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Behavioral Activation of Religious Behaviors: Treating Depressed College Students with a Randomized Controlled Trial

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I am submitting herewith a dissertation written by Maria Elizabeth Anne Armento entitled "Behavioral Activation of Religious Behaviors: Treating Depressed College Students with a Randomized Controlled Trial." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

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Behavioral Activation of Religious Behaviors: Treating Depressed College Students with a Randomized Controlled Trial

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Dedication

This dissertation is dedicated to IHS.
"All the way to heaven is heaven for He said: I am the Way."
St. Teresa of Avila

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Abstract

Although spiritual or religious behaviors are sometimes targeted within behavioral activation protocols (Hopko & Lejuez, 2007; Hopko, Lejuez, Ruggiero, & Eifert, 2003), the efficacy of a protocol that exclusively develops a religiously-based behavioral repertoire has not been investigated. This randomized controlled study investigated the efficacy of a brief protocol for religious action in behavioral activation (PRA-BA) relative to a no-treatment "support" condition among mild to moderately depressed undergraduate students (n = 50). PRA-BA consisted of an individualized one-session intervention and 2-week activation interval. Clinical outcomes assessed depression, environmental reward, anxiety, and quality of life. Repeated measures ANOVAs indicated that the PRA-BA group had significantly greater decreases in depression and anxiety and increases in environmental reward at post-treatment. There was also a statistical trend indicating that PRA-BA may improve quality of life. At one-month follow-up, treatment gains were maintained for the PRA-BA participants. This study provides encouraging support for the efficacy of a strictly religiously-based behavioral intervention toward attenuating symptoms of depression in college students.

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Chapter 1

Introduction

The current study was designed to build upon previous treatment outcome research by investigating the functionality and efficacy of a manualized treatment focusing on the behavioral activation of religious behaviors as a stand-alone intervention administered independent of secular psychosocial treatment. Although spirituality or religion has been targeted as one behavioral domain within the context of more global behavioral activation protocols (Hopko & Lejuez, 2007; Hopko, Lejuez, Ruggiero, & Eifert, 2003), the potential efficacy of an activation protocol focused exclusively on developing a religiously-based behavioral repertoire has not been investigated. The current study takes a novel experimental approach to the study of a faith-based intervention by directly manipulating religious behaviors and directly assessing the impact of this intervention toward attenuating symptoms of depression in college students. As such, it is a much stronger research design than the work that has been accomplished to date. Religious behaviors are targeted for modification in individuals with mild to moderate depression symptoms, with the central hypothesis that religious activation will result in decreased depression and anxiety as well as improved life satisfaction.

The Psychology of Religion: Historical Overview

The study of religion and spirituality through history has been rich and varied. Its contribution to philosophy, social theory, and psychology has been both complex and often understudied. For psychology in particular, the study of religion generally has been

lacking through history and only currently is beginning to be investigated with scientific rigor (Paloutzian & Park, 2005). The question of the relevance of religion toward the science of psychology has led to a fundamental debate. One perspective is that religiosity is a distinct human phenomena that extends beyond the traditional realm of human behaviors, the uniqueness of which requires special attention in the context of psychology and a comprehensive depiction of human behavior. Conversely, if religion is not unique, then it can be accounted for by the same principles that account for other human behaviors, and there is no compelling reason on grounds of pure science for psychologists to give it any special attention (Paloutzian & Park, 2005) A debate earnestly and often passionately contended, this issue is consequential in that, depending on one's perspective, religion and religious behaviors either are deemed minimally significant or potentially critical toward understanding the etiology and persistence of behavioral and emotional problems.

Over the past couple of decades, there has been growing interest in the psychology of religion. For much of the 20th century, the psychology of religion and spirituality were virtually ignored within academic psychology (Paloutzian & Park, 2005), perhaps in part due to a zeitgeist that involved establishing psychology as an empirical science distinct from more speculative disciplines such as its predecessor, philosophy (Miller, 1992). Despite this movement, the history of psychology has strong connections to religion and spirituality. From its philosophical origins, Socrates, Aquinas, Augustine, and Descartes considered notions of human behaviors, values, ethics and morals. During the Middle Ages and the Renaissance, abnormal behavior was often

believed to be linked to demonic possession and evil spirits (Alloy, Riskind, & Manos 2005; Halgin & Whitbourne, 2005). Several early icons in psychology also recognized the important role of religious and spiritual behaviors in psychological functioning. One such pioneer was William James (1902), who empirically investigated the effects of religion on "healthy-mindedness", "the sick soul", and the "divided self." Earlier in history, Josef Breuer (1893) considered religious experience through his work on "religious doubt," and the potential "pathogenic effect" that might result from a conflict between moral beliefs and behaviors. Breuer likely had a strong influence on the theoretical perspectives of Sigmund Freud (Gay, 1989). For example, in the early 20th century, Freud showed an interest in the relationship between religiosity and psychology in his publication "Obsessive Actions and Religious Practices" (Freud, 1907) linking obsessions to religious practices through his analysis of the novella, "Gradiva" by Wilhelm Jensen. Although a convinced, uncompromising atheist (Gay, 1989), Freud's interests and curiosity in the psychology of religion impacted important case studies including the Rat Man (1907) and the Wolf Man (1918). A student of Freud, Carl Jung characterized religion and spirituality as more central to psychology. Jung perceived religious organizations as psychotherapeutic systems designed to ease the suffering of the human mind, even suggesting a great practical truth behind religion (Jung, 1935). Literary figures external from psychology also frequently considered the relationship between religion and psychology, including Bernard of Clairvoux (1090-1153; "Sermons on Conversion"; "The Steps of Humility and Pride"), John of the Cross (1542-1591; "Assent of Mount Carmel"; "Dark Night of the Soul"), Teresa of Avila (1515-1582; "The

Interior Castle") and more recently Fr. Reginald Garrigou-Lagrange (1977-1964; "Our Savior and His Love for Us: Catholic Doctrine on the Interior Life of Christ as It Relates to our Own Interior Life"), Dietrich Von Hildebrand (1889-1977; "The Heart"), Edith Stein (1891- 1942; "Philosophy of Psychology and the Humanities"), Hans Urs von Balthasar (1905-1988; "Does Jesus Know Us? Do We Know Him"), Karol Wojtla (1920-2005; "Love and Responsibility"; "The Jeweler's Shop"), Joseph Ratzinger (1927-; "Saved in Hope"- referenced under Benedict XVI, encyclical letter: "Spe Salvi" ; "Jesus of Nazareth"), Benedict Groeschel (1933-; "Spiritual Passages: The Psychology of Spiritual Development") and Marc Foley (1959-; "The Context of Holiness: Psychological and Spiritual Reflections on the Life of St. Therese of Lisieux").

Within the history of psychology, interest in the psychology of religion largely involved independent investigations up until the early 20th century when progressively more attention began to be allocated toward this field of study. Systematic scientific inquiries in the psychology of religion became prominent during the 1960's (Paloutzian & Park, 2005), and in 1976, the American Psychological Association formally established Division 36, the Psychology of Religion. The following 30 years have been characterized by dramatic growth in both qualitative and quantitative research. Complex, integrative models have evolved, with the most recent theoretical and empirical movement in the psychology of religion involving a "multilevel interdisciplinary paradigm" which connects the psychology of religion to other auspices within psychology (multi-levels) as well as proposing linkages between the psychology of religion with other disciplines (Paloutzian & Park, 2005).

Current Conceptual Challenges in the Psychology of Religion

Despite expanding interest in the psychology of religion, some significant conceptual problems remain central to research in the field. One of the more fundamental difficulties involves distinctions between the terms religion and spirituality. One traditional perspective highlights "religion" as describing organizational aspects of a belief system and "spirituality" as depicting the personal aspects of a belief system. Along with this nomenclature involving removal of personalized beliefs from the auspice of "religion" has come the prevalent and somewhat pejorative view that religion is associated with "dogmatism and rigidity" while spirituality is associated with "positive and growth-oriented" behaviors, leading religion to frequently be seen as negative and spirituality as positive (Paloutzian & Park, 2005; Richards & Bergin, 2005). Another distinction suggests religion is associated with formal and institutional beliefs and practices characteristic of particular traditions, while spirituality involves the search for meaning, wholeness, inner potential, or a universal truth (Zinnbauer & Pargament, 2005). These sorts of definitional problems have led to religion becoming more of a noun than a verb, and spirituality more of a dynamic verb and adjective, creating further conceptual confusion (Zinnbauer & Pargament, 2005; Richards & Bergin, 2005). Although it may be suggested that spirituality is the more "positive" of the two concepts, having a definition based on personal existential meaning alone creates potential measurement problems and testability within empirical analysis. In the context of this operational dilemma, there is also the risk of losing sight of the fact that religious institutions are not independent from, but in fact represent, a community of people whose spirituality is central to the entire

institution (Zinnbauer & Pargament, 2005). The integration of these concepts has in fact been exemplified by important religious icons through their formal practices and their mysticism. Figures like the 14th Dalai Lama Tenzin Gyatso, Mohandas Gandhi, Moses ben Jacob Cordovero (Ramak) and Aryeh Kaplan (Jewish mystics), Teresa of Avila, Francis of Assisi, Therese of Lisieux, and Catherine of Sienna (Catholic mystics) all exemplify not only the quest for a higher understanding of God through the personal encounters of their mystical experiences, but also through their exemplar following of the rigors of their tradition based faith. Consequently, in defining these terms it may be critical to not view them has highly divergent, but rather as more integrated. Indeed, the importance of developing an operational definition by which to facilitate communication and empirical scrutiny cannot be understated (Paloutzian & Park, 2005).

Another conceptual difficulty is the distinction between "intrinsic" and "extrinsic" religiosity. This distinction has been somewhat different from a traditional definition of "intrinsic" and "extrinsic" behavior in psychology in general. Rather than defining religiosity that is expressed through public action and behavior as extrinsic and private belief and practice as intrinsic, within the psychology of religion this distinction has had an added subtle dimension (Allport, 1966). By this definition, intrinsic religiosity refers to faith and religion that is lived as an ultimate value in and of itself, while extrinsic religiosity is religiosity that is used to gain safety, social standing or other personal goals. (Zinnbauer & Pargament, 2005; Hill, 2005). Current studies in the psychology of religion still use this distinction (Cohen, et al., 2005; Milevsky & Levitt, 2004; Ryckman, Van Den, Borne, Thornton, & Gold, 2004; Tiliopoulos, Bikker, Coxon, & Hawkin, 2007).

Within the current study, the terms “religion” and “religiosity” will be the main focus of behavioral change given that the structured and organized behavior resulting from religious practice naturally lends itself to a systematic approach to behavioral assignment and empirical analysis. The qualities of religious behavior that provide it with easy measurability is consistent with a behavioral activation model of treatment that suggests that changes in overt behavior can lead to measureable changes in both mood and thought that can be tracked and modified overtime leading to an overall improvement in the client’s quality of life (Hopko, Lejuez, Ruggiero, & Eifert, 2003).

The current study will also integrate communal and private devotional practice within religious activation assignment. Although some activities such as prayer or meditation are private and might be considered “spiritual”, the organized aspect of assignment and completion of these behaviors lends itself to a better description of “religious” than “spiritual” behavior in the traditional understanding. Indeed, those who self-identify as “spiritual but not religious,” often have not only lower church attendance but also less prayer and scripture reading (Koenig, 2007) indicating the relationship between these behaviors results from a distinction between communal versus private rather than religious versus spiritual.

Chapter 2

Literature Review

Religion and Mental Health

Although there is no simple unidirectional relationship between religion and mental health variables, research generally suggests a correlational-curvilinear relationship between religion and mental health variables such as depression, death anxiety, general anxiety and overall distress (Miller & Kelley, 2005). Indeed, the preponderance of empirical research suggests religion has a positive influence on mental health functioning (Miller & Kelley, 2005:Corrigan, McCorkle, Schell, & Kiddler, 2003; Koeing, 2001). However, it also is clear that not all religious behavior is positive nor improves mental health and quality of life. For example, in addition to Freud's portrayal of religion as potentially having a negative impact on mental health, some current studies illustrate that religious variables may exacerbate mental illness (Exline & Rose, 2005; Paloutzian, 2005). For example, scrupulosity problems may worsen obsessive-compulsive symptoms (Huppert, Siev, & Kushner, 2007), and religious strain (feelings of alienation from God and conflicts with religious beliefs) may be associated with greater depression (Exline, Yali, & Sanderson, 2000). Some aspects of religiosity and mystical experiences may also be associated with psychotic symptoms (Miller & Kelley, 2005; Dein, 2007; Getz, Fleck, Strakowski, 2001). To be certain, the nature of religion and its overlap with mental health variables is somewhat complex, although it is apparent that religion and spirituality generally seem to buffer against mental health problems more

frequently than they serve to perpetuate or exacerbate these problems (Miller & Kelley, 2005; Corrigan, McCorkle, Schell, & Kiddler, 2003; Koeing, 2001).

Religion and Psychological Variables

Religion, Optimism, and Self-Esteem. It is generally accepted that there is a positive relationship between optimism and religiosity (Mattis et al., 2004). Studies have found that religiosity predicts optimism (Schutte & Hosch, 1996), may be associated with psychological adjustment through social support and optimism (Salsman, Brown, Brechting, & Carlson 2005), and that levels of spiritual commitment along with religious denomination and relational percepts with a deity significantly account for incremental variance in predicting hope and optimism (Ciarrocchi, Dy-Liacco, & Deneke, 2008).

