

INDIVIDUAL ATTACHMENT STYLES AND THE CORRESPONDENCE/COMPENSATION  
HYPOTHESES IN RELATION TO DEPRESSION AND  
DEPRESSIVE EXPERIENCES

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Dissertation Prepared for the Degree of  
DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

August 2008

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Hill, Mary Kathleen. Individual attachment styles and the correspondence/compensation hypotheses in relation to depression and depressive experiences. Doctor of Philosophy (Clinical Psychology), August 2008, 121 pp., 12 tables, 2 illustrations, references, 132 titles.

Two hundred twenty individuals participated in the present study from a university population. The study examined the relationship among attachment styles to caregivers, relationship with God, depressive symptomology, and depressive experiences. Attachment theorists have suggested a connection between childhood attachment to caregivers and current attachment to God through the idea that individuals have “working models” that form how they interpret present relationships. For the most part, the results of the current study supported the idea of correspondence between attachment to caregiver and attachment to God. Individual attachment styles to caregivers matched their attachment style to God. However, when caregiver religiousness was included as a moderating variable, results supported the theory of combined compensation-correspondence for those with insecure attachments to caregivers. Individuals with insecure attachment to caregivers were more likely to compensate for their insecure attachment bonds through participation in religious activity, whereas their internal, private relationship with God corresponded with their previous insecure attachment bonds. Individuals with insecure attachment to caregivers were more likely to endorse symptoms of depression and report introjective, but not anaclitic, depressive experiences. With respect to attachment to God, introjective depressive experiences were positively related to both anxious and avoidant attachments, whereas, anaclitic depressive experiences were positively related only to anxious attachment to God. Anxious attachment to God was found to partially mediate the relationship between insecure attachment to caregivers and depression symptoms. Finally, attachment effects were similar across gender, ethnicity, and age, with some notable exceptions.

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## TABLE OF CONTENTS

	Page
LIST OF TABLES AND FIGURES.....	vi
Chapters	
I. INTRODUCTION .....	1
Attachment Theory .....	2
Attachment to God.....	12
Correspondence versus Compensation .....	14
Compensation-Correspondence Hypothesis .....	23
Depression.....	25
Depressive Experiences .....	28
Research Questions and Rationale.....	31
Hypotheses.....	38
II. METHOD .....	40
Participants.....	40
Measures .....	40
Demographic Questionnaire .....	40
Retrospective Childhood Attachment.....	40
Measures of Caregiver and Subject Behavioral Expressions of Religiosity.....	43
Attachment to God Inventory (AGI).....	44
Depressive Experiences Questionnaire (DEQ).....	45
Beck Depression Inventory-Revised® (BDI-II).....	46
Procedure .....	47
III. RESULTS .....	49
Description of Participants.....	49
Correlations between Attachment Measures .....	51
Correlations between Dependent Variables.....	52
Correlations between Study Variables and Demographic Variables.....	53
Correlations between Attachment Styles and the Dependent Variables...	53
Colinearity among the Six ASM Attachment Types .....	55

Regression Analyses between Overall Caregiver Attachment and Dependent Variables.....	60
Family Background and Attachment to Caregivers.....	60
Overall Caregiver Attachment and the AGI .....	61
Overall Caregiver Attachment with Participant Spirituality/Religiosity and Participant BER.....	62
Overall Caregiver Attachment and Depression .....	64
Regression Analyses for Overall Caregiver Attachment Minimizing the Missing Data .....	66
Overall Caregiver Attachment and the AGI .....	66
Overall Caregiver Attachment with Participant Spirituality/Religiosity and Participant BER.....	67
Overall Caregiver Attachment and Depression .....	69
Regression Analyses using the Hazan & Shaver Measure of Attachment	72
H&S Caregiver Attachment and the AGI .....	73
H&S Caregiver Attachment with Participant Spirituality/Religiosity and Participant BER.....	74
H&S Caregiver Attachment and Depression .....	75
Moderation and Mediation Analyses .....	77
Mediation Analyses .....	80
IV. DISCUSSION.....	83
Categorical Versus Continuous Measurement of Attachment.....	83
Attachment, Spirituality, and Behavioral Expression of Religiosity .....	86
Correspondence and Compensation.....	86
Combined Compensation-Correspondence .....	88
Changes Due to Moderation .....	89
Additional Findings with Other Predictor Variables .....	91
Attachment to Caregivers, Attachment to God & Depression.....	94
Caregiver Attachment and Depressive Experiences.....	95
Attachment to God and Depressive Experiences.....	97
Mediation .....	98
Additional Findings with Other Predictor Variables .....	98
Overarching Implications.....	99
Advantages and General Limitations.....	102

REFERENCES ..... 112

## LIST OF TABLES AND FIGURES

	Page
Tables	
1. Descriptive Statistics for the Hazan & Shaver Measures of Attachment .....	104
2. Descriptive Statistics for the Continuous Variables .....	104
3. Correlations between the Attachment Measures.....	105
4. Correlations between Dependent Variables.....	106
5. Correlations between Demographic and Other Study Variables .....	107
6. Correlations between Attachment Styles and Dependent Variables .....	108
7. Factor Loadings and Communalities based on a Principle Factors Analysis with Varimax Rotation for 6 types of the ASM .....	109
8. Rotated Factor Matrix for the Two Factor Solution .....	109
9. Correlations between ASM subtypes and Overall Caregiver Attachment.....	109
10. Correlations between Demographic Variables and Overall Caregiver Attachment .....	110
11. Correlations between Overall Caregiver Attachment and Dependent Variables.....	110
12. Correlations Matrix for Demographic and Predictor Variables.....	110
Figures	
1. Moderation of overall caregiver attachment and participant behavioral expressions of religiosity by secondary caregiver religiosity/spirituality.....	111
2. Mediation of overall caregiver attachment and depression symptomology by anxious attachment to God.....	111

## CHAPTER I

### INTRODUCTION

Humans rely on others throughout their lives. People look to others to fulfill their basic needs as well as their psychological needs for love and validation. Attachment theory, as proposed by Bowlby (1973, 1980, 1982), provides a convincing framework for understanding why people form close emotional bonds with others. People reportedly seek out relationships with others to regulate emotional distress and to experience a sense of “felt security” (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1973, 1980, 1982; Park, Croker, & Mickelson, 2004). However, billions of people worldwide have relationships with beings that they cannot see, touch, or technically hear. These individuals not only have relationships with these beings, but also perceive these beings to be deities who provide a sense of “felt security.” It has been suggested that the manner in which people perceive their relationship to their chosen deities are transferred from their own early human experiences (Freud, 1961; Hardy, 1966).

Recent researchers have suggested that the relationship between monotheistic individuals and their deity (God) can be viewed as an attachment bond (Granqvist, 1998; Kirkpatrick & Shaver, 1990; McDonald, Beck, Allison, & Norsworthy, 2005). However, the literature has been limited in its breadth and depth. Specifically, the majority of researchers have conducted their studies within the confines of Christian Universities, have included individuals with only Christian beliefs, and have included predominantly female participants. The current study explored the associations between childhood attachment bonds, attachment to God, and the expression of psychological symptoms within a state university setting with a variety of participants.

## Attachment Theory

Attachment theory began with the joint work of John Bowlby (1969) and Mary Ainsworth (1985). Bowlby originally formulated the theory on concepts from ethology and sociobiology, cybernetics, information processing, cognitive psychology, developmental psychology, and psychoanalysis (Bretherton, 1992). For example, based on evolution theories and cybernetics, the child is believed to have an attachment behavioral system that is activated by potential danger in the environment, such as a predator attacking. From cognitive psychology comes the idea of internal working models, or mental representations of self and others, that are believed to guide one's interactions with others. Based on the principles of learning, these internal working models are thought to mirror actual situations that have occurred within the child-caregiver relationship (Granqvist, 2005). Ainsworth, Blehar, Water, and Wall (1978) later used novel methodology (The Strange Situation) to empirically test some of Bowlby's ideas, thus resulting in the expansion of the theory itself.

Waters and Cummings (2000) wrote that Bowlby's primary goal in developing modern attachment theory was to preserve the "kernels of truth in Freud's insights about close relationships by replacing his image of a needy, dependent infant motivated by drive reduction with one of a sophisticated, competence-motivated infant using its primary caregiver as a secure base from which to explore and, when necessary, as a haven of safety and a source of comfort" (p. 165). By transitioning from needy dependence to goal directed attachment, Bowlby was suggesting that a child's tie to its mother reflects the working characteristics of a basic control system that synthesizes information about the infant's state, the state of the environment, and past and current assess to the caregiver (Waters & Cummings, 2000). Ainsworth (1969) noted that the keynote of Bowlby's position is that attachment behavior has a biological foundation that

can be best understood within an evolutionary context. Specifically, Bowlby (1958) acknowledged that humans are capable of changing their behaviors to cope with a wide range of environmental variations. In comparison with other species, humans maintain fewer stable fixed-action patterns, have more learning flexibility, and have a longer phase of infantile helplessness. However, the human species has successfully survived despite the lengthy infantile period of vulnerability, thus suggesting that infants innately possess relatively stable behavioral systems that serve to protect the helpless infant. By sustaining parental care, infants are able to obtain necessary protection. Ainsworth (1969) remarked that infant attachment behaviors, together with reciprocal parental care behavior, tend to be among the most environmentally stable behavioral systems across species.

Bowlby's attachment theory was based on three main tenets: Attachment is an innate process, it is an adaptive process that has evolved, and it has endured because it promotes successful reproduction. He also believed that attachment promotes survival in several ways. First, attachment promotes safety, as the desire to remain close to a caregiver helps the helpless infant to survive. In addition, the emotional relationship formed between caregiver and child aids in the formation of future relationships via the internal working model, thus contributing to future survival. Finally, the secure base that the caregiver provides allows the child to develop mentally because the child is able to "touch base" with one's caregiver while exploring the environment, and mental development enhances survival. Bowlby emphasized both intra-organism and environmental conditions that activate and terminate behavioral systems.

Because of the diversity of attachment behavior and its differential arousal in different situations, no simple criterion for attachment exists. Bowlby suggested that five main classes of behavior should be considered in any attempt to assess the attachment behavior of a child: (1)

behavior that initiates interaction, such as greeting, approaching, touching, embracing, calling, reaching, and smiling; (2) behavior in response to the mother's interactional initiatives that maintains interaction, consisting of the preceding behaviors plus watching; (3) behavior aimed to avoid separation, such as following, clinging, crying; (4) exploratory behavior, as it is oriented with reference to the caregiver; and (5) withdrawal or fear behavior, especially as it is oriented with reference to the caregiver. In describing the attachment bond, Ainsworth (1985) outlined four criteria, which have become the "hallmarks" of attachment theory: (1) Maintaining proximity with the attachment figure, (2) Seeing the attachment figure as a secure base of explorative behavior, (3) Considering the attachment figure as providing a haven of safety, and (4) Experiencing separation anxiety when removed from the attachment figure, leading to grief if the attachment figure is also lost.

In 1978, Ainsworth and colleagues introduced the Strange Situation, a structured laboratory setting that examined the play interactions between child and caregiver, the child's reaction to a stranger and, most importantly, the child's reunion behavior after a brief separation from the caregiver. It should be noted that Ainsworth's research focused on mother-child attachments. Following is a brief overview of the procedure:

- 1) Caregiver and infant introduced into room
- 2) Caregiver and infant alone, infant free to explore (3 minutes)
- 3) Stranger enters, sits down, talks to caregiver and then tries to engage the infant in play (3 minutes)
- 4) Caregiver leaves. Stranger and infant alone (up to 3 minutes)
- 5) First reunion. Caregiver returns and stranger leaves unobtrusively. Caregiver settles infant if necessary, and tries to withdraw to her chair (3 minutes)
- 6) Caregiver leaves. Infant alone in room (up to 3 minutes)
- 7) Stranger returns and tries to settle the infant if necessary, and then withdraws to her chair (up to 3 minutes)
- 8) Second reunion. Caregiver returns and stranger leaves unobtrusively. Caregiver settles infant and tries to withdraw to her chair (3 minutes)

Ainsworth and colleagues used their observations from the Strange Situation to describe three distinct attachment styles between infant and mother; secure, anxious-ambivalent, and avoidant. Most infants tested belonged to the secure style (65-70%); the avoidant group comprised approximately 20-25%, the ambivalent group included less than 10%. They found that some infants effectively use their attachment figures as a refuge and as a secure base; thus, these infants are understood to have a secure attachment style. Securely attached children represented a balance between focusing on the environment and on their caregiver. They explored the environment, but as Ainsworth's Strange Situation proceeded, their behavior increasingly leaned towards proximity-seeking and maintaining contact with their caregiver. They used the caregiver as secure base, or a reference point, from which to explore the environment, going off to play for a bit, and then coming back to reunite with the caregiver, only to go off and play once again. In essence, attachment styles are specific emotional and behavioral responses to the separation from and the reunion with attachment figures, as well as the reaction to the presence of strangers (Ainsworth et al., 1978).

Ainsworth and colleagues (1978) observed that some infants were highly preoccupied with their attachment figures' whereabouts and displayed ambivalent behaviors toward their mothers when reunited. These infants are assumed to be uncertain about the availability and responsiveness of their caregiver which results in the infant being generally anxious and often clingy, thus the term anxious-ambivalent attachment style or insecure-ambivalent (Ainsworth et al., 1978). In the Strange Situation, the researchers observed that children with anxious-ambivalent attachment styles were unable to detach from their caregiver. Whereas most children may become upset when their caregiver leaves a room, they will usually soothe themselves, settle into the new environment, and play. Children with anxious-ambivalent attachment styles

were not able to calm themselves when their caregivers left the room. When the caregivers returned, many of the children began to scream and appeared angry. Others vacillated between wanting to be close to their caregivers and then pushing them away when they attempted to comfort the children.

Other infants appeared to be in complete doubt of their caregiver's availability or responsiveness and generally appeared to expect their proximity-seeking to be denied. They appear not to perceive their caregivers to be a secure base or a safe-haven, which leads the infant to avoid, thus the term avoidant attachment style (Ainsworth et al., 1978). Within the Strange Situation, children with insecure-avoidant attachment styles turned their attention to the environment. Many did not react when their caregivers left the room or when they came back. The children's dismissing behavior may be because they had learned that nurturance would not be forthcoming from their caregivers.

McKinsey-Crittenden (1995) argued that individuals "who are labeled secure have learned the predictive and communicative value of many interpersonal signals; they have made meaning of both cognition and affect" (p. 371). However, avoidant individuals have learned to organize their behavior effectively, but they are unable to interpret or utilize affective signals effectively; therefore, they have made sense of cognition but not affect. Ambivalent individuals have been reinforced for affective behavior, but have not learned an effective cognitive organization that reduces the inconsistency of others' behavior. McKinsey-Crittenden further explained that:

Secure infants are competent with both cognitive and affective models; that is they are balanced with regard to source of information. Furthermore, they have developed procedural internal representational models that integrate both sorts of information into patterns of behavior that are predictive with regard to both children's actual safety and their felt security. Avoidant infants, on the other hand, are competent primarily with

cognitive information whereas ambivalent infants are competent primarily with affective information. (p. 371-372)

Attachment is a two way process that develops over time between caregiver and child. Both the primary caregiver and the infant are active participants in this process. The key factor for caregivers is sensitive responding, or the ability to attune to their children and respond to their signals. The children's own responsiveness to their caregivers is also an important contributor to the process. It is assumed that the sensitive responding by caregivers to their infants' needs results in infants who demonstrate secure attachment, whereas the lack of such sensitive responding by caregivers results in insecure attachment (Lamb, Thompson, Gardner, Charnov, & Estes, 1984).

Attachment figures who are sensitive in their caregiving, attentive to their children's needs, and respond properly to their children's needs are likely to have infants who develop a secure attachment to their caregivers (Abelba, Hankin, Haigh, Adams, Vinokuroff, & Trayhern, 2005; Wenar & Kerig, 2000; West, Spreng, Rose, & Adam, 1999). For reasons described below, the secure attachment style is considered the "optimal" attachment style, whereas the other attachment styles are considered less than "optimal." The caregivers of anxious-ambivalent infants often respond inconsistently and unreliably to the infants' efforts for proximity and reassurance (Ainsworth et al., 1978). The caregivers of avoidant infants do not respond appropriately by disregarding their infants' needs, which leads the children to cope through defense means, such as ignoring or avoiding (Ainsworth et al., 1978).

Central to attachment theory is the proposal that connections between early interpersonal experience and later emotional and interpersonal functioning are mediated by internal representations or "working models" resulting from repeated interactions between caregiver and child (Bowlby, 1973; Bretherton, 1990). According to Bowlby (1973), the term "working

models” refers to mental representations that contain “expectations of the accessibility and responsiveness of attachment figures” and a “complementary and mutually confirming view of the self as worthy or unworthy of care” (p. 238). The attachment perspective suggests that differences in attachment style become individual differences in internal working models of relationships.

Individual’s expectations of self and other evolve into a working model that organizes beliefs and expectations about how attachment relationships operate and what one gains from these relationships. The subsequent working model then guides a person’s action in attachment-related situations (Bowlby, 1969/1982; Bretherton, 1985; Crowell, Treboux, & Waters, 2002; Main, Kaplan, & Cassidey, 1985). Although attachment representations are theoretically open to revision as a function of significant attachment-related experiences, they operate outside active awareness and in the context of caregiving interactions that are often stable and mutually reinforcing (Bowlby, 1969/1982; Sameroff & Chandler, 1975). The working model concept contributes to the outlook of attachment as a life-span phenomenon, providing an understanding of developmental change in the expression of attachment and its continual influence on secure base behavior (Ainsworth, 1989; Bretherton, 1985; Waters, Harmilton, & Weinfield, 2000; Waters, Treboux, Crowell, & Albersheim, 2000)

Another fundamental concept of modern attachment theory is the idea that child-caregiver and adult-adult intimate relationships are alike in that they both are secure base relationships (Crowell, Treboux, Gao, Fyffe, Pan, & Waters, 2002; Waters & Cumming, 2000). Crowell and colleagues (2002) clarified that both child-caregiver and adult-adult relationships are social systems in which confidence in a partner’s availability and responsiveness organizes exploratory and contact seeking behavior, as well as a wide range of affective and cognitive

activities, across time and context. Attachment theory provides not only a framework for understanding emotional reactions in infants but can also be extended to provide a framework for understanding love, loneliness, and grief in adults. Attachment styles in adults are thought to stem directly from the working models of self and others that they developed during infancy and childhood. For example, Sroufe, Fox, and Pancake (1983) identified securely attached infants at 12-18 months and found at age 2-3 years they had higher self-esteem, were more self-reliant, and were more flexible in the management of their impulses and feelings. They were also capable of monitoring their own behaviors, such as being exuberant when circumstances permitted but controlling themselves when circumstances required it. Socially, these children were able to positively engage and respond to other children, were more empathetic, and were more persistent in maintaining social interactions even when faced with conflict or challenge.

Various research findings have suggested that attachment styles remain relatively stable and often transition with development, though the styles remain open to revision in light of experience (Belsky, Campbell, Cohn, & Moore, 1996; Crowell, Treboux, & Waters, 2002; Vaughn, Egeland, Sroufe, & Waters, 1979; Waters, 1978; Waters, Treboux, Crowell, & Albersheim, 2000). For example, Waters and colleagues (2000) re-contacted participants 20 years after being seen in the Ainsworth Strange Situation at age 12 months. They found that 72% of the participants remained within their original attachment classification if no life changing event occurred within the previous 20 years. Thus, securely attached infants tend to develop into securely attached children, adolescents, and adults. Avoidant and anxiously attached infants also tend to continue to follow the same pattern developmentally.

Ainsworth's three primary infant-caregiver attachment styles were transformed into terms of adult-adult attachment by Hazan and Shaver (1987). These researchers maintained the three-

fold taxonomy; however the description of each attachment style reflects the relationship found between two adults. Adults with secure adult-adult attachments find it relatively easy to get close to others and are comfortable depending on others and having others depend on them. Secure adults usually don't worry about being abandoned or about sharing an emotionally intimate relationship with another. Anxious-ambivalent adults find that others are reluctant to get as close emotionally as they would prefer. They often worry that their partner does not truly care for them or that their partner will soon abandon them. Anxious-ambivalent adults want to merge completely with another person, and this desire sometimes has the opposite effect and scares people away. Avoidant adults are somewhat uncomfortable being emotionally close to others. They often find it difficult to trust others completely and have difficulty depending upon others. Avoidant adults often become uneasy when others try to get emotionally close, which can produce interpersonal difficulty as the love partners of avoidant adults usually wish their partner would be more intimate than they feel comfortable being.

The three main individual attachment styles have repeatedly been found to be related to several variables, and attachment quality has been shown to predict future behaviors. For example, individuals with secure attachments display fewer behavior problems than individuals with avoidant or anxious-ambivalent attachments (Bohlin & Hagekull, 2000). They also are more socially competent and more empathetic than both of their insecure counterparts (Elicker, Englund, & Sroufe, 1992). In addition, securely attached individuals are more psychologically adjusted than individuals with anxious-ambivalent or avoidant attachments (Parkes, 1982), and the quality of emotional communication is significantly better developed in securely attached individuals than in individuals with avoidant or anxious-ambivalent attachments (Grossman & Grossman, 1991). In the classroom, students with histories of secure attachment play with more

concentration and are less easily disturbed than those with histories of avoidant or anxious-ambivalent attachment (Grossman & Grossman, 1990). Also, children classified as securely attached at infancy reported at age 10 that they have at least one good friend who was trustworthy and reliable, whereas those who had been classified as anxiously attached at infancy either said they had no good friends or claimed that they had numerous friends, but were unable to name even one of their friends (Grossman & Grossman, 1991). In addition, the anxiously attached children reported more peer problems, such as being ridiculed or excluded. No comparable data was reported for avoidantly attached children. Due to research findings that indicate less distress and better functioning in life, the secure attachment style has come to be considered “optimal.”

