire asking about your thoughts about your relationship with your parents and how it influences your decision-making skills and thoughts about spiritual matters. To the best of our knowledge, we have not received your completed questionnaire.

The questionnaires that have been returned provide a wealth of information about the role parents play in the lives of college students.

We are writing to you again because of the importance that your questionnaire has for helping us get accurate results. We recognize that participation in this research project is voluntary, but it is important that everyone in the sample respond so that the results are truly representative of the entire population of undergraduate students at <institution>.

A few people have written to say that they should not have received the questionnaire because they are not students at <institution>. If this situation applies to you, please let us know by e-mailing one of us so that we can delete your name from the mailing list.

We hope that you will take a few moments to complete and return the questionnaire soon. To access the survey, please click on the following link: <link>. You will be asked to enter in a number. Please enter in the following number: <#####>.

If for some reason you choose not to respond, please let us know by entering the web survey, inserting your number, and submitting the blank questionnaire.

This research is being conducted in collaboration with ++++++++++ University.

Thank you very much for helping with this important study.

Sincerely,

Dr. Ronald Joekel
Faculty Advisor
University of Nebraska Lincoln
402-472-0971
rjoekel2@unl.edu

Deidra Graves Stephens
Student, University of Nebraska Lincoln
512-788-3327
deidra.stephens@mccombs.utexas.edu

Mary-Ellen Madigan
Student, University of Nebraska Lincoln
814-898-6336
MEA1@psu.edu

Dr. Richard Hoover
Faculty Advisor
University of Nebraska Lincoln
402-472-3058
rhoover2@unl.edu

P.S. Don't forget that submission of your questionnaire enters your name into a drawing for one of five $100 Amazon.com gift cards!

Appendix F

Final Follow-up E-mail

FINAL FOLLOW-UP E-MAIL

Dear <Name>,

I hope your finals are going well, or better yet, over! We have contacted you several times requesting that you respond to a questionnaire asking about your relationship with your parents and how it influences your decision-making skills and thoughts about spiritual matters. Our records indicate that we have not received your completed questionnaire.

We recognize that participation in this research project is voluntary, but our study relies upon responses from students like you in order to be considered a valid and reliable research project. We are doctoral students at the University of Nebraska at Lincoln, and we must complete this project in order to graduate.

Please assist us by taking the time to complete and return the questionnaire soon. To access the survey, please click on the following link: <link>. You will be asked to enter in a number. Please enter in the following number: <#####>.

If for some reason you choose not to respond, please let us know by entering the web survey, inserting your number, and submitting the blank questionnaire.

To express our appreciation, we will enter your name into a drawing for one of five Amazon.com gift certificates upon submission of your questionnaire.

Thank you very much for helping with this important study.

This research is being conducted in collaboration with ++++++++++ University.

Sincerely,

Deidra Graves Stephens
Student
University of Nebraska Lincoln
512-788-3327
deidra.stephens@mccombs.utexas.edu

Mary-Ellen Madigan
Student, University of Nebraska Lincoln
814-898-6336
MEA1@psu.edu

Dr. Ronald Joekel
Faculty Advisor
University of Nebraska Lincoln
402-472-0971
rjoekel2@unl.edu

Dr. Richard Hoover
Faculty Advisor
University of Nebraska Lincoln
402-472-3058
rhoover2@unl.edu

P.S. Please feel free to contact one of us if you have questions, concerns or comments.

Appendix G

Permission to Use the PAQ

PERMISSION TO USE THE PAQ

BOSTON COLLEGE
CHESTNUT HILL, MASSACHUSETTS 02167
School of Education

DEPARTMENT OF COUNSELING, DEVELOPMENTAL
PSYCHOLOGY, AND RESEARCH METHODS
Campion 307
(617)552-4030
Fax (617)552-8419

Dear Colleague:

You have my permission to reproduce and use the Parental Attachment Questionnaire for research purposes. Please send me a copy of your findings to include in the compendium of studies using the PAQ.

 Sincerely,

 Maureen Kenny, Ph.D.
 Associate Professor
 Department of Counseling, Developmental
 Psychology and Research Methods
 Boston College

Appendix H

Permission to Use the SEI-R

PERMISSION TO USE THE SEI-R

via e-mail

To: Mary-Ellen Madigan <mea1@psu.edu>
Subject: Re: SEI-R inquiry
From: vicky.genia@unlv.edu
Date: Thu, 27 Sep 2007 16:03:09 -0700

Yes you may use the instrument for your research. It sounds like an interesting project and I'd be interested in learning the results after the study is completed. Scoring is explained in the article but I'd be happy to answer specific questions if it is not clear.

Vicky Genia

Appendix I

Permission to Use the MJT

PERMISSION TO USE THE MJT

From: georg.lind@uni-konstanz.de [georg.lind@uni-konstanz.de]
Sent: Thursday, March 27, 2008 4:12 PM
To: Deidra Stephens
Subject: RE: MJT/MUT multiple language versions, scoring code

Dear Mrs. Stephens:

As is written on each copy of the MJT, this test is free for use for research and teaching in public institutions. For these persons no further permission is required. For other uses, a written application is necessary.