Religion and self-esteem share a similarly positive relationship in that religious participation is associated with increased self-esteem (Sherkat & Reed, 1992; Watson, Hood, Morris, & Hall, 1985), with public religious activity in particular being strongly related to self-esteem (Commerford & Reznikoff, 1996). These findings seem to generalize across the lifespan, with religiosity and self-esteem significantly associated within different age groups including the elderly (Krause, 1995) and adolescents (Smith, Weigert, & Thomas, 1979; Bagley & Mallick, 1997).

Religion, Personality, and Locus of Control. A number of studies have examined religiosity in relation to Eysenck's (1990, 1992) model of personality (Piedmont, 2005; Saroglou & Sargolou, 2003). Although several studies highlight correlations between religiosity and Agreeableness and Conscientiousness (Piedmont, 2005; Duriez, Soenens, & Beyers, 2004; Roccas, Sagiv, Schwartz, & Knafo, 2002;

Sargolou, 2002) findings are somewhat more divergent in other personality realms. For example, studies find varying results in terms of the relations of religiosity with Openness, Extroversion, and Neuroticism (Duiez, et al. 2004; Roccas, et al. 2002; Sanglou, 2002; Piedmont, 2005). Given these findings, there is suggestion that investigation of past linear associations with consideration of quadratic associations is important to the future of research in personality and religiosity (Jorm & Christensen, 2004).

Studies of religiosity and locus of control offer a similarly mixed picture. Although some research highlights a relationship between increased locus of control and religiosity (Helode & Barlinge, 1984; Mohammadi & Honarmand, 2007; Fiori, Brown, Cortina, & Antonucci 2006), others do not support this relationship (Friedberg & Friedberg, 1985; Tebbi, Mallon, Richards, & Bigler, 1987). Among those studies supportive of a relationship, female gender may moderate the association between religiosity and internal locus of control (Mohammadi & Honarmand, 2007), and locus of control may mediate the relationship between religiosity and life satisfaction (Fiori, et al.2006).

Religion and Coping. Research generally suggests a positive relationship between religiosity and positive coping behavior (Elkin et al., 2007: Pargament, Ano & Wachholtz, 2005; Archer, Brathwaite, & Fraser, 2005). A distinction has been made between positive and negative religious coping methods, with the suggestion that positive strategies (those reflecting a positive relationship with God and community) are associated with greater life satisfaction and decreased likelihood of negative mental

health outcomes including depression or anxiety while conversely, negative religious coping strategies (those reflecting a negative or insecure relationship with God and community) have been associated with depression and anxiety (Pargament, et al. 2005). Religiosity and coping appear to have a relationship moderated by a number of different factors including particular denomination and response to stressful life events (Pargament, et al. 2005).

Religion and Anxiety. There has been limited research on the relationship between religion and anxiety (Schreve-Neiger, & Edelstein, 2004; Miller and Kelley, 2005). Some research has demonstrated that those who are more religious may actually be more anxious (Miller and Kelley, 2005; Koeing, 1998). Other research suggests different findings, with more highly religious individuals reporting less anxiety that seems associated with more security and fewer fears about death and dying (Richards & Bergin, 2005; Williams & Cole, 1968). Research into death anxiety has found that those higher in religiosity had fewer death concerns (Thorson & Powell, 2000; Richards & Bergin, 2005) although a number of factors influence this relationship, including denominational differences, religiosity versus spirituality distinctions, and cultural confounds (Miller & Kelley, 2005). Further research explicates the complexity of the anxiety and religion relationship, with one study noting a decreased frequency of anxiety disorders among individuals with frequent church attendance and Protestant denomination, whereas anxiety was higher for those who were fundamentalist Pentecostal, had no religious affiliation, or those who listened to religious radio or

watched religious TV (Koenig, et al., 1993a). Further confusing the issue, such study findings also seem affected by age and gender (Koenig et al., 1993a, 1993b).

In the area of anxiety, obsessive compulsive symptoms have received increased attention. Some have speculated that religious rituals may lead to obsessive and compulsive symptomology, but the literature generally does not support such a relationship (Miller & Kelley, 2005; Steketee, Quay, & White, 1991). Instead, research shows there may be an exacerbation of OCD symptoms in those who are concurrently OCD and highly religious (Miller & Kelley, 2005; Steketee, Quay, & White, 1991; Yossifova & Loewenthal, 1999). Religious conflict also appears to be higher for those experiencing OCD (Higgins, Pollard & Merkel, 1992), although the general consensus is that there is no conclusive relationship between OCD and religiosity (Raphael, Rani, Bale, & Drummond, 1996; Fitz, 1990; Miller & Kelley, 2005).

Religion and Depression. Empirical research reveals that the psychology of religion has an important role within the study and treatment of depression. A number of articles have highlighted a "buffering effect" of religion and spirituality against depression (Pearce, Little, & Perez, 2003; Stack, 1992; Richards & Bergen, 2005) with several also finding an inverse relationship between depressive symptoms and religious involvement (Miller & Kelley, 2005). Research has also identified religion and spirituality as protective against the etiology of depression in cancer patients and potentially critical toward the cancer recovery process (Aukst-Margetic, Jakovljevic, Margetic, 2002; Aukst-Margetic, Jakovljevic, Margetic, Biscan, Samija, 2005). Religiosity also may reduce adolescent risk of attempting suicide (Greening &

Stoppelbein, 2002; Jahangir, ur Rehman, & Jan, 1999; Miller & Kelley, 2005; Richards & Bergin, 2005).

A number of studies support a behavioral model when looking at the relationship between depressive symptoms and religious variables. Several studies have found that those who attend church more frequently and participate in more religious activities are less depressed (Wright, Frost, & Wisecarver, 1993; Koenig et al. 1997; Aranda, 2008; Schapman & Inderbitzen-Nolan, 2002). Moreover, while non-organizational religiosity does not seem influential in attenuating depression, organizational religiosity has a moderate inverse relationship with depressive symptoms (Strawbrige, et al., 1998; Parker et al., 2003). Wink, Dillon, and Larsen (2005) addressed the distinction between religiousness (behaviors) and spirituality (operationalized as noninstitutionalized religious beliefs and practices) and found that religiousness buffered against depression while spirituality did not. Another study found that depressed patients were more likely to indicate no religious affiliation, self-identify as "spiritual but not religious," and depression severity was associated with lower church attendance, less prayer and scripture reading, and lower "intrinsic religiosity" (Koenig, 2007).

Given that church attendance in particular appears to be negatively related to depressive symptoms while there is some disagreement about the relationship between depressive symptoms and private devotion, it is important to consider the possible mediation of other factors such as social support on this relationship. Although a number of studies have found that there is only a partial or no mediating effect for social support when considering the effects of religious behavior on depressive symptoms (Koenig et al.

1997; Wink, et al. 2005; Koenig, 2007; Aranda, 2008), it is impossible to completely separate the two since they generally co-occur within the context of church attendance.

Assessment of Religious Behaviors

There are a number of measures available for the study of religious and spiritual behaviors (Hill, 2005). These measures are nicely summarized by Hill (2005), who created a list of 46 different scales covering 12 domains of assessment. A scale from each domain of assessment is discussed below as a representative scale to highlight each area.

Dispositional Religiousness or Spirituality. Within this domain are several scales including the Spiritual Well-Being Scale (Paloutzian & Ellison, 1982). This scale has a two-dimensional structure consisting of religious well-being and existential well-being (Genia, 2001; Ledbetter, Smith, Vosler-Hunter, & Fischer, 1991). There are some limitations to this measure such as its factoral complexity that may lead to ambiguous scores (Ledbetter, et al., 1991), a significant ceiling effect (Scott, Agresti, & Fitchett, 1998; Genia, 2001; Ledbetter, et al., 1991), and inadequate generalizability for African American individuals (Utsey, Lee, Bolden, & Lanier, 2005).

Religious or Spiritual Commitment. Within this auspice are several scales including the Santa Clara Strength of Religious Faith Questionnaire (SCSORF; Plante & Boccaccini, 1997). The SCSORF was found to have a unidimensional structure (Lewis, Shevlin, McGuckin, & Navratil, 2001) and to have high internal and split-half reliabilities and to be both a reliable and valid measure of religious faith (Plante & Boccaccini, 1997; Freiheit, Sonstegard, Schmitt, & Vye, 2006; Plante, Yancey, Sherman, Guertin, & Pardini, 1999). Evidence of convergent and divergent validity has also been found

(Sherman et al., 1999). The SCSORF is strongly related to spirituality and religious behavior and coping (Freiheit et al., 2006) and measures strength of religious faith regardless of denomination or affiliation (Lewis et al., 2001).

Religious or Spiritual Development. This domain includes several scales such as the Faith Development Scale (FDS; Leak, Loucks, & Bowlin, 1999). Created to be a valid measure of Allport's (1950) religious maturity concept, this scale is related to various indices of religious maturity as well as diverse religious and personality constructs (Leak & Fish, 1999). Predictive validity studies have found the FDS is sensitive to differences between groups with differing faith development and also within group changes overtime (Leak, 2003).

Religious or Spiritual History. This domain includes two primary scales, one of which is the Spiritual History Scale (Hays, Meador, Branch & George, 2001). This scale assesses lifetime religious and spiritual experiences and connects these data with health in adulthood (Hays, et al. 2001).

Religious and Spiritual Social Participation. This domain includes several measures such as the Religious Involvement Inventory (Hilty & Morgan, 1985). This measure assesses church participation and has well-established psychometric properties (Hill, 2005).

Religious or Spiritual Private Practices. The Religious Background and Behavior measurement scale (Connors, Tonigan, & Miller, 1996) was developed to assess religious practices and includes two factors: God Consciousness and Formal

Practices (Connors, et al., 1996). This measure has excellent test-retest reliability and satisfactory internal consistency (Connors et al., 1996).

Religious and Spiritual Support. The Religious Support Scale (Fiala, Bjorck, & Gorsuch, 2002) is based on the social support model of Cutrona and Russell (1987) and includes three subscales including measuring support from God, the congregation, and church leadership (Fiala et al., 2002). This measure also has strong psychometric properties (Fiala et al., 2002).

Religious or Spiritual Coping. The Religious Coping Scale (RCOPE; Pargament, Koenig, & Perez, 2000) assesses religious coping methods including both helpful and harmful religious expressions. The initial factor structure was supported by two studies, one college sample and one hospitalized elderly sample (Pargament et al., 2000).

Religious or Spiritual Beliefs and Values. This domain includes numerous measures that assess religious beliefs and values including the Christian Orthodoxy Scale (Fullerton & Hunsberger, 1982). Research suggests that this is a unidimensional, reliable and valid scale (Fullerton & Hunsberger, 1982; Johnson, George, & Saine, 1993). A short version was also developed and data from five studies revealed strong psychometric properties for this version (cf. Hunsberger, 1989).

Religion or Spirituality as Motivating Forces. The Religious Orientation Scale (Allport & Ross, 1967) assesses extrinsic versus intrinsic religiosity orientation and examines the relation of religion and prejudice (Allport & Ross, 1967). Lack of cross-cultural validity for this measure is a limitation (Brewczynski & MacDonald, 2006).

Religious or Spiritual Techniques for Regulating/Reconciling relationships. This domain includes several scales such as the Tendency to Forgive Measure (TTF; Brown, 2003). This measure was formed to evaluate dispositional forgiveness and has strong convergent and divergent validity (Brown, 2003).

Religious or Spiritual Experiences. The Daily Spiritual Experiences Scale (Underwood, 1999) was developed to look at experiences of spirituality such as awe, joy, and inner peace (Underwood & Teresi, 2002). Research suggests good reliability across several studies as well as good convergent validity (Underwood & Teresi, 2002).

Summary. At this stage of research, the assessment of religiosity relies primarily on self-report measures, with several alternative strategies being explored that include attitude accessibility, which gives an implicit measure for the centrality of religion gathered through measurement of response time to stimuli, pictures that assess religious understanding, and physiological indicators of religiosity as assessed via CAT and PET scans (Hill, 2005). Another potential assessment method has been suggested by Richards and Bergin (2005), who endorse a semi-structured interview within the context of a comprehensive multilevel, multisystemic assessment strategy. Level one begins with more general questions and terminology conducted in an ecumenical fashion while level two interviewing is only conducted if level one has shown it is justified. The general goal at level two is to determine the impact the client's religiosity is having on their presenting problem(s). Richards and Bergin (2005) also advocate a multidimensional method for assessing the final outcome of psychotherapy that involves use of religious assessment scales as well as indices of depression, anxiety, social adjustment, and life satisfaction.

Kristeller, Rhodes, Cripe, and Sheets (2005) evaluated the use of their own version of a semi-structured exploration of spiritual/religious concerns within a group of oncology/hematology patients, finding that 76% of patients found the assessment "somewhat" to "very" useful. This group also had a greater reduction in depression, increased quality of life, and increased feelings of interpersonal caring from their physician than a control group.