Finally, it would be remiss to neglect the fact that Bartholomew and Horowitz (1991) proposed a four-category model of adult attachment based on two types of internal working models, an internal model of the self and an internal model of others. They posited that an individual’s images of self and other can be dichotomized as positive or negative. Therefore, four attachment combinations can be conceptualized: Secure, Preoccupied, Fearful, and Dismissing. Those classified as Secure possess both a positive image of the self and a positive image of others. These individuals have a healthy self-esteem and are comfortable with intimacy. Those categorized as Preoccupied possess a negative view of self, but a positive view of others. These individuals lack self-assurance and self-esteem, but desire close interpersonal relationships which leads them to become pre-occupied with external validation. Those classified as Fearful possess a negative image of self and a negative view of others. They are highly concerned with others’ perceptions of them, but tend to expect rejection which leads them to fear close relationships. Finally, those categorized as Dismissing hold a positive self image,

but view others negatively; therefore, they are self-sufficient and are usually not interested in interpersonal closeness. Although the four-category model of attachment has been well-received, it was developed with adult-adult attachment in mind rather than caregiver-child attachment; hence, the current researcher decided to focus on the classic three-category model of attachment.

### *Attachment to God*

Kirkpatrick (1992, 1994, 1995) contends that individual attachment styles can be extended to individuals and their connection to God, especially within belief systems where a personal relationship with God is implicit. In essence, believers may view God as an attachment figure to those who are believers. Kirkpatrick (1999) identified evidence for the existence of the four hallmark attachment behaviors outlined by Ainsworth (1985) within individuals' relationships with God: (1) Maintaining proximity with the attachment figure, (2) Seeing the attachment figure as a secure base of explorative behavior, (3) Considering the attachment figure as providing a haven of safety, and (4) Experiencing separation anxiety when removed from the attachment figure, leading to grief if the attachment figure is also lost. Specifically, he cited that many individuals view God as close in proximity through prayer and believe that God is omnipresent. Similarly, Kaufman (1981), a theologian, stated that "the idea of God is the idea of an absolutely adequate attachment figure...God is thought of as a protective parent who is always reliable and always available to its children when they are in need" (p. 67).

Kirkpatrick (1992) illustrated the idea that many people turn to God when in distress through the old aphorism, "there are no atheists in foxholes." He also demonstrated empirical support for that aphorism by citing importance research showing that soldiers in combat pray frequently (Allport, 1950; Stouffer, Suchman, Devinney, Star, & Williams, 1949). Other

researchers have found that people turn to prayer, rather than to the church itself, in times of emotional suffering (Argyle & Beit-Hallahami, 1975). Individuals experiencing grief tend to turn to religion, though their fundamental beliefs about religion and spirituality often remain unchanged (Loveland, 1968), and sudden religious conversion experiences often occur during times of severe emotional distress (Clark, 1929). These cumulative findings suggest that individuals seek God in a way similar to distressed infants who engage in behaviors that serve to reestablish closeness to their attachment figure; thus, for them, God is providing a haven of safety.

With respect to the secure base aspect of attachment, Bowlby (1973) emphasized that the perceived availability of a receptive caregiver is a remedy to fear and anxiety: “Whether a child or adult is in a state of security, anxiety, or distress is determined in large part by the accessibility and responsiveness of his principle attachment figure” (p. 23). Kirkpatrick (1999) remarked that several figures in psychology have noted the extent to which religion provides people with a sense of security and confidence that allows them to function effectively in everyday life. For example, Johnson (1945) commented upon the “basic confidence and security” provided by religious faith and further described faith as “the opposite of fear, anxiety, and uncertainty” (p. 191).

Research findings concerning parent-child relationships and images of God also appear to fit well within the attachment framework. For example, Dickie, Eshleman, Merasco, Shepard, Vader-Wilt, and Johnson (2001) found that children’s perceptions of God were much like their perceptions of both parents. When children perceived their parents as nurturing and powerful, they also perceived God as nurturing and powerful. Specifically, when children perceived their fathers to be nurturing, they also perceived God as nurturing; and when they perceived their

mothers to be powerful, they also perceived God as powerful. They also found that older children perceived God as more nurturing and powerful than younger children, as older children are becoming more autonomous and God becomes the “perfect substitute attachment figure,” as Kirkpatrick (1992) said.

Kirkpatrick (1999) pointed out that several studies have demonstrated positive correlations between people’s images of God and of their parents, particularly of their mothers (Nelson, 1971; Strunk, 1959). As the primary attachment figure is usually the mother rather than the father in U.S. culture (Lamb, 1978), internal working models of these attachment figures during childhood appear to provide the basis for adult attachments to God. Kirkpatrick (1999) also noted that similar results have been reported cross-culturally: Societies in which “accepting,” – that is, loving, nurturing -- child-rearing practices are predominant tend also to be characterized by beliefs in benevolent, rather than malevolent, supernatural deities (Lambert, Triandis, and Wolf, 1959; Rohner, 1975). Frequently reported positive correlations between God-images and self-concept (Benson & Spilka, 1973; Jolley, 1983) are consistent with Bowlby’s (1969) belief that an individual’s model of self and models of attachment figure(s) tend to be complementary. In other words, those who perceive attachment figures to be loving and caring tend to view themselves as lovable and worthy of being cared for (Bowlby, 1969/1982), and that self-perception is extended to the worthiness of the love and care of God.

*Correspondence versus Compensation*

Within the current literature (Kirkpatrick, 1997, 1998; Kirkpatrick & Shaver, 1990; McDonald, Beck, Allison, & Norsworthy, 2005) researchers and theoreticians have formulated two main, diametrically opposed, hypotheses concerning the relationship between individual attachment styles (secure, avoidant, and anxious-ambivalent) and the attachment between an

individual and God: the compensation and correspondence hypotheses. The compensation hypothesis postulates that an individual's relationship to God can compensate for inadequate caregiver and/or adult romantic bonds. The compensation hypothesis assumes that persons with histories of avoidant or anxious-ambivalent attachment bonds are in greater need of a compensatory attachment figure than securely attached individuals and that God fills the role as a "substitute" attachment figure. Ainsworth's (1985) notion of attachment substitutes was the basis for the compensation hypothesis. The literature combines avoidant and anxious-ambivalent attachment into one category, insecure attachment, as it is assumed that both insecure attachment styles are the result of inadequate caregiving. Therefore, the compensation hypothesis does not apply to individuals with histories of secure attachment: These individuals do not need a "substitute" attachment figure because they already have secure attachment bonds.

On the other side, the correspondence hypothesis states that the attachment style an individual holds will be consistent across types of bonds: caregivers, peers, lovers, and God. The correspondence hypothesis is based on the assumption that early relationships provide the foundation upon which future relationships, including one's relationship with God, are built (Granqvist, 1998). Bowlby's (1969) notion of the continuity of working models provides the basis for the correspondence hypothesis. Therefore, individuals with anxious-ambivalent parental attachments are expected to experience more anxiety in their relationships with God, individuals with avoidant parental attachment are expected to display more avoidance in their relationships with God, and individuals with secure parental attachment should have more secure relationships with God.

Originally, theoreticians assumed that individuals with both avoidant and anxious-ambivalent attachment styles would compensate for their insecure attachment to parents by being

more religious. However, research has yielded an inconsistent pattern of findings. Some researchers have found avoidant individuals are more likely than the other two attachment styles to compensate, whereas others have found that anxious-ambivalent persons are more likely to compensate, and yet others have suggested that both avoidant and anxious-ambivalent are equally more likely to compensate than securely attached participants (Granqvist, 1998; Kirkpatrick, 1997/1998; Kirkpatrick & Shaver, 1990/1992). As a result of these inconsistent findings, most researchers have combined the two insecure attachment styles unless their research results indicated specific differences. These studies will be reviewed below.

Kirkpatrick and Shaver (1990) conducted one of the first studies to examine the how childhood attachment affects religious beliefs and one's relationship with God. They found that avoidantly attached individuals raised in non-religious homes often use their attachment to God as compensation for their existing avoidant attachments to parental figures, especially mothers. The researchers asked participants to classify retrospectively their childhood relationships with their mothers into secure, avoidant, or anxious-ambivalent attachment patterns. Participants who reported their childhood attachments as avoidant also showed significantly higher rates of sudden religious conversions, such as adopting the Christian faith after years of being an atheist, in adolescence and adulthood than the other participants. In particular, approximately 28% of the participants reporting an avoidant maternal attachment reported a sudden religious conversion during adolescence; however, only 1% of individuals reporting a secure maternal attachment and only 4% of anxious-ambivalent classified individuals reported adolescent conversions. It is important to note that the majority of participants who reported having a sudden religious conversion described a period of intense emotional turmoil that precipitated their conversion experience.

Kirkpatrick and Shaver (1990) also found that maternal religiousness was related to participants' current religiousness. Interestingly, among those who reported having relatively nonreligious mothers, the avoidant group reported the highest levels of adult religious commitment, church attendance, belief in a personal god, and belief in having a personal relationship with God as compared to the secure and anxious-ambivalent groups.

In a longitudinal study involving only women participants, Kirkpatrick (1998) found that women with avoidant or anxious-ambivalent attachments at the beginning of the study reported more religious change four years later. Avoidant and anxious-ambivalent women were more likely than secure women to report experiencing a renewal of their relationship with God during this time period. He also found that women with anxious-ambivalent attachments were more likely than either the secure or avoidant groups to report a religious experience or conversion over the course of the four years. This finding is different from Kirkpatrick and Shaver's (1990) finding that showed the avoidant group to be the most likely to report religious conversion.

Kirkpatrick (1998) interpreted the finding that anxious-ambivalent individuals were more likely to report conversion experiences by suggesting that anxiously attached individuals, especially women, are more emotional and evince an experiential orientation toward religion than their secure and avoidant counterparts. He stated that...

anxiously attached individuals are fearful of abandonment, desire more closeness and intimacy than most others are willing to reciprocate, and are clingy and overly dependent in romantic relationships... For these individuals, an attachment to God may be particularly effective in "compensating" for what they find lacking in interpersonal relationships: Unlike boyfriends and husbands, God presumably is not frightened away by excessive demands for closeness." (p. 214)

Similarly, Granqvist (1998) found that individuals who reported anxious-ambivalent attachment bonds with parents, rather than avoidant attachment bonds as in Kirkpatrick and Shaver's 1990 study, exhibited a greater increase in importance of religious beliefs as adults than

those who reported secure or avoidant bonds with their parents. Granqvist stated that the difference in findings was likely affected by the smaller proportion of participants reporting avoidant attachments compared to those reporting anxious-ambivalent attachments in his study, as compared to Kirkpatrick and Shaver's (1990) study. In addition, the difference was likely influenced by the fact that the avoidant and anxious-ambivalent groups were similar in religiousness in his study, whereas the anxious-ambivalent group in Kirkpatrick and Shaver's (1990) study scored in between the secure and avoidant groups on religiousness. Again, parental religiousness moderated the relationship between parental attachment and relationship to God, but in this study Granqvist explored paternal religiousness. When paternal religiousness was perceived as low, participants with either anxious-ambivalent or avoidant paternal attachments had a significantly higher level of religiousness than did the participants with secure paternal attachments from low to non-religious homes. However, Granqvist (1998) also found that secure participants from highly religious homes were more highly religious than their avoidant or anxious-ambivalent counterparts from highly religious homes, thus providing support of the correspondence hypothesis within secure attachments.

Other researchers have also found additional support for the correspondence hypothesis. In a series of studies (Brokaw & Edwards, 1994; Hall & Brokaw, 1995; Hall, Brokaw, Edwards, & Pike, 1998) researchers found support for the correspondence hypothesis by considering object relations theory, a theory that shares similarities with Bowlby's (1969) working models. Collectively, these studies showed that individuals' mature object relations development<sup>1</sup> was

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<sup>1</sup> Within modern object relations theory, objects can be people (mother, father, others) or things, such as transitional objects with which we form attachments. These objects and a developing child's relationship with them are incorporated into a self, and become the building blocks of the self-system. Many object relations theorists see psychological dysfunction as an expression of being stuck at a stage of development, unable to mature further. From this perspective, dysfunctional and symptomatic behaviors are really an immature attempt to resolve early traumas (Klee, 2005).

positively associated with their level of spiritual maturity. Therefore, persons with less mature object relationship development were shown to have less fulfilling relationships with God than those with more mature object relationship development. The quality of one's present object relationships, which theoretically stem from early interpersonal relationships, as hypothesized in attachment theory, and concomitant introjects, similar to internal working models in attachment theory, is re-created in one's relationship with God. In addition, these investigators found a correspondence between relationships with caregivers and images of God. Individuals who tended to experience others as critical and, in turn, emotionally withdrew to protect themselves were more likely to experience God as critical and, subsequently, withdraw from God.

Examining attachment to God, Beck and McDonald (2004) found support for the correspondence hypothesis when investigating the relationship between romantic adult attachment and attachment to God. They combined results of three studies from three different samples, two college and one community, to test the correspondence and compensation hypotheses, as well as to describe the psychometric properties of their new scale, The Attachment to God Inventory (AGI). They found that persons with greater attachment-related anxiety in adulthood love relationships displayed greater attachment anxiety in their relationships with God and that persons with greater avoidance in adulthood love relationships exhibited greater attachment avoidance in their relationships with God. Persons with secure attachment to romantic partners showed a more secure relationship with God; this finding was especially noted within the community sample, suggesting that the older community sample showed greater trends for secure attachment patterns.

Kirkpatrick and Shaver (1992) conducted a cross-sectional study in which they examined romantic attachment and religion and found that participants with secure adult attachments

reported having more positive images of God, that is, more loving, less distant, and less controlling, than did participants with adult anxious-ambivalent and avoidant attachment styles. Secure participants also reported higher levels of religious commitment than both anxious-ambivalent and avoidant groups. The preceding results support the correspondence hypothesis of attachment and religion, thus suggesting that an individual's internal working models of God and religion *parallel* their working models developed within close relationships. Therefore, the positive God images of securely attached individuals are consistent with their mental models of attachment figures as reliable and trustworthy and of themselves as worthy of love and care.

Kirkpatrick and Shaver (1992) also found that participants with anxious-ambivalent attachment styles were most likely to classify themselves as atheists, which is consistent with the correspondence hypothesis; however they also were the most likely to report instances where they “spoke in tongues,”<sup>2</sup> which is consistent with the results from Granqvist's (1998) study and supports the compensation hypothesis. Kirkpatrick and Shaver (1992) argued that anxiously attached individuals often desire more intimacy and closeness than they feel others provide them; therefore, it appears they may find in religion an emotionally powerful experience, reflected in such religious experiences as speaking in tongues, that satisfies their desires. On the other hand, Kirkpatrick and Shaver (1992) noted that anxious-ambivalent infants are known to express anger toward their attachment figure following an unexpected separation; therefore, the fact that they also found anxiously attached individuals to be the most likely to describe themselves as antireligious *and* as the most likely to have spoken in tongues suggests that anxiously attached

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<sup>2</sup> The most common meaning of “speaking in tongues” or glossolalia is a phenomenon of intense religious experience expressing itself in ecstatic speech. The *Interpreter's One-Volume Commentary on the Bible* stated glossolalia is the ecstatic utterance of emotionally agitated religious persons, consisting of a jumble of disjointed and largely unintelligible sounds. Those who speak in tongues believe they are moved directly by a divine spirit and their utterance is therefore quite spontaneous and unpremeditated. A person speaking in tongues is typically in a state of religious ecstasy and is often unable to understand the words that he or she is saying. Glossolalia has been most notably observed in some tribal religions and within some Christian denominations, especially Charismatics, Pentecostals, and Mormons (in the past).

individuals represent two extremes of religiousness (devout versus antireligious) from an attachment perspective. It seems that the religiousness of individuals with anxious-ambivalent attachment histories matches the ambivalent part of the anxious-ambivalent label, sometimes clingy, sometimes angry.

Avoidant individuals were the most likely to describe themselves as agnostic in Kirkpatrick and Shaver's 1992 study, which differed from their original 1990 study finding that avoidant individuals were the most religious out of the three attachment groups. Kirkpatrick and Shaver explored the difference in avoidant findings and found that in their 1992 study a significant relationship existed between romantic attachment and attachment to God *only* for avoidant individuals who retrospectively reported avoidant attachments to parents. This finding showed that, for avoidant participants, romantic attachment style corresponded to current attachment style to God but that current attachment style to God compensated for inadequate maternal attachment. Kirkpatrick and Shaver's (1992) finding that individuals with avoidant romantic attachments were more likely to be agnostics than the other two romantic attachment styles suggests that indifference may be the opposite of devotion. Avoidant individuals may evade religious beliefs and relationships with God because of their learned aversion to intimacy and closeness in interpersonal relationships. However, the fact that individuals with avoidant maternal attachments showed a compensatory relationship with God, suggests that God can serve as the ultimate "substitute" attachment figure for individuals with avoidant parental attachments.

Granqvist and Hagekull (2000) found support for both the compensation and correspondence hypotheses. In support of the correspondence hypothesis they found that adult attachment style corresponded with personal relationship with God, in that participants with secure adult attachment styles demonstrated more secure personal relationships with God;

individuals with anxious-avoidant attachment styles demonstrated more anxious personal relationships with God; and individuals with avoidant adult attachment styles demonstrated more avoidant personal relationships with God. In support of the compensation hypothesis, they found that individuals classified as romantically single were more active religiously, more likely to perceive a personal relationship with God, and more likely to have made changes indicative of an increased importance of religious beliefs than partnered individuals. Granqvist and Hagekull (2000) interpreted the latter results to mean that the absence of a love partner was equivalent to insufficient attachment, an interpretation this researcher finds questionable as those authors failed to consider the other types of attachment relationships available to individuals, such as parental and peer attachment relationships.

The manner in which researchers have measured attachment to God varies significantly across studies. In the majority of studies in which results supported the compensation hypothesis, researchers measured some type of behavioral expression of religiosity, such as religious conversion, prayer, or participation in religious activities. Behavioral expressions of religiosity are different from the actual personal experience of a relationship with God in that behavioral expressions refer to a variety of religious activities, whereas the personal experience of one's relationship with God is private and internal and not necessarily related to outward behavior. Thus, behavioral expressions of religiosity are organizational in nature and quite public, and the personal experience of one's relationship with God is private in nature and not necessarily related to behavioral expressions. Researchers (Beck & McDonald, 2004; Beck, McDonald, Allison, & Norsworthy, 2005; Kirkpatrick, 1997) have suggested that individuals with avoidant or anxious-ambivalent attachment bonds may be more likely than securely attached individuals to compensate for their inadequate attachment histories by seeking out God

through the behavioral expression of conversion and zealous religious involvement. However, once they become more involved in religious activities and develop a more personal relationship with God, their preexisting avoidant or anxious-ambivalent mental models of attachment influence how they experience their personal relationship with God; thus, correspondence becomes the primary hypothesis with respect to one's actual personal relationship with God.

#### *Compensation-Correspondence Hypothesis*

A third combined hypothesis might be that people with histories of avoidant or anxious-ambivalent attachment may initially compensate by using God, or more importantly religious involvement, to supplement an insufficient attachment history. However, as these individuals with avoidant or anxious-ambivalent attachment histories grow spiritually within a religious context, old internal working models about what to expect from attachment figures may emerge and deep-rooted insecurities concerning attachment relationships may resurface, leading to a correspondence between attachment history and current attachment to God. Therefore, though individuals with either of the insecure attachment histories may remain involved in religious activities, their attachment histories would be expected to directly affect their personal relationship with God. That is, individuals with avoidant childhood attachment histories would be expected to have a more avoidant personal relationship with God, and individuals with anxious-ambivalent childhood attachments would be expected to experience more anxiety within their personal relationship to God. Both the compensation and correspondence hypotheses may be correct for the same individual depending upon what question is being considered: behavioral expression of religiosity or personal relationship aspects between an individual and God.

McDonald, Beck, Allison, and Norsworthy (2005) found that parent spirituality and parental attachment were associated with one's relationship to God. These researchers examined

more personal relationship aspects between individuals and God -- personal feelings about one's actual relationship with God, rather than behavioral expressions of the individual's relationship with God, such as acts of conversion, church attendance, that previous researchers had examined (Granqvist, 1998; Kirkpatrick, 1998; Kirkpatrick & Shaver, 1990). As discussed above, Kirkpatrick and Shaver (1990) and Granqvist (1998) found that individuals with either avoidant or anxious-ambivalent attachment histories were more likely to compensate for their insecure attachment bonds through acts such as conversion or speaking in tongues. McDonald, Beck, Allison, and Norsworthy (2005) also found that individuals with either avoidant or anxious-ambivalent attachments to parents were more likely to display behavioral expressions of religiosity, but when personal relationship aspects were separated from behavioral expressions, they found that individuals' parental attachment models were consistent with their current personal relationship with God, thus supporting the correspondence hypothesis. This finding suggests that attachment to God is likely more complex than originally anticipated by researchers and that future research should specify whether behavioral expressions of religiosity are being measured or whether personal relationship experiences with God are being measured.

In summary, the theoretical underpinnings of attachment to God rely on two originally opposed hypotheses: the correspondence and compensation hypotheses. The correspondence hypothesis predicts that an individual's attachment style is consistent across domains, meaning that an individual with secure attachment to parents should have secure attachments to peers, to lovers, and to God. The same can be said for individuals with either of the insecure attachment styles, so that individuals with avoidant or anxious-ambivalent childhood attachments have more avoidant or anxious-ambivalent relationships with peers, lovers, and God. The compensation hypothesis posits that individuals with histories of one of the insecure attachment styles, avoidant

or anxious-ambivalent, will use God as a substitute attachment figure. Parental religiosity has been shown to moderate the relationship between attachment history and relationship to God (Beck & McDonald, 2004; Granqvist, 1998; Kirkpatrick, 1997/1998; Kirkpatrick & Shaver, 1990; McDonald, Beck, Allison, & Norsworthy, 2005), which is especially important with respect to the compensation hypothesis, as individuals with avoidant or anxious-ambivalent attachment histories who grew up in low to non-religious homes are more likely than their securely attached counterparts to compensate for their insecure attachments and seek God out as a substitute attachment figure. Initial research (Granqvist, 1998; Kirkpatrick, 1997/1998; Kirkpatrick & Shaver, 1990) found support for the compensation hypothesis, though their measurement of attachment to God consisted of behavioral expressions of religiosity, such as conversion or regular church attendance. More recent researchers (McDonald, Beck, Allison, & Norsworthy, 2005) has emphasized the need to distinguish the difference between behavioral expressions of religiosity from one's personal relationship with God. When the two were differentiated, support for both the compensation and correspondence hypotheses was established within the same study (McDonald, Beck, Allison, & Norsworthy, 2005). In particular, McDonald and colleagues showed that individuals with either avoidant or anxious-ambivalent attachments to parents were more likely to display behavioral expressions of religiosity, but within their personal relationships with God, characterized by more avoidance or anxiety, was related to their individual attachment style.