Best regards
Georg Lind

Appendix J

Tukey HSD Post-hoc procedure for Parental Fostering of Autonomy by Class Year

Table 37

Tukey HSD Post-hoc procedure for Parental Fostering of Autonomy by Class Year

Scale	(I) Year	(J) Year	Mean Difference (I-J)	SE	*p*
Autonomy	Freshmen	Sophomores	-.861	.586	.456
		Juniors	-2.028*	.619	.006
		Seniors	-2.079*	.620	.005
	Sophomore	Freshmen	.861	.586	.456
		Juniors	-1.167	.624	.242
		Seniors	-1.218	.625	.209
	Juniors	Freshmen	2.028*	.619	.006
		Sophomores	1.167	.624	.242
		Seniors	-.051	.656	1.000
	Seniors	Freshmen	2.079*	.620	.005
		Sophomores	1.218	.625	.209
		Juniors	.051	.656	1.000

*p< 0.05

Appendix K

Tukey HSD Post-hoc procedure for Parental Fostering of Autonomy by Age Group

Table 38

Tukey HSD Post-hoc procedure for Parental Fostering of Autonomy by Age Group

Scale	(I) Age	(J) Age	Mean Difference (I-J)	SE	*p*
Autonomy	18-19	20-21	-1.228	.494	.063
		22-23	-2.180*	.639	.004
		24-25	-4.272*	1.020	.000
	20-21	18-19	1.228	.494	.063
		22-23	-.952	.628	.429
		24-25	-3.044*	1.014	.014
	22-23	18-19	2.180*	.639	.004
		20-21	.952	.628	.429
		24-25	-2.092	1.092	.221
	24-25	18-19	4.272*	1.020	.000
		20-21	3.044*	1.014	.014
		22-23	2.092	1.092	.221

* $p < 0.05$

Appendix L

Tukey HSD Post-hoc procedure for Spiritual Openness by Class Standing

Table 39

Tukey HSD Post-hoc procedure for Spiritual Openness by Class Standing

Scale	(I) Year	(J) Year	Mean Difference (I-J)	SE	*p*
Spiritual Openness	Freshmen	Sophomores	-.822	.557	.452
		Juniors	-1.685*	.588	.022
		Seniors	-1.722*	.589	.018
	Sophomore	Freshmen	.822	.557	.452
		Juniors	-.863	.593	.465
		Seniors	-.900	.594	.429
	Juniors	Freshmen	1.685*	.588	.022
		Sophomores	.863	.593	.465
		Seniors	-.037	.623	1.000
	Seniors	Freshmen	1.722*	.589	.018
		Sophomores	.900	.594	.429
		Juniors	.037	.623	1.000

* $p < 0.05$

Appendix M

Tukey HSD Post-hoc procedure for Spiritual Support by Age Group

Table 40

Tukey HSD Post-hoc procedure for Spiritual Support by Age Group

Scale	(I) AGE	(J) AGE	Mean Difference (I-J)	SE	p
Spiritual Support	18-19	20-21	1.499	1.219	.608
		22-23	3.245	1.574	.166
		24-25	5.821	2.515	.095
	20-21	18-19	-1.499	1.219	.608
		22-23	1.745	1.549	.673
		24-25	4.322	2.499	.309
	22-23	18-19	-3.245	1.574	.166
		20-21	-1.745	1.549	.673
		24-25	2.577	2.691	.774
	24-25	18-19	-5.821	2.515	.095
		20-21	-4.322	2.499	.309
		22-23	-2.577	2.691	.774

* $p < 0.05$

Appendix N

Tukey HSD Post-hoc procedure for Spiritual Openness by Age Group

Table 41

Tukey HSD Post-hoc procedure for Spiritual Openness by Age Group

Scale	(I) AGE	(J) AGE	Mean Difference (I-J)	SE	p
Spiritual Openness	18-19	20-21	-.862	.471	.260
		22-23	-1.444	.608	.083
		24-25	-2.977[*]	.972	.012
	20-21	18-19	.862	.471	.260
		22-23	-.582	.599	.765
		24-25	-2.115	.966	.127
	22-23	18-19	1.444	.608	.083
		20-21	.582	.599	.765
		24-25	-1.533	1.040	.454
	24-25	18-19	2.977[*]	.972	.012
		20-21	2.115	.966	.127
		22-23	1.533	1.040	.454

* p < .05

Appendix O

Soup for the Soul

THE BEHRENDCOLLEGE CAMPUS MINISTRY HOSTS:

Soup for the Soul

FREE Lunch

Thursdays:

November 6, 13, 20

Smith Chapel

Living Room

12:15-1:00

✢

TOPIC:
You & Your Parent/s:
A discussion on the balance
between personal
Independence and parental
relationships

Love your parent/s, but wish they'd let you grow up, too? Or, wanting more independence yet you are still dependant upon them? Come for a 3 week discussion on positive ways to be in an adult relationship with your parent/s!