The Role of Religion in Clinical Practice

Even though clinical practice by definition addresses beliefs and values, many clinicians receive little or no training in utilization of religious variables within assessment and treatment, and rarely discuss spiritual or religious issues within their training programs (Bartoli, 2007; Shafranske, 2005; Walker, Gorscuch, & Tan, 2004). What little coverage religiosity receives in many training programs is often informal, non-systematic, and generally peripheral (Brawer, et al., 2002), and although religious and spiritual issues may be brought up by individual clients within therapy and in the context of supervision, very few internship sites provide any formal training in religiosity (Russell & Yarhouse, 2006). Another underdeveloped resource for including religiosity within clinical practice is consultation and collaboration. For example, many psychologists do not think to include collaboration with clergy or other religious figures to better understand a person's values and behaviors (Shafranske, 2005). Although historically there has been minimal inclusion of religious practices within clinical settings, efforts are underway to address this issue. Richards and Bergin (2005) have identified a number of religious and spiritual practices that may be used as therapeutic

interventions: prayer, contemplation and meditation, reading sacred writings, repentance, atonement and forgiveness, worship and ritual, fellowship and service, seeking spiritual direction, and moral instruction. They further point to additional interventions, several of which are applicable for clinical settings: therapist prayer, teaching spiritual concepts, reference to scripture, spiritual self-disclosure, spiritual confrontation, spiritual assessment, religious relaxation or imagery, therapist and client prayer, blessing by a therapist, encouragement for forgiveness, use of the religious community, client prayer, encouragement of client confession, referral for blessing, religious journal writing, spiritual meditation, religious bibliotherapy, scripture memorization, and dream interpretation.

This plethora of options illustrates the many possibilities for incorporating religious strategies within therapeutic assessment and intervention for clients who may wish to have a religious component in therapy (Rose, Westerfeld, & Ansley, 2008). Research suggests that many clients in fact desire to have religious elements included in therapy, although there is no clear procedural formula for how this should be accomplished (Shafranske, 2005). It has been demonstrated that about two-thirds of medical patients feel their physician should be aware of their religious beliefs (Shafranske, 2005). Problematically, however, only about 10% of physicians systematically take a religious history of their clients and nearly 50% never do (Koss-Chioino, 2008). These findings extend to mental health practitioners. Although about 80% of clinical psychologists believe religious and spiritual behavior is a significant domain in considering mental health functioning, only about 50% of practitioners address

religion with a portion of their patients, and about 15% never address the issue at all (Shafranske, 2005). Despite substantial patient interest and the many options for religious-based strategies to be included in clinical treatment, the literature indicates that clinicians only rarely administer religious interventions. When these interventions are in fact provided, they generally are strongly influenced by the extent of the clinician's involvement in explicit religious behaviors and the clinician's particular religious faith (Shafranske, 2005; Walker, Gorsuch, & Tan, 2004).

Religious Applications in Clinical Practice: Religious Diversity

Within North America alone, there is significant religious and spiritual diversity encountered in personal faith and within the therapeutic setting (Keller, 2000). When looking from a world-view perspective, Christianity comprises the largest religious community in the world with nearly 2 billion members to date (Keller, 2000; Adherents.com, 2007). Islam is the next largest community with over 1 billion members, while atheists, agnostics, and non-religious total the third largest group at about 1 billion members (Keller, 2000; Adherents.com, 2007). With non-religious, atheists, and agnostics comprising only about 15% of the world's population and 9.1% of the North American population, the majority of clients coming to see a therapist will bring with them a set of religious and spiritual values effecting both their general life and clinical setting functioning.

It is important for therapists to consider not only the impact of religion and spirituality in general on their client, but also how the specific religious and spiritual views of a client affect their world-view and experience. Although each client will bring

a unique view and experience of religion into the treatment session, it is possible to consider some of the major religions of the world and what their primary tenets are to prepare the therapist for better understanding the client's diverse religious experience (Richards & Bergin, 2000). An "ecumenical therapeutic stance" is suggested for all therapists at the beginning and throughout treatment with a client as a method of being open to the diversity of client beliefs. A "denominational therapeutic stance" can be taken when a therapist finds they share the same beliefs as their client, providing an opportunity for a deeper therapeutic alliance (Richards & Bergin, 2000).

Research suggests specific ways to provide intervention to clients of diverse religious beliefs utilizing the structure of each religious denominational belief system and the potential for further collaboration with religious leaders in various denominations including Roman Catholics (Shafranske, 2000), Eastern Orthodox Christians (Young, 2000), Lutherans, Presbyterians, Anglicans, and Methodists (McCullough, Weaver, Larson, & Aay, 2000), Evangelical and Fundamentalist Protestants (Thurston, 2000), Pentecostal Protestants (Dobbins, 2000), Mormons (Ulrich, Richards & Bergin, 2000), Seventh-Day Adventists (Rayburn, 2000), Orthodox Jews (Rabinowitz, 2000), Conservative and Reform Jews (Miller & Lovinger, 2000), Muslims (Hedayat-Diba, 2000), Buddhists (Finn & Rubin, 2000), Hidus (Sharma, 2000), members of African American Churches and spiritual traditions (Cook & Wiley, 2000), members of Latino/Latina religious and spiritual Traditions (Zea, Mason, & Murguia, 2000), members of Asian American Churches and spiritual traditions (Tan & Dong, 2000), and members of Native American religion and spirituality (Trujillo, 2000).

Religious Applications in Clinical Practice: Treatment Outcome

In addition to practical difficulties in clinical application and diversity issues related to religiosity, few empirical studies have examined the efficacy of religious and spiritual interventions (Shafranske, 2005), and treatment outcome research in this area is largely unsophisticated relative to the general status of psychotherapy research (Cuijpers, van Straten, & Warmerdam 2007; Wolf & Hopko, 2008; Worthington & Sandage, 2001). In particular, there is inadequate research examining the potential independent or incremental benefits of religious interventions in a systematic and methodologically sound manner (Shafranske, 2005; Harris, Thoresen, McCullough, & Larson, 1999; Kaplar, Wachholtz, & O'Brian, 2004). Of those studies that have been conducted, most have found that therapies that include a religious component were at least as effective as their secular psychotherapy comparison (Shafranske, 2005).

Some studies have involved descriptive analyses of religious and spiritual "interventions" that represent practices or traditions that clients may have participated in for years (Richards & Bergin, 2005) as a means to examine these practices in relation to mental health, rather than developing and implementing a set of operationalized and uniform behaviors identified as a therapeutic program. This has lead to much religious intervention research that simply surveys whether or not clinicians include religious aspects into therapy, but without any real methodological organization or randomized controlled trials. One example is the 1985 national survey of psychotherapists (Jensen, Bergin, & Greaves, 1990) that found 17% of eclectic therapists included a religious component to their therapy. The results of this survey suggested at least a portion of

mainstream psychologists were trying to incorporate religious issues in therapy, but it failed to provide any specific information about what those interventions might be, how frequently they were utilized, or how successful they were (Jensen, Bergin, & Greaves, 1990). Although surveys like this provide some valuable information with regard to the general statistics of religious interventions, they fail to provide more sophisticated analyses that randomized controlled trials might provide.

It is clear that therapists from varying therapeutic paradigms periodically incorporate religious interventions into their work (Richards & Bergin, 2005) including psychoanalysts (Genia, 1995) as well as behavioral (Martin & Booth, 1999), cognitive (Propst, 1996), rational-emotive (Nielsen, Johnson, & Ellis, 2001), person-centered (West, 2004), humanistic (Elkins, 2005), existential-humanistic (Mahrer, 1996), interpersonal (Miller, 2005), and Gestalt therapists (Harris, 2000). Other more general approaches outline religious and spiritual intervention components that therapists can incorporate into their assessment and treatment plan (Richards & Bergin, 2005; Brennan & Heiser, 2004; Shafranske, 2005; Hill, 2005). However, lack of systematic empirical inquiry into the efficacy of these strategies establishes the need for current treatment outcome research in this area as highly pressing.

Meta-Analytic Outcome Research. Two large meta-analytic reviews have examined religious treatment outcome research over the past 20 years. McCullough (1999) looked at only randomized-control trials considering the effects of a secular psychotherapy versus a religious-based psychotherapy for people presenting with depression. At that time only five published papers and one unpublished dissertation met

criteria. General conclusions of this meta-analytic review showed that even though treatments that include religious components compared with secular interventions may not produce significant differences in overall treatment outcome, they still may produce differences in religious client's satisfaction with treatment. This review also pointed to a need for longer-term treatment studies, a wider range of disorders to be studied, and for higher numbers of clients to be included within treatment studies. Smith, Bartz, and Richards (2007) completed another meta-analytic review and with less stringent inclusion criteria (the article must be written in English and have quantitative data regarding a religious component of treatment) found 31 empirical studies, several of which were unpublished dissertations and five of which were the original articles discussed by McCullough (1999). Most of these studies considered group therapy (71%) and only about half (52%) used a manualized treatment to promote consistent treatment across clients (Smith et al., 2007). The general conclusion to this meta-analysis was that religious and spiritual approaches to psychotherapy appear to be effective. The most effective treatments appeared to be those that helped clients understand and apply their own religious beliefs to their lives. This review also pointed out several limitations in current religious treatment outcome literature including small sample sizes, attrition rates, lack of manualized treatment, and lack of fidelity checks for administered therapy.

Open-Clinical Trials. Seven studies have looked at the efficacy of religious interventions in the context of an open-trial, pilot study. Intervention focus included group treatment of self-defeating perfectionism (Richards, Owen, & Stein, 1993), post-abortion grief and trauma (Layer, Roberts, Wild & Walters, 2004), sexual abuse and

spiritual struggles (Murray-Swank & Pargament, 2005), group therapy for HIV-positive adults (Tarakeshwar, Pearce, & Sikkema, 2005), a Latina religious educational intervention provided to community, alumni, and control groups (Guinn & Vincent, 2002), body-mind-spirit empowerment group therapy for divorced Chinese women (Chan, Chan, & Lou, 2002), and group stress management through Christian Cognitive Behavioral therapy (Craigie, 1992). Each of these studies generally revealed positive results, including decreases in depression (Richards, et al.,1993; Tarakeshwar, et al., 2005), perfectionism (Richards, et al., 1993), shame and PTSD symptoms (Layer, et al., 2004), increased self-esteem, existential well-being or empowerment (Richards, et al., 1993; Murray-Swank & Pargament, 2005; Guinn & Vincent, 2002; Chan, et al., 2002), higher self-rated religiosity and more positive spiritual coping with less perceived stress (Murray-Swank & Pargament, 2005; Tarakeshwar, et al., 2005; Chan, et al., 2002) and beneficial change in cognitive/evaluative processes with maintenance at 6-year follow-up (Craigie, 1992).

Randomized-Controlled Trials. A total of eighteen studies have looked at randomized controlled trials of religious interventions versus other treatment or non-treatment groups. Of these studies, six have compared a strictly religious-based intervention with secular treatment. Within this group of religious- based interventions, several were compared against secular treatments including a religious imagery technique (Propst, 1980), Christian Contemplative Meditation (CCM; Zimmerman & Meier, 1999), spiritual dream interpretation (Davis and Hill, 2005), Complementary and Alternative Medicine (CAM; Targ & Levine, 2002), group religious therapy for eating disordered

inpatients (Richards, Berrett, Hardman, & Eggett, 2006), and forgiveness therapy (Rye, et al. 2005). Several others compared a religious treatment condition to non-treatment or minimal treatment only and included pastoral care (Baker, 2000) and spiritually-focused therapy (Cole, 2005). Results varied across studies but showed a general pattern of religious interventions being at least as successful as secular treatments (Zimmerman & Meier, 1999; Davis and Hill, 2005; Targ & Levine, 2002; Richards, et al., 2006) and more successful than non-or minimal treatment (Baker, 2000; Cole, 2005) For a couple of studies these results varied. In one study, clients receiving religious intervention showed an increase over secular treatment for psychological disturbance and eating disorder symptoms (Richards, et al., 2006) and more treatment gains than those receiving secular treatment (Propst, 1980). Another study showed similar results for religious and secular treatment for most symptoms, but with secular treatment providing a greater decrease in depressive symptoms (Rye et al. 2005). In many studies, religious interventions brought about a higher degree of client reported satisfaction with treatment (Zimmerman & Meier, 1999; Targ & Levine, 2002), rapid initial improvement (Richards, et al., 2006), longer lasting results (Zimmerman & Meier, 1999) and lower attrition (Targ & Levine, 2002). Several studies also showed an increase in spiritual well-being (Richards, et al., 2006), faith maturity (Zimmerman & Meier, 1999), spiritual integration (Targ & Levine, 2002) and existential well-being (Davis & Hill, 2005).