### Depression

As mentioned above, sensitive and consistently available caretaking likely contribute to an individual's development of an internal working model of self as worthy of love. Sensitive and consistently available caretaking also contribute to an individual's internal working model of

others as trustworthy and predictable (Bowlby, 1982). On the contrary, insensitive and unreliable caretaking may result in an internal working model of self as unworthy of love and an outlook of others as untrustworthy (Bowlby, 1982). These internal working models of self and others are believed to serve as cognitive filters through which people interpret current experiences and formulate ongoing expectations of self and others (Bowlby, 1982; Bretherton, 1985, 1992). An individual's ability to adapt to stress over time has been theorized to be, in part, due to positive internal working models -- associated with secure attachment -- as the individual has confidence in self and trusts others to be available for help when needed. Conversely, and consistent with Beck's (1967) model of depression, a negative view of self and others -- associated with insecure attachment -- may increase vulnerability to depression (Carnelley, Pietromonaco, & Jaffe, 1994; Kenny, Molilanen, Lomax, & Brabeck, 1993).

In a study comparing samples of orphanage-reared versus parent-reared children, Hortacsu, Cesur, and Oral (1993) found that depression was predicted by avoidant attachment, with secure attachment being negatively related to depressive symptomology. Other researchers found that secure attachment can act like a buffer against stressful life events that often precede depression (Hammen, Burge, Diley, & Devilla, 1995). Cooper, Shaver, and Collins (1998) found that adolescents classified with avoidant or anxious-ambivalent attachment had significantly higher depression scores than adolescents classified with secure attachment.

Kenny and Sirin (2006) found that young adults' perceptions of parental attachment were positively associated with perceived self-worth, as individuals with secure attachment displayed positive self-worth and individuals with avoidant or anxious-ambivalent attachments displayed more negative self-worth. It was also shown that parental attachment contributes indirectly to depressive symptoms through self-worth. Secure parental attachment and positive self-worth led

to less depressive symptomology, whereas, avoidant or anxious-ambivalent parental attachment and negative self-worth contributed to more depressive symptomology.

Parental attachment and depressive symptoms were also found to be connected in a study examining vulnerability to depression in children with insecure attachment (Abela, Hankin, Haigh, Adams, Vinokuroff, & Trayhern, 2005). The authors found that children who exhibited either avoidant or anxious-ambivalent attachment and excessive reassurance seeking (e.g. constantly soliciting affirmation of a parent's love) experienced higher levels of depression symptomology than children who possessed only one or neither of the aforementioned factors. Also, avoidant children who were rejected by their parents tended to avoid seeking comfort from them even though they appear to be experiencing high levels of psychological distress, which increases the risk for depression (Spangler & Grossman, 1993).

Oliver and Whiffen (2003) explored how perception of parents and partners were related to men's depressive symptoms. Their study examined the relationships among men's recollections of childhood rejection by parents, their attachment security in current romantic relationships, and self-reported depressive symptoms. They found that perceived parental rejection, childhood physical abuse, and avoidant attachment were all positively correlated with depressive symptoms. However, it was also shown that the relationship between maternal rejection and adult depressive symptoms was mediated by adult attachment security. Those individuals who felt rejected by their mother in childhood also feared being unloved or abandoned by their romantic partner *and* experienced an increase in depressive symptoms. Similarly, men who perceived their fathers as rejecting, critical, indifferent, and hostile during childhood had higher levels of depressive symptoms as an adult; however, romantic attachment did not mediate the relationship between paternal attachment and depressive symptomology.

## *Depressive Experiences*

Many researchers have focused on what predisposes certain people to depression (Beck & Beamsderfer, 1974; Blatt & Schichman, 1983; Kaplan, 1986). Research on depression has brought forth different subtypes of depressive experiences, such as anaclitic and introjective depressive experiences (Blatt & Schichman, 1983). Blatt's theory on depressive experiences is rooted in psychodynamic theory. Depressive experiences are not diagnostic but, rather, aid in determining what types of experiences predispose a person to manifest depression; therefore, neither anaclitic nor introjective subtypes are desirable. Therefore, depressive experiences are predisposing factors and are not synonymous with depressive symptoms. The anaclitic, or dependent, depressive experience is related to infantile fears of abandonment and a tendency toward "abandonment depression" as well as self-perceived helplessness and weakness. Individuals experiencing anaclitic depressive experiences are responding negatively to their current external, social relationships. The introjective, or self-critical, depressive experiences require more development and a mature superego, which allows for feelings of inferiority, guilt, worthlessness, and failure; therefore, these individuals are responding to self-criticism. Anaclitic depression involves excessive interpersonal concerns; whereas, introjective depression refers to personal achievement concerns (Reis & Greyner, 2002).

Blatt's (1974) anaclitic and introjective depressive subtypes are analogous to Beck's (1967) socially dependent and autonomous types of depression. The socially dependent group is comparable to Blatt's anaclitic group, whereas the autonomous group corresponds to the introjective group. In other words, the socially dependent group becomes depressed when they are confronted with interpersonal loss, whereas the autonomous group becomes depressed over performance failures (Beck, 1967). These two types of depressive experiences reflect two types

of people, the socially dependent who want and seek out interpersonal relationships and the autonomous who want and seek evidence of their own individuality.

Blatt's (1967) theory predicts that dependent and self-critical individuals are also at a greater risk for poor social and cognitive functioning. Jenkins (1998) found that individuals with anaclitic depressive experiences were more likely to have a social support system than are individuals with introjective depressive experiences. In contrast, those with introjective depressive experiences are more likely to isolate themselves from social involvement.

According to Blatt and Levy (2003) normal personality development relies on the balance between seeking out others and establishing an independent self. Blatt and Levy stated, "In normal personality development, these two developmental processes evolve in an interactive, reciprocally balanced, mutually facilitating fashion from birth to senescence" (p. 114-115). An individual needs others to help develop a mature sense of self and needs an independent self to relate appropriately to others. Therefore, it is those individuals who are polarized on either the dependent or independent side of the spectrum that are most likely to report depressive experiences.

Recent researchers have explored what predicts such striking differences in the phenomenology of depression and have increasingly turned their attention to attachment theory (Carnelley, Pietromonaco, & Jaffe, 1994; Rice & Mirzadeh, 2000; Reis & Greyner, 2002; Roberts, Gotlib, & Kassel, 1996). They have found that anaclitic and introjective depression may be developmentally tied to individual differences in attachment style (Blatt & Homann, 1992) and may be predictive of depression symptoms.

Although research has shown a connection between individual attachment styles and depression symptoms (Abela et. al, 2005; Allen, Porter, McFarland, Boykin-McElhaney, &

Marsh, 2007; Hortacsu, Cesur, & Oral, 1993; Kenny and Sirin, 2006), very few studies have assessed the relationship between individual attachment styles and the depressive experience subtypes (Reis & Greyner, 2002; Zurroff, 1990, cited in Blatt & Homann, 1992). Reis and Greyner (2002) found that anaclitic depression was predicted by anxious-ambivalent attachment -- seeking others' acceptance to bolster low self-worth -- and that introjective depression was predicted by avoidant attachment -- low self-worth and expectations of rejection. They also found that secure attachment was negatively associated with either subtype of depressive experiences. In a separate unpublished study, researchers found that compared to securely attached females, females with anxious-ambivalent attachment styles scored higher on both dependency, related to anaclitic depression, and self-criticism, related to introjective depression (Zurroff, 1990, cited in Blatt & Homann, 1992). They provided no data on participants with avoidant attachment styles.

Based on the above research findings, it appears that the two insecure attachment styles may be associated with the development of depressive experiences. Avoidant attachment appears to be connected to the development of introjective depressive experiences, as avoidant attachment is characterized by excessive independence, distancing from relationships, and a low sense of self-worth. On the other hand, anxious-ambivalent attachment is likely involved in the development of anaclitic depressive experiences, as anxious-ambivalent attachment is characterized by dependency, abandonment concerns, and a preoccupation with interpersonal relationships. The current study examined the relationship between an individual's retrospectively reported childhood attachment to their primary caregiver and their current attachment to God, and how the two together are associated with reported depressive experiences and manifestation of depressive symptoms.

## Research Questions and Rationale

The purpose of the present study was to explore associations between retrospectively reported childhood attachment, current reported attachment to God, and depressive experiences in both women and men. Attachment theory suggests that a connection exists between childhood attachment to caregivers and current attachment to God through the idea that individuals have “working models” that form how they interpret present relationships (Bowlby, 1973). The fact that individuals’ relationships with God are one sided, in that people are not capable of interacting with God in the same manner that people presumably interact and communicate with one another, suggests that people use their existing interpersonal relationships and the subsequent working models to create mental interactions with God.

As discussed earlier, three main attachment styles have been outlined; secure, avoidant, and anxious-ambivalent (Ainsworth et al., 1978). Individuals who develop secure attachment to caregivers have learned that their caregiver will consistently respond to their physical and emotional needs, which helps the child learn the predictive and communicative value of many interpersonal signals. Thus, they have made meaning of both cognition and affect, as they are able to effectively organize their behavior and utilize emotional signaling to obtain desired nurturance (McKinsey-Crittenden, 1995). Those who develop anxious-ambivalent attachment to caregivers have learned that their caregiver will be inconsistent in their responding, which leads the child to be uncertain as to how to organize their behavior to effectively elicit the desired response. Anxious-ambivalent individuals have been reinforced for affective behavior, but have not learned an effective cognitive organization that reduces the inconsistency of other’s behavior (McKinsey-Crittenden, 1995). Finally, individuals who develop avoidant attachment to caregivers have learned that their caregiver will be not only inconsistent in responding to the

child's physical and emotional needs, but will likely be unresponsive to the child. Therefore, these individuals are forced to care for their own needs and cease relying on their caregiver for support. They have learned to organize their behavior effectively, but they are unable to interpret or utilize affective signal effectively, therefore, they have made sense of cognition but not affect (McKinsey-Crittenden, 1995).

Once attachment styles have been formed between child and caregiver, the child develops "internal working models," which are expectations of the self and of others (Bowlby, 1969). These internal working models organize beliefs and expectations about how attachment relationships operate and what one gains from these relationships. The subsequent working model then guides a person's action in attachment-related situations (Bowlby, 1969, 1982; Bretherton, 1985; Main, Kaplan, & Cassidey, 1985; Crowell et al., 2002). It is here where assumptions about an individual's attachment to God can be made. This researcher believes that the common concept of God as a "father-like figure" makes parental-attachment, rather than peer or romantic attachment, the most appropriate attachment relationship to explore when examining the associations between human attachment and human attachment to God; therefore, the current study focused solely on retrospectively reported childhood attachment to parents.

Two opposing hypotheses about the association between parental attachment and attachment to God have been delineated: the compensation hypothesis and the correspondence hypothesis (Kirkpatrick, 1997, 1998; Kirkpatrick & Shaver, 1990). The compensation hypothesis proposes that an individual's relationship to God can compensate for inadequate caregiver and/or adult romantic bonds. It is assumed that persons with histories of either of the two insecure attachment bonds (avoidant or anxious-ambivalent) are in greater need of a compensatory attachment figure than individuals with secure attachments and that God fills the

role as a “substitute” attachment figure (Kirkpatrick & Shaver, 1990). Therefore, individuals with secure attachment histories are exempt from the compensation hypothesis, as they already have formed adequate attachment bonds with others.

On the other hand, the correspondence hypothesis states that the attachment style an individual holds will be consistent across types of bonds: caregivers, peers, lovers, and God. The correspondence hypothesis assumes that early relationships provide the foundation upon which future relationships, including one’s relationship with God, are built (Granqvist, 1998). Bowlby’s (1969) notion of the continuity of working models provides the basis for the correspondence hypothesis. However, previous research has suggested that the two hypotheses may also exert influence in combination, making a third compensation-correspondence hypothesis possible. Specifically, Beck and McDonald (2004) stated that individuals with avoidant or anxious-ambivalent attachment bonds may be drawn to or seek out God through organized religion to fill an attachment void (compensation); however, once a personal relationship with God develops, previous working models assert themselves in this new relationship (correspondence) driving those with anxious attachment histories to become more anxious in their relationship with God and those with previous avoidant attachment bonds to experience more avoidance in their relationship with God.

Parental religiosity has been shown to be a moderating variable within the literature (Granqvist, 1998; Kirkpatrick & Shaver, 1990), in that individuals raised in low to non-religious homes with avoidant or anxious-ambivalent parental attachments have been shown to be more likely to participate in religious activities than securely attached individuals raised in low to non-religious homes. This researcher suggested that when parental religiosity is considered as a moderating variable, individuals with either of the two insecure parental attachment styles will

be more religious than their securely attached counterparts. The religiosity of individuals with secure attachment histories were expected to match their parents religiosity, as these individuals do not need to compensate for inadequate attachment bonds.

The current study also intended to contribute to the growing body of literature concerning individual attachment styles and relationship with God. Individual attachment styles were measured in two ways, continuously and categorically. Whereas the majority of attachment research has used a categorical measure, the current study also utilized a multi-item continuous instrument in an attempt to get a better picture of any variability within the attachment styles. A continuous measure of attachment appeared to have many advantages over a categorical measure, such as being able to assess for individual differences within the categories and the ability to utilize additional statistical analyses (Simpson, 1990). It was hoped that the strengths and weaknesses of each form of measurement as they apply to attachment styles would be identified in order to ensure that the construct was being measured in the most accurate way possible.

Based on the emphasis recent research has placed on the importance of differentiating between behavioral expressions of religiosity and one's personal relationship with God, the current study measured both constructs to examine whether different results appear based on whether behavioral expressions are being measured or whether personal relationship is being measured. It was hypothesized that compared to individuals with secure attachments, those with anxious-ambivalent or avoidant attachment styles would be more likely to compensate for their insecure attachment histories and turn to God through behavioral expressions, such as conversion, prayer, regular church attendance (compensation). However, once in the relationship with God, the two insecurely attached groups' internal working models were

hypothesized to be associated with their personal relationship with God (correspondence). Thus, individuals with anxious-ambivalent attachment histories were expected to experience more anxiety in their relationship with God and avoidantly attached individuals were expected to experience more avoidance in their relationship with God. It was also hypothesized that individuals with secure attachment would display correspondence between their parental attachment and personal relationship to God by indicating low levels of both avoidance and anxiety. Finally, parent's religiosity was also expected to contribute to whether securely attached individuals with highly religious parents engage in more behavioral expressions of religiosity than securely attached individuals with parents low in religiosity.

Several researchers have found associations between attachment styles and depressive symptoms (Abela et. al, 2005; Kenny & Sirin, 2006; Oliver & Whiffen, 2003). The cumulative findings suggest that people with either of the two insecure attachment styles are more likely to experience depressive symptomology than securely attached individuals. Based on research findings concerning the role of attachment styles on the manifestation of depressive symptomology, it was hypothesized that attachment to God will mediate the relationship between avoidant or anxious-ambivalent childhood attachment scores and depression scores. Participants who displayed less anxiety in their relationship to God and had an anxious-ambivalent childhood attachment style were expected to be less susceptible to depression than participants with anxious-ambivalent attachment styles and high anxiety in their personal relationship to God. Similarly, participants who displayed less avoidance in their relationship to God and had an avoidant childhood attachment style were expected to be less susceptible to depression than participants with avoidant attachment styles and high avoidance in their personal relationship to God. In addition, it was hypothesized that those with secure parental attachments

would report the least depressive symptomology as compared to the other two insecure attachment styles.

Anaclitic and introjective depressive subtypes have been shown to be related to attachment styles (Blatt & Homann, 1992; Reis & Greyner, 2002). Avoidant attachment has been shown to be connected to the development of introjective depressive experiences, as avoidant attachment is characterized by excessive independence, distancing from relationships, and self-criticism. On the other hand, anxious-ambivalent attachment is likely involved in the development of anaclitic depressive experiences, as anxious-ambivalent attachment is characterized by dependency, abandonment concerns, and a preoccupation with interpersonal relationships. Therefore, in an effort to add to the current literature concerning the connections between depressive subtypes and the two insecure attachment styles, the current study hypothesized that individuals with anxious-ambivalent attachment histories would likely experience more anaclitic depression than either the secure or avoidant attachment groups. Similarly, individuals with avoidant attachment histories were expected to experience more introjective depression than either the secure or anxious-ambivalent groups.

Anaclitic and introjective depression were expected to be related to one's relationship to God. An individual suffering from anaclitic depression was expected to be worried about abandonment issues, which would be associated with a desire for more closeness. Therefore individuals with high anaclitic depressive experience scores were hypothesized to display more anxiety in their personal relationship to God as compared to individuals with low anaclitic depression scores. For an individual suffering from introjective depression, the focus of the depressive experience is internal and self-critical, which research has shown to lead to isolation (Jenkins, 1998). The propensity to become isolated would suggest a connection between

introjective depression and less reliance on one's personal relationship with God; therefore, individuals with high introjective depressive experience scores were expected to display more avoidance in their personal relationship to God as compared to individuals with low introjective depression scores.

Finally, the question of the clinical significance of the present study will be briefly mentioned. In practice, clients from various backgrounds come in for treatment. However, religion and spirituality are often neglected by therapists (Jones, 1994). Miller (1991) argued that therapists should be aware that the psychotherapy process will likely impact a client's spiritual life. Therefore, focusing on clients' spirituality to the degree that it relates to psychotherapy is an important aspect therapists should consider. Conversely, the relationship between spirituality/religion and psychology has implications for pastors and religious leaders. Hall, Brokaw, Edwards, and Pike (1998) found that the quality of an individual's relationship with God is highly related to, and may be significantly influenced by one's relational maturity. Thus, pastors and religious leaders might consider the likelihood that congregation members with troubled interpersonal relationships will have more difficulties relating to God.

Rose, Westefeld, and Ansley (2001) found that more than half (55%) of psychotherapy clients expressed a desire to discuss spiritual or religious concerns in counseling; 22% said that their desire to discuss spiritual and religious concerns in counseling depended on other factors, such as, relevance to problems; and only 18% indicated they preferred not to discuss spiritual or religious issues. In a national survey of members of the American Counseling Association, Kelly (1995) found that 85% of the respondents endorsed the statement that "seeking a spiritual understanding of the universe" was important to them personally. The importance of religion and spirituality seems to permeate both the lives of therapists and of clients. However, therapists

are often without a theoretical framework to connect psychology and religion/spirituality within the therapy process. The current study hoped to help further determine the extent to which parental attachment impacts an individual's relationship style with God, as well as how the two are connected to depression symptomology and depressive experiences. The goal was to help therapists become better informed about how to conceptualize clients who bring their spiritual and religious beliefs into the therapy room.

### Hypotheses

1. Individuals with secure childhood attachment bonds were expected to match their caregivers with respect to the frequency of behavioral expressions of religiosity.
2. Individuals with secure caregiver attachment were hypothesized to exhibit a similar emphasis on religion as compared to their caregivers; therefore, individuals with highly religious caregivers were expected to also report being highly religious, and visa-versa.
3. Individuals with secure caregiver attachment were predicted to have lower depression symptomology scores than the other participants.
4. Individuals who grew up in low to non-religious homes with anxious-ambivalent or avoidant caregiver attachments were hypothesized to exhibit more religiosity than secure participants from non-religious homes.
5. Individuals who reported histories of avoidant attachment were expected to indicate more avoidance in their personal relationship with God and those who reported histories of anxious-ambivalent attachment were expected to indicate more anxiety in their personal relationship with God.
6. Based on past research, individuals with high introjective depressive experience scores were expected to report a history of avoidant attachments to caregivers as compared to individuals with low introjective depression scores.
7. Similarly, individuals with high introjective depressive experience scores were also hypothesized to indicate more avoidant personal relationships to God as compared to individuals with low introjective depression scores.
8. Individuals with high anaclitic depressive experiences scores were expected to report a history of anxious-ambivalent attachments to caregivers as compared to individuals with low anaclitic depression scores.
9. Similarly, individuals with high anaclitic depressive experience scores were also hypothesized to indicate more anxious-ambivalent personal relationships to God as compared to individuals with low anaclitic depression scores.

10. Individuals from retrospectively described non-religious homes with avoidant or anxious-ambivalent attachments were expected to indicate more behavioral expressions of religiosity than securely attached participants from non-religious homes, thus providing support for the compensation hypothesis. Securely attached participants were expected to match their retrospectively reported caregivers behavioral expressions of religiosity, providing support for correspondence.
  
11. Participants who indicated less anxiety or avoidance in their relationships to God and had either of the two insecure childhood attachment styles would indicate fewer depression symptoms than participants with either insecure attachment style and high anxiety or avoidance in their personal relationship to God.

## CHAPTER II

### METHOD

#### Participants

The sample population was taken from 220 undergraduate students enrolled in psychology courses at a large southwestern university. The participants were either satisfying a course requirement or were given extra credit for their participation. No restrictions were placed on ethnicity, race, marital status, or age during data collection. Also, no restrictions were placed on religious orientation, as the current study hoped to explore the generalizability of the attachment to God theory across various belief systems. All participants were treated in accordance with the “Ethical Principles of Psychologists and Code of Conduct” (American Psychological Association, 2002). Specific participant characteristics are discussed in detail in the Results section.

#### Measures

##### *Demographic Questionnaire*

The Demographic Questionnaire included basic questions about gender, age, ethnicity, marital status, and current religious affiliation, if any. Fill in the blank questions were also included to determine whom each participant viewed to be their primary and secondary caregivers.

##### *Retrospective Childhood Attachment*

Retrospective childhood attachment to both primary caregiver and secondary caregiver was assessed using a format developed by Hazan and Shaver (HS; 1987). Participants were asked to rate two trichotomous items. The items present participants with descriptions of the secure, avoidant, and anxious-ambivalent patterns of childhood attachment described by

Ainsworth and her colleagues (1978). The primary caregiver attachment items are reproduced below; the secondary caregiver items were identical.

They were generally warm and responsive; they were good at knowing when to be supportive and when to let me operate on my own; our relationship was almost always comfortable, and I have no major reservations or complaints about it. (Secure)

They were fairly cold, distant, and rejecting, and not very responsive; I often felt that their concerns were elsewhere; I frequently had the feeling that they would just as soon not have had me. (Avoidant)

They were noticeably inconsistent in their reactions to me, sometimes warm and sometimes not; they had their own needs and agendas which sometimes got in the way of their receptiveness and responsiveness to my needs; they definitely loved me but didn't always show it in the best way. (Anxious-ambivalent)

For each caregiver, participants were asked to read the three descriptions and pick which one of the descriptions best captures their childhood relationship with that caregiver. Thus, a categorical scale of attachment was obtained; however, a separate questionnaire based on Hazan and Shaver's items was also utilized, as previous research has suggested that single-time nominal data is associated with lower reliability and discriminatory capacity than data obtained from multi-item ratings on continuous scales (Simpson & Rholes, 1998).

Simpson (1990) developed a Likert-type version of Hazan and Shaver's (1987) measure of the three attachment styles, the Attachment Style Measure (ASM; Simpson, 1990). The three attachment vignettes originally created by Hazan and Shaver (1987) were divided into 13 individual sentences, each of which was answered on a 7-point Likert-type scale (1 = *strongly disagree* and 7 = *strongly agree*). To control for acquiescence response bias, three items were worded in the negative direction. Participants rated the following items according to how they typically felt toward their primary and secondary caregivers. The primary caregiver attachment items are reproduced below; the secondary caregiver items were identical except for the substitution of the word secondary for primary. (a) "I found it relatively easy to get close to my

primary caregiver”; (b) “I was not very comfortable having to depend on my primary caregiver”; (c) “I was comfortable having my primary caregiver depend on me”; (d) “I rarely worried about being abandoned by my primary caregiver”; (e) “I didn't like my primary caregiver getting too close to me”; (f) “I was somewhat uncomfortable being too close to my primary caregiver”; (g) “I find it difficult to trust my primary caregiver completely”; (h) “I was nervous whenever my primary caregiver got too close to me”; (i) “My primary caregiver often wanted me to be more intimate than I feel comfortable being”; (j) “My primary caregiver was often reluctant to get as close as I would have liked”; (k) “I often worried that my primary caregiver didn't really love me”; (l) “I rarely worried about my primary caregiver leaving me”; and (m) “I often wanted to merge completely with my primary caregiver, and this desire sometimes scared my primary caregiver away.” Items a through e were taken from Hazan and Shaver's “secure” vignette description. Items f through i and j through m were taken from the avoidant and anxious/ambivalent vignettes, respectively. Scoring was done by obtaining the mean of the items from each vignette, thus creating three indices; Secure Attachment Style, Avoidant Attachment Style, and Anxious-Ambivalent Attachment Style. For each Attachment Style, higher scores indicate higher levels of attachment. For example, higher secure scores reflect greater security, higher avoidant scores reflect greater avoidance, and higher anxious-ambivalent scores indicate greater anxiety.

Simpson (1990) demonstrated less than desirable internal consistency coefficients for the secure style ( $\alpha = .51$ ) and the anxious-ambivalent style ( $\alpha = .59$ ), whereas the avoidant style was adequate at .79. In a follow-up study, Sperling, Foelsch, and Grace (1996) found only low internal consistency for the secure style ( $\alpha = .42$ ), whereas both the avoidant style ( $\alpha = .80$ ) and the anxious-ambivalent style ( $\alpha = .79$ ) were adequate. Despite the low value for the secure style

found in both studies, Sperling, Foelsch, and Grace (1996) still found the ASM to be the “best choice” for examining attachment in a continuous way, largely because of its direct link to Ainsworth and colleagues’ attachment style distinctions. With respect to primary caregiver, the present study yielded alphas of .56 for the secure style, .74 for the avoidant style, and .58 for the anxious-ambivalent. In addition, alphas of .70 for the secure style, .82 for the avoidant style, and .63 for the anxious-ambivalent style were computed with respect to secondary caregiver responses.

#### *Measures of Caregiver and Subject Behavioral Expressions of Religiosity*

The religiosity measures were a compilation of several different questions found within the attachment to God studies (Granqvist & Hagekull, 2000; Kirkpatrick & Shaver, 1990). The item content was intended to capture behaviors traditionally associated in the literature with religiosity. Care was taken to include only questions that reflect behavioral expressions of religiosity, as Beck, McDonald, Allison, and Norsworthy (2005) suggested that future research separate behavioral expressions of religiosity from aspects of a personal relationship with God.

The first item was meant to determine each participant’s and their caregivers’ beliefs in God and had the participants indicate the descriptor that best describes them and their caregivers (separated by primary, secondary, and participant): atheist, agnostic, unsure, spiritual, and religious. On the next six items, participants were asked to indicate, on a 6-point Likert scale, the frequency with which they and their caregivers have engaged in the following behaviors (ranging from 1, never to 6, more than once a week): pray, meditate, attend worship services, read-study scriptures/holy writings, attend religion oriented classes, such as Sunday School or Bible Study, and talk with others about religious beliefs. Participants were also asked to indicate whether they have ever spoken in a different language due to religious beliefs; and, if so, how

often. Finally, the participants were also asked to indicate on a 6 point scale ranging from 1 (strongly disagree) to 6 (strongly agree) the degree to which the following statement corresponded with their opinion: “I have experienced a change which meant that religion became more important to me during a period of my life.” This statement was taken from Kirkpatrick and Shaver (1990) and adapted by Granqvist and Hagekull (2000). Cronbach’s alphas were assessed for primary, secondary, and participant behavioral expressions of religiosity (.90, .92, and .88, respectively) and were found to be good.

#### *Attachment to God Inventory (AGI)*

The AGI (Beck & McDonald, 2004) is a 28-item self-report measure using a Likert type scale (1 = *disagree strongly* to 7 = *agree strongly*) based on the Experiences in Close Relationships Scale (Brennan, Clark, & Shaver, 1998). The AGI was intended to capture the more personal aspects of one’s relationship with God, rather than the common behavioral expressions associated with religiosity. It contains 14 items on the Anxiety about Abandonment subscale and 14 items on the Avoidance of Intimacy subscale. Examples of the Anxiety items are: “I often worry about whether God is pleased with me,” and “I fear God does not accept me when I do wrong.” Examples of the Avoidance items are: “I prefer not to depend too much on God,” and “I just don’t feel a deep need to be close to God.” For each subscale, higher scores indicate higher levels of either Anxiety or Avoidance. For example, higher Anxiety about Abandonment scores reflect greater anxiety, higher Avoidance of Intimacy scores reflect greater avoidance; however, lower scores on both the Anxiety about Abandonment and Avoidance of Intimacy subscales reflects more security, which is associated with individuals with secure attachment styles.

The AGI items demonstrated good simple structure across three samples, loading on their

proper factors; however, items 14 and 16 on the AGI showed strong cross-factor loadings. Specifically, items 14 and 16 correlated more strongly with the Anxiety factor rather than with the intended Avoidance factor; therefore, Beck and McDonald suggested that these items be deleted from the questionnaire for research purposes. Overall, the AGI showed minimal shared variance between subscales ( $r = .248$ ). The AGI subscales generated good internal consistency coefficients (Avoidance ranges from .84 to .86, Anxiety ranges from .80 to .87). The current study produced alphas of .87 for the Anxiety subscale and .93 for the Avoidance subscale.

#### *Depressive Experiences Questionnaire (DEQ)*

The DEQ (Blatt, D'Afflitti, & Quinn, 1979) is a 66-item questionnaire that is rated on a 7-point Likert-type scale and has yielded three orthogonal factors: Dependency (DEQ-A), Self-Criticism (DEQ-I), and Efficacy. Dependency and Self-Criticism correspond with Blatt's (1974) concepts of anaclitic (dependent) and introjective (self-critical) depression and were used to determine the associations between parental attachment and the depressive subtypes, as well as between the depressive subtypes and personal relationship with God. The Dependency factor consists of items that are primarily externally directed, refer to interpersonal relations, and contain themes of abandonment, loneliness, and helplessness and the desire to be close to, related to, and dependent on others. High-loading items reflect concerns about being rejected, hurting or offending people, and having difficulty in managing anger and aggression for fear of losing the gratification someone could provide. The Self-Criticism factor consists of items that are more internally directed and reflect feelings of guilt, emptiness, hopelessness, dissatisfaction, and insecurity. Items with a high loading on this factor reflect concerns about a failure to meet expectations and standards, an inability to assume responsibility, feeling threatened by change, ambivalence about self and others, and a tendency to assume blame and feel critical toward

oneself. Efficacy involves items indicating a sense of confidence about one's resources and capacities. The items with high loadings on this factor contain themes of high standards and personal goals, a sense of responsibility, inner strength, feelings of independence, and a sense of pride and satisfaction in one's accomplishments. Individuals who score high on this factor are characterized by goal-oriented strivings and feelings of accomplishment, but not by extreme competitiveness. The DEQ assesses subjective experiences that are not direct symptoms of depression but frequently characteristic experiences of depressed patients. Within a college population, the DEQ has high internal consistency .81 for Dependency, .75 for Self-Criticism and .73 for Efficacy (Zuroff, Quinlan, & Blatt, 1990). This study yielded alphas of .86 for Dependency, .88 for Self-Criticism and .50 for Efficacy. When separated by gender the current study produced alphas of .85 for males and .87 for females with respect to Dependency, .85 for males and .89 for females with respect to Self-Criticism, and .45 for males and .52 for females with respect to Efficacy.

*Beck Depression Inventory-Revised® (BDI-II)*

The BDI-II® assessment tool (Psychological Corporation, San Antonio, Texas, [www.harcourtassessment.com](http://www.harcourtassessment.com)) was created by Beck, Steer, and Brown in 1996. It is a 21-item self-report measure frequently used to assess depressive symptom severity and was used within the current study to examine direct symptoms of depression. A 4-point scale is used to rate each item ranging from 0 to 3, with total scores ranging from 0 to 63. The BDI-II has high internal consistency ( $\alpha = .92$ ) among outpatients (Beck, Steer, & Brown, 1996). The BDI-II has demonstrated adequate content and factorial validity, as well as established diagnostic discrimination (Duzois, Dobson, & Ahnberg, 1998). The current study yielded an alpha of .90

overall. When separated by gender this study produced alphas of .91 for males and .90 for females.

### Procedure

Participants were notified of the current study through the EMS Website and/or by brief announcement in psychology related courses. The EMS Website described the research study (attachment styles and the correspondence/compensation hypotheses), the nature of the research (answering of various questionnaires), the number of credits offered (one credit per half hour of participation), the approximate length of time it will take to participate (one to two hours), and the researcher and faculty sponsor of the research. Participants were able to sign-up for the study through the EMS website. An email was then sent to the student as a record of the sign-up. The researcher posted predetermined time slots for the administration of the aforementioned measures, and the students chose from one of the available times.

The administration of the measures took place in a classroom on the University of North Texas campus. To ensure anonymity, participants were instructed not to include any identifying information on the questionnaires. However, it should be noted that the researcher had to retain a list of all participants so that the appropriate credits could be awarded after the completion of the study. An informed consent letter was given, and informed consent was discussed before the mass administration began (see Appendix I). Time for questions about the current study was allotted and the researcher's contact information was provided for further questions.

Once informed consent was obtained from the participants, each participant received a packet containing the measures previously explained: a demographics questionnaire, the Attachment Style Measure (caregiver), the Hazan-Shaver Attachment Self-Report (caregiver), the Measures of Caregiver Behavioral Expressions of Religiosity, Participant Behavioral

Expressions of Religiosity, the Attachment to God Inventory, the Depressive Experiences Questionnaire, and the Beck Depression Inventory. To minimize any potential ordering effects, the measures were randomly organized before being given to the participants. Participants were then asked to complete each measure and return the entire packet directly to the examiner.

Each measure was stamped with a participant number so that the participant's identity was not on the data. Any identifying information found on the data was immediately marked through with a black magic marker.

## CHAPTER III

### RESULTS

#### Description of Participants

Two hundred and twenty individuals participated in the present study. Seventy-two percent of the participants were female ( $n = 158$ ), and 28% were male ( $n = 62$ ). Sixty-one percent were Caucasian ( $n = 133$ ), 18% were African American ( $n = 40$ ), 13% were Hispanic ( $n = 29$ ), and 8% were Other ( $n = 18$ ). Based upon the disproportionate number of ethnicities, African American and Hispanic were combined into one category, African American/Hispanic. The other ethnicities were eliminated, reducing the  $n$  for ethnicity to 202. Ninety-seven percent of the sample was single ( $n = 213$ ). Eighty-two percent of the sample categorized themselves as spiritual or religious ( $n = 180$ ), with 76% of the participants classifying themselves as Christian ( $n = 168$ ). The majority of primary and secondary caregivers were also reported to be spiritual or religious – 93% of primary ( $n = 205$ ) and 87% ( $n = 191$ ) of secondary. For the purposes of data analysis, participants who described themselves as religious or spiritual were combined into one category, the religious/spiritual group, and participants who described themselves as atheist, agnostic or unsure, were combined into one category, the non-religious/spiritual group.

As mentioned in the introduction, most research using the Hazan & Shaver measure of attachment has shown the following distribution of attachment styles: secure style (65-70%); avoidant style 20-25%, and anxious-ambivalent style (15% or less). However, the current study's distribution of categorical attachment styles was contrary to expectation with respect to both primary and secondary caregiver on the Hazan & Shaver measure of attachment. Specifically, 77% of participants reported secure attachments to their primary caregiver, 3% reported avoidant attachments, and 20% reported anxious-ambivalent attachments. With respect

to secondary caregivers, 65% reported secure attachments, 3% reported avoidant attachments, and 31% reported anxious-ambivalent attachments. Based upon the small percentage of participants reporting avoidant attachments to either caregiver, the current researcher decided to combine the avoidant and anxious-ambivalent attachment styles into a single insecure attachment style. The descriptive statistics for the Hazan & Shaver measure of attachment are shown in Table 1.

Eighty-two percent of participants reported their mother as their primary caregiver ( $n = 180$ ); the remaining percentage was comprised of 11% fathers ( $n = 24$ ) and 7% of other individuals, such as grandparents or siblings ( $n = 16$ ). As might be expected, the majority of participants reported their fathers to be their secondary caregivers (71%,  $n = 157$ ). The remaining secondary caregivers consisted of mothers at 11% ( $n = 25$ ) and other caregivers at 15% ( $n = 33$ ).

Table 2 provides a descriptive picture of the relevant continuous variables, including all measures based on continuous scales and age. For both primary and secondary caregiver, participants scored higher on the secure attachment subscale on the ASM than they did on the avoidant and anxious-ambivalent subscales. Participants also scored relatively low on the AGI anxious and avoidant attachment to God subscales, while simultaneously obtaining moderately high Behavioral Expressions of Religiosity scores (across the board for participant, primary caregiver, and secondary caregiver). The DEQ data showed a trend of midlevel scores, whereas the BDI data consisted of low scores. Finally, the mean age of the participants was 20 years old. Thus the sample consisted of mainly young, healthy, securely attached individuals who participated in religious/spiritual activities on a regular basis.

### Correlations between Attachment Measures

The correlations among the attachment measures are shown in Table 3. All but two of the 28 correlations were statistically significant. The correlation between the Hazan & Shaver measures of secure attachment to primary caregiver and secure attachment to secondary caregiver was positive, though small in size.<sup>3</sup> As expected, the correlations between the Hazan & Shaver measures of attachment and the ASM subtypes were positive in direction when examining the ASM secure attachment style and negative in direction when examining either the ASM anxious-ambivalent or ASM avoidant attachment styles. The correlation between the Hazan & Shaver measure of attachment to primary caregiver and the ASM subtypes were moderate in size for primary caregiver and small in size for the secondary caregiver. The correlations between the Hazan & Shaver measure of attachment to secondary caregiver and the ASM subtypes were small to near zero for the primary caregiver and large for the secondary caregiver.

All but two of the correlations among the ASM subtypes were moderate to large in size. The correlation between participants' scores on the ASM secure style for primary and secondary caregivers was positive. For both primary and secondary caregivers, participants' scores on the ASM secure style of attachment were negatively correlated with their score on the ASM avoidant and ASM anxious-ambivalent styles of attachment. Finally, despite the fact that the ASM avoidant and ASM anxious-ambivalent scales have been designed to measure very distinct constructs, the two measures were highly correlated in the present study. The correlation between the ASM avoidant and ASM anxious-ambivalent styles of attachment was .67 for primary caregiver and .71 for secondary caregiver.

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<sup>3</sup> I followed Cohen's rule (1977) for deciding whether a correlation is weak or strong. The qualitative descriptors of small, moderate, and large were applied to correlations of .10-.29, .30-.49, and .50+, respectively.

### Correlations between Dependent Variables

Several significant relationships were found between the dependent variables and can be seen in Table 4. Small to moderate positive correlations were found between AGI anxious and the subscales of the DEQ (introjective, anaclitic, and efficacy) and between AGI anxious and the BDI. Participants who reported having anxious attachment to God were more likely to report depressive experiences, symptoms of depression, and better personal resilience and inner strength. A small negative correlation was also found between the AGI anxious and AGI avoidant subscales.

Moderate to large negative correlations were found between the AGI avoidant subscale when correlated with participant spirituality/religiosity and participant behavioral expressions of religiosity, meaning participants with avoidant attachment to God were less likely to report themselves as religious/spiritual and less likely to engage in behavioral expressions of religiosity, such as praying or attending worship services. Small positive correlations were seen between AGI avoidant and DEQ-introjective and the BDI, suggesting that those who reported avoidant attachment to God were more likely to report introjective depressive experiences and depression symptomology. A small negative correlation was found between AGI avoidant and DEQ-efficacy, meaning that those with avoidant attachments to God were less likely to display personal resilience and inner strength.

Small negative correlations were produced between participant behavioral expressions of religiosity (BER) and DEQ-introjective, as well as between BER and the BDI, suggesting that participants who reportedly engage in fewer behavioral expressions of religiosity were more likely to report introjective depressive experiences and symptoms of depression. Positive correlations were found between BER and participant spirituality/religiosity (moderate) and

between BER and DEQ-efficacy (small); therefore, individuals who engage in more behavioral expressions of religiosity were also more likely to classify themselves as spiritual/religious and to report more personal resilience and inner strength. A large positive correlation was produced between the two DEQ subscales; introjective and anaclitic depressive experiences were also highly and moderately correlated with the BDI in positive directions, which is not surprising as the two DEQ subtypes and the BDI are reflective of the underlying construct of depression.

#### Correlations between Study Variables and Demographic Variables

The simple correlations between the demographic variables and the main variables in the study are shown in Table 5. With 60 correlations a Bonferroni Correction was employed to guard against chance findings. The adjusted  $p$  value was .0008 (.05 divided by 60 = .0008). All correlations involving gender were small to near zero, and none were significant. Only one correlation with age was significant. There was a moderate, positive relationship between age and the ASM anxious subscale. Older participants reported having more anxious attachments to primary caregivers than did younger participants.

Two of the 17 correlations involving ethnicity were significant. Caucasian participants were more likely than African American/Hispanic participants to have avoidant attachments to God. More African American/Hispanic than Caucasian participants reported their primary caregiver to be religiously active.

#### Correlations between Attachment Styles and the Dependent Variables

Table 6 shows the correlations between attachment styles and the dependent variables. With 64 correlations a Bonferroni Correction was employed to guard against chance findings. The adjusted  $p$  value was .0008. None of the correlations between the Hazan and Shaver

measures of attachment styles (primary and secondary) and any of the dependent variables were statistically significant.

Five of the 27 correlations involving ASM primary caregiver subtypes and the dependent variables were significant. There was a small, negative correlation between ASM primary secure and DEQ introjective. The more secure participants' attachment to their primary caregiver, the less likely participants were to report introjective depressive experiences. For the ASM primary anxious subscale, the correlations between ASM primary anxious and AGI-Anxious and between ASM primary anxious and DEQ introjective were positive, though small in size. Participants with more anxious attachment styles reported more anxious attachment toward God and more introjective depressive experiences. Finally, there was a moderate, positive correlation between Primary Avoidant and DEQ introjective and a small, positive correlation between primary avoidant and the BDI. The greater the avoidance reported toward primary caregivers by participants, the more likely participants were to report introjective depressive experiences and symptoms of depression.

Six of the 27 correlations involving ASM secondary caregiver subtypes were significant. The introjective subtype of the DEQ and BDI were correlated with all three ASM secondary subtypes, with negative correlations shown for ASM secondary secure and positive correlations associated with ASM secondary anxious and ASM secondary avoidant. Participants with more secure attachments to their secondary caregiver reported fewer signs of introjective depressive experiences and symptoms of depression. Participants with either greater anxious or avoidant attachments to their secondary caregiver reported more introjective depressive experiences and symptoms of depression.

## Colinearity among the Six ASM Attachment Types

After simple correlations were run for the ASM attachment subtypes, hierarchical regression analyses were utilized to examine the relationships between the ASM attachment subtypes and the dependent variables. However, the results indicated potential colinearity among the six ASM subtypes. For example, with respect to the DEQ introjective dependent measure, all simple correlations between each ASM subtype and DEQ introjective were significant ( $r$ 's from high .20's to mid .30's), but the betas for each ASM subtype in the regression analysis dropped below .10. However, if each ASM subtype were entered separately after the demographic variables, each beta was statistically significant. When the betas of predictor variables are significant when entered separately but not when entered as a group, this signifies potential colinearity among predictor variables.

The factorability of the six ASM subtypes was further examined. Several well-recognized criteria for the factorability of variables were used. First, the correlations among the six ASM subtypes were in the mid .20's to mid .75's, suggesting good factorability. Second, the Kaiser-Meyer-Olkin measure of sampling adequacy was .70, above the recommended value of .6, and Bartlett's test of sphericity was significant ( $n = 218$ ,  $\chi^2(15) = 761.25$ ,  $p < .001$ ). Finally, the communalities of the six ASM subtypes varied from .59 to .75 (see Table 7), further confirming that each ASM subtype shared some common variance with one another. Given these overall indicators, the six attachment subtypes were factor analyzed to examine any colinearity among the predictor variables and to look for underlying common relationships.

Principle axis factoring with varimax rotation was used because the primary purpose was to identify the latent variables that contribute to the common variance of ASM subtypes, excluding unique variance. The results yielded two factors that exceeded an Eigenvalue of 1.

The first factor had an Eigenvalue of 3.42 and explained 57% of the variance; the second factor had an Eigenvalue of 1.33 and accounted for 22% of the variance. The other four factors had Eigenvalues of less than .50. The two factor solution, which explained 79% of the variance, was retained because of the ‘leveling off’ of Eigenvalues on the scree plot after two factors, the insufficient number of primary loadings and difficulty of interpreting the third factor and subsequent factors. The rotated factor matrix for the two factor solution can be seen in Table 8. The two extracted factors were labeled secondary caregiver attachment (Factor 1) and primary caregiver attachment (Factor 2), as the high loadings showed that Factor 1 consisted of the ASM subtypes associated with secondary caregiver and Factor 2 consisted of the ASM subtypes associated with primary caregiver.