The final twelve studies compared a secular treatment with the same (or similar) treatment that included a religious component or focus. These studies compared secular CBT with a religious CBT (Percheur & Edwards, 1984; Hawkins, Tan, & Turk, 1999;

Propst, et al. 1992), secular RET with a religiously modified version (Johnson & Ridley, 1992; Johnson, et al. 1994), traditional forgiveness therapy and religiously integrated forgiveness (Rye & Pargament, 2002), standard secular therapy and a religiously modified version (Razali, Hasanah, Aminah & Subramaniam, 1998; Razali, Aminah & Khan, 2002), secular therapy and medication compared with a religiously modified treatment and medication (Azhar, Varma, & Dharap, 1994; Azhar & Varma, 1995a ; Azhar & Varma, 1995b), and contemplative prayer with standard psychotherapy as measured through a time series analysis (Finney & Malony, 1985). Several of these studies found that treatment that included a religious component led to greater decreases in anxiety and depression symptoms (Azhar, et al., 1994; Propst, et al. 1992). Another group of studies found that treatment including a religious component initially led to more rapid improvement in client anxiety and depression, but that differences between treatment groups were no longer significant at 6-months follow-up (Azhar & Varma, 1995b; Razali et al., 1998, 2002). The remaining studies found treatment with an added religious component or intervention to be at least as helpful as secular treatment (Percheur & Edwards, 1984; Hawkins, Tan, & Turk, 1999; Johnson & Ridley, 1992; Johnson et al., 1994; Finney & Malony, 1985).

Current Study

In view of the number of religious treatment outcome articles alone, the literature points to a paucity of well-controlled and recent efficacy studies looking at manualized religious treatments within randomized controlled trials. Only six studies have compared a strictly religious-based intervention with secular treatment (Smith, Bartz, and Richards,

2007) with other studies conducting descriptive analyses of religious and spiritual "interventions" that represent practices or traditions that clients may have participated in for years (Richards & Bergin, 2005) while still others have attached a religious component to an already secular treatment rather than developing and implementing a set of operationalized and uniform behaviors identified as a therapeutic intervention, leading to inadequate research examining the potential independent or incremental benefits or religious interventions in a systematic and methodologically sound manner (Shafranske, 2005; Harris, Thoresen, McCullough, & Larson, 1999; Kaplar, Wachholtz, & O'Brian, 2004). While religious components being included in secular treatment may add to an already efficacious treatment, studies looking at interventions that are specifically religious in nature are clearly lacking.

The current study was designed to build upon previous treatment outcome research by investigating the functionality and efficacy of a manualized treatment focusing on the behavioral activation of religious behaviors (PRA-BA: Protocol for Religious Action in Behavioral Activation; see Appendix) as a stand-alone intervention administered independent of secular psychosocial treatment. A main focus of this current study is the ideographic nature of PRA-BA designed to meet the diverse needs of individual religiosity while allowing for assessment of individual beliefs and customs. Through initial assessment with the client, this protocol allows for client input and for the therapist to look to outside literature sources for more information on activities that would be relevant to each individual's religious belief system. Although spirituality and religion has been targeted as one behavioral domain within the context of more global

behavioral activation protocols (Hopko & Lejuez, 2007; Hopko, Lejuez, Ruggiero, & Eifert, 2003), the potential efficacy of an activation protocol focused exclusively on developing a religiously-based behavioral repertoire has not been investigated. The current study takes a novel experimental approach to the study of a faith-based intervention by directly manipulating religious behaviors and directly assessing the impact of this intervention toward attenuating symptoms of depression in college students. As such, it is a much stronger research design than the correlational work that has been accomplished to date. To address this issue, the following randomized controlled trial was designed to compare the efficacy of a religiously-based behavioral activation (PRA-BA) with a no-treatment control condition. Hypotheses were as follows:

Relative to the no-treatment control condition, participants receiving religiously-based behavioral activation (PRA-BA) would experience:

(a) decreased depression as indexed by the BDI-II

(b) increased environmental reward as indexed by the EROS

(c) decreased anxiety as indexed by the STAI-T and BAI

(d) increased quality of life as indexed by the QOLI

(e) increased dispositional religiousness as measured by the Spiritual Well-Being Scale

(f) increased religious coping as measured by the Ways of Religious Coping Scale

(g) increased religious behaviors as measured by the Religious Background and Behavior Measurement Scale

Through the utilization of a brief religiously based behavioral activation protocol, clinicians may have a direct link to an important life area that is currently overlooked in

the world of treatment outcome. This proposed work stands to make a significant impact on the religious treatment outcome research and within clinical practice. This study represents a work that potentially could have significant effects on the field of clinical psychology and potentially the larger community. Through this and future similar studies, religious issues in psychology will be more than a study of potential relationships or theoretical rhetoric, but potentially increase focus on the impact of religiosity, mental health functioning, and the future of mental health treatment.

Chapter 3

Method

Participants

The sample included participants recruited from the University of Tennessee undergraduate psychology courses. Recruitment was conducted through the departmental research website (HPR) and via undergraduate psychology courses. In both circumstances, the study was described as focusing on whether increased religious behaviors might effectively reduce symptoms of depression and increase quality of life. Students interested in participating first completed a confidential questionnaire (Beck Depression Inventory-II; Beck & Steer, 1993) and a demographic form. If the student was eligible (see criteria below), he or she received a personalized email from the principal investigator inviting them to participate.

Participants 18 years and older who scored 14 or higher on the BDI-II during the screening were eligible. A total of 253 individuals were screened for the study with a total of 75 individuals screening as eligible on the BDI-II. All screened individuals were sent an email informing them of their eligibility status. The principal investigator then called the eligible individuals and a total of 50 individuals were willing to participate in the study. Participants undergoing pharmacological (n = 5) or psychological treatment for depression (n = 0) were included in the study as long as they had been stabilized on medication for at least 8 weeks. Participants with highly elevated BDI-II scores (BDI-II > 30) were included in the study and closely monitored for potential suicidal ideation (n =

6). Participants with co-existent anxiety problems were included, though individuals with active suicidal intent or psychosis as measured by the ADIS-IV were excluded ($n = 0$).

Eligible individuals included a total of 75 individuals with 50 choosing to participate in the study and $n = 25$ choosing not to participate. Based on Chi-square and t-test analyses, groups did not differ as a function of age [$F(1, 69) = 2.89$, $p = 0.33$], gender [$x^2(1) = 0.25$, $p = 0.62$] or ethnicity [$x^2(4) = 3.16$, $p = 0.53$]. Groups did differ as a function of education [$F(1, 68) = 8.13$, $p = 0.023$] and marital status [$x^2(2) = 7.26$, $p = 0.03$] Individuals who chose to participate had more years of education ($M = 14.08$, $SD = 1.38$) than those who chose not to participate ($M = 13.36$, $SD = 0.67$) and proportionately more individuals who chose not to participate were married ($n = 3$) than those choosing to participate ($n = 0$).

The final sample included 50 participants: 31 females (62%) and 19 males (38%). Ages ranged from 17 to 31 ($M = 20.0$, $SD = 2.75$). Ethnic distribution was as follows: 88% Caucasian ($n = 44$), 8% African American ($n = 4$), 2% Latino ($n = 1$), and 2% American Indian or Alaskan Native ($n = 1$). Total years of education ranged from 13 to 19 years ($M = 14.0$, $SD = 1.38$). Marital status included 92% single ($n = 46$) and 8% partnered ($n = 4$). Based on the ADIS-IV semi-structured interview, 58% of participants ($n = 29$) were diagnosed with major depressive disorder and 20% ($n = 10$) were diagnosed with dysthymia. Diagnosis frequency did not differ as a function of experimental group [MDD: [$x^2(1) = 0.74$, $p = 0.390$; Dysthymia: $x^2(1) = 0.00$, $p = 1.00$]. Based on Chi-square and t-test analyses, those diagnosed with MDD or Dysthymia did not differ from those without MDD and Dysthymia as a function of age [$F(1, 47) = 1.50$

$p = 0.30$], gender [$x^2(1) = 1.72$, $p = 0.19$], ethnicity [$x^2(3) = 2.55$, $p = 0.46$], marital status [$x^2(1) = 2.87$, $p = 0.09$] or education [$F(1, 46) = .003$, $p = 0.34$].

Participants were randomly assigned to receive either religious behavioral activation ($n = 25$) or a control group involving a non-intervention "support" session ($n = 25$). Participants assigned to religious behavioral activation (PRA-BA) engaged in the intervention described in Appendix A. Based on Chi-square and t-test analyses, groups did not differ as a function of age [$F(1, 47) = 0.57$, $p = 0.46$], education [$F(1, 46) = 0.17$, $p = 0.69$], gender [$x^2(1) = 0.76$, $p = 0.38$] or ethnicity [$x^2(3) = 3.36$, $p = 0.34$]. Marital status differed by experimental condition, with proportionately more individuals in the control group having a partner ($n = 4$) relative to the PRA-BA group ($n = 0$) [$x^2(1) = 4.35$, $p = 0.04$]. Given literature suggesting that individuals who report being single, separated, or divorced may have higher rates of depression and poorer treatment outcome than those who are partnered or married (Minami et al., 2009; Wu & DeMaris, 1996), marital status was included as a covariate in all outcome analyses. Based on a Chi-square test, study groups did not proportionately differ in terms of the number of participants stabilized on medication [$x^2(1) = 2.00$, $p = 0.16$] and no participants were receiving psychotherapy. Two individuals who identified as atheists participated, with one assigned to each experimental condition. The remaining 48 participants identified as either Christian, having spiritual beliefs though not specifically defined by a particular religion, or Jewish (n = 1).

Assessment Measures

An Abbreviated *Anxiety Disorders Interview Schedule* (ADIS-IV; Brown, DiNardo, & Barlow, 2004) was used to assess for major depression, dysthymia, and psychosis at pre-treatment (Brown, DiNardo, & Barlow, 2004).

The *Beck Depression Inventory-II* (BDI-II; Beck, Steer, & Brown, 1996) assesses the severity of depressive symptoms and includes 21 items rated on a 4-point Likert scale (Score Range = 0-63). Higher scores suggest increased depression severity. Sample items include degree of "sadness" and "loss of pleasure." The instrument has excellent reliability and validity with depressed younger and older adults (Nezu, Ronan, Meadows, & McClure, 2000). In the present study, internal consistency was strong (α = .95).

The *Environmental Reward Observation Scale* (EROS; Armento & Hopko, 2007) is a 10-item measure (1 to 4 point Likert Scale) that assesses environmental reward and response-contingent positive reinforcement (RCPR; Lewinsohn, 1974). Scores range from 10 to 40, with higher scores suggesting increased environmental reward. Sample items include "the activities I engage in usually have positive consequences," and "lots of activities in my life are pleasurable." Based on psychometric research with three independent college samples, the EROS has strong internal consistency (α = .85-.86) and excellent test-retest reliability (r = .85), and correlates strongly with other commonly administered and psychometrically sound self-report measures of depression (r = -.63 to -.69) and anxiety (Armento & Hopko, 2007). In the present study, internal consistency was strong (α = .94).

The *State-Trait Anxiety Inventory – Trait* (STAI-T; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) is a 20-item scale used to measure trait anxiety. Good to excellent internal consistency has been reported for the scale across adult, college, high school, and military recruit samples (Spielberger et al., 1983), as well as older adults (α = .88, Stanley et al., 1996). Adequate 30-day test-retest reliability with high school students and 20-day test-retest reliability with college students has been reported (r = .86; Spielberger et al., 1983). In the present study, internal consistency was strong (α = .94).

The *Beck Anxiety Inventory* (BAI; Beck & Steer, 1993) is a 21-item questionnaire that measures cognitive and somatic symptoms of anxiety, with higher scores indicating increased anxiety (Score Range = 0-63). Sample items include "unable to relax," and "heart pounding or racing." Good psychometric properties have been demonstrated among college, medical, and psychiatric samples (Antony, Orsillo, & Roemer, 2001). In the present study, internal consistency was strong (α = .95).

The *Quality of Life Inventory* (QOLI; Frisch, 1994) is a 16-item self-report measure of life satisfaction. The instrument provides a global measure (ranging from –6 to +6) based on the average of satisfaction ratings across a range of life domains. The scale is a valid and reliable measure of life satisfaction (Frisch, 1999) (α = .90 and *RANGE* = -5 to +4 for the present study).

The *Religious Background and Behavior Scale* (Conners, Tonigan, & Miller, 1996) was developed to assess religious practices and includes two factors: God Consciousness and Formal Practices (Connors, et al., 1996). This measure has good psychometrics properties and is used to measure private religious and spiritual behaviors

and has a less exclusively Christian focus than other measures. This measure was developed for use within a clinical population (Hill, 2005). In the present study, internal consistency was strong (α = .95).

The *Spiritual Well-Being Scale* (Paloutzian & Ellison, 1982). This scale has a two-dimensional structure consisting of religious well-being and existential well-being (Genia, 2001; Ledbetter et al., 1991). In the present study, internal consistency was strong (α = .93).

The *Ways of Religious Coping Scale* (WORCS; Boudreaux, Catz, Ryan, Amaral-Melendez, Brantley, 1995) is a 40-item scale that is used to assess religious coping strategies. The scale has high internal consistency (Boudreaux, Catz, Ryan, Amaral-Melendez, Brantley, 1995). In the present study, internal consistency was strong (α = .97).