Composite scores were created for the two factors by first converting the raw scores on each ASM subtype to z-scores. Then to get a Factor 1 score for each subject, their secondary caregiver ASM avoidant score was subtracted from their secondary caregiver secure score, followed by the subtraction of their secondary caregiver ASM anxious ambivalent score. Factor 2 scores were produced in the same way, but with primary caregiver ASM z-scores. For example, suppose a securely attached participant had the following z-scores for a caregiver: 1.50 for ASM secure, -1.50 for ASM avoidant, and -1.50 for ASM anxious ambivalent. The participant’s Factor score would be 4.50 [ $1.50 - (-1.50) - (-1.50) = 4.50$ ]. If another more insecurely attached participant had corresponding ASM z-scores of -1.50, 1.50, and 1.50, his/her Factor score would be -4.50 [ $-1.50 - (1.50) - (1.50) = -4.50$ ]. Thus, higher scores indicate more secure attachment to secondary caregiver (Factor 1) or primary caregiver (Factor 2); lower scores indicate more insecure attachment to caregiver(s).

Although the factor analysis yielded two distinguishable factors, the two factors were still

correlated ( $r = .45$ ), suggesting that a general underlying factor still existed. To obtain a common underlying factor, each participants' Factor 1 and Factor 2 scores were added together to create a third factor, labeled overall caregiver attachment. This factor indicated the degree to which participants were securely or insecurely attached to their caregivers. The higher the participant's score on overall caregiver attachment, the more securely attached the participant was to his/her caregivers.

Correlations between overall caregiver attachment and the six ASM subtypes, overall caregiver attachment and the demographic variables and overall caregiver attachment and the dependent variables were then run. As shown in Table 9, all ASM subtypes were highly correlated ( $r$ 's  $.70$  or higher) with overall caregiver attachment. Thus, higher overall caregiver attachment scores are indicative of more secure attachment to caregivers and lower overall caregiver attachment scores point to greater insecure attachment to caregivers.

The correlations between overall caregiver attachment and demographic variables are shown in Table 10. Age was negatively correlated with overall caregiver attachment. Younger participants were more likely than older participants to report being securely attached to caregivers.

The correlations between overall caregiver attachment and all dependent variables are shown in Table 11. Overall caregiver attachment was negatively correlated with AGI anxious, AGI avoidant, DEQ introjective, and BDI and positively correlated with spirituality/religiosity and DEQ efficacy. Participants with more secure attachment to caregivers reported being spiritual/religious, having less anxious and less avoidant attachments to God, having less introjective depressive experiences and depression symptomology, and more personal resilience and inner strength.

Correlations between demographic and the predictor variables are shown in Table 12. Gender was negatively correlated with AGI avoidant, indicating that male participants were more likely to report avoidant attachment styles to God than female participants. Age was negatively correlated with overall caregiver attachment, meaning younger participants were more likely to report secure attachment to caregivers. Ethnicity was negatively correlated with participant spirituality/religiosity, primary and secondary caregiver BER, and AGI anxious, but positively correlated with AGI avoidant. More African American/Hispanic participants than Caucasian participants classified themselves as spiritual/religious and reported having primary and secondary caregivers who engaged in more religious activities. African American/Hispanic participants also reported having more anxious attachment styles to God than Caucasian participants, whereas more Caucasian participants reported having more avoidant attachment styles to God than African American/Hispanic participants.

Participant spirituality/religiosity was positively correlated with primary caregiver spirituality/religiosity, secondary caregiver spirituality/religiosity, primary and secondary caregiver BER, and overall caregiver attachment. A negative correlation was found between participant spirituality/religiosity and AGI avoidant. Participants who described themselves as religious/spiritual were more likely to report their primary and secondary caregivers to be religious/spiritual and reported that their caregivers engaged in more behavioral expressions of religiosity than participants who described themselves as not religious/spiritual. Religious/spiritual participants were less likely than non religious/spiritual participants to report avoidant attachment styles to God, but more likely to report secure attachment styles to caregivers.

Primary caregiver spirituality/religiosity was positively correlated with secondary

caregiver spirituality/religiosity, primary caregiver BER, secondary caregiver BER, but negatively correlated with AGI avoidant. Participants who classified their primary caregiver as religious/spiritual were more likely to also classify their secondary caregivers as religious/spiritual and reported that their caregivers engaged in more behavioral expressions of religiosity than participants who classified their primary caregivers as non religious/spiritual. In addition, participants who indicated that their primary caregiver was religious/spiritual were less likely to report avoidant attachment styles to God. Secondary caregiver spirituality/religiosity was positively correlated with primary and secondary caregiver BER and negatively correlated with AGI avoidant. Participants who classified their secondary caregivers as religious/spiritual were more likely to also report that their primary and secondary caregivers engaged in more behavioral expressions of religiosity than participants who indicated that their secondary caregiver was not religious/spiritual. Additionally, participants who specified that their secondary caregiver was religious/spiritual were less likely to report avoidant attachment styles to God.

Primary caregiver BER was positively correlated with secondary caregiver BER and overall caregiver attachment, but negatively correlated to AGI avoidant. Participants who indicated that their primary caregiver engaged in more behavioral expressions of religiosity were more likely to also report that their secondary caregiver engaged in more behavioral expressions of religiosity. These same participants reported more secure overall attachment to caregivers, but less avoidant attachment styles to God. Secondary BER was negatively correlated with AGI avoidant and positively correlated with overall caregiver attachment, suggesting that participants who reported that their secondary caregivers engaged in fewer behavioral expressions of religiosity were more likely to report avoidant attachment styles to God and more likely to have

insecure attachments to caregivers. AGI anxious and AGI avoidant were both negatively correlated to overall caregiver attachment, which suggests that participants who reported more secure attachment styles to caregivers were less likely to report anxious or avoidant attachment styles to God. As mentioned earlier, a small negative correlation was found between the two AGI subtypes, suggesting that participants who reported anxious attachment to God were less likely to report avoidant attachment to God.

#### Regression Analyses between Overall Caregiver Attachment and Dependent Variables

Hierarchical multiple regressions were used to test the relationships between the study's predictor and dependent variables. Hierarchical multiple regression was utilized as this model allows for the entering of variables in a predetermined order. Demographic variables were entered in the equation first, followed by the study's predictor variables (Cohen, Cohen, West, & Aiken, 2003). It should be noted that due to the accumulation of missing data across predictor (primarily among primary and secondary spirituality/religiosity) and demographic variables (primarily participant spirituality/religiosity and ethnicity), the  $n$  for the following regressions fell between 171 and 173. However, the sample size still exceeds the recommended  $n > 106$  when testing  $R^2$  with seven predictor variables (Green, 1991).

#### *Family Background and Attachment to Caregivers*

To better determine what role family background played with respect to attachment to caregivers, the following regression was run. Gender, age, and ethnicity were entered during the first step of the regression, followed by primary caregiver spirituality/religiosity, secondary caregiver spirituality/religiosity, primary caregiver BER, and secondary caregiver BER in the second step. Overall caregiver attachment was entered as the dependent variable. Only primary caregiver BER was a significant predictor of overall caregiver attachment in step 2 of the

regression (beta = .23,  $p < .05$ ). However, the overall model for overall caregiver attachment was not significant ( $F = 2.01$ ,  $df = 7, 183$ ,  $p = .06$ ).

#### *Overall Caregiver Attachment and the AGI*

Significant relationships were found for both Attachment to God Inventory (AGI) subtypes, anxious and ambivalent. The demographic variables entered on step 1 for both regression analyses included gender, age, ethnicity, and participant spirituality/religiosity. The predictor variables were entered in step 2 as follows: primary caregiver spirituality/religiosity, secondary caregiver spirituality/religiosity, primary caregiver BER, secondary caregiver BER, and overall caregiver attachment.

For AGI anxious, ethnicity was a significant predictor of anxious attachment to God in both step 1 and step 2 (beta = -.21,  $p < .01$ , beta = -.18,  $p = .05$ , respectively). When the predictor variables were entered after the demographic variables, the results indicated that overall caregiver attachment was a significant predictor of AGI anxious (beta = -.25,  $p < .01$ ). The overall model for AGI anxious was significant ( $F = 2.56$ ,  $df = 9, 172$ ,  $p < .01$ ), and accounted for 12% of the variance. Participants with more secure attachments to caregivers reported lower anxious attachment to God. Also, participants who classified themselves as African American/Hispanic were more likely than Caucasians to report greater anxious attachment to God.

For AGI avoidant, all demographic variables were significant predictors of avoidant attachment to God; gender (step 1: beta = -.17,  $p < .01$ , step 2: beta = -.18,  $p = .001$ ), age (step 1: beta = -.12,  $p < .05$ , step 2: beta = -.11,  $p < .05$ ), ethnicity (step 1: beta = .26,  $p < .001$ , step 2: beta = .21,  $p < .001$ ), and participant spirituality/religiosity (step 1: beta = -.48,  $p < .001$ , step 2: beta = -.40,  $p < .001$ ). When the predictor variables were entered after the demographic variables,

the results indicated that secondary caregiver spirituality ( $\beta = .14, p < .05$ ), primary caregiver BER ( $\beta = -.28, p < .001$ ), and secondary caregiver BER ( $\beta = -.21, p < .01$ ) significantly predicted AGI avoidant. The overall model for AGI avoidant was significant ( $F = 23.95, df = 9, 172, p < .001$ ) and accounted for 57% of the variance. Individuals who described their secondary caretakers as religious/spiritual were more likely to report avoidant attachment to God; however, individuals who reported either their primary or secondary caregiver as engaging in fewer behavioral expressions of religiosity were more likely to report avoidant attachment to God. Less avoidant attachment to God was particularly seen for female participants, older participants, African American/Hispanic participants, and participants who described themselves as not religious/spiritual.

#### *Overall Caregiver Attachment with Participant Spirituality/Religiosity and Participant BER*

Significant relationships were found for participant spirituality/religiosity and participant BER. The demographic variables entered on step 1 for the participant spirituality/religiosity regression analysis included gender, age, and ethnicity; whereas, the BER regression analysis also included participant spirituality/religiosity as the final demographic variable in step 1. The predictor variables entered in step 2 for both regression analyses included the following: primary caregiver spirituality/religiosity, secondary caregiver spirituality/religiosity, primary caregiver BER, secondary caregiver BER, AGI avoidant, AGI anxious and overall caregiver attachment.

For participant spirituality/religiosity, none of the demographic variables produced significant findings. With respect to the predictor variables, secondary caregiver spirituality/religiosity ( $\beta = .21, p < .01$ ), primary caregiver BER ( $\beta = -.22, p = .01$ ), AGI avoidant ( $\beta = -.59, p < .001$ ), and overall caregiver attachment ( $\beta = .14, p < .05$ ) were all significant predictors of participant spirituality/religiosity. The overall model for participant

spirituality/religiosity was significant ( $F = 8.60$ ,  $df = 10, 172$ ,  $p < .001$ ), and accounted for 35% of the variance. Participants who classified their secondary caregiver as religious/spiritual were also more likely to describe themselves as religious/spiritual. Those who indicated that their primary caregivers engaged in fewer behavioral expressions of religiosity than other participants' primary caregivers were more likely to categorize themselves as religious/spiritual. Participants who reported less avoidant attachment to God were also more likely to classify themselves as religious/spiritual, as were those participants who reported having more secure attachment to caregivers.

For participant BER, age (step 1:  $\beta = .18$ ,  $p < .01$ , step 2:  $\beta = .11$ ,  $p < .05$ ), ethnicity (step 1:  $\beta = -.18$ ,  $p < .01$ ), and participant spirituality/religiosity (step 1:  $\beta = .38$ ,  $p < .001$ ) were all significant predictors of participant behavioral expressions of religiosity; however, ethnicity and participant spirituality/religiosity failed to retain their significance in Step 2 of the equation. When the predictor variables were entered after the demographic variables the results indicated that primary caregiver BER ( $\beta = .28$ ,  $p < .001$ ), secondary caregiver BER ( $\beta = .15$ ,  $p < .05$ ), and AGI avoidant ( $\beta = -.51$ ,  $p < .001$ ) were significant predictors of participant BER. The overall model for participant BER was significant ( $F = 31.17$ ,  $df = 11, 172$ ,  $p < .001$ ), and accounted for 68% of the variance. Older participants were more likely to report that they engage in behavioral expressions of religiosity than younger participants. In addition, participants who indicated that either their primary or secondary caregivers engaged in a higher frequency of behavioral expressions of religiosity were also more likely to report their own engagement in behavioral expressions of religiosity as more frequent than participants who indicated that their primary or secondary caregivers engaged in fewer behavioral expressions of religiosity. Finally, those participants who reported having an avoidant attachment to God were

less likely to report a high frequency rate of behavioral expressions of religiosity.

#### *Overall Caregiver Attachment and Depression*

Significant relationships were found for the Depressive Experiences Questionnaire (DEQ) subtypes, introjective, anaclitic, and efficacy, and for depression symptomology (BDI). The demographic variables entered on step 1 for the following regression analyses included gender, age, ethnicity, and participant spirituality/religiosity. The predictor variables were entered in step 2 as follows: primary caregiver spirituality/religiosity, secondary caregiver spirituality/religiosity, primary caregiver BER, secondary caregiver BER, AGI avoidant, AGI anxious, and overall caregiver attachment.

For DEQ introjective, participant spirituality/religiosity was a significant predictor of introjective depressive experiences in step 1 ( $\beta = -.24, p < .01$ ), but lost significance in step 2. When the predictor variables were entered last after the demographic variables the results indicated that AGI anxious ( $\beta = .48, p < .001$ ) and overall caregiver attachment ( $\beta = -.33, p < .001$ ) were significant predictors of DEQ introjective. The overall model for DEQ introjective was significant ( $F = 12.66, df = 11, 170, p < .001$ ), and accounted for 47% of the variance. Participants who reported having more secure attachments to caregivers were less likely to report introjective depressive experiences, and participants who reported having an anxious attachment to God were more likely to report introjective depressive experiences.

As for DEQ anaclitic, gender ( $\beta = .16, p < .05$ ) and ethnicity ( $\beta = .17, p < .05$ ) significantly predicted anaclitic depressive experiences in step 2 of the analysis. When the predictor variables were entered after the demographic variables, AGI anxious significantly predicted DEQ anaclitic ( $\beta = .46, p < .001$ ). The overall model for DEQ anaclitic was significant ( $F = 5.50, df = 11, 170, p < .001$ ), and accounted for 28% of the variance. Female

participants reported more anaclitic depressive experiences than male participants and Caucasian participants reported more anaclitic depressive experiences than African American/Hispanic participants. Participants who reported having anxious attachment to God were also more likely to report anaclitic depressive experiences.

Ethnicity significantly predicted DEQ efficacy in both steps 1 and 2 of the regression (step 1:  $\beta = -.28, p < .001$ , step 2:  $\beta = -.25, p = .002$ ). The predictor variables, AGI anxious ( $\beta = .16, p < .05$ ) and overall caregiver attachment ( $\beta = .18, p < .05$ ) were found to be significant predictors of DEQ efficacy after being entered following the demographic variables. The overall model for DEQ efficacy was significant ( $F = 2.97, df = 11, 170, p = .001$ ), and accounted for 17% of the variance. African American/Hispanic participants reported greater personal resilience and inner strength than Caucasian participants. Participants who reported having more anxious attachment to God and participants with secure caregiver attachments were more likely to report better personal resilience and inner strength than those with less anxious attachment to God and insecure caregiver attachments.

For the BDI, gender (step 1:  $\beta = .19, p < .01$ , step 2:  $\beta = .18, p < .01$ ) and participant spirituality/religiosity (step 1:  $\beta = -.38, p < .001$ , step 2:  $\beta = -.34, p < .001$ ) were significant predictors of depression symptomology. When the predictor variables were entered after the demographic variables, the results indicated that the AGI anxious ( $\beta = .34, p < .001$ ) and overall caregiver attachment ( $\beta = -.16, p < .05$ ) were significant predictors of depression symptomology. The overall model for the BDI was significant ( $F = 7.56, df = 11, 171, p < .001$ ), and accounted for 34% of the variance. Female participants and participants who are not religious/spiritual were more likely to report depressive symptomology. Participants with anxious attachment to God and participants with insecure attachments to caregivers were also

more likely to report depression symptomology.

Overall, the results suggest that individuals with more secure attachments to their caregivers are more spiritual/religious, have less anxious attachments to God, have less introjective depressive experiences and depression symptomology, and have more personal resilience and inner strength. Individuals with more avoidant attachments to God are less likely to be spiritual or religious and engage in religious behaviors, and experience more introjective depressive experiences and depression symptomology. Individuals with anxious attachment to God are higher on all three measures of depression but report more personal resilience and inner strength. Individuals whose caregivers readily engage in religious behaviors are less likely than their counterparts to have avoidant relationships to God; whereas they are more likely to report being less spiritual or religious, they reportedly do participate in religious activities.

#### Regression Analyses for Overall Caregiver Attachment Minimizing the Missing Data

As mentioned above, the accumulation of missing data across predictor (primarily among primary and secondary spirituality/religiosity) and demographic variables (primarily participant spirituality/religiosity and ethnicity) caused the  $n$  of the previous regressions to fall between 171 and 173. Though the sample size still exceeded the recommended  $n > 106$  when testing  $R^2$  with seven predictor variables (Green, 1991), the regressions were rerun without the variables that caused the greatest decrease in  $n$  (primary caregiver spirituality/religiosity, secondary spirituality/religiosity, participant spirituality/religiosity, and ethnicity). The following regressions retained  $N$ 's between 213 and 216, except when participant religiosity/religiosity was examined as the dependent variable ( $n = 202$ ).

#### *Overall Caregiver Attachment and the AGI*

Significant relationships were found for both Attachment to God Inventory (AGI)

subtypes, anxious and ambivalent. The demographic variables entered on step 1 for the following regression analyses included gender and age. The predictor variables were entered in step 2 as follows: primary caregiver BER, secondary caregiver BER, and overall caregiver attachment.

For AGI anxious, neither of the demographic variables entered produced significant findings. When the predictor variables were entered after the demographic variables, the results indicated that overall caregiver attachment ( $\beta = -.27, p < .001$ ) was a significant predictor of AGI anxious. The overall model for AGI anxious was significant ( $F = 3.95, df = 5, 215, p < .01$ ), and accounted for 9% of the variance. Participants with more secure attachments to caregivers reported lower anxious attachment to God, which is consistent with the original regression analysis that included the eliminated variables.

For AGI avoidant, both demographic variables were significant predictors of avoidant attachment to God; gender (step 1:  $\beta = -.20, p < .01$ , step 2:  $\beta = -.20, p < .001$ ) and age (step 2:  $\beta = -.17, p < .01$ ). When the predictor variables were entered after the demographic variables, the results indicated that primary caregiver BER ( $\beta = -.38, p < .001$ ) and secondary caregiver BER ( $\beta = -.23, p < .01$ ) significantly predicted AGI avoidant. The overall model for AGI avoidant was significant ( $F = 24.67, df = 5, 215, p < .001$ ), and accounted for 37% of the variance. Individuals who reported either their primary or secondary caregiver as engaging in fewer behavioral expressions of religiosity were more likely to report avoidant attachment to God. Less avoidant attachment to God was seen for female participants and older participants. No significant change in findings was established for AGI avoidant.

#### *Overall Caregiver Attachment with Participant Spirituality/Religiosity and Participant BER*

Significant relationships were found for participant spirituality/religiosity and participant

BER. The demographic variables entered on step 1 for the following regression analyses included gender and age. The predictor variables entered in step 2 included the following: primary caregiver BER, secondary caregiver BER, AGI avoidant, AGI anxious and overall caregiver attachment.

For participant spirituality/religiosity, neither gender nor age produced significant results. With respect to the predictor variables, AGI avoidant ( $\beta = -.60, p < .001$ ) and overall caregiver attachment ( $\beta = .14, p < .05$ ) were both significant predictors of participant spirituality/religiosity. The overall model for participant spirituality/religiosity was significant ( $F = 14.43, df = 7, 201, p < .001$ ), and accounted for 34% of the variance. Participants who reported less avoidant attachment to God were more likely to classify themselves as religious/spiritual, as were those participants who reported having more secure attachment to caregivers. Compared to the original regression analyses, two differences in significance were noted. Primary caregiver BER and secondary caregiver spirituality/religiosity were not significant predictors in the current analysis, but both were significant predictors in the original analysis.

For participant BER, age (step 1:  $\beta = .17, p = .01$ , step 2:  $\beta = .12, p < .01$ ) significantly predicted participant behavioral expressions of religiosity. When the predictor variables were entered after the demographic variables the results indicated that primary caregiver BER ( $\beta = .25, p < .001$ ), secondary caregiver BER ( $\beta = .13, p < .05$ ), and AGI avoidant ( $\beta = -.57, p < .001$ ) were significant predictors of participant BER. The overall model for participant BER was significant ( $F = 59.89, df = 7, 214, p < .001$ ), and accounted for 67% of the variance. Older participants were more likely to report that they engage in behavioral expressions of religiosity than their counterparts. In addition, participants who indicated that

their primary or secondary caregiver engaged in a higher frequency of behavioral expressions of religiosity were also more likely to report their own engagement in behavioral expressions of religiosity as more frequent than participants who indicated that their caregivers engaged in fewer behavioral expressions of religiosity. Participants who reported having an avoidant attachment to God were less likely to report a high frequency rate of behavioral expressions of religiosity. No significant differences were noted between the results of the current regression analysis and the original analysis.

#### *Overall Caregiver Attachment and Depression*

Significant relationships were found for the Depressive Experiences Questionnaire (DEQ) subtypes, introjective, anaclitic, and efficacy, and for depression symptomology (BDI). The demographic variables entered on step 1 for the following regression analyses included gender and age. The predictor variables were entered in step 2 as follows: primary caregiver BER, secondary caregiver BER, AGI avoidant, AGI anxious, and overall caregiver attachment.

For DEQ introjective, participant, no demographic variables significantly predicted introjective depressive experiences in step 1. When the predictor variables were entered last after the demographic variables the results indicated that AGI avoidant ( $\beta = .22, p < .01$ ), AGI anxious ( $\beta = .45, p < .001$ ), and overall caregiver attachment ( $\beta = -.29, p < .001$ ) were significant predictors of DEQ introjective. The overall model for DEQ introjective was significant ( $F = 17.89, df = 7, 212, p < .001$ ), and accounted for 38% of the variance.

Participants who reported having more secure attachments to caregivers were less likely to report introjective depressive experiences. However, participants who reported having either avoidant or anxious attachment to God were more likely to report introjective depressive experiences; which differs from the original analysis as it only showed anxious attachment to God to

significantly predict introjective depressive experiences.

As for DEQ anaclitic, neither gender nor age produced significant findings. When the predictor variables were entered after the demographic variables, AGI anxious significantly predicted DEQ anaclitic ( $\beta = .39, p < .001$ ). The overall model for DEQ anaclitic was significant ( $F = 6.20, df = 7, 212, p < .001$ ), and accounted for 18% of the variance. Participants who reported having anxious attachment to God were also more likely to report anaclitic depressive experiences. Though the original analysis showed gender to significantly predict anaclitic depressive experiences, it was not found to be a significant predictor in the current analysis.

Gender significantly predicted DEQ efficacy in step 2 of the regression ( $\beta = -.14, p = .05$ ). The predictor variables, AGI avoidant ( $\beta = -.17, p < .05$ ), AGI anxious ( $\beta = .15, p < .05$ ), and overall caregiver attachment ( $\beta = .15, p < .05$ ) were found to be significant predictors of DEQ efficacy after being entered following the demographic variables. The overall model for DEQ efficacy was significant ( $F = 3.34, df = 7, 212, p = .002$ ), and accounted for 10% of the variance. Male participants reported greater personal resilience and inner strength than female participants. Interestingly, participants who reported having greater anxious attachment to God were more likely to report better personal resilience and inner strength than those with less anxious attachment to God; however, participants with less avoidant attachment to God were more likely to report better personal resilience and inner strength than participants with more avoidant attachment to God. The avoidant attachment to God finding is unique to the current analysis, as AGI avoidant was not a significant predictor of DEQ efficacy in the original regression. Commensurate with the original analysis, participants with secure caregiver attachments were more likely to report better personal resilience and inner strength than those

with insecure caregiver attachments

For the BDI, gender (step 2:  $\beta = .16, p < .05$ ) became a significant predictor of depression symptomology in step 2 of the analysis. When the predictor variables were entered after the demographic variables, the results indicated that AGI avoidant ( $\beta = .20, p = .01$ ), AGI anxious ( $\beta = .31, p < .001$ ), and overall caregiver attachment ( $\beta = -.20, p = .01$ ) were significant predictors of depression symptomology. The overall model for the BDI was significant ( $F = 8.68, df = 7, 214, p < .001$ ), and accounted for 23% of the variance. Female participants were more likely to report depressive symptomology. Participants with avoidant and anxious attachments to God and participants with insecure attachments to caregivers were also more likely to report depression symptomology than their counterparts. It should be noted that avoidant attachment to God became a significant predictor during the current analysis but was not shown to be a significant predictor in the original analysis.

Overall, the current analyses upheld the results found in the original analyses. Participants with more secure attachments to caregivers reported lower anxious attachment to God, were more likely to classify themselves as religious/spiritual, were less likely to report introjective depressive experiences, were less likely to report depression symptomology, and were more likely to report better personal resilience and inner strength than those with insecure caregiver attachment. Participants who reported having anxious attachment to God were more likely to report introjective and anaclitic depressive experiences and were more likely to report better personal resilience and inner strength than those with less anxious attachment to God. Avoidant attachment to God was seen more for male participants, younger participants, non-religious/spiritual participants, participants who reportedly engage in fewer behavioral expressions of religiosity, and participants who indicated that their primary or secondary

caregiver engaged in fewer behavioral expressions of religiosity. Older participants were more likely to report that they engage in behavioral expressions of religiosity than their counterparts. In addition, participants who indicated that their primary or secondary caregiver engaged in a higher frequency of behavioral expressions of religiosity were also more likely to report their own engagement in behavioral expressions of religiosity. Finally, male participants reported greater personal resilience and inner strength than female participants.

Six significant differences were noted between the current analyses and the original regressions. Three of the six differences included the emergence of significant findings, all of which included AGI avoidant. Participants with greater avoidant attachment to God were more likely to report introjective depressive experiences and to endorse depression symptomology. In addition, participants with less avoidant attachment to God reported better personal resilience and inner strength than participants with more avoidant attachment to God. Three of the six differences included the loss of significant findings. In the original regressions, primary and secondary caregiver BER significantly predicted participant spirituality/religiosity; however, the predictive relationships were not established in the current analyses. Gender significantly predicted the occurrence of anaclitic depressive experiences in the original analyses but was not shown to be a significant predictor in the current analyses.

#### Regression Analyses using the Hazan & Shaver Measure of Attachment

Regression analyses were run again using the Hazan and Shaver measure of attachment (H&S) to ascertain whether the measure provided comparable findings to the ASM. Again, it should be noted that due to the accumulation of missing data across predictor (primarily among primary and secondary spirituality/religiosity) and demographic variables (primarily participant spirituality/religiosity), the  $n$  for the following regressions fell between 171 and 173. However,

the sample size still exceeds the recommended  $n > 106$  when testing  $R^2$  with seven predictor variables (Green, 1991).

### *H&S Caregiver Attachment and the AGI*

Significant relationships were found for both Attachment to God Inventory (AGI) subtypes, anxious and ambivalent. The demographic variables entered on step 1 for the following regression analyses included gender, age, ethnicity, and participant spirituality/religiosity. The predictor variables were entered in step 2 as follows: primary caregiver spirituality/religiosity, secondary caregiver spirituality/religiosity, primary caregiver BER, secondary caregiver BER, H&S primary caregiver attachment, and H&S secondary caregiver attachment.

For AGI anxious, ethnicity was a significant predictor of anxious attachment to God in both step 1 and step 2 (beta = -.21,  $p < .01$ , beta = -.22,  $p = .01$ , respectively). When the predictor variables were entered after the demographic variables, no predictor variables were found to be significant. The overall model for AGI anxious was not significant ( $F = 1.46$ ,  $df = 10, 172$ ,  $p = .16$ ). African American/Hispanic participants were more likely to report greater anxious attachment to God than Caucasian participants.

For AGI avoidant, all demographic variables were significant predictors of avoidant attachment to God; gender (step 1: beta = -.17,  $p < .01$ , step 2: beta = -.18,  $p = .001$ ), age (step 1: beta = -.12,  $p < .05$ , step 2: beta = -.10,  $p = .05$ ), ethnicity (step 1: beta = .25,  $p < .001$ , step 2: beta = .19,  $p = .001$ ), and participant spirituality/religiosity (step 1: beta = -.48,  $p < .001$ , step 2: beta = -.40,  $p < .001$ ). When the predictor variables were entered after the demographic variables, the results indicated that secondary caregiver spirituality (beta = .14,  $p < .05$ ), primary caregiver BER (beta = -.30,  $p < .001$ ), and secondary caregiver BER (beta = -.19,  $p = .01$ ) significantly

predicted AGI avoidant. The overall model for AGI avoidant was significant ( $F = 20.95$ ,  $df = 10, 172$ ,  $p < .001$ ), and accounted for 56% of the variance. Individuals who described their secondary caretakers as religious/spiritual were more likely to report avoidant attachment to God; however, individuals who reported either their primary or secondary caregiver as engaging in fewer behavioral expressions of religiosity were more likely to report avoidant attachment to God. Less avoidant attachment to God was particularly seen for female participants, older participants, African American/Hispanic participants, and participants who were reportedly religious/spiritual.

#### *H&S Caregiver Attachment with Participant Spirituality/Religiosity and Participant BER*

Significant relationships were found for participant spirituality/religiosity and participant BER. The demographic variables entered on step 1 for the participant spirituality/religiosity regression analysis included gender, age, and ethnicity; whereas, the BER regression analysis also included participant spirituality/religiosity as the final demographic variable in step 1. The predictor variables entered in step 2 for both regression analyses included the following: primary caregiver spirituality/religiosity, secondary caregiver spirituality/religiosity, primary caregiver BER, secondary caregiver BER, AGI avoidant, AGI anxious, H&S primary caregiver attachment, and H&S secondary caregiver attachment.

For participant spirituality/religiosity, none of the demographic variables produced significant findings. With respect to the predictor variables, secondary caregiver spirituality/religiosity ( $\beta = .21$ ,  $p < .01$ ), primary caregiver BER ( $\beta = -.24$ ,  $p = .01$ ), AGI avoidant ( $\beta = -.59$ ,  $p < .001$ ), and H&S primary caregiver attachment ( $\beta = .16$ ,  $p < .05$ ) were all significant predictors of participant spirituality/religiosity. The overall model for participant spirituality/religiosity was significant ( $F = 7.96$ ,  $df = 11, 172$ ,  $p < .001$ ), and

accounted for 35% of the variance. Participants who classified their secondary caregiver as religious/spiritual were also more likely to be religious/spiritual themselves. Those who indicated that their primary caregivers engaged in fewer behavioral expressions of religiosity than other participants' primary caregivers were more likely to describe themselves as religious/spiritual. Participants who reported less avoidant attachment to God were also more likely to be religious/spiritual, as were those participants who reported having more secure attachment to their primary caregiver.

For participant BER, age (step 1:  $\beta = .18, p < .01$ , step 2:  $\beta = .11, p < .05$ ), ethnicity (step 1:  $\beta = -.18, p = .01$ ), and participant spirituality/religiosity (step 1:  $\beta = .38, p < .001$ ) were all significant predictors of participant behavioral expressions of religiosity during Step 1 of the analysis. When the predictor variables were entered after the demographic variables the results indicated that primary caregiver BER ( $\beta = .29, p < .001$ ), secondary caregiver BER ( $\beta = .13, p < .05$ ), and AGI avoidant ( $\beta = -.50, p < .001$ ) were significant predictors of participant BER. The overall model for participant BER was significant ( $F = 28.63, df = 12, 172, p < .001$ ), and accounted for 68% of the variance. Participants who indicated that either their primary or secondary caregivers engaged in a higher frequency of behavioral expressions of religiosity were also more likely to report their own engagement in behavioral expressions of religiosity as more frequent than participants who indicated that their primary or secondary caregivers engaged in fewer behavioral expressions of religiosity. Participants who reported having more avoidant attachment to God were less likely to report a high frequency rate of behavioral expressions of religiosity.

#### *H&S Caregiver Attachment and Depression*

Significant relationships were found for the Depressive Experiences Questionnaire

(DEQ) subtypes, introjective, anaclitic, and efficacy, and for depression symptomology (BDI). The demographic variables entered on step 1 for the following regression analyses included gender, age, ethnicity, and participant spirituality/religiosity. The predictor variables were entered in step 2 as follows: primary caregiver spirituality/religiosity, secondary caregiver spirituality/religiosity, primary caregiver BER, secondary caregiver BER, AGI avoidant, AGI anxious, H&S primary caregiver attachment, and H&S secondary caregiver attachment.

For DEQ introjective, participant spirituality/religiosity was a significant predictor of introjective depressive experiences (step 1:  $\beta = -.24, p < .01$ ; step 2:  $\beta = -.16, p < .05$ ). When the predictor variables were entered last after the demographic variables the results indicated that AGI anxious ( $\beta = .55, p < .001$ ) was a significant predictor of DEQ introjective. The overall model for DEQ introjective was significant ( $F = 9.39, df = 12, 170, p < .001$ ), and accounted for 42% of the variance. Participants who classified themselves as religious/spiritual were less likely to report introjective depressive experiences. Participants who reported having more anxious attachment to God were more likely to report introjective depressive experiences.

As for DEQ anaclitic, gender ( $\beta = .17, p < .05$ ) and ethnicity ( $\beta = .16, p < .05$ ) significantly predicted anaclitic depressive experiences in step 2 of the analysis. When the predictor variables were entered after the demographic variables, AGI anxious significantly predicted DEQ anaclitic ( $\beta = .47, p < .001$ ). The overall model for DEQ anaclitic was significant ( $F = 4.93, df = 12, 170, p < .001$ ), and accounted for 27% of the variance. Female participants reported more anaclitic depressive experiences than male participants, and Caucasian participants reported more anaclitic depressive experiences than African American/Hispanic participants. Participants who reported having anxious attachment to God were also more likely to report anaclitic depressive experiences.

Ethnicity significantly predicted DEQ efficacy in both steps 1 and 2 of the regression (step 1:  $\beta = -.28, p < .001$ , step 2:  $\beta = -.23, p = .005$ ). No predictor variables were found to be significant predictors of DEQ Efficacy after being entered following the demographic variables. The overall model for DEQ Efficacy was significant ( $F = 2.46, df = 12, 170, p = .006$ ), and accounted for 16% of the variance. African American/Hispanic participants reported greater personal resilience and inner strength than Caucasian participants.

For the BDI, gender (step 1:  $\beta = .19, p < .01$ , step 2:  $\beta = .20, p < .01$ ) and participant spirituality/religiosity (step 1:  $\beta = -.38, p < .001$ , step 2:  $\beta = -.38, p < .001$ ) were significant predictors of depression symptomology. When the predictor variables were entered after the demographic variables, the results indicated that the AGI anxious ( $\beta = .37, p < .001$ ) was a significant predictor of depression symptomology. The overall model for the BDI was significant ( $F = 6.72, df = 12, 171, p < .001$ ), and accounted for 34% of the variance. Female participants and participants who did not indicate that they are religious/spiritual were more likely to report depressive symptomology. Participants with anxious attachment to God were also more likely to report depression symptomology.

In summary, the results for the Hazan and Shaver measure of attachment were quite different from those using the ASM continuous measure of attachment. Whereas, the results for attachment to caregiver using the ASM found significant relationships to AGI Anxious, participant spirituality/religiosity, DEQ introjective, DEQ efficacy, and the BDI, the analyses employing the H&S measures of attachment found significant results only for the variable of participant spirituality/religiosity.

#### Moderation and Mediation Analyses

Based on past compensation research (Granqvist & Hagekull, 2000; Kirkpatrick &

Shaver, 1990), it was hypothesized that caregiver spirituality/religiosity would moderate the relationship between caregiver attachment and participant behavioral expressions of religiosity (Hypothesis 10). Individuals who reportedly came from non-religious homes (as assessed by the participant's report of caregiver spirituality/religiosity) with insecure attachments were expected to be more religious than securely attached participants from non-religious homes, thus providing support for the compensation hypothesis. No significant relationships were found between caregiver attachment and participant expressions of religiosity, as well as between caregiver attachment and caregiver spirituality/religiosity. According to Baron & Kenny (1986) "it is desirable that the moderator variable be uncorrelated with both the predictor and the criterion (the dependent variable) to provide a clearly interpretable interaction term." Multiple regression equations were used to test the interactive effects of attachment and caregiver spirituality/religiosity on the continuous variable, participant behavioral expressions of religiosity. Moderation is established if the interaction between caregiver spirituality/religiosity and caregiver attachment significantly impacts participant behavioral expressions of religiosity. Two regressions were run to account for primary spirituality/religiosity and secondary spirituality/religiosity.

For the first regression, gender, age, ethnicity, and participant spirituality/religiosity were entered first, followed by overall caregiver attachment in step 2, primary caregiver spirituality/religiosity in step 3, and the interaction term (representing the cross-product of primary caregiver spirituality/religiosity and overall caregiver attachment) in step 4, with participant BER as the dependent variable (Baron & Kenny, 1986). Moderation was not established, as the interaction term did not significantly impact participant BER after all other variables had been entered.

The second regression included gender, age, ethnicity, and participant spirituality/religiosity in step 1, overall caregiver attachment in step 2, secondary caregiver spirituality/religiosity in step 3, and the interaction term (representing the cross-product of secondary caregiver spirituality/religiosity and overall caregiver attachment in step 4, with participant BER as the dependent variable. When the interaction term was entered last after all other variables, the results indicated that the interaction term remained a significant predictor of participant BER (beta = .91,  $p = .001$ ). Age (step 1: beta = .18,  $p < .01$ ; step 2: beta = .19,  $p < .01$ ; step 3: beta = .18,  $p < .01$ ; step 4: beta = .19,  $p < .01$ ), ethnicity (step 1: beta = -.17,  $p < .01$ ; step 2: beta = -.19,  $p < .01$ ; step 3: beta = -.18,  $p < .01$ ; step 4: beta = -.19,  $p < .01$ ), and participant spirituality/religiosity (step 1: beta = .37,  $p < .001$ ; step 2: beta = .35,  $p < .001$ ; step 3: beta = .33,  $p < .001$ ; step 4: beta = .32,  $p < .001$ ) significantly predicted participant BER throughout all four steps of the analysis. Overall caregiver attachment did not become significant until the last step of the analysis when it switched direction from positive to negative (step 4: beta = -.79,  $p = .003$ ). Secondary caregiver spirituality/religiosity also gained significance during the final step of the analysis (step 4: beta = .19,  $p = .01$ ). The overall model was significant ( $F = 9.72$ ,  $df = 7, 175$ ,  $p < .001$ ) and accounted for 29% of the variance.

Based upon the significant findings, the computer program ModGraph (Jose, 2001) was used to better determine whether secondary caregiver spirituality/religiosity moderated the relationship between overall caregiver attachment and participant behavioral expressions of religiosity. ModGraph follows Aiken and West's (1991) suggestion to graph the interaction and automatically generates the cell means required to create a visible representation of the interaction effect. According to Jose (2001), it is important to note that statistical interaction occurs when lines are not parallel. As can be seen in Figure 1, the effect of secondary caregiver

spirituality/religiosity on participant behavioral expressions of religiosity is greater when individuals have more secure attachments than when individuals have more insecure attachments, because the means are more divergent (i.e., there is greater space between the means reading up and down). Individuals who reportedly came from non-religious homes (as assessed by the participant's report of secondary caregiver spirituality/religiosity) with secure attachments engaged in significantly fewer behavioral expressions of religiosity than secure individuals from religious homes. No divergence was seen for individuals with insecure attachments as those who came from non religious homes engaged in approximately the same amount of behavioral expressions of religiosity as insecure individuals from religious homes.

The current moderation results support Hypothesis 10 and compensation in that participants with insecure attachment styles with nonreligious secondary caregivers reportedly engage in significantly more behavioral expressions of religiosity than securely attached participants with nonreligious secondary caregivers. Correspondence is supported for those with secure attachments as securely attached participants' BER scores matched their secondary caregivers' spirituality/religiosity. Securely attached participants with nonreligious secondary caregivers were less likely to engage in behavioral expressions of religiosity than securely attached participants with religious secondary caregivers. Please note that individuals with secure attachment to caregivers are exempt from the compensation hypothesis because they do not need to compensate for inadequate bonds to caregivers.

### *Mediation Analyses*

It was also hypothesized that personal relationship to God would mediate the relationship between insecure childhood attachment scores and depression scores, in that participants who display less anxiety or avoidance in their relationship to God and have insecure childhood

attachment styles will be less susceptible to depression than participants with insecure attachment style and high anxiety or avoidance in their personal relationship to God (Hypothesis 11). According to Baron & Kenny (1986) a variable functions as a mediator when it meets the following conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed mediator (i.e., Path a), (b) variations in the mediator significantly account for variations in the dependent variable (i.e., Path b), and (c) when Paths a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when Path c is zero.

It should be noted that a significant relationship was not established between AGI avoidant and overall caregiver attachment in the original regressions; however, a significant relationship was found between the two variables when regressions were rerun to account for the missing N. For AGI avoidant, gender, age, ethnicity, and participant spirituality/religiosity were entered in step 1 of the analysis, overall caregiver attachment was entered in step 2, followed by AGI avoidant in step 3, with severity of depression symptoms (BDI) as the dependent variable (Baron & Kenny, 1986). Mediation could not be established for avoidant attachment to God, as AGI avoidant did not remain a significant predictor of depression symptomology (BDI) in the final step of the analysis and no significance was lost between the relationship between overall caregiver attachment and depression symptomology, failing to support path c.

For AGI anxious, gender, age, ethnicity, and participant spirituality/religiosity were entered in step 1 of the analysis, overall caregiver attachment was entered in step 2, followed by AGI anxious in step 3, with severity of depression symptoms (BDI) as the dependent variable (Baron & Kenny, 1986). Participant spirituality/religiosity remained a significant predictor of

depression symptoms (step 1:  $\beta = -.31, p < .001$ , step 2:  $\beta = -.25, p < .001$ ; step 3:  $\beta = -.30, p < .001$ ) throughout the analysis. When AGI anxious was entered last after all other variables, the results indicated that the AGI anxious significantly predicted depressive symptoms ( $\beta = .35, p < .001$ ). Overall caregiver attachment remained a significant predictor of depressive symptoms in steps 2 and 3 (step 2:  $\beta = -.26, p < .001$ , step 3:  $\beta = -.17, p < .01$ ), but its' predictive value and significance decreased when AGI anxious was added suggesting possible mediation.

To identify whether no, partial, or full mediation was identified by the above regression, a Sobel test (1982) was used to determine whether the reduction in overall caregiver attachment was significant enough to indicate mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). According to Sobel (1982), the Sobel's  $z$  value must be larger than 1.96 in absolute value and produce a  $p$ -value of less than .05, in order for significant mediation to be detected. The Sobel  $z$ -value obtained for the current study was  $-2.72, p = .0066$ , therefore implying that the association between the overall caregiver attachment and depression symptomology was significantly reduced by the inclusion of the mediating variable (AGI-Anxious). MedGraph (Jose, 2001) was used to graphically depict the mediation among the three variables and to determine whether partial or full mediation occurred (see Figure 2). Partial mediation was depicted, meaning the path from overall caregiver attachment to depression symptomology is reduced in absolute size but is still a significant predictor of depression symptomology when anxious attachment to God is controlled (Baron & Kenny, 1986).

## CHAPTER IV

### DISCUSSION

The current researcher examined the associations between retrospective childhood attachment style, current attachment style to God, behavioral expressions of religiosity, and depression. Overall, the analyses showed that individuals with secure attachment to caregivers have more secure attachment to God, experience less depressive symptomology, and encounter fewer depressive experiences. When caregiver spirituality is considered as a moderating variable, individuals with insecure attachments to caregivers from nonreligious homes are more likely to display behavioral expressions of religiosity than securely attached individuals from nonreligious homes. Personal relationship to God was found to partially mediate the relationship between insecure childhood attachment and depression, in that participants who reported less anxious attachment to God and have insecure childhood attachment were less likely to report symptoms of depression than participants with insecure childhood attachment and higher anxious attachment to God. Finally, important measurement differences were found between the categorical Hazan and Shaver measure of attachment (H&S) and the continuous Attachment Style Measure (ASM) by Simpson, which will hopefully aid future researchers in their selection of proper measurement tools.