Procedure

If potential participants screened positive on the initial BDI-II screener (BDI-II > 14), they were invited to participate in the study and complete the more comprehensive pre-treatment psychological assessment. All participants were seen in an individualized (as opposed to group) setting to ensure that unique treatment needs and individual differences were addressed. Both treatment and control participants met with the principal investigator on three occasions: pre-treatment, post-treatment, and one-month follow-up. At the pre-treatment assessment, all includes completed informed consent procedures and self-report measures. The ADIS-IV diagnostic interview also was administered. The treatment group was then provided with the therapeutic intervention

(PRA-BA) described in Appendix A. To equate for duration of contact, each control participant was given time to express their thoughts and feelings in a "supportive environment," but no structured therapeutic intervention was utilized. A "supportive environment" consisted of the principal investigator listening to the individual issues presented by each participant and providing reflective listening with empathetic statements whenever possible (e.g. "I'm so sorry to hear about that difficult time in your life" or "hang in there, I know it can be tough sometimes"). All participants were told they could receive a referral at the end of the study for psychotherapy if they so desired (at the end of the study $n = 0$). Total session time for the first session was approximately 60 minutes. All sessions for the PRA-BA and non-treatment (support) control participants were conducted by the principal investigator to ensure adherence to the treatment protocol and consistency in administration.

At the conclusion of the first meeting, control participants were asked to continue life as usual while treatment participants were asked to engage in typical behaviors but also complete their religious behavioral activation assignments. Religious behavior assignments differed for each participant based on assessment of past and current religious beliefs, values and practices (see Appendix A). All PRA-BA participants were assigned both "communal" and "private" religious behaviors. Popular communal activity assignments included: attending a church service, attending "The Walk" on campus, and attending "Vols For Christ" on campus. Popular private religious activities included daily morning or evening prayer, daily listening to religious music, and daily meditation. For all participants, a 2-week post-treatment meeting was scheduled. Each participant was

also told they would receive a phone call check-in from the principal investigator in 1-week. During these check-in phone calls, control participants were asked general questions about their emotional functioning while PRA-BA participants were specifically queried about their religious behavioral activation assignments. If there were problems with activation, the phone call check-in provided an opportunity to briefly problem-solve how to better activate. Of the activation includes reached (n = 17), all were consistently already activating. Phone call check-in was very brief in all cases lasting less than 5 minutes each. Of the 50 includes, 39 were successfully contacted at the one-week check-in interval. Based on a Chi-square test, the number of participants contacted at one-week check-in did not differ as a function of experimental condition [$x^2(1) = 2.914$, $p = 0.09$]. Six participants chose to email or call back and leave a detailed description of their week, and five participants did not respond to the phone message. Based on Chi-square tests, the number of participants responding by email or phone message also did not differ as a function of experimental condition. After one more week had elapsed (for a total of two weeks of activation), all participants returned for the post-treatment assessment (M = 13.90 days, SD = .46) and again completed questionnaires. The religious activation homework was collected from PRA-BA treatment participants. The post-treatment was approximately 30 minutes in duration. At the end of this meeting, all participants were reminded that they would return in 4 weeks for a follow-up assessment. Almost all participants (n = 48) returned for the follow-up assessment and completed assessment measures (M = 27.42 days, SD = 1.78). PRA-BA participants were also asked if they had continued activation over the past month. Of the 25 treatment participants, only 4

reported no longer activating at all (84% reportedly continued activation). The follow-up assessment was approximately 15 minutes in duration.

Chapter 4

Results

Attrition

Of the 50 participants, there were none that dropped out prior to the post-treatment assessment. Before the one-month follow-up, 2 participants dropped out of the study, one due to scheduling issues and the other due to illness (overall attrition = 4%). Both participants who dropped were from the treatment group, although a Chi-square test did not reveal a significant difference in attrition as a function of experimental condition [$x^2(1) = 2.08, p = 0.15$]

Behavioral Activation Manipulation Check

The effectiveness of the behavioral activation manipulation was measured utilizing the Religious Background and Behavior Scale (RBB) as a measure of overt behavior, the Spiritual Well-Being Scale (SWB) as a measure of religious and spiritual attitude, and the Ways of Religious Coping Scale (WORCS) as a measure of religious coping. Preliminary ANOVAs indicated that experimental groups differed only on the SWB, with the PRA-BA group reporting fewer religious attitudes and beliefs [F (1, 48) = 4.80, $p < .05$, $\eta^2 = .09$]. As presented in Table A-1 (see Appendix for all tables and figures), a series of 2 (experimental group) x 2 (Time: pre-treatment, post-treatment) repeated-measures ANOVAs revealed that overt religious behaviors, attitudes, and coping all increased in the PRA-BA group relative to the control group following treatment. Note that due to pre-treatment differences on the SWB, an ANCOVA also was conducted using post-treatment SWB as the criterion variable and pre-treatment SWB as

the covariate. Results still indicated a significant main effect of increased religious and spiritual attitudes in the PRA-BA group relative to the control group [F (1, 47) = 5.07, p < .05, η^2 = .09]. Illustrated in Table A-2 and Figures A-5 to A-7, data suggested that increased religious behaviors and attitudes were maintained at 1-month follow-up.

Treatment Adherence

All participants in the PRA-BA treatment group completed a religious behavior activation homework form listing the number of assigned behaviors that were completed over the two-week treatment interval. Some assigned behaviors consisted of one activity over the two weeks (e.g., going to a Bible study) while some behaviors were assigned daily (e.g., morning prayer). Calculation of the total number of assigned and completed behaviors involved multiplication of the number of times repeated behaviors were assigned and the actual number of times these behaviors were completed. The average number of behaviors assigned for each participant was substantial (M = 34.72, SD = 9.68) and the average number completed was impressive (M = 30.0, SD = 10.24). Treatment compliance was very strong as indicated by an overall patient adherence score of 86.2% (SD = 14.76).

Enjoyment ratings were also collected for each behavior that participants completed over the two-week treatment interval. These ratings were based on a Likert scale ranging from 1 “not pleasurable” to 4 “very pleasurable.” Collapsed across PRA-BA participants, enjoyment ratings were very strong (M = 3.28, SD = .40).

Post-Treatment Clinical Outcomes

Clinical variables were examined with a series of repeated-measures ANOVAs using a 2 (experimental group) x 2 (pre-treatment, post-treatment) design to assess treatment efficacy. One-month follow-up analyses of clinical variables involved a series of 2 (experimental group) x 3 (pre-treatment, post-treatment, 1-month follow-up) repeated-measures ANOVAs. Clinical variables included depression (BDI-II), environmental reward (EROS), anxiety (somatic: BAI, trait: STAI-T), and quality of life (QOLI). Preliminary ANOVAs indicated that experimental groups differed only on the BAI, with the PRA-BA group reporting increased somatic anxiety [F (1, 48) = 4.50, $p <$ .05, η^2 = .09]. As presented in Table A-3, significant Group x Time interactions were evident for measures of depression, environmental reward, and anxiety showing a significant decrease in depression and anxiety and an increase in environmental reward for the PRA-BA group compared to the control group. Although quality of life did not significantly improve in the PRA-BA group relative to the control group, when marital status was no longer used as a covariate, the interaction became significant [QOLI: F(1, 48) = 5.98, p = .02]. Due to pre-treatment differences on the BAI, an ANCOVA also was conducted using post-treatment somatic anxiety as the criterion variable and pre-treatment somatic anxiety as the covariate. Results still indicated a significant main effect of decreased somatic anxiety in the PRA-BA group at post-treatment relative to the control group [F (1, 47) = 4.98, $p < .05$, η^2 = .09]. Effect sizes ranged from medium to large for all variables (η^2= 0.07 to 0.26). As presented in Table A-4 and Figures A-8 to A-12, 1-month follow-up analyses (using marital status as a covariate) revealed

significant group x time interactions for depression, environmental reward, anxiety, and quality of life showing a significant decrease in depression and anxiety and an increase in environmental reward and quality of life for the PRA-BA group compared to the control group. Effect sizes were medium to large for all outcome variables (η^2= 0.06 to 0.13).

Chapter 5

Discussion

This study elaborates on previous psychosocial treatment outcome research evaluating the efficacy of behavioral activation and religious-based interventions on emotional functioning. Results suggested the PRA-BA intervention effectively attenuated depression and anxiety symptoms and increased environmental reward. Furthermore, treatment gains were maintained at one-month follow-up. These results support the potential "buffering effect" that religion and spirituality may have against depression (Pearce, Little, & Perez, 2003; Stack, 1992; Richards & Bergen, 2005) and suggest that once activated, individuals may continue to implement these behaviors when not actively undergoing treatment.

Given the documented effectiveness of the intervention in manipulating religious overt behavior, attitudes, and coping strategies, data support the hypothesis that increased religious behaviors are consequential to improving mood. Although limited both in its scope and methodological rigor, previous research highlighted the potential efficacy of increased religiosity toward increasing positive mood (Miller & Kelley, 2005), and suggested there was more potential for positive changes in mood following activities involving organized, community religious events rather than less defined, spiritual behaviors (Parker et al., 2003; Strawbridge et al., 1998; Wink, Dillon, and Larsen, 2005). The current study provides a unique perspective to this research in that assigned behaviors included both community religious behaviors and private, devotional religious behaviors. Although it is methodologically unfeasible to partial out whether

community versus private behaviors accounted for the most variance in attenuating depression and anxiety symptoms, it is evident based on pleasure ratings that participants enjoyed both community and private religious behaviors.

The increase in environmental reward (EROS) for PRA-BA participants highlights increased environmental reward as a potentially powerful mediator between religious activation and improved affect. These data support behavioral theories of depression that implicate increased environmental reinforcement as critical toward attenuating depressive symptoms (Ferster, 1973; Hopko, Lejuez, Ruggiero, & Eifert, 2003; Lewinsohn, 1974).

There has been very limited research on the relationship between religion and anxiety (Miller & Kelley, 2005; Schreve-Neiger,& Edelstein, 2004) with mixed results as to whether increased religiosity attenuates or exacerbates anxiety symptoms (Koeing, 1998; Miller & Kelley, 2005; Richards & Bergin, 2005; Williams & Cole, 1968). Results of this study lend convincing support to the efficacious nature of PRA-BA insofar as decreasing both somatic and trait related anxiety. One contributing factor towards decreased anxiety in treatment participants may be due to the ideographic nature of PRA-BA in that it provides participants with the opportunity to choose behaviors unique to their beliefs and desired life choices and values. Research has shown that negative religious coping strategies (those reflecting a negative or insecure relationship with God and community) have been associated with depression and anxiety (Pargament et al., 2005). The ideographic and tailored assessment and assignment of behaviors that characterize PRA-BA might have provided a framework for participants to break the

cycle of negative coping strategies by assessing how rewarding or punishing past religious experiences have been and potentially trying new (or old) strategies more likely to elicit positive mood states. These results are consistent with a general model for behavioral activation that suggests a treatment must be ideographic in nature to efficaciously treat depression and anxiety symptoms (Ferster, 1973; Hopko & Lejuez, 2007; Lewinsohn, 1974; Martell, Addis, & Jacobson, 2001). Additionally, the transdiagnostic effects of a depression intervention on anxiety symptoms supports unified conceptualizations of emotional disorders and symptoms as highly overlapping (Barlow, Raffa, & Cohen, 2002; Barlow, Allen, & Choate, 2004).

Although quality of life was not significantly increased for treatment participants at two-week post assessment, there was a significant trend in this direction. It is possible that the shortness of time between pre and post treatment contributed to the lack of significant change observed in the QOLI at the second meeting but later observed at the one-month follow-up. The QOLI is a broad measure with 16 domains including areas of life that would not be expected to change in as short as a two week period (e.g. work, children, creativity, money). It is also interesting to note that using "marital status" as a covariate negated the post-treatment gains in quality of life for the PRA-BA group. Accordingly, these data support the notion that relationship involvement may increase life satisfaction and buffer against symptoms of depression and anxiety (Cadzow & Servoss, 2009; Powers, Ressler, & Bradley, 2009; Jawad, Sibai, & Chaaya, 2009; Sweatman, 1999) and also may serve a mediating or moderating role in understanding the potential impact of religiosity on a variety of mental health functioning variables.

Limitations and Future Directions

Perhaps one the most significant finding of this investigation is the efficacy of a treatment focused exclusively on religious activation independent of a secular psychosocial treatment that directly manipulates religious behaviors providing for direct assessment of the impact of such behavioral change on depression and related constructs. The study therefore represents an important methodological advancement over previous treatment outcome work that has not illuminated potential independent or incremental benefits of religious interventions in a systematic and methodologically sound manner (Shafranske, 2005; Harris, Thoresen, McCullough, & Larson, 1999; Kaplar, Wachholtz, & O'Brian, 2004) and those that have attached a religious component to an already secular treatment rather than developing and implementing a set of operationalized and uniform behaviors identified as a therapeutic intervention (Shafranske, 2005; Smith, Bartz, & Richards, 2007).

Another particularly significant contribution of this study is the ideographic nature of PRA-BA which provides a significant advancement over previous religious and spiritual treatment outcome research by assessing and including an individual's specific religious beliefs into treatment in a systematic and measureable manner. This strategy is in contrast to introducing either a specific religious component only applicable to those of a specific religious affiliation or a general religious or spiritual component that all are expected to embrace despite differences in beliefs (Smith, Bartz, & Richards, 2007). This unique contribution of PRA-BA may provide a more open-ended format for clinicians to work with the individual religious needs of their clients and to structure and tailor

treatment that leads to better overall treatment success and client satisfaction with treatment.