#### Categorical Versus Continuous Measurement of Attachment

Although the majority of researchers on attachment (e.g. Granqvist, 1998, Hazan & Shaver, 1987; Kirkpatrick & Shaver, 1990) have used a categorical measure of attachment, the current researcher also utilized a multi-item continuous instrument in an attempt to get a better picture of any variability within the attachment styles. The continuous measure of attachment (ASM) was shown to be more accurate than the categorical measure of attachment (H&S) due to

its sensitivity to individual differences within the categories and the ability to utilize additional statistical analyses (Simpson, 1990). All of the study's significant findings for caregiver attachment styles, relationship to God, and measures of depression were only found using the ASM. The analyses employing the H&S measure of attachment found significant results only for the variables of participant spirituality/religiosity.

It is likely that much of the difference in findings and utility between the categorical and continuous measure of attachment relates to aggregation (Epstein, 1983). The ASM's use of multiple questions and options for various responses allowed for aggregation, or the combined product of different question and answer possibilities, whereas the H&S's use of a single item produced limited usefulness and generalizability. Epstein (1983) indicated that "responses to single stimuli, even if they are highly reliable or made so through aggregation over occasions, are in most cases too narrow in scope to relate to broad dispositional measures at more than very modest levels, if at all." In addition, a meta-analysis (Baldwin and Fehr, 1995) reviewing the stability of scores on the Hazan and Shaver measure of attachment showed that approximately 30% of participants changed their response when evaluated on separate occasions, suggesting that the single-item measure is not accurately measuring the construct of attachment.

Although in the present study the ASM proved to be a better measure of attachment styles than the H&S, the reliability of the ASM subscales leaves much to be desired. The alpha coefficients for the subscales are usually below the accepted standards of .80 or higher. Simpson (1990) reported combined alphas of .51 for secure style, .59 for anxious-ambivalent style, and .79 for avoidant style. Sperling et al. (1996) found alphas of .42 for secure style, .79 for anxious-ambivalent style, and .80 for avoidant style. In the present study, the corresponding alphas were .56, .58, and .74 for primary caregiver and .70, .63, and .82 for secondary caregiver. Clearly,

greater attention needs to be given to the items on the ASM subscales, so that the ASM meets accepted standards of reliability.

In addition to reliability concerns, there are also validity issues concerning the ASM. There is still confusion concerning what the ASM is measuring. According to Atkins (2006), when developing the measure Simpson based the questions and their subsequent attachment category using the attachment style descriptions from Hazan and Shaver's (1987) Adult Attachment Questionnaire, rather than on methodical principles. Based on Simpson's (1990) study, internal validity scores for the secure and anxious-ambivalent dimensions were less than desirable ( $\alpha = 0.51$  and  $\alpha = 0.59$ , respectively) and this measure has been criticized for being based on dimensions that were chosen for conventional, rather than empirical, reasons (Carver, 1997).

According to Simpson (1990), factor analyses were performed on all attachment items in the ASM. Two factors emerged: a secure–avoidant dimension and an anxious–nonanxious dimension. However, Simpson found no difference in the general pattern of findings when two versus three attachment styles were examined. Due to theoretical rationale and the lack of changes to the general pattern of findings, three distinct attachment styles were retained. With respect to the current study, factor analysis was also performed due to multicollinearity between the three attachment styles. Of particular interest was the significant positive correlation seen between the two insecure attachment styles, anxious-ambivalent and avoidant, because according to attachment theory the two insecure attachment styles are distinct constructs and should not be highly correlated. Based on the current study's factor analysis findings, an insecure-secure dimension emerged, which is different than the aforementioned dimensions Simpson (1990) found and contradicts attachment theory that anxious-ambivalent and avoidant subtypes are

separate from one another.

Given the reliability concerns of the single item Hazan and Shaver measure of attachment, the less than desirable reliability for some of the ASM subscales, and the lack of consensus on what the ASM is measuring, attention needs to be paid to how attachment styles are being measured. Making sure that the measurement instruments used are assessing what the researcher is intending to measure is imperative since researchers may prematurely make scientific claims that are not warranted, thus hampering scientific progress.

#### Attachment, Spirituality, and Behavioral Expression of Religiosity

Over the years, three main attachment styles have been outlined: secure, avoidant, and anxious-ambivalent (Ainsworth et al., 1978). Individuals who develop secure attachment to caregivers have learned that their caregiver will consistently respond to their physical and emotional needs. Those who develop anxious-ambivalent attachment to caregivers have learned that their caregiver will be inconsistent in their responding. Finally, individuals who develop avoidant attachment to caregivers have learned that their caregiver will be not only inconsistent in responding to the child's physical and emotional needs, but will likely be unresponsive. Once attachment between child and caregiver is formed, internal working models are developed guiding a person's expectation and subsequent action in attachment-related situations (Bowlby, 1969,1982; Bretherton, 1985; Cox, Arndt, Pyszczynski, Greenberg,, Abdollahi, & Solomon, 2008; Crowell, Treboux, Gao, Fyffe, Pan, & Waters, 2002; Main, Kaplan, & Cassidey, 1985). It is assumed that working models and existing personal relationships are used to create mental interactions with God because of the relationship's one-sided nature.

#### *Correspondence and Compensation*

Two opposing hypotheses about the association between parental attachment and

attachment to God have been established; the compensation hypothesis and the correspondence hypothesis (e.g. Granqvist & Hagekull, 2000; Granqvist, Ivarsson, Broberg, & Hagekull, 2007; Kirkpatrick, 1997, 1998; Kirkpatrick & Shaver, 1990). Some researchers have explored the idea that an individual's relationship to God may compensate for inadequate caregiver and/or adult romantic bonds, hence the compensation hypothesis (Granqvist, 1998; Kirkpatrick & Shaver, 1992; Miner, 2007). Persons with insecure attachment histories (avoidant or anxious-ambivalent) are thought to be in greater need of a compensatory attachment figure than individuals with secure attachments; therefore, individuals with secure attachment histories are exempt from the compensation hypothesis, as they already have formed adequate attachment bonds with others (Kirkpatrick & Shaver, 1990). In contrast, those supporting the correspondence hypothesis argue that attachment style is steady across all types of bonds: caregivers, peers, lovers, and God. Bowlby's (1969) notion of the continuity of working models provides the basis for the correspondence hypothesis. The current study found that individuals with secure attachment to caregivers with religious/spiritual caregivers were more likely to be religious or spiritual than securely attached individuals with nonreligious/spiritual caregivers, supporting the correspondence hypothesis, as well as Hypothesis 2, as individuals with secure attachments do not need to compensate for insecure attachment bonds.

Based upon the compensation hypothesis, it was expected that individuals with insecure attachment to caregivers and non-religious/spiritual caregivers would classify themselves as more religious/spiritual than securely attached participants with non-religious/spiritual caregivers (Hypothesis 4). However, the current study found that, just like securely attached individuals, those with insecure attachments to caregivers are more likely to match their caregivers with respect to religious classification. Therefore, individuals who grew up in non-religious/spiritual

homes are more likely to classify themselves as non-religious/spiritual in early adulthood, supporting correspondence rather than compensation.

#### *Combined Compensation-Correspondence*

Based on the emphasis recent research (McDonald et al., 2005; Miner, 2007) has placed on the importance of differentiating between behavioral expressions of religiosity and one's personal relationship with God, the current study measured both constructs to examine whether different results appear depending upon on whether behavioral expressions are being measured or whether personal relationship is being measured. No significant relationship was found between retrospective childhood attachment and current behavioral expression of religiosity, failing to support Hypothesis 1. However, when examining personal relationship, individuals with insecure attachments to caregivers were shown to be more likely to experience anxious or avoidant attachments to God than their securely attached counterparts, providing support for the correspondence hypothesis. The difference in findings may reflect the difference between the constructs, as the measure used to assess participant attachment to God reflects internal working models of attachment whereas the measure used to assess participant behavioral expressions of religiosity simply reflects observable behaviors.

The two opposing hypotheses of religiosity, the correspondence and the compensation hypotheses, were used as templates for the current study and led to the investigation of a third combined hypothesis, the compensation-correspondence hypothesis. The compensation-correspondence hypothesis posited that individuals with avoidant or anxious-ambivalent caregiver attachment styles initially compensate for their insecure attachments via behavioral expressions of religiosity, but their personal relationships with God continue to correspond with their pre-existing insecure attachments to caregivers. Beck and McDonald (2004) stated that

individuals with avoidant or anxious-ambivalent attachment bonds may be drawn to or seek out God through organized religion to fill an attachment void (compensation); however, once a personal relationship with God develops, previous working models assert themselves in this new relationship (correspondence) driving those with anxious attachment histories to become more anxious in their relationship with God and those with previous avoidant attachment bonds to experience more avoidance in their relationship with God.

In the current study, participants with insecure caregiver attachment histories were expected to compensate for their insecure bonds via behavioral expressions of religiosity, but their personal relationship with God was expected to correspond with their pre-existing attachment bonds (Hypothesis 5). Whereas the results showed that individuals' personal relationship with God matched their pre-existing attachment bonds, no direct relationship was found between attachment to caregivers and behavioral expressions of religiosity. These findings do not support the combined compensation-correspondence hypothesis but rather provide support for the correspondence hypothesis.

#### *Changes Due to Moderation*

Within the literature, caregiver religiosity has been consistently shown to act as a moderating variable, though specific findings have varied across studies. Research has consistently found that individuals with insecure, as opposed to secure, attachment styles often seek out God as a replacement attachment figure when parents have not been religious (Granqvist, 2005; Granqvist, Ivarsson, Broberg, & Hagekull, 2007). This finding has been interpreted by researchers to provide sufficient support for the compensation hypothesis.

Research has differed with respect to the findings associated with highly religious caregivers. For example, Kirkpatrick and Shaver (1990) found that the relationship between

attachment and religion was significant only for participants who were raised by nonreligious mothers, but no significant differences were found between participants from highly religious backgrounds. Therefore, insecurely attached participants from nonreligious homes were more likely to be actively religious than securely attached participants from nonreligious homes.

In turn, Granqvist and Hagekull (2000) not only found support for the compensation hypothesis in that insecurely attached participants from nonreligious homes were more likely to be religious than securely attached participants from nonreligious homes, but they also found higher religiousness for secure participants, as opposed to insecure participants, from highly religious homes. Therefore, individuals with secure attachments were found to match their caregivers with respect to religiousness, supporting the correspondence hypothesis. It should be noted that both studies did not differentiate between behavioral expressions of religiosity and personal relationship, but their line of questioning reflected more behavioral actions than internal states.

Unfortunately, none of the studies thus far have discussed whether significant differences occurred between insecurely attached persons from highly religious homes and insecurely attached persons from nonreligious homes. It is unclear if there is a significant relationship that is being overlooked between insecurely attached individuals from religious homes and insecurely attached individuals from nonreligious homes or whether previous researchers have simply failed to recognize any significance to the comparison.

The current study hypothesized that insecurely attached individuals who grew up with caregivers with low religiosity will become more religious than their secure counterparts from low religious homes. The religiosity of individuals with secure attachment histories were expected to match their parents' religiosity, as these individuals do not need to compensate for

inadequate attachment bonds. The results failed to provide any support for the moderation of overall caregiver attachment and participant behavioral expressions of religiosity by primary caregiver spirituality/religiosity, but secondary caregiver spirituality/religiosity was shown to moderate the relationship between overall caregiver attachment and participant behavioral expressions of religiosity, providing partial support for Hypothesis 10. Individuals who reportedly came from non-religious homes (as assessed by the participant's report of secondary caregiver spirituality/religiosity) with secure attachments engaged in significantly less behavioral expressions of religiosity than secure individuals from religious homes, which supports the correspondence hypothesis (Granqvist & Hagekull, 2000) and Hypothesis 1. In addition, those with insecure caregiver attachments from nonreligious homes were found to display more behavioral expressions of religiosity than securely attached participants from nonreligious homes, which supports the compensation hypothesis, and indirectly part of Hypothesis 5. The inclusion of caregiver spirituality/religiosity as a moderating variable appears to be an essential component when testing compensation.

Consistent with Kirkpatrick and Shaver (1990) no significant differences were found between insecurely attached participants from highly religious homes and securely attached participants from highly religious homes. In addition, no significant differences were found between the insecurely attached participants from religious homes and insecurely attached participants from nonreligious homes. Thus, it appears that insecurely attached participants, as a whole, compensate for their inadequate caregiver bonds through behavioral expressions of religiosity.

#### *Additional Findings with Other Predictor Variables*

Several additional findings were established with respect to demographic and predictor

variables. Participant spirituality/religiosity was shown to be positively related to caregiver spirituality/religiosity and caregiver behavioral expressions of religiosity, which supports previous research findings that those with secure attachment styles from religious homes are likely to remain religious in adulthood (Granqvist, 1998; Granqvist et al., 2007; Kirkpatrick & Shaver, 1990). In addition, participants who reported more secure attachment to caregivers reported that both their primary and secondary caregivers engaged in more religious expression than participants who reported insecure attachment, suggesting that individuals raised in homes that encourage religious activity were more likely to experience secure attachment bonds to caregivers. Though this finding aligns with cultural expectations about the importance of religion with respect to child rearing, it could also be reflective of the dynamic present in relationships characterized by secure attachment. Securely attached individuals have been shown to openly communicate with others more than insecurely attached individuals (Feeney, 1994). Therefore, the securely attached participants in the current study may have been able to provide more information about their caregivers' religious behaviors than insecurely attached participants, which should be taken into consideration.

Age and ethnicity both affected individual behavioral expressions of religiosity. Younger participants were more likely to report a lower frequency of religious behavioral expression than older participants which is not surprising as the current sample consisted of mostly young, college age participants. Past research has shown (Regnerus & Uecker, 2007; Stolzenberg, Blair-Loy & Waite, 1995), young adults tend to engage in fewer behavioral expressions of religiosity while in college. African American and Hispanic participants were more likely than Caucasian participants to have religious primary caregivers, suggesting that ethnicity influences religious family background. Previous research has found that African American and Hispanics

are more likely to attend worship services on a regular basis, value their religious practices, participate in church organizations, read the Bible, and pray than Caucasians (Pattillo-McCoy 1999; Taylor, Chatters, Jayakody, & Levin, 1996).

Younger participants, male participants, and Caucasian participants were more likely to report avoidant attachment to God, while African American and Hispanic participants were more likely to report anxious attachment to God. The previously mentioned finding that African American and Hispanic participants reportedly have caregivers who are more religious suggests that these individuals experience anxiety rather than avoidance because of the importance religion is given within their family system. Caucasian individuals may gravitate toward avoidant attachment to God because less emphasis appears to be placed upon religion in Caucasian families as compared to African American and Hispanic families. Male and younger participants may experience more avoidant attachment to God than their counterparts because religion is not generally considered a top priority within college populations and because males have been shown to be less religious than women (de Vaus & McAllister, 1987).

In summary, support was established for the correspondence hypothesis between retrospective attachment to caregivers and current religiosity, including spiritual/religious classification (spiritual/religious versus non-spiritual/religious) and attachment to God. Therefore, Bowlby's (1969) notion of "internal working models" appears to contribute to the organization of an individual's beliefs and expectations about how attachment relationships operate and what one gains from these relationships, thus guiding one's perceptions about attachment-related situations, including attachment to God (Bowlby, 1969,1982; Bretherton, 1985; Main, Kaplan, & Cassidey, 1985; Crowell et al., 2002). However, when secondary caregiver religiousness was introduced as a moderating variable, a previously nonsignificant

relationship between attachment to caregivers and behavioral expression of religiosity became significant, providing support for the compensation hypothesis. It appears that the two hypotheses (compensation and correspondence) may exert influence in combination making a third compensation-correspondence hypothesis more accurate. Individuals are more likely to *compensate* for insecure caregiver attachment by engaging in more behavioral expressions of religiosity; but when actual attachment to God is examined, individuals with insecure attachments are more likely to report insecure attachment to God supporting *correspondence* across attachment relationships. Again, those with secure attachments are exempt from the model as they do not need to compensate for inadequate bonds to caregivers through religious participation or through their personal relationship with God.

#### Attachment to Caregivers, Attachment to God & Depression

Several studies have found associations between attachment styles and depressive symptoms (Abela et. al, 2005; Kenny and Sirin, 2006; Meissner, 2007; Oliver and Whiffen, 2003). Overall, individuals with insecure attachment styles have been shown to experience more depressive symptomology than securely attached individuals. The current study corroborated previous findings in that individuals with secure attachment to caregivers were found to experience less depression symptomology than individuals with insecure attachments, providing support for Hypothesis 3.

Anaclitic and introjective depressive subtypes have been shown to be related to attachment styles (Blatt & Homann, 1992; Reis and Greyner, 2002). Avoidant attachment has been connected to the development of introjective depressive experiences, as avoidant attachment is characterized by excessive independence, distancing from relationships, and self-criticism. On the other hand, anxious-ambivalent attachment has been shown to contribute to the

development of anaclitic depressive experiences, as anxious-ambivalent attachment is characterized by dependency, abandonment concerns, and a preoccupation with interpersonal relationships.

### *Caregiver Attachment and Depressive Experiences*

With respect to caregiver attachment and depressive experiences, the original hypotheses proposed distinct differences between the two insecure attachment styles, anxious-ambivalent and avoidant. However, due to the current study's use of factor analysis the two insecure attachment styles were combined which diminished the ability to examine the distinctions between the two insecure attachment styles. Individuals who reported more introjective depressive experiences were more likely to have insecure attachments to caregivers than individuals with less introjective depressive experiences; thus providing support for Hypothesis 6, which proposed that individuals with high introjective depressive experience scores would have avoidant attachments to parents as compared to individuals with low introjective depression scores. Based on this finding, it appears that individuals with secure attachments to caregivers are not as likely to be predisposed to depression experiences that are isolating, self-critical, and achievement based. No relationship was found between caregiver attachment and anaclitic depressive experiences, failing to provide support for Hypothesis 8; which expected individuals with high anaclitic depressive experiences scores to have anxious-ambivalent attachments to parents as compared to individuals with low anaclitic depression scores.

The fact that introjective depressive experiences were significantly related to caregiver attachment, but anaclitic depressive experiences were not related to caregiver attachment is surprising based on the current study's attachment style distribution according to the H&S measure of attachment style. The current study consisted of more anxiously attached individuals

than avoidantly attached individuals. Based on previous findings (Reis and Greyner, 2002) one would expect that anaclitic depressive experiences would be more likely to produce significant findings, due to the common factors between anaclitic depressive experiences and anxious attachment, such as dependency, abandonment concerns, and a preoccupation with interpersonal relationships. However, in a separate unpublished study, it was found that females with anxious-ambivalent attachment styles scored higher on both dependency (related to anaclitic depression) and self-criticism (related to introjective depression) than securely attached participants (Zurroff, 1990, cited in Blatt & Homann, 1992), thus confusing the relationship between attachment and depressive experiences even further.

From a cognitive model of psychopathology (rather than psychodynamic), a recent study (Wearden, Peters, Berry, Barrowlough, & Liversidge, 2008) examined whether parental caregiving and attachment were associated with self-evaluation or other-evaluation and found that negative self-evaluative core beliefs were correlated with anxious attachment. No significant correlations were found between negative other-evaluative core beliefs and avoidant attachment. Wearden et al.'s findings suggest that parental attachment styles are important predictors in the development of negative self-evaluative core beliefs, but not negative other-evaluative core beliefs, which is consistent with the current study's findings that individuals with insecure attachments to caregivers were more likely to exhibit introjective depressive experiences and not anaclitic depressive experiences. Nevertheless, based on the disparity among research findings (Reis & Greyner, 2002; Wearden, et al., 2008; Zurroff, 1990, cited in Blatt & Homann, 1992) it is suggested that more research be conducted to better determine what factors contribute to, or change, the relationships between attachment and depressive experiences.

### *Attachment to God and Depressive Experiences*

Anaclitic and introjective depression were also expected to be related to one's relationship to God. An individual suffering from anaclitic depression was expected to be worried about abandonment issues, which would be associated with a desire for more closeness. Therefore, individuals with high anaclitic depressive experience scores were hypothesized to display more anxiety in their personal relationship to God as compared to individuals with low anaclitic depression scores. For an individual suffering from introjective depression, the focus of the depressive experience is internal and self-critical, which research has shown to lead to isolation (Jenkins, 1998). The propensity to become isolated would suggest a connection between introjective depression and less reliance on one's personal relationship with God; therefore, individuals with high introjective depressive experience scores were expected to display more avoidance in their personal relationship to God as compared to individuals with low introjective depression scores.

Anxious attachment to God was related to both types of depressive experiences, introjective and anaclitic. These findings support Hypothesis 9, which suggested that individuals with high anaclitic depressive experience scores would have more anxious-ambivalent personal relationships to God as compared to individuals with low anaclitic depression scores. Originally, avoidant attachment to God was not found to be related to depressive experiences; however, when the sample size was increased by excluding the variables creating the significant decrease in sample size, a significant relationship arose between avoidant attachment to God and introjective depressive experiences. This finding provided support for Hypothesis 7, which proposed that individuals with high introjective depressive experience scores would have more avoidant personal relationships to God as compared to individuals with low introjective

depression scores. It appears introjective depressive experiences are related to both anxious and avoidant attachments to God; whereas, anaclitic depressive experiences are only related to anxious attachment to God.

### *Mediation*

As no study had examined the relationships among attachment to caregivers, attachment to God, and depression together, the current study proposed a mediation model to help define the relationship among the variables. Anxious attachment to God was found to partially mediate the relationship between insecure attachment to caregivers and depression symptoms, providing support for Hypothesis 11. It appears that anxious attachment to God may exacerbate the relationship between insecure attachment to caregivers and depression symptomology. Insecure attachment to caregivers leads one to develop more anxious attachment to God, and subsequently more anxious attachment to God leads one to feel more depressed. The fact that anxious attachment to God remained a significant predictor of depression symptomology within the mediation analyses, while avoidant attachment to God did not suggests that those with insecure attachments to caregivers and anxious attachment to God are more likely to experience depression symptomology than individuals with secure or avoidant attachments to God. It is likely that the intense yearning for closeness that is characteristic of anxious attachment contributes to the manifestation of depression symptomology, as individuals with anxious attachment to God and insecure caregiver attachment are not receiving the feedback that they desire from their relationships (Kirkpatrick, 1998).

### *Additional Findings with Other Predictor Variables*

Additional analyses showed that individuals with secure attachment to caregivers and African American/Hispanic individuals were more likely to report efficacy. The finding that

individuals with secure attachment to caregivers were more likely to report efficacy corresponds with previous research (Abela et. al, 2005; Kenny and Sirin, 2006; Meissner, 2007; Oliver and Whiffen, 2003) and the current study's previous finding that individuals with secure attachment styles are less likely to report depression. The fact that African American and Hispanic persons were more likely to report efficacy echoes previous literature that has revealed ethnic minorities in higher education settings report higher self-esteem than Caucasian students (Schmader, Major, & Gramzow, 2002). In addition, females reported more depressive symptomology and were more susceptible to anaclitic depressive experiences than males, which is commensurate with previous findings that have shown females to be more susceptible to depression (Grigoriadis & Robinson, 2007).

#### Overarching Implications

The lack of consistent findings between the categorical Hazan and Shaver measure of attachment and the continuous Attachment Style Measure strongly suggests that future researchers should consider their measurement tools with much deliberation. In addition, the overlap found between the two insecure subtypes of attachment (anxious-ambivalent and avoidant) also raises concern as the two subtypes have been conceptualized as distinct constructs. Perhaps a different approach should be considered by future researchers, such as interviewing participants rather than using self-report measures. Main and colleagues (1985) developed the Adult Attachment Interview (AAI) which assesses childhood experiences with caregivers and current functioning. Although self-reports and interviews may appear comparable, attachment classifications between the two have not been related in four samples (Borman-Spurrell, Allen, Hauser, Carter, & Coie-Detke, 1995; Crowell, Holtzworth-Munroe, Treboux, Waters, Stuart, & Hutchinson, 1993) and more recent research (Granqvist, Ivarsson, Broberg, & Hagekull, 2007)

has suggested that interviews may be more accurate in measuring attachment as interviews do not take participant responses at face value, but instead evaluate the consistency of participant responses when speaking about attachment.

For the most part, the current study supports correspondence between attachment to caregiver and attachment to God. Individuals' attachment styles to caregivers matched their attachment styles to God. However, when caregiver religiousness was considered as a moderating variable, support was established for the view of combined compensation-correspondence. It should be noted that individuals with secure attachment styles are exempt from the combined hypothesis, as they do not need to compensate for inadequate bonds to caregivers. Therefore, securely attached participants' matched their caregivers with respect to religious expression and personal relationship to God. Individuals with insecure attachment to caregivers were more likely to compensate for their insecure attachment bonds through the participation in religious activity; however, even though these individuals engage in a higher frequency of religious behaviors their internal, private relationship with God tends to correspond with their previous insecure attachment bonds.

The support for the combined view of compensation-correspondence adds upon previous research that has found support for compensation alone and correspondence alone, but also highlights the importance of proper measurement with respect to religiosity. In the current study, compensation-correspondence was predicted because both behavioral manifestations and relational aspects of religiosity were examined. Future studies need to be purposeful when outlining the issue of compensation-correspondence and when choosing assessment measures to help develop the understanding of attachment to God.

With respect to caregiver religiosity as a moderating variable, the inconsistent findings surrounding individuals from highly religious homes should be examined further. Though the current study failed to find a significant difference between securely attached individuals and insecurely attached individuals from highly religious homes, Granqvist and Hagekull (2000) did find a significance difference between these two groups. In addition, the lack of emphasis placed upon whether a relationship exists between insecurely attached persons from highly religious homes and insecurely attached persons from nonreligious homes should be rectified in future research. The current study consciously noted that insecurely attached participants, regardless of their religious upbringing, appeared to compensate for their inadequate caregiver bonds through behavioral expressions of religiosity. However, previous research has implied that compensation only applies to insecurely attached participants from nonreligious homes (Granqvist, 1998; Granqvist & Hagekull, 2000; Kirkpatrick, 1994/1998; Kirkpatrick & Shaver, 1990). These different findings by researchers point to the need for future research where investigators examine all possible combinations among caregiver attachment styles, religious upbringing, and current religious expression.

In practice, clinicians may want to consider the implications of the issue of compensation-correspondence when working with religious clients who appear to have insecure attachment to caregivers. Understanding that though the client may more readily disclose their involvement in religious activity (Rose, Westefeld, and Ansley (2001), it is still important to fully grasp how the individual views their actual relationship with God. This is especially important due to the finding that anxious attachment to God partially mediates the relationship between attachment to caregivers and depression. Individuals with insecure attachments to caregivers are more likely to experience depression symptomology, but the addition of anxious

attachment to God seems to contribute to the development of depression symptomology. In practice, clinicians may want to consider the extent to which clients' attachment to caregivers and attachment to God are interrelated and contribute to their manifestation of depression symptomology. When appropriate, pastors and religious leaders might also want to explore the connections among attachment to caregivers, attachment to God, and depression when assisting struggling congregation members.

#### Advantages and General Limitations

The fact that the current study utilized more than one measure of attachment is a clear advantage over previous studies, as previous research has primarily used the categorical Hazan & Shaver measure of adult attachment. The use of two distinct measures allowed for attachment style to be evaluated using different methods, which led to the finding that the measures are not measuring the same constructs. In addition, the current study included multiple measures of spirituality/religion; Attachment to God Inventory, Behavioral Expressions of Religiosity, and spiritual/religious classification. The ability to examine the differences between internal attachment to God and external behavioral expressions of religiosity allowed for distinctions to be made, which will hopefully contribute to the correspondence-compensation literature. With respect to the Behavioral Expressions of Religiosity measure, the current researcher combined several 1-item questions that had been included in previous studies to create a multi-item measure rather than a single item measure of religiosity. By increasing the number of items reliability and validity are improved, as single item questions are often too unreliable and constricted to permit generalizability (Epstein, 1983). In addition, the switch from a single item, categorical measure to a multi-item, continuous measure is advantageous due to the sensitivity to individual differences and the ability to utilize additional statistical analyses. (Simpson, 1990).

Finally, the examination of depression and its relationship to both attachment to caregivers and God is unique to the current study and will hopefully add to the existing literature.

One of the primary limitations to the current study is the skewed distributions of participants on the Hazan and Shaver measure of attachment. Most research using the Hazan & Shaver measure of attachment has shown the following distribution of attachment styles: secure style (65-70%); avoidant style 20-25%, and anxious-ambivalent style (15% or less). However, the current study's distribution of categorical attachment styles was contrary to expectation with respect to both primary and secondary caregiver on the Hazan & Shaver measure of attachment, especially with respect to avoidant attachment. Until the findings of the present study can be replicated with a normative distribution of the attachment subtypes, the current findings should be regarded as tentative.

The lack of cultural diversity, the gender disproportion, the lack of age representation, and missing data on religious classification all burden the current study, as they would burden most other social science projects. In addition, the lack of religious diversity also limits the generalizability of the current study to predominantly Christians. Future studies would be advised to examine more diverse samples that better represent the varied populations seen in the United States of America, including racial, ethnic, cultural, and religious differences. Also, future research may explore how a college student population understands religion and defines spirituality, as their views may be different from the general population.

Obviously, the use of a correlational design limits the ability to draw causal inferences. In addition, the problem of common method variance may have affected the results, as the measures were all self-reports. The measurement problems discussed earlier with the measures of caregiver attachment also burdens the current study. Future studies should consider the use of

a longitudinal design and different modes of measurement to better determine if causal relationships exist and if the findings hold across various measurement modalities.

Table 1

*Descriptive Statistics for the Hazan & Shaver Measures of Attachment*

Attachment Measures	N	Attachment Style	
		Secure	Insecure
HS Primary	220	77%	23%
Black	40	78%	22%
Hispanic	29	83%	17%
White	133	75%	25%
Other	18	78%	22%
Male	62	82%	18%
Female	158	75%	25%
HS Secondary	218	65%	35%
Black	39	72%	28%
Hispanic	29	55%	45%
White	132	64%	36%
Other	18	78%	22%
Male	62	65%	35%
Female	156	66%	34%

Table 2

*Descriptive Statistics for the Continuous Variables*

Continuous Variables	N	Mean	SD	Scale
ASM Primary				
Secure	220	5.65	1.02	1 - 7
Avoidant	220	2.01	1.16	1 - 7
Anxious	220	1.92	1.02	1 - 7
ASM Secondary				
Secure	218	5.16	1.30	1 - 7
Avoidant	218	2.33	1.37	1 - 7
Anxious	218	2.25	1.24	1 - 7

*(table continues)*

Table 2 (continued).

Continuous Variables	<i>N</i>	Mean	<i>SD</i>	Scale
AGI				
Anxious	219	2.67	1.04	1 - 7
Avoidant	219	3.69	1.43	1 - 7
Behavioral Expression-Religiosity				
Primary Caregiver	220	21.60	9.41	1 - 36
Secondary Caregiver	218	20.93	9.81	1 - 36
Participant	219	20.47	8.57	1 - 36
DEQ				
Anaclitic	217	4.46	.89	1 - 7
Introjective	217	3.80	1.04	1 - 7
Efficacy	217	4.94	.62	1 - 7
BDI-II	219	10.41	8.33	0 - 63
Participant's Age	220	20.68	4.17	17 - 49

Table 3

*Correlations Between the Attachment Measures*

	HS Primary	HS Secondary	ASM Primary Secure	ASM Primary Avoidant	ASM Primary Anxious	ASM Secondary Secure	ASM Secondary Avoidant	ASM Secondary Anxious
HS Secondary	.20 **	-						
ASM Primary Caregiver Secure	.44***	.04	-					
ASM Primary Caregiver Avoidant	-.38 ***	-.13	-.64***	-				
ASM Primary Caregiver Anxious	-.42 ***	-.15 *	-.61***	.67 ***	-			
ASM Secondary Caregiver Secure	.20**	.60***	.37***	-.36 ***	-.32***	-		
ASM Secondary Caregiver Avoidant	-.18**	-.52***	-.28***	.51***	.32***	-.75***	-	
ASM Secondary Caregiver Anxious	-.16*	-.54***	-.25***	.31***	.41***	-.73***	.71***	-

\* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$

Table 4

*Correlations between Dependent Variables*

	AGI Anxious	AGI Avoidant	Participant Religiosity/ Spirituality	BER Participant	DEQ Anaclitic	DEQ Introjective	DEQ Efficacy
AGI Avoidant	-.20**						
Participant Religiosity/ Spirituality	.13	-.56***					
BER Participant	.11	-.77***	.44***				
DEQ Anaclitic	.37***	-.01	-.02	-.09			
DEQ Introjective	.48***	.18**	-.21**	-.23***	.63***		
DEQ Efficacy	.15*	-.19**	.15*	.15*	.06	.04	
BDI	.32***	.17**	-.28***	-.24***	.41***	.59***	-.06

Correlations including participant religiosity/spirituality produced n ranging from 203 to 206, for all other correlations the n varied from 216 to 219

\* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$

Table 5

*Correlations between Demographic and Other Study Variables*

		Gender	Age	Ethnicity
HS-Primary	202-220	-.08	-.08	-.05
HS-Secondary	200-218	.01	.06	-.00
ASM Primary				
Secure	202-220	.04	-.15	.05
Avoidant	202-220	-.01	.17	.08
Anxious	202-220	.09	.30***	-.07
ASM Secondary				
Secure	200-218	.01	.02	.06
Avoidant	200-218	.03	.06	-.02
Anxious	200-218	.11	.02	-.16
AIG				
Anxious	201-219	.01	.00	-.20
Avoidant	201-219	-.20	-.12	.29***
Religiosity/Spirituality				
Primary Caregiver	196-213	-.02	.04	-.13
Secondary Caregiver	187-203	.08	.04	-.14
Participant	191-206	.10	.04	-.14
BER				
Primary Caregiver	202-220	.02	-.09	-.27***
Secondary Caregiver	200-218	.02	-.01	-.15
Participant	201-219	.11	.17	-.21
DEQ				
Anaclitic	200-217	.09	-.09	.05
Introjective	200-217	-.03	-.04	-.02
Efficacy	200-217	-.01	-.08	-.24
BDI-II	201-219	.13	.00	.04

\*\*\*  $p \leq .0008$

Table 6

*Correlations between Attachment Styles and Dependent Variables*

	AIG Anxious	AIG Avoidant	Participant Religiosity/ Spirituality	Participant BER	DEQ Introjective	DEQ Anaclitic	DEQ Efficacy	BDI
HS Primary	-.06	-.08	.19	.08	-.17	.00	.10	-.08
HS Secondary	-.07	-.15	.15	.15	-.19	-.05	.01	-.13
ASM Primary Secure	-.10	-.11	.12	.11	-.25***	-.02	.06	-.17
ASM Primary Anxious	.25***	.06	-.08	-.08	.29***	.05	-.11	.17
ASM Primary Avoidant	.16	.20	-.14	-.02	.36***	.06	-.10	.25***
ASM Secondary Secure	-.15	-.17	.23	.17	-.36***	-.12	.12	-.28***
ASM Secondary Anxious	.23	.10	-.13	-.06	.34***	.16	-.17	.28***
ASM Secondary Avoidant	.14	.04	-.20	-.08	.30***	.10	-.17	.26***

Correlations including participant religiosity/spirituality produced N ranging from 203 to 206, for all other correlations the N varied from 215 to 219

\*\*\*  $p \leq .0008$

Table 7

*Factor Loadings and Communalities Based on a Principle Factors Analysis with Varimax Rotation for 6 Types of the ASM (N = 218)*

ASM Subtypes	Secondary Caregiver Factor	Primary Caregiver Factor	Communalities
Primary ASM Secure	-.62	-.45	.59
Primary ASM Avoidant	.73	.43	.70
Primary ASM Anxious	.67	.43	.63
Secondary ASM Secure	-.77	.39	.75
Secondary ASM Avoidant	.79	-.36	.75
Secondary ASM Anxious	.73	-.40	.70

Table 8

*Rotated Factor Matrix for the Two Factor Solution*

	Factor	
	1	2
ASM Primary Secure		-.75
ASM Primary Avoidant		.80
ASM Primary Anxious Ambivalent		.76
ASM Secondary Secure	-.84	
ASM Secondary Avoidant	.83	
ASM Secondary Anxious Ambivalent	.81	

Table 9

*Correlations between ASM Subtypes and Overall Caregiver Attachment (N = 218)*

Study Variable	Primary ASM Secure	Primary ASM Anxious	Primary ASM Avoidant	Secondary ASM Secure	Secondary ASM Anxious	Secondary ASM Avoidant
Overall Caregiver Attachment	.70***	-.74***	-.77***	.78***	-.75***	-.79***

\*\*\* $p < .001$

Table 10

*Correlations between Demographic Variables and Overall Caregiver Attachment*

Study Variable	Demographic Variables		
	Gender	Age	Ethnicity
Overall Caregiver Attachment	-.04 (N = 218)	-.15* (N = 218)	.06 (N = 200)

\* $p < .05$

Table 11

*Correlations between Overall Caregiver Attachment and Dependent Variables*

	AIG Anxious	AIG Avoidant	Participant Religiosity/Spirituality	Participant BER	DEQ Introjective	DEQ Anaclitic	DEQ Efficacy	BDI
Overall Caregiver Attachment	-.23*** (N = 217)	-.13* (N = 217)	.20** (N = 204)	.12 (N = 217)	-.41*** (N = 215)	-.11 (N = 215)	.16* (N = 215)	-.31*** (N = 217)

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

Table 12

*Correlations Matrix for Demographic and Predictor Variables*

	Gender	Age	Ethnicity	Participant Religiosity/Spirituality	Primary Religiosity/Spirituality	Secondary Religiosity/Spirituality	Primary BER	Secondary BER	AGI Anxious	AGI Avoidant
Age	-.02									
Ethnicity	.05	.07								
Participant Religiosity/Spirituality	.09	.04	-.14*							
Primary Religiosity/Spirituality	-.02	.04	-.13	.19*						
Secondary Religiosity/Spirituality	.08	.04	-.14	.23**	.43***					
Primary BER	.02	-.09	-.27***	.24***	.30***	.34***				
Secondary BER	.02	-.01	-.15*	.27***	.20**	.39***	.64***			
AGI Anxious	.01	.00	-.20*	.13	-.03	-.08	.13	.09		
AGI Avoidant	-.20*	-.12	.29***	-.56***	-.22***	-.17**	-.52***	-.48***	-.20**	
Overall Caregiver Attachment	-.04	-.15*	.06	.20**	.04	.13	.19**	.15*	-.23***	-.13*

Correlations including participant, primary, and secondary spirituality/religiosity produced N ranging from 191 to 211, for all other correlations the N varied from 200 to 220

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

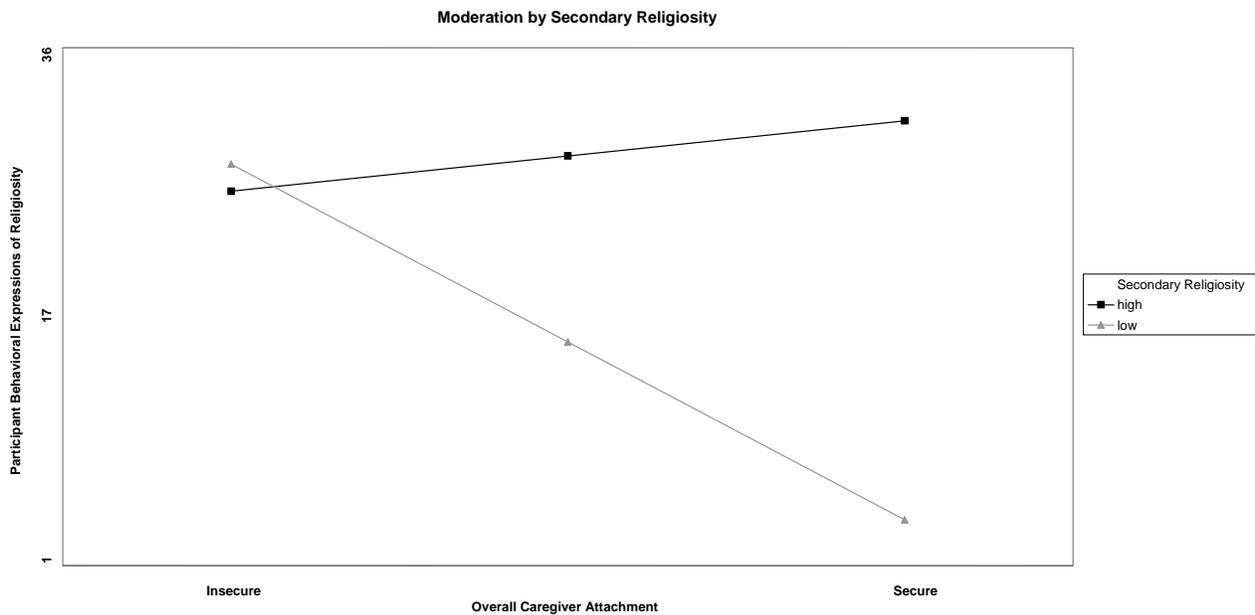


Figure 1. Moderation of overall caregiver attachment and participant behavioral expressions of religiosity by secondary caregiver religiosity/spirituality.

**MedGraph - PC: A programme to graphically depict mediation among three variables**

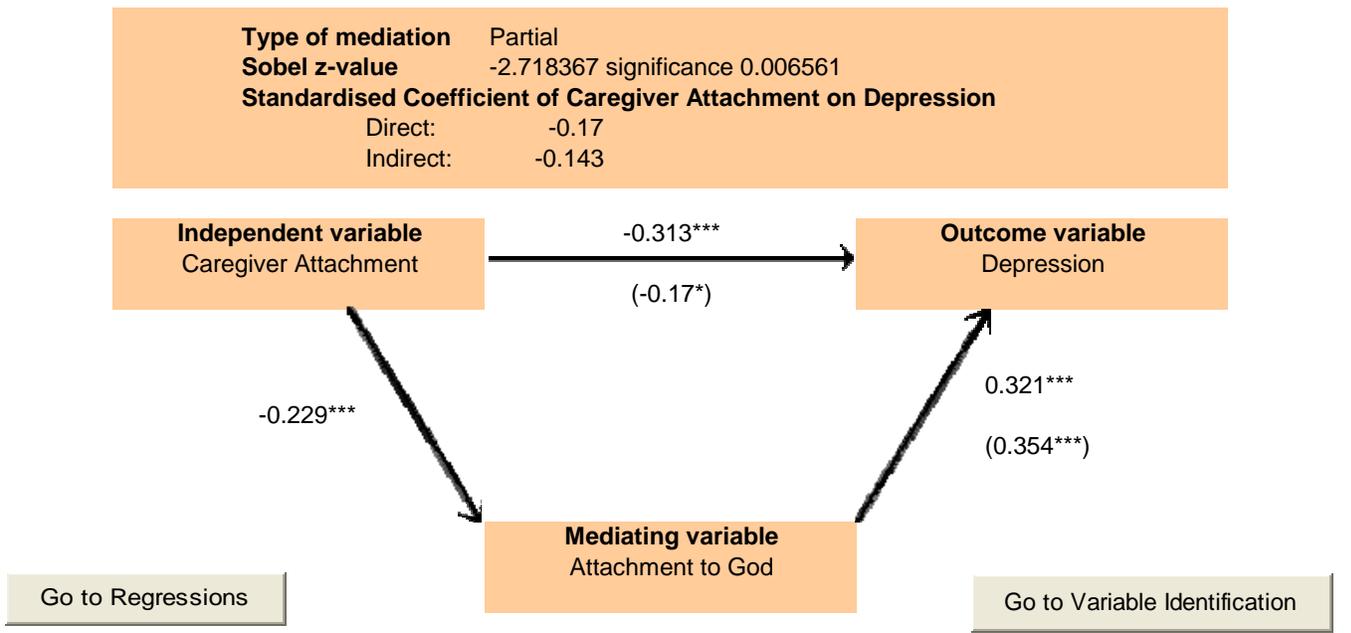


Figure 2. Mediation of overall caregiver attachment and depression symptomology by anxious attachment to God.

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