The study does have a couple notable limitations. First, there may be a lack of generalizability of findings given the limited diversity in the sample. Although results were generally significant for a largely Caucasian, younger adult, college sample, it is unknown whether similar results would be found in a general community sample or clinical setting. Although BDI-II scores suggested the sample was mild-moderately depressed (M = 21.18, SD = 6.02) and approximately 75% of the sample was diagnosed with major depression or dysthymia, implications of study findings toward more severely depressed individuals can only be speculated upon. It is also impossible to predict whether clients in a clinical setting would be as amicable and committed to follow through with behavioral activation as student participants. Motivation to receive extra credit for class provided an incentive that would not be found in the general community, although desire for relief of depressive symptoms may be considered motivation if a client understands how PRA-BA may be efficacious and contribute to their process of healing. It could in fact be argued that lack of motivation and commitment is a significant impediment to even the most efficacious and successful empirically based treatments despite the sophistication of the protocol (Shannon, 2009; Murphy et. al., 2009).

The future direction of this work stands to be an important contribution to both the psychology of religion and treatment outcome research in general. For example, Gawrysiak, Nicolas and Hopko (2009) recently demonstrated the efficacy of a single-session behavioral activation treatment based on the Behavioral Activation Treatment of

Depression (BATD: Lejuez, Hopko, & Hopko, 2001). This current study follows a similar model with a single-session treatment, but with an exclusive focus on religious behaviors. Although the original study (Gawrysiak et al., 2009) showed decreased depression and increased environmental reward following activation, it failed to demonstrate decreased anxiety as documented in the current study. This study also advances this work by including a one-month follow-up in which decreases in depression and anxiety were maintained. Future research should attempt replication of these findings among other samples and settings, and also incorporate lengthier follow-up assessments to better assess treatment response. Because efficacious, short-term therapies are especially important in light of current demands of primary care environments (Wells, et al. 1999), PRA-BA may also have significant utility in this context.

Continued work in the psychology of religion will need to include rigorous treatment outcome studies to further illuminate the nature of religiosity and its potential role in alleviating emotional symptoms and disorders. It is evident that religiosity has played a role in clinical treatment outcome even during times when it has not been given direct consideration by virtue of the significant number of clients (75%) who believe their physician should be aware of their religious beliefs and the significant percentage of clinical psychologists (80%) who believe religious behavior is a significant domain in considering mental health functioning (Shafranske, 2005). Lack of consistent, rigorous outcome research in the psychology of religion may keep current clinicians from further broaching an area of psychology that is rapidly emerging as an important consideration in clinical treatment outcome. It will be important to continue to expand research to include

more sophisticated designs to better understand the complicated nature and relationship between religiosity and mental health as this area of psychology continues to shed new light on therapeutic practice.

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Appendix

Table A-1: The Effectiveness of Behavioral Activation in Modifying Religious Behavior, Attitude, and Coping

	PRA-BA				No-treatment "support session"						
	Time				Time						
Assessment	Pre-Treatment		Post-Treatment		Pre-Treatment		Post-Treatment		Group X Time		
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	$F(1, 47)$	*p*	η^2
Overt Behavior											
RBB	29.9	9.45	34.5	10.93	35.1	14.30	33.7	13.94	14.77	<.00	0.24
Religious/Spiritual Attitude											
SWB	80.6	16.82	86.6	20.22	91.6	18.63	92.1	20.38	4.43	.04	0.09
Religious Coping											
WORCS	62.9	30.46	72.2	31.74	81.4	40.05	79.6	38.60	12.83	<.00	0.21

Table A-2: The Effectiveness of Behavioral Activation in Modifying Religious Behavior, Attitude, and Coping at 1-Month Follow-Up

	PRA-BA						No-treatment "support session"								
	Time						Time								
Assessment	Pre-T		Post-T		1-monthF		Pre-T		Post-T		1-monthF		Group X Time		
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	$F(1, 47)$	p	η^2
Overt Behavior															
RBB	30.7	9.36	35.8	10.30	33.3	9.27	35.1	14.30	33.7	13.94	33.8	12.94	7.76	<.00	0.15
Religious/Spiritual Attitude															
SWB	83.5	13.73	90.3	15.61	91.0	14.98	91.6	18.63	92.1	20.38	91.0	20.95	5.80	<.00	0.11
Religious Coping															
WORCS	66.1	29.36	74.8	31.72	71.0	29.15	81.4	40.05	79.6	38.60	75.9	34.65	5.03	<.00	0.10

Table A-3: Post-Treatment Clinical Outcomes as a Function of Experimental Condition

	PRA-BA				No-treatment "support session"						
	Time				Time						
Outcome	Pre-Treatment		Post-Treatment		Pre-Treatment		Post-Treatment		Group X Time		
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	$F(1, 47)$	p	η^2
Depression											
BDI-II	20.4	9.73	13.4	8.99	18.5	5.91	16.24	7.63	5.31	.03	0.10
Environmental Reward											
EROS	24.1	5.01	26.6	5.77	26.6	4.33	25.7	5.17	6.03	.02	0.11
Anxiety											
BAI	16.3	9.02	11.2	8.38	11.6	6.31	11.4	10.33	6.18	.02	0.12
STAI-T	51.3	8.95	45.9	8.64	46.6	7.86	46.9	9.39	16.06	<.00	0.26
Quality of Life											
QOLI	0.8	1.81	1.8	1.53	1.2	1.52	1.4	1.61	3.64	.06	0.07

Table A-4: Post-Treatment Clinical Outcomes and 1-Month Follow-up as a Function of Experimental Condition

	PRA-BA						No-treatment "support session"								
	Time						Time								
Outcome	Pre-T		Post-T		1-monthF		Pre-T		Post-T		1-monthF		Group X Time		
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	$F(1, 47)$	p	η^2
Depression															
BDI-II	20.4	9.73	13.4	8.99	11.7	8.17	18.5	5.91	16.24	7.63	14.8	9.59	3.54	.03	0.07
Environmental Reward															
EROS	24.8	4.45	27.4	5.20	27.7	5.41	25.5	4.33	25.7	5.17	26.3	5.12	3.30	.04	0.07
Anxiety															
BAI	15.0	6.86	9.6	6.27	8.4	5.39	11.6	6.31	11.4	10.33	9.7	10.96	5.11	.01	0.10
STAI-T	50.0	7.80	44.6	7.46	43.8	7.73	46.6	7.83	46.9	9.39	45.2	11.01	6.64	<.00	0.13
Quality of Life															
QOLI	1.1	1.35	2.0	1.41	2.0	1.45	1.2	1.52	1.4	1.61	1.2	1.78	3.06	.05	0.06

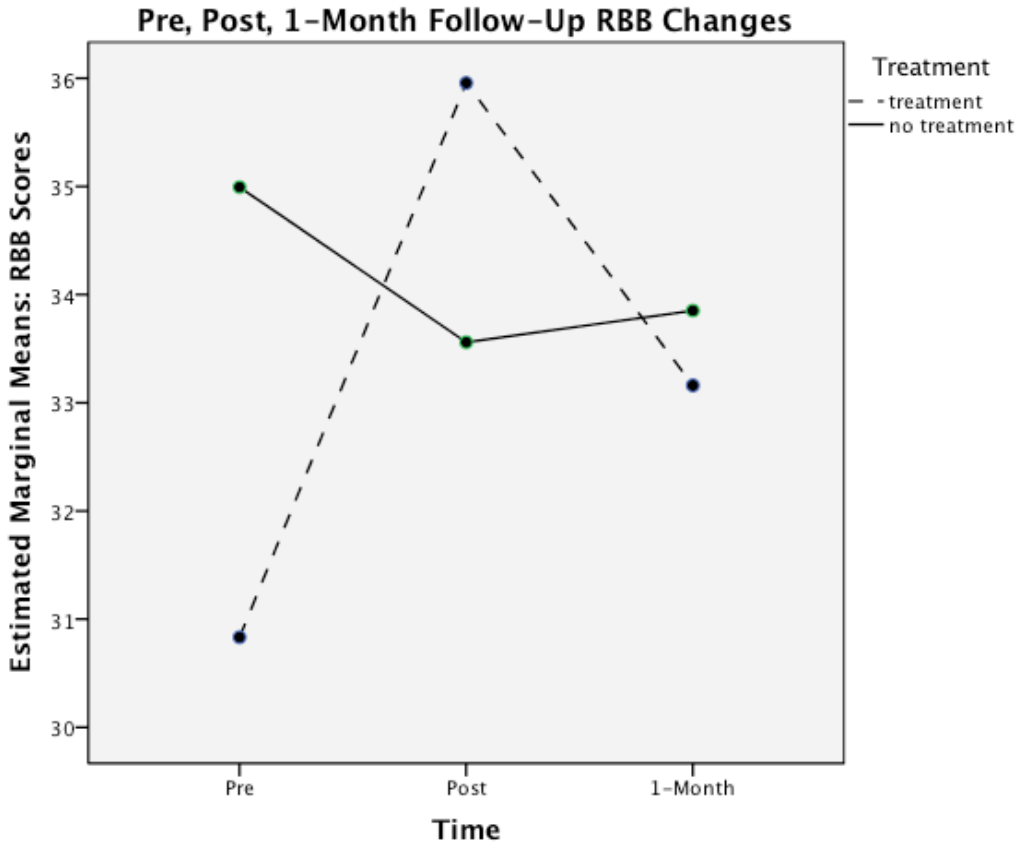

Figure A-5: Pre, post, and 1- Month Follow-Up RBB Changes

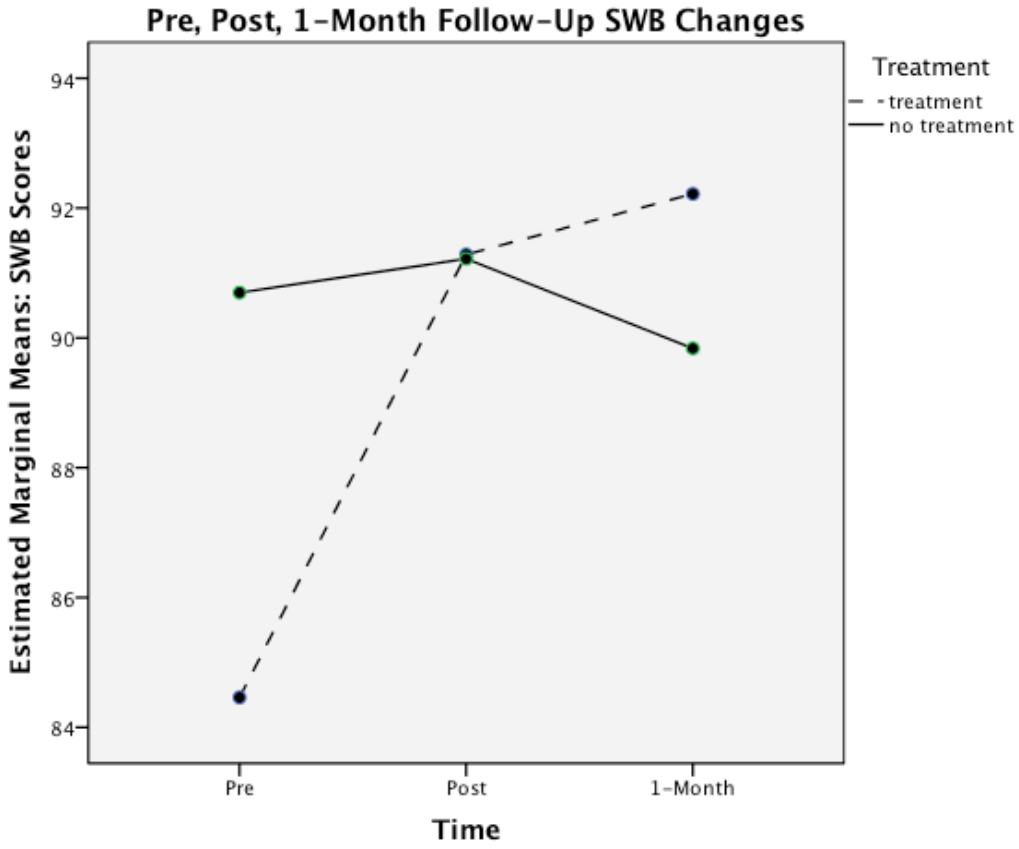

Figure A-6: Pre, post, and 1- Month Follow-Up SWB Changes

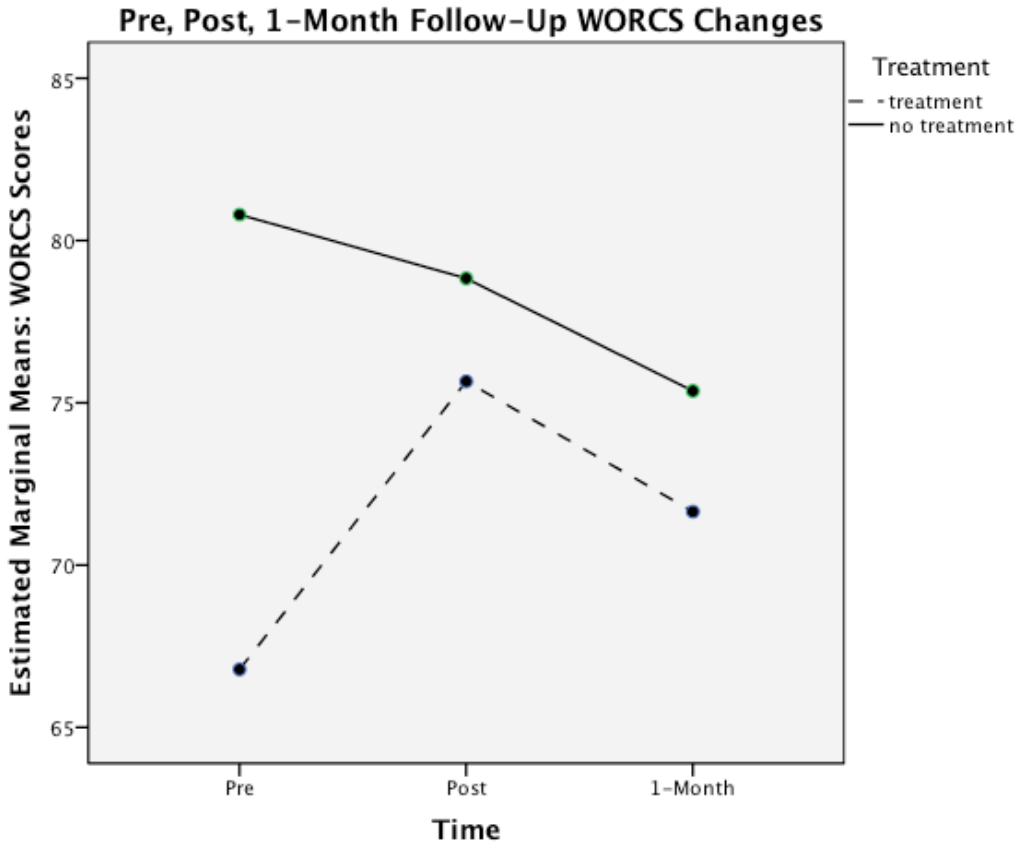

Figure A-7: Pre, post, and 1- Month Follow-Up WORCS Changes

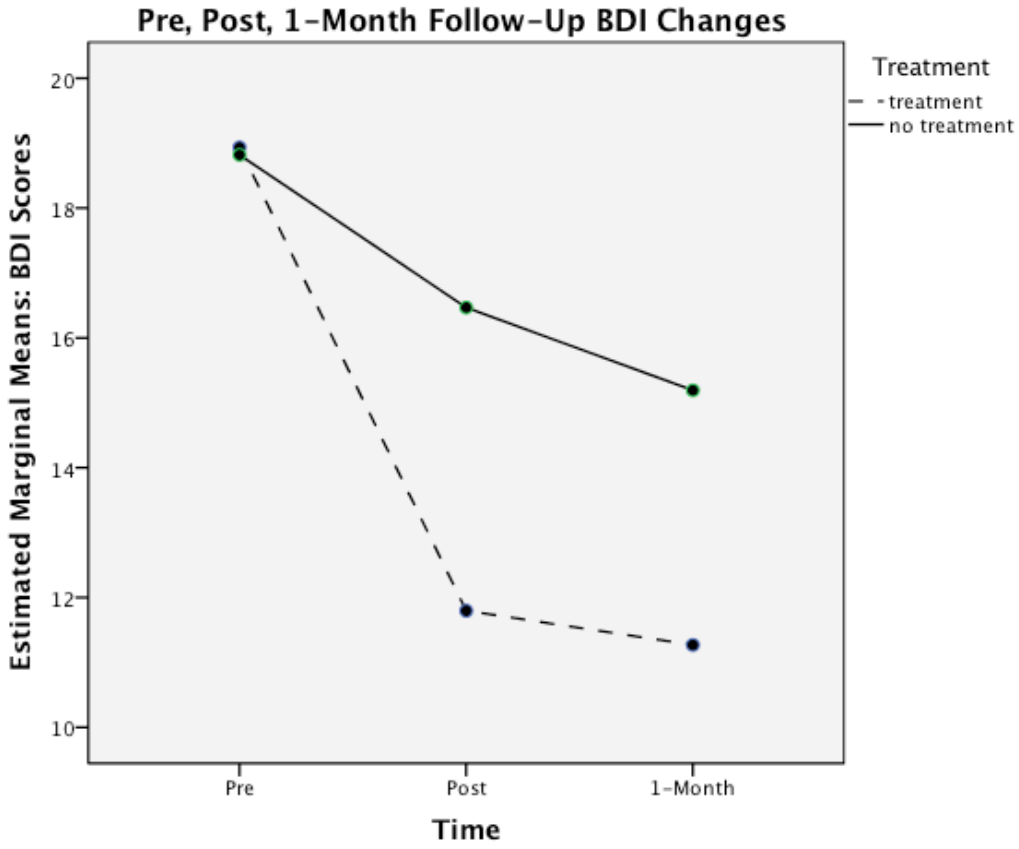

Figure A-8: Pre, post, and 1- Month Follow-Up BDI Changes

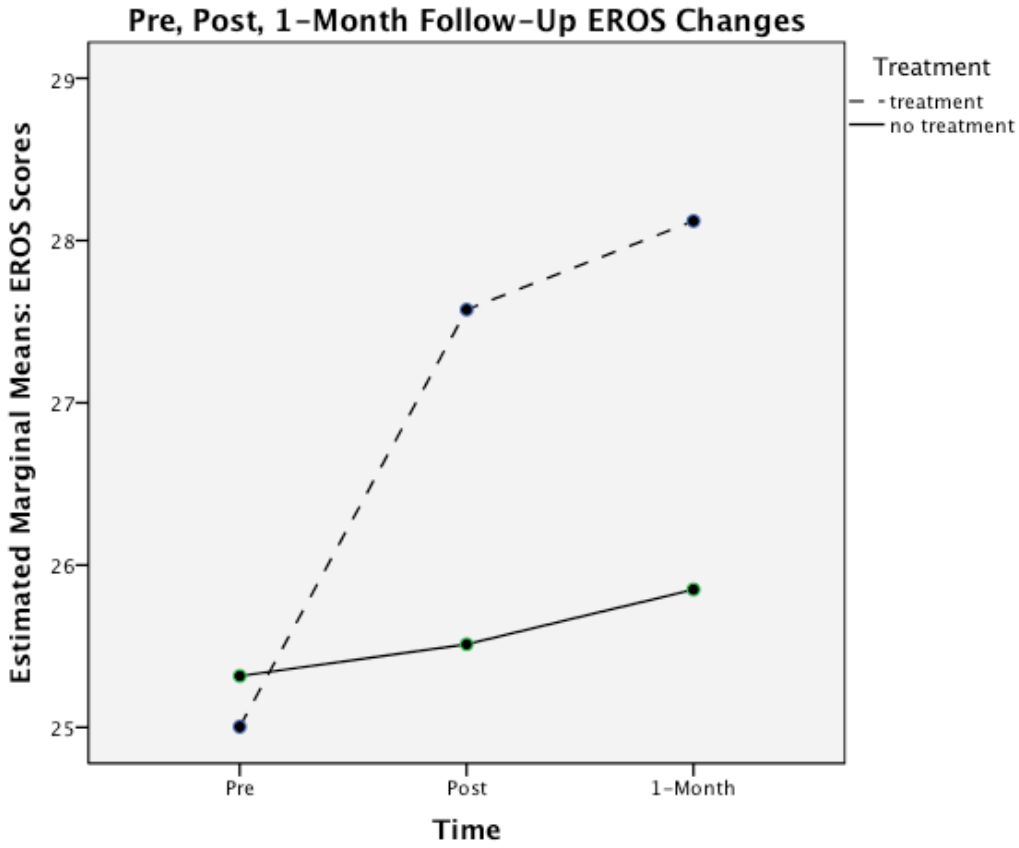

Figure A-9: Pre, post, and 1- Month Follow-Up EROS Changes

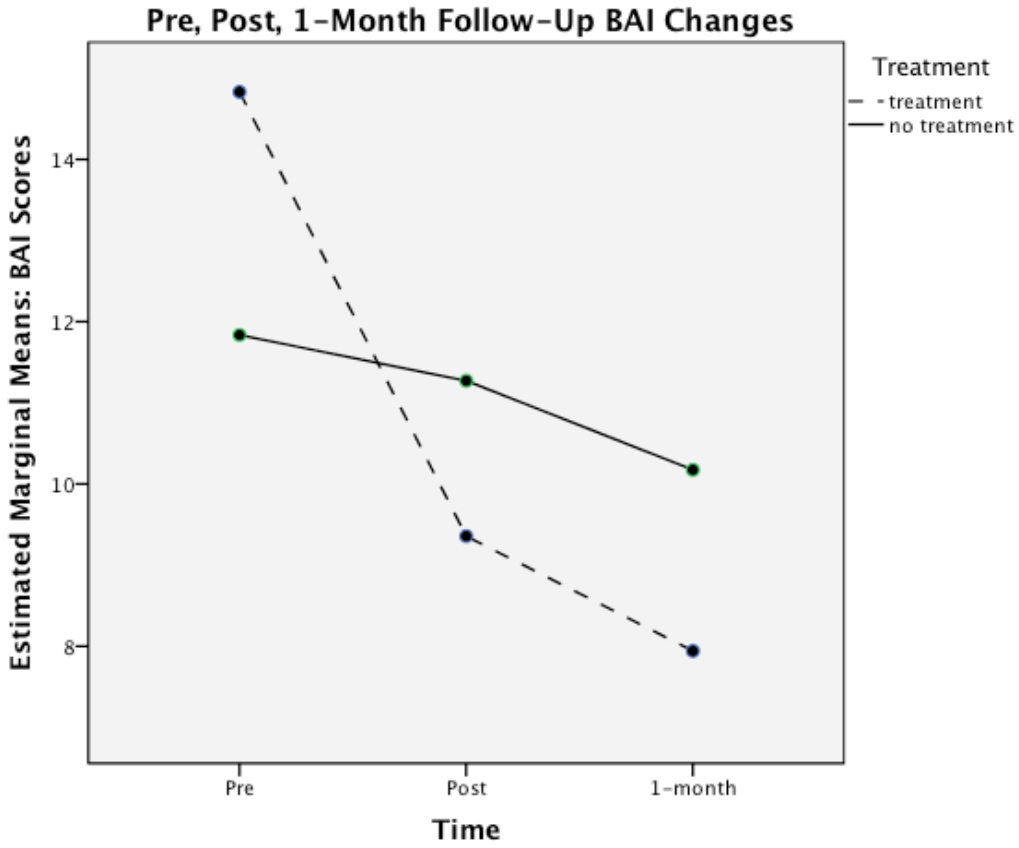

Figure A-10: Pre, post, and 1- Month Follow-Up BAI Changes

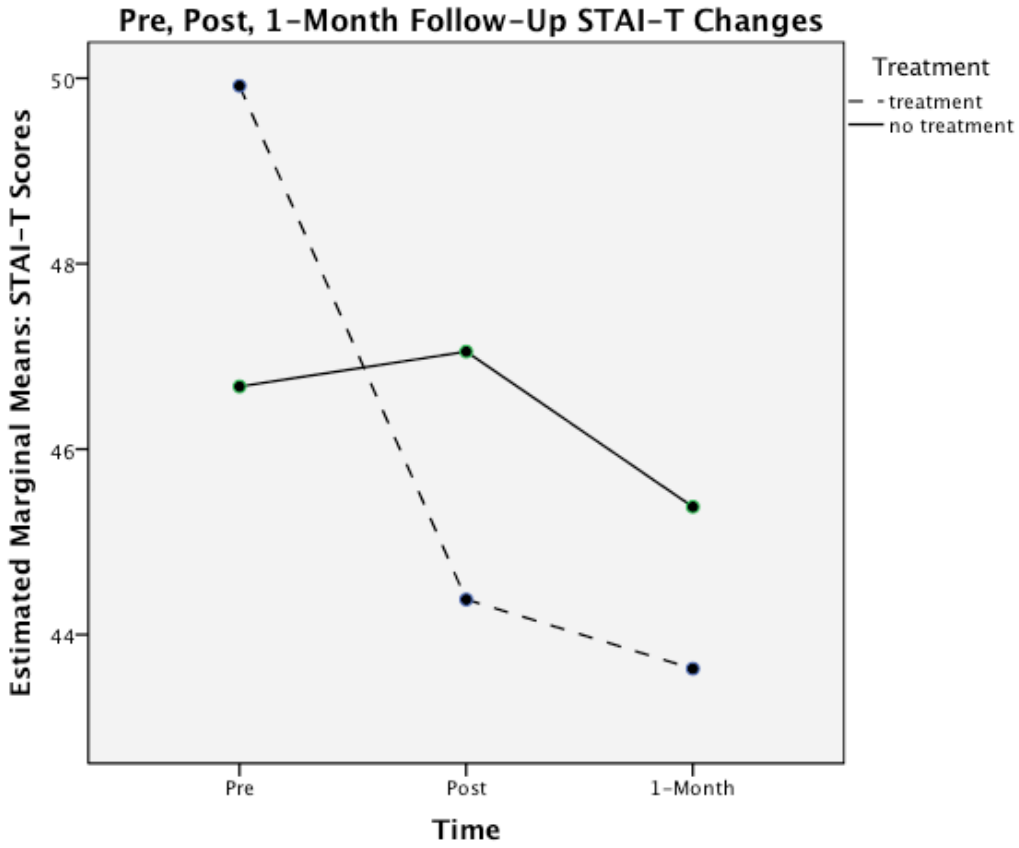

Figure A-11: Pre, post, and 1- Month Follow-Up STAI-T Changes

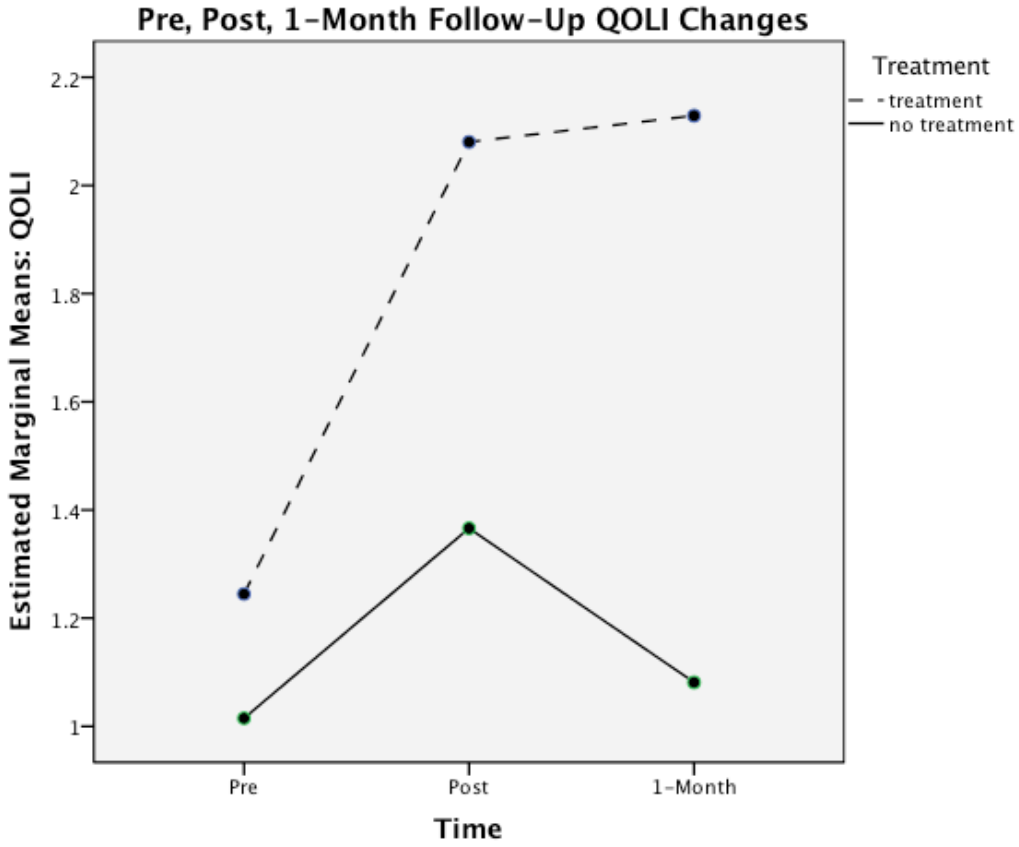

Figure A-12: Pre, post, and 1- Month Follow-Up QOLI Changes

Protocol for Religious Action in Behavioral Activation (PRA-BA) in Moderately Depressed College Students

Maria EA Armento & Derek R. Hopko

Protocol References:

Lejuez, C.W., Hopko, D.R., Hopko, S.D. (2001) "A Brief Behavioral Activation Treatment for Depression, Treatment Manual" Behavior Modification, 25(2), 255-286

Gawrysiak, M.J., Hopko, D.R. (2008) "Protocol for BATD treatment of Moderately Depressed College Students"

PHASE 1: Screening Criteria and Recruitment

HPR: Establish Instructions

- HPR Study Description (online):

Prior to beginning this study, you must first complete a short questionnaire to determine your eligibility. This questionnaire should only take a few minutes to complete. Although you do not receive points for this screener, IF ELIGIBLE FOR THE STUDY, COMPLETION OF THE STUDY IS WORTH 20 CREDIT POINTS. You will be contacted via email by the experimenter after you complete the screener to inform you of your eligibility for the full study.

- Study Description (You are only eligible if notified of eligibility):
  This study is examining the extent to which a religious behavioral intervention reduces symptoms of depression in comparison to a no-treatment supportive session. It requires an initial 60-minute meeting where participants complete questionnaires and either develop a religious behavioral plan or have a supportive discussion (based on randomized assignment). In the former condition (behavioral plan), you will be asked to engage in religious activities for a period of two weeks. After the first week has elapsed you will be contacted by phone to briefly discuss how your experiences are going. After one more week has elapsed (for a total of 2 weeks), you will meet with the examiner again to briefly discuss your experiences and fill out some questionnaires. Finally you will meet with the examiner again briefly one month later to fill out some questionnaires. After this final meeting you will also receive a $15 check for your time**.**

Online Screening Criterion:

- BDI-II Eligibility (14 or above) _____
- Is BDI-II highly elevated (quantify) _____
- Inform Dr. Hopko if it is (Date) _____
- BDI Elevation include suicide ideation _____
- Refer to clinic and/or notify Dr. Hopko (Date) _____
- Demographic Eligibility _____
  - Pharmacological/psychological depression treatment _____
  - Active Suicidal Intent _____
  - Current Psychosis/Bipolar _____
  - If 2-4 are marked yes refer to clinic (Date of referral) _____
  - Unwilling to participate in religious activation _____
  - Eligible? _____

    - If ***NOT*** ELIGIBLE send email number 1.
    - If ***ELIGIBLE*** send email number 2 to Experimental Includes
    - If ***ELIGIBLE*** send email number 3 to Control Includes

EMAIL #1 - Sample Email of Participants *NOT* eligible:

Hello (student's name),

My name is Maria Armento, and I'm a psychology graduate student at UT conducting research. I appreciate your completion of the screener questionnaire in class this week for the Behavioral Activation of Religious Behaviors study and cooperation thus far. I'm contacting you to regretfully inform you that you are not eligible for participation in this research study. There are many other research opportunities for you to get your credit however. Thank you very much for your time and good luck with your semester.

Maria

EMAIL #2 - Sample Email of Experimental and Control Participants *ELIGIBLE*:
Hello (student's name),

My name is Maria Armento, and I'm a psychology graduate student at UT conducting research. I appreciate your completion of the screening questionnaire today in class and your cooperation thus far. I'm contacting you to inform you that you are eligible to participate in my research study. As you have already been informed, this study is investigating the degree to which a very a brief religious behavioral intervention or a no-treatment support meeting can reduce symptoms of depression you may or may not be experiencing. Your responsibility in this study, should you choose to participate, will require an initial 90-minute meeting with myself. You will be asked to complete questionnaires and either develop a religious behavioral plan or have a supportive discussion (based on randomized assignment). In the former condition (behavioral plan), you will be asked to engage in religious activities for a period of two weeks. After the first week has elapsed you will be contacted by phone to briefly discuss how your experiences are going. After one more week has elapsed (for a total of 2 weeks), you will meet with me again to briefly discuss your experiences and fill out some questionnaires. Finally you will meet with me again briefly one month later to fill out some questionnaires. You will receive 20 credit points (and $15 for the one month follow up) as compensation should you choose to participate. I will be calling to contact you to confirm your wish to participate in this study and to set up an appointment time.

Thanks, Maria

PHASE 2: Initial Meeting and Study Instructions:

- After potential participant has contacted you (after you've notified them of their eligibility) schedule an appointment with them. Appointment date _____

- Meeting Time #1
- Explain Informed Consent (Located in IRB)
    - **Questionnaires and Initial Assessment**
    - Administer abbreviated ADIS
    - Complete BDI
    - Complete EROS
    - Complete STAI-T
    - Complete BAI
    - Complete QOLI
    - Complete Religious Background and Behavior Scale
    - Complete Religious Commitment Inventory
    - Complete the Spiritual Well-Being Scale
    - Complete the Ways of Religious Coping Scale

For Experimental Includes:

First Meeting Goals:

Today we have several goals:

(1) Better understand your depressive symptoms
(2) Better understand your religious beliefs
(3) Begin the process of religious activation

1. Ask the client to describe what depression feels like to him/her. Reflect, ask questions and summarize what the client has said. Relate this information to clinical depression symptoms by talking to the client about what the symptoms of clinical depression are (at least 2 weeks of depressed mood and or anhedonia; significant weight loss or gain, decrease/increase appetite, decrease/increase sleeping, feelings of irritability, fatigue or energy loss, feelings of worthlessness or excessive/inappropriate guilt, diminished ability to think or concentrate, suicidal thoughts or attempts) and how their own experiences relate.
2. Ask the client to describe their religious beliefs. Ask the client how active they have been in their faith community and in their private religious practices. If a client is religiously atheist or agnostic ask them to describe this experience and how they behave accordingly in their life. Make sure to consider the diversity found in religious belief and practice. Consult literature about the specific denomination the client may be a part of if necessary. Use the "Religious Beliefs Summary" as a guideline for this assessment.

3. Provide the client with information about the benefits of being religiously active. Studies show that those who are active in their religious life are less depressed and experience less anxiety and appear to have an overall more positive outlook on life. Talk with the client about the serenity prayer and how this is an "acceptance versus change" way of thinking. Relate this to the client's life and how some things have happened that they cannot change but that there are some things they can and that active religious behavior can help them make a change.
4. Talk with the client about ways they might become more active in (1) faith community activities (2) private devotional activities. Fill out the "Religious Activity Goals" during this discussion.
5. Ask the client to engage in several specific activities for the coming week. Fill out the "Religious Activity Homework" sheet during this discussion. Use as many sheets as necessary if number of activities for the week exceeds one sheet. Make sure the client knows to bring back this sheet next week. (Also make a photocopy to keep in their file in case they forget to return it).
6. Make sure to set up two more follow-up sessions with the client.
7. Have the client fill out the pre-assessment self-report measures.

Phone check-in: One week has elapsed:

Today we have two goals:

(1) Check in on your progress with last week's assignment

1. Ask the client how their experience was over the past week. Were the able to complete their behavioral assignments? If not, how did they feel about it? Try to better understand the obstacles to their success and problem solve with them. If they were successful, how did the success make them feel? How did each of the particular activities help to improve their mood?

Second (in person) Meeting Goals- Two weeks have elapsed:

Today we have several goals:

(1) Check in on your progress with last two week's assignment
(2) Fill out a post-assessment measures

1. Ask the client how their experience was over the past two week. Were the able to complete their behavioral assignments? If not, how did they feel about it? Try to better understand the obstacles to their success and problem solve with them. If they were successful, how did the success make them feel? How did each of the particular activities help to improve their mood?
2. Have the client fill out post-assessment measures

For Control Includes:

Spend each meeting session with control includes listening to them discuss their thoughts and feelings. Make sure not to be directive or to apply any therapeutic intervention. Be

thoughtful and provide a good listening ear but refrain from any interpretation or reflection with client that may lead to a form of non-directive treatment.
At the end of first and follow-up session have participant fill out assessment measures.

Religious Beliefs Summary

Client ID #:_____
Date:_____

(1) Would you consider yourself to be religious or spiritual? If yes, how so?

_____

_____

(2) Do you identify yourself with a specific religious organization? If yes, which organization how long have you identified yourself this way?

_____

_____

(3) What are the main beliefs of your faith group? Do you share these beliefs as well?

_____

_____

(4) How active are you currently with your faith community? What are some of the activities you participate in?

_____

_____

(5) How active are you currently in your private religious life? What are some of the private religious activities you participate in?

_____

_____

Religious Activity Goals

Client ID#: _____
Date:_____

Faith Community Activities	Private Devotional Activities

Some examples of each:

Attend a Sacred Liturgy
Minister at a Religious Service or function
Attend a Bible Study
Attend a Religious Social Function
Attend a Young Adults Group
Go and Speak with a Religious Leader
Volunteer at a Special Event

Go to a Peaceful Place and Pray Privately
Read the Bible
Read a Devotional Book
Private Prayer or Meditation at Home
Listen to Prayerful Music
Go For a Walk or a Hike
Learn More About Your Faith

Religious Activity Homework

Client ID #:
Date:

Day of the Week	Activity	Time	Location	Completed
_____				Y N
	notes: _____			
_____				Y N
	notes: _____			
_____				Y N
	notes: _____			
_____				Y N
	notes: _____			
_____				Y N
	notes: _____			
_____				Y N
	notes: _____			
_____				Y N
	notes: _____			
_____				Y N

Vita

Maria Elizabeth Anne Armento was born in Canton, Ohio and raised in Oak Ridge, TN. She received her Bachelor of Arts degree in Psychology and a Master of Arts Degree in Experimental Psychology from the University of Tennessee, Knoxville. She completed a clinical psychology internship program at Baylor College of Medicine, Menninger Department of Psychiatry and Behavioral Sciences, in Houston, TX in June 30, 2011.

Maria will begin a Postdoctoral Fellowship in Late-Life Anxiety in Primary Care at Menninger Department of Psychiatry and Behavioral Sciences, Baylor College of Medicine and Michael E. DeBakey Veterans Affairs Medical Center, Houston, TX Summer of 2011.